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BARRIERS TO THE ADOPTION OF ONLINE EDUCATION
AT VIETNAM NATIONAL UNIVERSITY – HO CHI MINH CITY

By
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A DISSERTATION IN PRACTICE

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Abstract

This case study investigated the perceived barriers to the adoption of online education at Vietnam National University – Ho Chi Minh City (VNU-HCM). Qualitative analysis of interviews with 26 faculty and staff members identified barriers grouped into five categories following Rogers’ (2003) theory on the diffusion of innovations. Barriers related to relative advantage were based on the perceptions of poor quality and the suitability of online education within the context of Vietnam. Barriers related to compatibility dealt with a lack of technology infrastructure, issues of faculty workloads, institutional policies, and concern for students’ English language skills. Barriers related to complexity involved concern for the technical and pedagogical skills of faculty members. The barrier related to trialability dealt with an approval process perceived as unclear, complex and time-consuming. Barriers related to observability were concerns for quality metrics and a lack of forums for sharing experience from previous online education initiatives. Recommendations to increase the adoption of online education included communication of a clear strategy for online education. A list of desired attributes for pilot programs was also provided. Recommendations for technical training and support encouraged building a community of practice. Increasing the adoption of online education will require changing perceptions within the university and in Vietnam. Information from this case study should assist faculty and administrators to plan and manage the implementation of online programs more effectively. Leadership at VNU-HCM will be the determining factor in developing the innovation culture required to achieve the strategic vision.

Keywords: Online education, barriers, Vietnam
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# Table of Contents

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Acknowledgements</td>
</tr>
<tr>
<td>Table of Contents</td>
</tr>
<tr>
<td>List of Tables</td>
</tr>
<tr>
<td>CHAPTER ONE: INTRODUCTION</td>
</tr>
<tr>
<td>Background of the Problem</td>
</tr>
<tr>
<td>Statement of the Problem</td>
</tr>
<tr>
<td>Purpose of the Study</td>
</tr>
<tr>
<td>Research Questions</td>
</tr>
<tr>
<td>Significance of the Study</td>
</tr>
<tr>
<td>Aim of the Study</td>
</tr>
<tr>
<td>Method Overview</td>
</tr>
<tr>
<td>Definition of Relevant Terms</td>
</tr>
<tr>
<td>Assumptions</td>
</tr>
<tr>
<td>Delimitations and Limitations</td>
</tr>
<tr>
<td>Leader’s Role and Responsibility in Relation to the Problem</td>
</tr>
<tr>
<td>Summary</td>
</tr>
<tr>
<td>CHAPTER TWO: LITERATURE REVIEW</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Defining Distance Education, Online Education, and e-Learning</td>
</tr>
<tr>
<td>Comparison Between Online and Traditional In-Class Learning</td>
</tr>
</tbody>
</table>
Evolution of Online Education in the United States ......................................................... 20
Background of Higher Education in Vietnam ................................................................. 25
Background of the University Under Study .................................................................. 30
Innovation Theory and Barriers ....................................................................................... 33
Best Practices for Managing Online Education Innovation .............................................. 37
Leadership in Education Innovation .............................................................................. 43
Summary ........................................................................................................................... 47

CHAPTER THREE: METHODOLOGY ......................................................................... 48
Introduction ....................................................................................................................... 48
Research Design ............................................................................................................... 50
Data Analysis ..................................................................................................................... 56
Validity and Reliability ..................................................................................................... 58
Researcher Bias and Assumptions ................................................................................... 59
Translation Issues .............................................................................................................. 60
Ethics – Protection of Participants .................................................................................. 60
Summary ........................................................................................................................... 61

CHAPTER FOUR: FINDINGS ........................................................................................ 62
Introduction ....................................................................................................................... 62
Research Question One: Relative Advantage ................................................................. 63
Research Question Two: Compatibility .......................................................................... 72
Research Question Three: Complexity ......................................................................... 88
Research Question Four: Trialability ............................................................................. 91
Research Question Five: Observability ....................................................................... 93
List of Tables

Table 1 VNU-HCM Student Enrollment for 2013-2014 ........................................... 52
CHAPTER ONE: INTRODUCTION

Background of the Problem

With a population of over 90 million people, Vietnam ranks as the 14th largest country in the world. Since market-based reforms ("Đổi Mới") were introduced in 1986, Vietnam has grown from being one of the poorest economies in the world to being classified as a lower middle income nation (World Bank, 2015). In 2014, Vietnam’s national GDP of 186 billion dollars (USD) represented a GDP per capita of USD 2,053. By comparison, Vietnam’s per capita GDP exceeds that of Cambodia (USD 1,081), Myanmar (USD 1,221), and Laos (USD 1,693). But Vietnam’s per capita GDP falls short of that of the Philippines (USD 2,865), Indonesia (USD 3,534), Thailand (USD 5,445), China (USD 7,589), and Malaysia (USD 10,804) (Schwab & Sala-i-Martin, 2015).

Access to education in Vietnam has also improved, and employment for university graduates is expected to grow by 5.9% between 2011 to 2020 (World Bank, 2015). Vietnam’s overall Global Competitiveness Index (GCI) rankings have improved steadily from 75 in 2012-13 to 56 in the 2015-2016. However, Vietnam ranked lower in two of the areas that contribute to the overall ranking: higher education and training (95), and technological readiness (92). One of the key problem areas noted in the country profile was an inadequately educated workforce (Schwab & Sala-i-Martin, 2015).

From 1999-2008, the number of universities in Vietnam more than doubled from 69 to 160 (London, 2011). However, improvements in the nation’s higher education system had not matched the development of the overall economy (Kính & Chí, 2008). The Higher Education Reform Agenda (HERA) was issued with the intention of increasing enrollment capacity and quality within the system (Kính & Chí, 2008; World
BARRIERS TO ADOPTION OF ONLINE EDUCATION: VNU-HCM

And yet, several years after HERA and the Education Law of 2005, there were still concerns that Vietnam’s objectives were not being met (Fulbright Economics Teaching Program (FETP), 2010).

Online education at the university level is a potential tool for improving the education system in Vietnam and opening up access to students who otherwise would be unable to gain an education. The many advantages of online education can include cost savings, innovative teaching methods, sharing courses with foreign universities, and flexible schedules for students and faculty. Such improvements to the education system might come in the form of cost efficiencies, but these would have to be shown. Improving the higher education system can also mean using innovative teaching methods and requiring more critical thinking within the courses (Peeraer & Van Petegem, 2010; 2012; 2015).

Increasing the use of technology in education has been on Vietnam’s national reform agenda since the early 2000s as a method to improve both the pedagogy and management of education. Educators were encouraged to utilize Information and Communication Technology (ICT) applications as they seek innovative teaching methods. Despite the apparent government endorsement of online education, adoption of these methods remained slow. Peeraer and Van Petegem (2015) noted that Vietnamese teachers were using ICT to move traditional teaching methods to an online format without changing the pedagogy.

Although there are many potential benefits to using online education, the transition from traditional face-to-face classes to an online format is not a simple matter of deciding to try something new. A study by Hue and Ab Jalil (2013) investigating the
use of ICT in higher education in Vietnam noted that lecturers often do not use ICT in their courses despite recognizing the potential benefits. Hue and Ab Jalil (2013) further suggested that their findings regarding the relationship between attitudes of lecturers and slow adoption rates were compatible with Rogers’ (2003) theory of diffusion of innovations. Rogers (2003) defined diffusion as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (p. 5). Rogers (2003) outlined five key factors that influence the rate of an innovation’s adoption: “relative advantage, compatibility, complexity, trialability, and observability.” (p. 221)

This qualitative study provided a deeper understanding of the barriers to the adoption of online education in Vietnam. Analysis of interviews with 26 administrators and faculty identified barriers that were perceived as important in deciding to use online courses and provided a foundation for recommendations on developing policies and procedures to approve, develop, and introduce new forms of online education at Vietnam National University – Ho Chi Minh City (VNU-HCM).

**Statement of the Problem**

Although the use of online education had become more prevalent in many parts of the world, the use of online courses was still not widespread in Vietnam (Dang & Robertson, 2010; Peeraer & Van Petegem, 2015). A better understanding of the barriers to the adoption of online education was needed as a foundation for faculty and administrators in deciding to use online courses to a greater degree. The proposed audience for this study included administrators and teachers in Vietnam who might be encouraged to consider using online courses, as well as students who could benefit from
the information by gaining confidence in the new method of learning. Foreign
universities that plan to provide online courses in Vietnam should be able to use the
results to plan for an entry of their programs.

**Purpose of the Study**

The purpose of this case study was to determine what barriers were perceived as
important by faculty and administrators in deciding to use online courses to a greater
degree within the VNU-HCM system. This information provided a foundation for
developing policies and procedures to approve, develop, and introduce new forms of
online education at VNU-HCM.

**Research Questions**

The overarching question for the current case study was: What factors are
important in the adoption of online education as an innovation in the VNU-HCM system?
In other words: What factors would allow the use of online education to become more
widespread? Following Rogers’ (2003) theories of the barriers to the adoption of
innovations, key questions that were used to clarify this issue included:

1. **Relative Advantage:** What advantages exist to using online education at VNU-
   HCM? What advantages exist to avoiding the use of online education?
2. **Compatibility:** In what ways are online courses seen as being incompatible with
   the institution? What cultural aspects would not work well with online courses?
   What technological aspects would not work well with online courses? What
   administrative aspects would not work well with online courses?
3. **Complexity:** Do students, faculty and administrators believe they have the
   necessary skills to make the best use of online education tools? What specific
parts of online education would be the most difficult to integrate into the current structure of the institution?

4. **Trialability:** What forms of online education would be the easiest to experiment with in the institution? How would a pilot program be designed? What issues might be confronted?

5. **Observability:** How would the results of such a pilot program be shared with colleagues? What specific aspects of the results would be the most important to share?

**Significance of the Study**

The state of online programs in higher education in the United States has been well documented through studies such as the annual surveys by Allen and Seaman (2013; 2014; 2015). Results of the surveys mapped the growth of various types of online education as well as the attitudes of educators and administrators on the effectiveness and time commitments of online education. Other studies outside of Vietnam investigated the factors that affect student attitudes toward online learning (Drennan, Kennedy, & Pisarski, 2005; Park, 2009). Anstine and Skidmore (2005) provided advice on adjusting research to accommodate for self-selection in online courses. Gaytan (2009) used institutional theory in online education to demonstrate the need for research-based frameworks for planning and designing online courses.

The audience for this topic starts with administrators and faculty in Vietnam who might be encouraged to consider using online courses. Students may benefit from the information by gaining confidence in the new method of learning. Foreign universities that plan to provide online courses in Vietnam should be able to use the results to plan for
an entry of their programs. Before encouraging the use of more online courses, it was important to understand the many reasons for the limited use of online education in Vietnam. Another potential concern was how an online class experience was viewed in a culture that reveres teachers, as in Vietnam. The themes identified in this report can be used by faculty and administrators to guide the design, implementation and management of online education initiatives in the future.

**Aim of the Study**

The aim of this study was to create a plan for overcoming the most important perceived barriers to online education and to offer solutions that guide administrative decisions concerning future online learning projects at the university. By understanding barriers to the adoption of online education, faculty and administrators can plan and manage implementation of online programs more effectively.

**Method Overview**

This qualitative study involved interviews of 26 administrators and faculty from the six branch universities under the VNU-HCM umbrella to obtain their views on whether or not Rogers’ (2003) barriers exist and in what form these barriers were perceived. The results of the analysis took the form of detailed themes associated with Rogers’ (2003) five key factors related to the adoption of innovations: relative advantage, compatibility, complexity, trialability, and observability. Once the themes were identified, recommendations were formulated that could be used toward creating and implementing policy in the future.
**Definition of Relevant Terms**

The following terms were used operationally within this study.

*Asynchronous:* An asynchronous online course uses e-mail, discussion boards, and file transfers to allow students and teachers to interact without being online at the same time. A synchronous online course would use video conferencing or chat capabilities to allow live interaction between students and teachers.

*Blended/Hybrid course:* A Blended or Hybrid course is defined as using from 30% to 79% online content.

*Distance education:* Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously. Technologies used for instruction may include the following: Internet, one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband lines, fiber optics, satellite or wireless communication devices, audio conferencing, and video cassette, DVDs, and CD-ROMs, if the cassette, DVDs, and CD-ROMs are used in a course in conjunction with the technologies listed above (The National Center for Education Statistics (NCES), n.d.).

*e-Learning:* An e-learning course is differentiated from distance learning by the use of technology to allow online access.

*Massive Open Online Courses (MOOCs):* An online course using 100% online content. Allen and Seaman (2015) note MOOCs differ from typical online courses because they are often open free of charge to a very large number of participants who are
not required to be registered students at the institution and do not earn credit for the course.

*Ministry of Education and Training (MOET):* The Vietnamese ministerial branch of government responsible for oversight and/or management of K-12 education, universities and colleges that are not part of Vietnam’s National University system.

*Online Content:* The amount of learning instruction provided online rather than in a traditional classroom setting. This study will follow the practice of Allen and Seaman (2015) to classify courses by the percentage of online content: traditional courses (0%), web-facilitated courses (1 to 29%), blended/hybrid courses (30 to 79%), and online courses (80 to 100%).

*Online course:* An online course is defined as using at least 80% online content.

*Online learning:* Online learning includes blended/hybrid and online courses that result in reduced in-class time for students. Online learning providing a technology-based learning experience is differentiated from web-facilitated courses that simply allow accessing information online.

*Pedagogy:* The method and practice of teaching.

*Synchronous:* See “Asynchronous”

*Traditional course:* A traditional course is defined as using 0% online content and a student studies in a typical face-to-face classroom setting.

*Vietnam National University – Ho Chi Minh City (VNU-HCM):* Vietnam National University – Hanoi (VNU) and Vietnam National University – Ho Chi Minh City (VNU-HCM) are two separate institutions under Vietnam’s National University system that
BARRIERS TO ADOPTION OF ONLINE EDUCATION: VNU-HCM

report directly to the Prime Minister and are independent from MOET. The current study focuses only on programs within VNU-HCM.

*Web-facilitated course:* A course using from 1% to 29% online content.

**Assumptions**

A major assumption was that some form of online education would be a positive innovation for Vietnam. In addition, the present study assumed that those interviewed answered questions honestly and with full disclosure. Finally, this study also assumed that what was learned among the universities identified could be extrapolated to other universities in Vietnam and other countries with similar cultures and states of economic development.

**Delimitations and Limitations**

This study focused only on universities within the VNU-HCM system in the region of Ho Chi Minh City. This study involved interviewing enough people to form an understanding of this group in general. The study was not exhaustive nor did it attempt to cover all programs. Only current recurring themes in processes and attitudes were identified.

A major obstacle during the interview process was ensuring accurate interpreting in Vietnamese and English. Although most of the interviews were conducted in English, an assistant was always present to translate and time was spent before interviews began to be sure the assistant understood the concepts being investigated. The accuracy of translations was later verified by allowing another Vietnamese person to listen to several audio recordings. All requests for approvals to interview, recruitment letters, introductory scripts and questions were provided in both English and Vietnamese.
Leader’s Role and Responsibility in Relation to the Problem

The current study was important because leaders need a basis for making decisions on which programs should be accepted and approved. Leaders need to know whether technical requirements, compatibility with institutional culture, or some other aspect is most important in the implementation of innovations in online education. The first few attempts at online education are important because they represent a confirmation stage where the decision to adopt an innovation is either reinforced or reversed (Rogers, 2003). If the first attempt fails, there will be less interest in future attempts.

Encouraging innovation within an institution requires an appropriate leadership style which develops a culture of participation in the process. Buller (2014) noted that a culture of innovation is required to promote change in higher education. McCarthy (2009) suggested that an important success factor for the ability to change the institutional culture was if the president and other top administrative officials were fully engaged with communicating the message.

Specific to Vietnam, Nguyen, Cornish, and Minichiello (2014) surveyed administrative leaders and academic staff in Vietnamese higher education institutions to learn more about their perceptions of leadership and management. Their results pointed to the need to improve management and decision-making skills with a greater focus on proactive leadership. They further discussed the need to shift the institutional culture from a historically authoritarian hierarchical system to a structure based more on distributed leadership that is reciprocal in nature (Nguyen et al., 2014).
Summary

This chapter discussed the economic growth and strides in education reform for Vietnam during the past 30 years. Despite pronouncements in support of online technologies, the adoption of online education has been slow. A better understanding of the barriers to the adoption of online education was needed as a foundation for faculty and administrators in deciding to use online courses to a greater degree. The purpose of this case study was to determine what barriers were perceived as important by faculty and administrators in deciding to use online courses to a greater degree within the VNU-HCM system.

Following Rogers’ (2003) theories of the barriers to the adoption of innovations, this qualitative study involved interviews of 26 administrators and faculty from the six branch universities under the VNU-HCM umbrella to obtain their views on whether or not Rogers’ (2003) barriers exist and in what form these barriers were perceived. Rogers’ (2003) five key factors related to the adoption of innovations are: relative advantage, compatibility, complexity, trialability, and observability. Results of this study might benefit teachers and administrators in planning, implementing and managing online programs more effectively by providing a plan for overcoming the most important perceived barriers to online education. This chapter also established a baseline for interpreting the results by providing definitions of relevant terms, as well as a discussion of assumptions, delimitations and limitations. Lastly, the important role of leadership was introduced within the context of implementing innovations in higher education.

Chapter Two presents an analysis of literature relevant to online education in Vietnam. Topics include the attributes of online education, research comparing traditional
face-to-face courses with online courses, the evolution of online education in the United States, and Rogers’ (2003) theories on the barriers to adoption of innovations. In addition, Chapter Two provides a brief history of higher education in Vietnam and information about the university under study. Lastly, the literature review includes discussion of leadership roles and best practices for innovation in higher education. Chapter Three introduces the research methodology and provides information about the sample size, data collection and analysis process. Chapter Four discusses the findings of the research represented as themes matching the barriers to innovation presented in Rogers’ (2003) theories. Chapter Five provides recommendations to resolve barriers to the greater use of online education at VNU-HCM. Implications for implementation of each of the recommendations are also discussed.
CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter provides an analysis of literature relevant to the study of online education in Vietnam. The first section describes the attributes of online education that may distinguish one form of distance education from another. A discussion of research comparing traditional face-to-face courses with online courses provides a basis for understanding concerns for measuring the quality of online courses. A discussion of the role of technology in the evolution of online education in the United States provides perspective on the adoption of innovations. A brief history of higher education in Vietnam is followed by background information of the university under study. As a basis for the methodology presented in Chapter Three, Rogers’ (2003) theories on the barriers to adoption of innovations were reviewed as well as several studies employing adoption of innovation concepts. A discussion of relevant best practices for managing online education innovation provides the basis for recommendations in Chapter Five. Finally, the complex roles of leadership specific to innovation in education are explored.

Defining Distance Education, Online Education, and e-Learning

The following review of literature presents the various forms and attributes of online education that have evolved from their origins in distance education. The attributes are not always mutually exclusive and the definitions provide an understanding of the range of choices among online offerings. Descriptions and comparisons of each form are provided as the basis for further discussion rather than promotion of one specific mode of learning.
As part of the U.S. Department of Education, the National Center for Education Statistics (NCES) provides a glossary of terms related to the data within their Integrated Postsecondary Education Data System (IPEDS). The glossary defined distance education as follows:

Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously.

Technologies used for instruction may include the following: Internet, one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband lines, fiber optics, satellite or wireless communication devices, audio conferencing, and video cassette, DVDs, and CD-ROMs, if the cassette, DVDs, and CD-ROMs are used in a course in conjunction with the technologies listed above (NCES, n.d.).

Schlosser and Simonson (2009) defined distance education as “institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors” (p. 4). These definitions represent a modern perception of distance education, which has its roots in the form of correspondence courses developed over a century ago (Chaloux & Miller, 2014; Moore, Dickson-Deane, & Galyen, 2011; Schlosser & Simonson, 2009).

Moller and Huett (2012) offered a classification of three generations of distance education: correspondence courses, internet-based courses, and “courses offered in the technology-enabled space” (p. 2). Development of the internet encouraged the transition
from correspondence courses by providing convenient file sharing and learning management systems. A distinguishing factor of the third generation is the application of technologies such as simulation, gaming, and modeling, which create a more interactive learning environment (Moller & Huett, 2012).

Moore, Dickson-Deane, and Galyen (2011) provided further discussion on the distinction between distance learning, e-learning, and online learning by first noting that distance education is characterized as providing access to learning to those students that cannot physically be present in a classroom. The term e-learning would imply technology is used to allow online access. The term online learning would imply a technology-based “learning experience” that goes beyond simply accessing the information online (Moore et al., 2011, p. 130).

In addition, Moore et al. (2011) differentiated online learning from learning management systems (LMS), Course Management Systems (CMS), and Knowledge Management Systems (KMS), which are focused on the management and delivery of courses rather than the specific mode of learning. This distinction is important when comparing how much online education is being used at various institutions. A U.S. Department of Education Report prepared by the National Center for Education Statistics noted “reduced in-class seat time” was a specific part of defining hybrid/blended online courses, and courses that were merely “web-enhanced” should not be included in the counts of hybrid/blended online courses (Parsad & Lewis, 2008, p. 1).

Using a percentage of online learning time or content to distinguish between types of distance learning can be helpful in defining online learning. Spector (2012) used a definition of distance learning in which computer-based technology allowed students and
instructors to be separated from each other for more than 75% of a course. In their annual reports documenting online education in the United States, Allen and Seaman (2013; 2014; 2015) made further distinctions by requesting university administrators to respond to questions using definitions based on the percentage of online content within available courses. The scale begins with a traditional course having 0% online content. A course was defined as web-facilitated if it used 1% to 29% online content that simply facilitated what was essentially a face-to-face course. A course using a learning management system or web page to provide the syllabus and assignments would be web-facilitated. A course with 30% to 79% of the content delivered online was defined as a blended or hybrid course. Using online discussions and reducing the actual amount of in-class time would be considered a blended or hybrid course. An online course was defined as providing 80% or more of the content delivered online and may have no in-class time at all (Allen & Seaman, 2013; 2014; 2015).

Going one step further in using the percentage of content to characterize online courses, Allen and Seaman (2015) defined Massive Open Online Courses (MOOCS) as providing 100% of the learning content online. However, they note MOOCs differ from typical online courses because they are often open free of charge to a very large number of participants who are not required to be registered students at the institution and do not earn credit for the course.

Another relevant attribute used to characterize online education is whether the course utilizes synchronous or asynchronous technology for group communication (Hiltz & Turoff, 2005). Hrastinski (2008) described an asynchronous online course as using e-mail, discussion boards, and file transfers to allow students and teachers to interact
without being online at the same time. A synchronous online course would use video conferencing or chat capabilities to allow live interaction between students and teachers. With an asynchronous course, students may have more time to develop their comments in a way that is more thoughtful than synchronous communication. Whereas, a synchronous course may create a more social environment and more quickly address questions or difficulties (Hrastinski, 2008).

This section has presented terminology and attributes relevant to the current discussion of online education. The following section discusses methods that are used to compare online courses with traditional in-class learning.

**Comparison Between Online and Traditional In-Class Learning**

A recent survey showed 74% of academic leaders in the United States rated learning outcomes of online classes as the same or better than traditional classes (Allen & Seaman, 2015). Guidelines shared by accrediting commissions in the United States require that online learning courses are as rigorous as courses taught using traditional learning formats (Council of Regional Accrediting Commissions (C-RAC), 2011). However, researchers have disagreed on whether online courses should be compared and measured against traditional courses by evaluating student engagement, student learning, or student satisfaction (Rabe-Hemp, Woollen, & Humiston, 2009). In addition, some research yielded results showing no significant difference between the two formats while other research raised doubts (Emerson & MacKay, 2011; Weber & Lennon, 2007). The foundation of this problem rests with agreeing on what should be measured and how.

The first question is what should be measured. One study evaluated the question of parity between online and traditional courses from three perspectives: student
engagement, learning, and satisfaction (Rabe-Hemp et al., 2009). Measuring student engagement required investigation in areas such as student participation and the amount of student-faculty contact. Measuring learning utilized education outcomes such as scores on tests and assignments. Measuring satisfaction utilized student evaluations of the class and teacher.

There are a number of variables that might affect how well a student does in a class that have nothing to do with the class. Various studies have examined the effects of age, GPA, previous experience in online courses, and other factors on how students performed or how satisfied they were with the course (Anstine, J. & Skidmore, M., 2005; Carbanaro, Dawber, & Arav, 2006; Emerson & MacKay, 2011; Weber & Lennon, 2007).

Students may self-select into an online or traditional course because they believe they will perform better in such a class or because of personal scheduling issues. In most cases it is clear that a student is signing up for either type of course. However, one study specifically had students sign up for different sections of the course without knowing that one section would use an online format (Weber & Lennon, 2007). The Weber and Lennon (2007) study found their web-based course to be equivalent to the traditional classroom environment for both learning outcomes and student satisfaction. Another study randomly assigned the students to one section or the other (Emerson & MacKay, 2011). Using questionnaires before and after the lesson, the results of the Emerson and MacKay (2011) study showed that students studying the lesson in a traditional setting performed 24% better than students who studied the lesson in an online format. This method might be the purest form of random sampling possible for such a study. If the
sample cannot be random and students self-select for various personal reasons, there are methods to make adjustments.

Most studies resolved the issues of self-selection by verifying that the two groups were not significantly different. Once the similarity of the groups was confirmed, simply demonstrating that the average course scores or student evaluations of each class were not statistically different was enough to show parity. Anstine and Skidmore (2005) described one method of sample selection adjustments in which an online course was shown to be inferior when controlling for other factors. This methodology involved a regression model with endogenous switching. The key to this method was selecting variables that would affect the choice of online or traditional but not affect class performance. In this case, the variables were: travel time to the university, if the student had children at home, and reported hours at work.

The Anstine and Skidmore (2005) methodology using a statistical switching regression model allowed comparisons between the two formats while adjusting for the non-random selection of the course format. Certain variables were likely to affect the learning outcome of the student. These included age, prior online course experience, cumulative GPA, etc. However, Anstine and Skidmore (2005) assumed distance from the university, having children at home, and hours working at a job would determine the choice of course format but not learning outcome. They concluded that some online courses achieved parity with traditional courses while others did not. For instance, an economics class showed no significant difference in test scores while the difference in a statistics class was significant. This difference was not seen from a simple comparison of the average exam scores.
A great deal of preparation needs to be in place before proper comparisons can be made between online and traditional courses. The structure of the courses should be as identical as possible and taught by the same teacher with experience in both formats. Pre-tests and pre-course surveys are needed to gather data on variables that might affect the learning outcome or the choice of format. Regression analysis can then determine if parity exists once adjustments are made for these factors.

The preceding sections have presented terminology and attributes of online education, and discussed methods that have been used to compare online courses with traditional in-class learning. The following section applies this terminology in a brief history of online education in the United States.

**Evolution of Online Education in the United States**

Over the last century and a half, distance education has developed for various reasons (Schlosser & Simonson, 2009). Providing greater access to education, especially for those students seen as non-traditional or coming from disadvantaged groups, was a primary factor. Innovation was also supported as a means to improve the quality of education in general. In addition, there had been a desire to improve cost efficiencies in providing education. The following discussion highlights how distance education in the United States evolved with the emergence of new technologies.

**Correspondence Study**

The earliest use of distance education in the United States was in the form of correspondence education dating back to the 1890s (Chaloux & Miller, 2014). Post-secondary programs were offered by The Pennsylvania State University, the University of Chicago, the University of Wisconsin, and the Chautauqua College of Liberal Arts,
BARRIERS TO ADOPTION OF ONLINE EDUCATION: VNU-HCM

(Chaloux & Miller, 2014; Schlosser & Simonson, 2009). Learning materials in the form of textbooks and written documents were later supplemented by audio recordings for teaching the blind and laboratory kits for courses in electronics (Schlosser & Simonson, 2009).

**Radio and Television**

Radio broadcast of course lectures expanded in the 1920s and many educational institutions constructed their own radio stations (Schlosser & Simonson, 2009). The first experimental television-based courses were produced at the University of Iowa, Purdue University, and Kansas State College in the 1930s (Schlosser & Simonson, 2009). The use of television allowed institutions to expand distance programs and by the early 1960s “telecourses” were used in a manner that combined recorded video lectures and traditional textbooks (Chaloux & Miller, 2014, p. 6).

**Cable, Satellite, and Optic Fiber Networks**

Coverage expanded in the 1970s as cable television entered the market. By the late 1970s satellite technologies allowed for more efficient distribution of programs through the efforts of the Public Broadcasting Service (PBS) and their Adult Learning Service (Chaloux & Miller, 2014; Schlosser & Simonson, 2009). The development of fiber-optic networks in the 1990s provided an economical application of real-time audio-visual conferencing in distance education (Schlosser & Simonson, 2009).

**Internet and Electronic Communications**

The development of the World Wide Web in the 1990s ushered in the use of online learning by creating an e-learning environment (Chaloux & Miller, 2014). The internet provided an efficient method of distributing course materials through a
BARRIERS TO ADOPTION OF ONLINE EDUCATION: VNU-HCM

worldwide network serving millions of people (Schlosser & Simonson, 2009). A report on distance education at degree-granting postsecondary institutions for the 2006-07 academic year noted that 75% of responding institutions were using asynchronous rather than synchronous communication to a “large extent” (Parsad & Lewis, 2008, p. 3). Survey data of United States post-secondary institutions provided through the National Center for Education Statistics (NCES) showed that 25.6% of the 17.7 million undergraduate students for the 2012-2013 school year were enrolled in at least one distance education course. This percentage increased to 26.5% for the 2013-2014 academic year (Kena et al., 2015).

Perceptions Today

A common perception among academic leaders was that faculty do not accept the value and legitimacy of online education (Allen & Seaman, 2015). There was also concern that students require greater self-discipline to succeed in online courses and that the retention rates for such courses were lower than for traditional classes. Acceptance of online degrees by future employers was another concern (Allen & Seaman, 2015).

Although negative faculty perceptions of online education can be seen as a barrier, not all faculty members believe that face-to-face courses are superior to online courses. The perceptions of academic leaders in the United States have been well documented in the annual reports of Allen and Seaman (2013; 2014; 2015) using responses to questionnaires from the active, degree-granting institutions of higher education that were open to the public. Based on 2,807 responses from a possible 4,891 institutions, 25.9% of academic leaders believed that learning outcomes of online courses were inferior to face-to-face courses (Allen & Seaman, 2015). However, 57.9%
of those academic leaders believed learning outcomes of online and face-to-face courses were the same and 16.3% believed online courses were better than face-to-face (Allen & Seaman, 2015). Perceptions of blended learning courses were more positive than for purely online courses. In addition, 44.6% of academic leaders shared the perception that online courses required more time and effort to teach (Allen & Seaman, 2013).

**Future Directions and Massive Open Online Courses (MOOCs)**

The future of online education will likely involve innovations in pedagogy as well as in technology. Moller and Huett (2012) predicted the next generation of distance education will focus on the processes of learning and employ motivational designs that use technology to increase human interactivity and socially connect students with each other and with instructors. Hiltz and Turoff (2005) described an evolutionary move from courses based on pedagogy that has emphasized teacher-based, face-to-face classes to online and hybrid courses based on technology that supports a collaborative and student-centered pedagogy. In addition, Hiltz and Turoff (2005) predicted that several hundred “mega-universities” would replace the vast network of local, regional, and national universities to provide courses on a global scale (p. 60). With the increased use of new pedagogies in the form of blended learning courses, “distinctions will blur between traditional learning and distance learning” (Hiltz & Turoff, 2005, p. 63).

Massive Open Online Courses (MOOCs) have been in use during the last decade, but the future of MOOCs is not clear. Allen and Seaman (2015) noted that between 2012 and 2014 the percentage of academic leaders responding that they have a MOOC had increased from 2.6% to 8%. However, it appeared that many of the academic leaders who reported they were undecided about using MOOCs in 2012 had concluded by 2014 not to
introduce a MOOC. The proportion of institutions that had concluded not to introduce a MOOC grew from 33.7% in 2012 to 46.5% in 2014 (Allen & Seaman, 2015).

The most common reasons that academic leaders cited for offering a MOOC were to increase the visibility of the institution and to experiment with innovative pedagogy (Allen & Seaman, 2015; Powell & Yuan, 2013). However, Powell and Yuan (2013) noted that finding a sustainable model for providing MOOCs was a challenge and Allen and Seaman (2015) reported that by 2014, 50.8% of the academic leaders responded to the survey saying that they do not believe MOOCs are sustainable and only 27.9% agreed that MOOCs were the best way to learn about online pedagogy. Despite the apparent dampening of enthusiasm for MOOCs, in 2014, 16.3% of the academic leaders still believed that MOOCs were sustainable and 27.9% believed MOOCs offered an important way to learn how to improve online pedagogy (Allen & Seaman, 2015). Using the theory of disruptive innovation as a basis for analysis, Powell and Yuan (2013) argued that institutions should form autonomous business units to explore new funding and business models in response to the potential for wider adoption of internet technologies. Some of the potential revenue sources for MOOCs are fees charged for certificates, assignment grading, access to social networks or discussions, and tuition for credited courses. In addition, MOOC providers could use sponsored advertising or sell student information to potential employers or advertisers (Powell & Yuan, 2013).

After discussing the evolution of online education in the United States, the following section provides a historical context of the use of online education in Vietnam.
Background of Higher Education in Vietnam

The following section provides a background of higher education in Vietnam, a description of the challenges within the current structure of higher education today, and examples of research related to online education.

Roots of Higher Education in Vietnam

The earliest forms of education in Vietnam were Confucian institutions that developed while China dominated what is now northern Vietnam from the first to tenth centuries (Goyette, 2012; Hayden & Thiep, 2010; Hayden & Le, 2013; Kính & Chí, 2008; London, 2011). The instruction in Confucianism was essential for developing a system of authority and governance. By the 11th century, the Royal College at the Temple of Literature was established under Vietnamese rule and civil administrators (mandarins) were selected through merit-based criteria and competitive exams. Various dynasties continued the use of formal examinations to recruit and regulate bureaucracies as late as 1945 (London, 2011).

French colonialism from the late 19th to early 20th century was the second major influence for education in Vietnam (Hayden & Thiep, 2010; Hayden & Le, 2013; Kính & Chí, 2008; London, 2011). Confucian-based institutions were replaced by a French-Vietnamese education system using the French language. The training was intended only for those people needed to fill administrative positions to support French colonial governance, and 95% of Vietnamese people remained illiterate (Kính & Chí, 2008).

The third major influence on education in Vietnam was the use of a soviet-inspired education system developed in the 1940s and 1950s, and committed to creating a literate population. Armed conflicts and a war-torn economy prevented the establishment

**Vietnam’s Higher Education Reform**

Vietnam’s path to improvements in their education system started in 1986 with the introduction of “Đổi Mới,” which was a set of economic reforms aimed at creating a socialist-oriented market economy. Vietnam’s Communist Party stressed the importance of reforming and expanding the higher education system to encourage economic development (Hayden & Thiep, 2010). The Ministry of Education and Training (MOET) was established in 1990 and reforms from 1996 forward were focused on a process of decentralization allowing more local discretion on education spending (London, 2011). These reforms brought significant growth while moving away from the soviet model (Hayden & Thiep, 2010). From 1992 to 2006 the number of higher education students in Vietnam grew from 162,000 to 1.54 million, which represented an increase of the gross enrollment rate from about 2% to 13% (Hayden & Thiep, 2010). From 1999-2008, the number of universities in Vietnam more than doubled from 69 to 160 (London, 2011).

Kinh and Chi (2008) noted that the reforms up to 2005 were focused on moving away from training people for public organizations and toward economic components and learning needs of the society. However, education needs were not yet fully met for industrialization, modernization and international economic integration (Kính & Chí, 2008). The Higher Education Reform Agenda (HERA) was issued as an official resolution in 2005 with the intention of setting clear goals to reform higher education. The key goals of HERA were to increase autonomy of individual institutions, increase enrollment capacity, increase quality and efficiency within the system, development of
research capabilities within universities, and to improve the governance of higher education (Kính & Chí, 2008; World Bank, 2013).

Several years after HERA and the Education Law of 2005, there were still concerns with the state of higher education and whether the intended reforms could be implemented. A Fulbright Economics Teaching Program report described the gap between Vietnam’s objectives and the policy actions that would be required to achieve them (Fulbright Economics Teaching Program (FETP), 2010). Priorities were established, but there was no clear direction on how objectives would be accomplished (Hayden & Le, 2013). Hayden and Thiep (2010) noted the need for cultural change both in the way the higher education system was managed and in relation to teaching. Hayden and Le (2013) noted that administrators within MOET and the universities were widely perceived as “inadequately trained for the roles they perform” (p.336) and that ambiguous and complex regulations increased difficulties. Other problems identified within the higher education system included an overloaded curriculum that exceeded the capacities of students, an over-reliance on exams, and the unquestioned respect for teachers, which does not encourage students to engage actively or be creative (Hayden & Le, 2013). A 2013 World Bank report described the management of Vietnam’s higher education system as “fragmented” (World Bank, 2013, p. 12). The most recent legislation was the Law on Higher Education 2012 (08/2012/QH13), which included articles intended to further establish autonomy and accountability of universities, develop quality assurance initiatives, and create a university classification and ranking system.
Online Education in Vietnam

After describing the origins of education in Vietnam and the more recent efforts at reforming the higher education system, the following section provides a description of several research efforts in exploring the adoption of online education. The first area of research involved a qualitative examination of teachers’ perceptions as well as students’ participation of an interactive web-based technology (Dang & Robertson, 2010). The study included 240 undergraduate English as a Foreign Language students and three teachers from a public university in Vietnam. The authors noted resistance to the new pedagogy that was different from the style Vietnamese teachers were traditionally and culturally familiar with, and that faculty development should consider this issue during integration. Another issue arose due to the cultural perception that teachers cannot make mistakes, and yet any online communication that was archived could be used to display an error. Lastly, the authors noted the importance of providing adequate support to faculty and making accommodations for workloads. With regard to student participation, the authors determined online tasks should be designed to require some level of student interaction. In addition, clear guidelines should be established to inform students on the timing required for acceptance of discussion posts. The authors also suggested enhancing the learning community by encouraging both online and offline connections. Lastly, the authors noted the important role of teachers’ online comments that can encourage or hinder discussions (Dang & Robertson, 2010).

Hue and Ab Jalil (2013) utilized a descriptive survey methodology to determine whether the attitudes of lecturers toward information and communication technologies (ICT) had an effect on their use of ICT in the classroom. The survey population included
109 lecturers at a public university in Vietnam and the results exhibited a slightly moderate positive relationship between the attitudes toward ICT integration into the curriculum and the teachers’ ICT use in the classroom. The authors noted that their findings on lecturers’ attitudes toward ICT integration related to Rogers’ (2003) theory of diffusion of innovations with regard to the characteristics of innovations that affect the rate of adoption.

Peeraer and Van Petegem (2010; 2012; 2015) performed three studies related to ICT integration in Vietnam. They began with an exploratory multiple regression analysis to determine what factors might be important for the integration of ICT in teaching practice. The study used a survey population of 862 teachers at five teacher education institutes, and identified ICT skills and computer confidence as determining factors for the use of ICT in the classroom (Peeraer & Van Petegem, 2010). A later study expanded on the previous findings to explore policy issues with regard to ICT in education. Their analysis of technology planning documents identified a gap between the stated policy guidelines and actual implementation (Peeraer & Van Petegem, 2012). The most recent addition to their research employed the Delphi method to explore the possible future use of ICT in education in Vietnam. The first round of the analysis obtained responses from 20 of 35 invited key players in public and private sectors as well as partners from development organizations. The second round included 26 responses and the third round included 22 responses. Although the results showed strong agreement that the goal of technology integration should be to achieve learning goals and improve learning, the group did not always agree which efforts would be most important for the transformation of education in Vietnam. Most of the key players in the discussion rounds identified
teaching pedagogy as a critical target, but other respondents identified ICT infrastructure or professional development for teachers and school leaders. Another area identified as important in changing how ICT might be used in education was research in assessment and evaluation. Lastly, some of the key players stressed the importance of a vision, as well as policies and plans at the national and local levels (Peeraer & Van Petegem, 2015).

**Background of the University Under Study**

Vietnam National University, Ho Chi Minh City (VNU-HCM) was established in 1995 by government decree in the form of eight member universities. In 2001, VNU-HCM was reorganized under a formal decision of the Prime Minister which proscribed regulations on organization and operation (VNU-HCM website).

As of 2015, there were six VNU-HCM member universities: the University of Technology, the University of Science, the University of Social Sciences and Humanities, International University, the University of Information Technology, and the University of Economics and Law. Although there are several smaller campuses in the center of Ho Chi Minh City, the main campus is located a few miles to the east in a newly emerging university city. In addition, enrollment at VNU-HCM was about 55,000, with 89 departments in the fields of technology, natural sciences, social sciences and humanities, science, economics, and health. There were 90 departments offering masters degrees with enrollment at about 9500 students, and 77 doctoral programs with enrollment of 680 students.

Based on the 2001 organizational and operational statute of VNU-HCM, administrators of VNU-HCM are under the direct authority of the government, and the president of VNU-HCM is appointed by the Prime Minister. This legal structure differs
from the general university system under the authority of MOET. Administration of VNU-HCM is divided into three levels: the VNU-HCM level, the member universities and institutions, and faculties and departments within the schools. (Ngo, Lingard, & Mitchell, 2006).

Based on a formal decision by the Prime Minister in 2014, the stated responsibilities of VNU-HCM were focused on developing a highly qualified workforce for the benefit of national socio-economic development and international integration, conducting research and developing scientific arguments to aid in formation of directions, policies, strategies and developmental plans of the country, and to bring VNU-HCM up to regional and international standards (VNU-HCM, 2015a).

The VNU-HCM 2014 Annual Report highlighted the e-learning initiative at the University of Technology that uses web-facilitated tools to manage course materials, lecture notes, quizzes, attendance, and for communications between students and faculty. Efforts to incorporate e-learning started with the part-time programs in 2008 and later expanded to the full-time programs. Adoption of the online tools was slow and temporary funds were provided to create incentive for faculty to begin using the system. By 2014, the system boasted 2,669 subjects having course content online. Administrators were hopeful that they would be able to introduce the benefits of the system to the other member universities. They were also investigating the potential use of MOOCs (VNU-HCM, 2015a).

Universities in Vietnam have historically used a national entrance examination to provide a common measurement for universities to select students. However, the system of organizing separate exams for high school graduation and university admissions was
inefficient. In addition, the results were not an accurate measurement of a student’s aptitude. In 2015, MOET issued a formal decision combining the high school graduation and university admission examinations, as well as placing a greater focus on aptitude. VNU-HCM is now able to use a shared database of exam scores for admission screening (VNU-HCM, 2015a).

Administrators of VNU-HCM have identified quality assurance (QA) as a top priority as a university with a leading position in the Vietnamese higher education system. The internal quality accreditation system is based on the process of MOET. As an external measurement, VNU-HCM utilizes a quality assessment program in association with the ASEAN University Network (AUN-QA). VNU-HCM had 16 programs that were assessed based on AUN-QA criteria. VNU-HCM also created a Center for Education Accreditation to promote the development of skill sets in higher education management, as well as quality evaluation and accreditation (VNU-HCM, 2015a).

The most recent VNU-HCM strategic plan for 2016-2020 noted accomplishments in the transition to using more self-study and encouraging the creativity and research abilities of students. However, the strategic plan also described a number of challenges relevant to this study. The nation was seeking to increase the quality of higher education with limited financial resources. The university’s management and staff would need to develop greater capabilities to adapt to change. The push to increase information technology into their management and training systems had not met expectations (VNU-HCM, 2015b).

A number of weaknesses were identified by the strategic plan. Innovation in online education had remained within several specific departments, and the mechanisms
to encourage sharing and cooperation for online initiatives were inefficient. The reward structure for administrators was ineffective and they lacked the information systems and data resources for effective management and decision making (VNU-HCM, 2015b).

Several of the broad strategies put forth in the strategic plan were relevant to the current study. There was an overall plan to improve information management and data collection throughout the system to streamline administration procedures and inform better decisions. The need for a system to track financial data was also noted. The plan also called for improving management of training for faculty and administrators including a focus on e-learning. In addition, the plan called for continued efforts to develop relationships and cooperation with local businesses and international partners (VNU-HCM, 2015b).

**Innovation Theory and Barriers**

The following review of literature relates to innovation theories that provide a deeper understanding of how online education innovations are adopted within universities. Particular attention was given to understanding the perceived barriers that limit the adoption of innovations. The analysis begins with a discussion of the theories of diffusion of innovations pioneered by Everett M. Rogers (2003) as they can be applied in an educational environment.

**Rogers’ Diffusion of innovations Theory**

Rogers (2003) defined diffusion as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (p. 5). Factors that facilitate innovation can be leveraged and barriers that are identified can then be addressed in a manner that allows the diffusion process to proceed.
Rogers (2003) outlined five key factors that influence the rate of an innovation’s adoption: relative advantage, compatibility, complexity, trialability, and observability (p. 221). Each of these factors can be used in turn to explore how they affect the adoption of online education within a university.

Rogers began his research in the field of rural sociology studying the diffusion of agricultural innovations in the 1950s. The first edition of his book was in 1962 and proposed a more general diffusion model than had been used previously. He moved out of rural sociology and into communication theory to explore diffusion of innovations and social change (Rogers, 2003). This move allowed him to develop ideas on how innovations are different as well as how they are communicated within a society.

Relative advantage referred to showing that the innovation provides greater benefit than the old way of doing things (Rogers, 2003). Understanding attitudes and perceptions of the relative advantage of online education would allow a better understanding of misperceptions or if specific unknown benefits could be highlighted.

Rogers (2003) defined compatibility as whether or not the innovation was seen as consistent with the values, past experiences, and future needs of those who might adopt that innovation. Therefore, it would be important to understand how online education fit within a specific culture and their institutions. Encouraging adoption of online education without acknowledging specific issues could lead to conflict and hinder adoption of desired new projects.

Complexity was concerned with whether or not the innovation was seen as being difficult to learn or use (Rogers, 2003). Applying complexity issues in online education
requires an understanding of why online courses might appear difficult to implement and developing strategies to overcome the barriers.

Trialability examined whether or not an innovation could easily be experimented with at a minimum cost or risk (Rogers, 2003). Innovation in online education requires identifying specific test cases that can be implemented and creating a culture that is supportive of the efforts. Understanding which forms of case studies are acceptable to administrators and faculty, or which barriers need to be overcome, would encourage the use of such trials.

Observability was concerned with whether or not the results of a trial could be seen (Rogers, 2003). The results of trial cases or current online courses should be compared to expected outcomes and then shared with colleagues within the university community. It is important to identify the process by which results are measured and shared. Attitudes and perceptions of such sharing should be reviewed to determine methods that match the current culture while moving toward a productive innovation process.

In each case, understanding the relevance of these five factors can lead to a better understanding of the adoption of online education within a university and may point to leadership goals in developing a plan for the future use of online courses.

**Applications of Rogers’ Theory**

Rogers’ (2003) diffusion of innovations theory has been used in a variety of studies regarding the adoption of technology in education environments (Medlin, 2001; Parisot, 1995; Sahin, 2006). Research has demonstrated that the five potential barriers of innovation can influence faculty members in their decision to adopt online education
(Sahin, 2006). Specific research topics often compared the level of computer use with factors such as expertise, access, attitude, support, and teacher characteristics (Isleem, 2003; Medlin, 2001). Anderson, Varnhagen, and Campbell (1998) used Rogers’ (2003) theory to examine factors that differentiated faculty identified as “earlier adopters” and “mainstream faculty” (p. 71). Their recommendations to increase the adoption of innovations included incentives, training programs, and a greater understanding of the barriers within the institution (Anderson et al., 1998).

Investigation of the barriers to innovation can be helpful to clarify issues. However, overcoming the barriers requires a strategy to address a set of interrelated factors specific to the local conditions for innovation. The process of sharing innovations can be improved by first understanding the reasons for resistance within the specific environment (Kirkland & Sutch, 2009).

Other Theories

Rogers’ (2003) theory on the diffusion of innovations was developed through the study of communication as applied to various technologies and different segments of society. Ely (1999) moved beyond communication and focused on the implementation stage to determine the conditions required for proper implementation and continuing adoption of an innovation. Important factors included having the proper skillsets, availability of time and resources, the presence of rewards or incentives, and leadership.

Surry (2002) differentiated Rogers’ (2003) general diffusion theory from instructional technology diffusion theories that were specific to education and may better examine the perceptions of potential adopters as part of an innovation strategy. Surry developed the RIPPLES model for integrating instructional technologies into higher
education. This model included attention to: “Resources, Infrastructure, People, Policies, Learning, Evaluation, and Support (Surry, 2002, p. 1).”

It would seem that understanding how ideas about innovations are communicated is as important as the unique characteristics of the innovation itself. MacVaugh and Schiavone (2010), put forth an alternative model of non-adoption in the form of a matrix that analyzes the relationships between three types of actors in adoption and three areas of focus. The first axis of the model was divided among individuals, the community, and the industry. The second axis called attention to the specific technological, social and learning conditions of the system.

The preceding discussion of innovation theory as applied to education environments highlighted the basis for the methodology in Chapter Three and recommendations in Chapter Five of this study. Rogers’ (2003) theories on the diffusion of innovations were used to investigate the perceived barriers of innovation and then to offer recommendations to improve the perception of online education to hasten the rate of adoption.

**Best Practices for Managing Online Education Innovation**

A review of best practices for managing innovation within higher education was needed to provide background before suggesting recommendations in Chapter Five. The following discussion summarizes concepts relevant to this study.

**The Need to Communicate a Clear Strategic Vision**

A strategic vision statement should specify the institution’s goals with enough detail to guide planning and budgeting (Rovai & Downey, 2010). Abel (2005) included a clear understanding by faculty of the institution’s goals as an important success factor in
implementing online learning. The demonstrated clear support by senior management of online initiatives allows the university to prioritize projects in line with strategic goals (Kenny, 2003).

In addition to prioritizing goals, clear communication of the strategic vision is needed to encourage the development of an innovative culture within the institution (Renfrew-Knight, Bryan, & Filsner, 2009). Creating a culture that encourages innovation requires effective leadership (Kirkland & Sutch, 2009). Oke, Munshi, and Walumbwa (2009) went on to describe that the design of formal systems, as well as the processes that guide developing initiatives, will determine the effectiveness of leadership. The importance of supporting online education initiatives through the policies and procedures within the university’s administration was also described by Gaytan (2009). Specific note was made of the important role played by the offices of academic affairs within any university (McCarthy, 2009).

**Financial Resources**

The importance of fiscal resource allocation was recognized as an important element of Surry’s (2002) model for integrating instructional technology into higher education. Poorly planned programs that lack adequate financial sustainability often lead to failure (Rovai & Downey, 2010).

Funding for online education initiatives should be adequate, but the requirements often vary (Gaytan, 2009). Reduced operating costs and economies of scale should be seen as only part of the overall justification for online initiatives that are intended to improve learning (Surry, 2002). Adequate resources for online education can only be
effectively allocated if there is a shared perception of the requirements (Kirkland & Sutch, 2009).

Although lack of financial resources is a barrier to innovation, one study noted that a useful target for funding would be to address the more important issue of current faculty workloads, which inhibit implementation of online education initiatives (Renfrew-Knight et al., 2009).

**Quality Assurance**

Best practices for implementing online courses include a clear focus of quality assurance (Rovai & Downey, 2010). The importance of communicating the role of academic quality in the online education strategy was noted in a benchmarking study conducted as a resource for campus leaders in the United States (McCarthy, 2009). A properly designed course should provide an active-learning experience and keep the student engaged (Cheawjindakarn, Suwannatthachote, & Theeraroungchaisri, 2013; Rovai & Downey, 2010). The metrics should measure benefits resulting from online learning implementation and determine whether students can learn effectively (Cheawjindakarn et al., 2013), as well as student satisfaction (Abel, 2005).

**Collection, Management and Sharing of Data**

McCarthy’s (2009) study found that successful programs have certain administrative functions centralized. One area of centralization should include an accountability process that documents initiatives from the proposal stage to post-implementation review, and permits this information to be shared within the organization (Kenny, 2003).
Kenny (2003) described an action research process in which a central group should set priorities and identify projects in line with the strategic goals of the organization. Once a project was approved and resources were allocated, the project team would be required to provide periodic reports during the planning, implementation and evaluation cycle.

Communication processes, as well as meeting frequency and format, should be clarified during the planning stage. A timeline should include key events and identify reporting cycles, but should still allow some flexibility. The budget should also be clearly specified (Kenny, 2003).

The sharing of experience provided through periodic and post-implementation reports should represent learning opportunities. Achievement of goals should be evaluated as well as what was learned and could be used for the next project. The administrative group should use the reported results to assess progress of the overall strategic plan (Kenny, 2003). Management of innovation implementation can also be viewed as risk management that requires managing performance by creating a process to monitor achievement of set targets (Renfrew-Knight et al., 2009).

Most innovation projects require adaptation and provide opportunities to learn during implementation. For an institution to benefit from this experience, it is necessary to facilitate the sharing of ideas. Leaders can encourage sharing by clearly supporting the use of conferences and seminars, recognition programs, and seeking outside expertise when needed. One specific recommendation to fully utilize the learning opportunities of ongoing initiatives was to use a formal evaluation process to create an evidence base on which future decisions could be made (Renfrew-Knight et al., 2009).
Creating Partnerships with Employers

The trend for creating partnerships between higher education and businesses has been described for some time (Howell, Williams, & Lindsay, 2003). Rovai and Downey (2010) noted that alliances and partnerships play an important role in successful online strategies. University administrators should determine how the partnership would help to reach the institution’s strategic goals (Rovai & Downey, 2010). The drive for creating such partnerships is often a desire to better focus on the needs of stakeholders. Future quality assurance models will require universities to consider the input from employers on course content and instructional modes (Arif, Smiley, & Kulonda, 2005).

Implementation Strategies

Various research has provided multiple lists to successful implementation of online education. Renfrew-Knight et al. (2009) discussed the need for leadership to demonstrate passionate support for a culture of innovation with shared responsibility and encouragement of risk-taking. The use of cross-discipline working teams would create additional opportunities to innovate as an institution. Gaytan (2009) recommended a framework for planning, design, implementation and assessment that included: communication within the learning community, faculty and student support, evaluation and assessment, commitment by leadership, adequate facilities and financial resources, as well as library and other learning resources. Kenny (2003) emphasized the learning potential from a regimen of reporting and reviews. Abel (2005) noted that common success factors included leadership prioritization of programs having the most impact, developing a clear timeline with milestones, and development of success measures.
Training and Technical Support

Adequate technical training and support are required to encourage the adoption of online education and to improve the teaching and learning experience. Yang (2010), noted that training on equipment and software is an important part of the general support that should be provided to students. Cheawjindakarn et al. (2013) noted that adequate technical service quality affects students’ and instructors’ satisfaction and increases the acceptance of online learning.

Specific issues regarding the need for adequate training and technical support were described in various studies (McCarthy, 2009; Rovai & Downey, 2010; Yang, 2010). Rovai and Downey (2010) noted that faculty development for online programs should allow faculty to experience an online environment as a learner and practice online discussions. Abel (2005) suggested that universities should offer one-on-one assistance for course design in addition to training that requires faculty to experience online courses from the student perspective. Support is required in the areas of web design, database management, graphic design, and instructional design. Gaytan (2009) noted that adequate faculty and student technical support should be on-going and provide support staff around-the-clock.

Reducing Resistance

Various studies suggest that once faculty understand the value of online education, they will be more likely to use it (Sahin, 2006). Allen and Seaman (2015) noted that, the more intensive the online presence is at an institution, the more likely faculty are to accept it. Creating a shared sense of responsibility for innovation can minimize resistance. Institutions can inspire managers to innovate by communicating
why change is necessary and encouraging their involvement in developing solutions (Renfrew-Knight et al., 2009).

In addition, faculty development programs should provide an understanding of new technologies and new pedagogies with the intention of encouraging a positive perception of the innovation. It is important to understand the perceptions of potential adopters before designing a training program (Surry, 2002). Kirkland and Sutch (2009) described that success of an innovation could be influenced by a teacher’s perception of the pedagogy involved.

The preceding review of best practices in the innovation of online education provided support for the recommendations that are presented in Chapter Five.

**Leadership in Education Innovation**

Although various definitions exist, Haslam, Reicher, and Platow (2011) offered a glossary that included some of the most recent categorizations of different leadership styles:

*Authentic Leadership:* A model of leadership that argues that leaders need to be true to themselves and to the realities that they and their followers confront. Amongst other things, this means that a leader’s rhetoric must match his or her actions, be meaningful rather than superficial, and correspond to social and organizational reality.

*Distributed Leadership:* A model of leadership that recognizes that multiple group members (not just leaders) play—and need to play—a role in helping groups achieve their goals.
**Ethical Leadership:** A model of leadership that argues that leaders need to focus not only on ensuring that groups are effective but also on orienting groups toward goals that are socially responsible and moral.

**Identity Leadership:** A model of leadership that argues that leaders’ primary function is to represent, manage and promote a sense of shared social identity that underpins a group’s existence and purpose.

**Inclusive Leadership:** A model of leadership that argues that leaders need to build positive relationships with their followers and ensure that all group members are encouraged to participate in group activities that bear upon the leadership process (e.g., strategy development, governance, goal-setting).

**Servant Leadership:** A model of leadership that argues that leaders need to serve the interests of their followers (rather than the other way around).

**Transactional Leadership:** Leadership that is based on satisfactory exchange of resources between leaders and followers. This approach assumes that successful leadership is contingent upon satisfaction of the mutual needs of leaders and followers.

**Transformational Leadership:** Leadership that is based on a capacity to develop and promote values and goals that are shared by both leaders and followers. This approach assumes that successful leadership derives from a leader’s ability to encourage followers to rise above low-level transactional considerations and instead pursue a higher-order sense of morality and purpose (Haslam et al., 2011, glossary).
Haslam et al. (2011) explored the psychology of leadership as part of a relationship between leaders and followers. Their viewpoint was that a theory of leadership should include an understanding of the contextual situation, as well as an analysis of the interaction between leaders and followers. A leader cannot lead without followers, and the positive or negative view of a leader’s effectiveness is based on the perception of individual followers. In addition, understanding the role of power and transformational considerations is important to explain the effectiveness of varying leadership styles (Haslam et al., 2011).

Oke et al. (2009) provided a contextual interpretation of which forms of leadership may be more appropriate as a part of innovation. They noted that a transformational leadership style should be used as part of creative innovation activities, whereas a transactional leadership style should be used during implementation of innovations. In addition, transformational leadership is more useful for innovation requiring an exploratory perspective, while transactional leadership is better for innovation activities intended to exploit innovations that are already understood. They further suggested that the correct balance of transformational and transactional leadership is required for successful innovation within an organization (Oke et al., 2009).

Johnson (2012) placed a focus on ethical leadership by encouraging leadership styles that are transformational, authentic, or servant-based. Burke (2011) discussed specific leadership roles during the various stages of change within an organization. As an example, leaders should establish the need for change and provide a clear vision during prelaunch. During the launch itself, the leader should focus on communicating the need for change and dealing with resistance (Burke, 2011).
Moving from the general to the specific, research has provided insight of leadership regarding innovation within the environment of higher education. Jones, Lefoe, Harvey, and Ryland (2012) suggested that a more distributed and collaborative leadership style was required in the higher education sector to accommodate the “highly specialized and professional context” (p. 74). They further recommended a collaboration among academics, executives and professional staff which recognizes the contributions of both formal leaders and informal experts (Jones et al., 2012).

The role of leadership in creating a culture of innovation was noted in several studies (Kirkland & Sutch, 2009; McCarthy, 2009). Kirkland and Sutch (2009) stressed that distributed leadership enables staff and creates a shared responsibility for innovation. McCarthy (2009) suggested that an important success factor for the ability to change the institutional culture was if the president and other top administrative officials were fully engaged with communicating the message. Buller (2014) noted that a culture of innovation is required to promote change in higher education. Leaders must be committed to create an environment that encourages and rewards new ideas from all areas within the institution (Buller, 2014). Renfrew-Knight et al. (2009) pointed out that although the right kind of manager is needed to develop a culture of innovation, the leaders that were most successful in encouraging innovation were not necessarily “extraordinary” individuals (p. 9). Rather, characteristics of successful innovation leaders included a participative management style, committed leadership, a demonstrated passion and support for innovation, and communication of a shared vision (Renfrew-Knight et al., 2009).
Specific to Vietnam, Nguyen, Cornish, and Minichiello (2014) surveyed administrative leaders and academic staff in Vietnamese higher education institutions to learn more about their perceptions of leadership and management. Their results pointed to the need to improve management and decision-making skills with a greater focus on proactive leadership. They further discussed the need to shift the institutional culture from a historically authoritarian hierarchical system to a structure based more on distributed leadership that is reciprocal in nature (Nguyen et al., 2014).

The preceding review of literature points to several topics of concern for innovation in the higher education arena. Encouraging innovation within an institution requires an appropriate leadership style that develops a culture of participation in the process. Selection of the leadership style should be based on the specific context of the institution.

**Summary**

The term online learning can have different meanings for different people. The preceding topics were used to orient discussion for the following chapters. The methodology in Chapter Three was based on Rogers’ (2003) theories on the barriers to adoption of innovations. Analysis of the interviews in Chapter Four used Rogers’ (2003) barriers to group interview responses into themes. Finally, the leadership roles and recommendations in Chapter Five are supported by many of the best practices identified in this literature review.
CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this case study was to determine what barriers were perceived as important by faculty and administrators in deciding to use online courses to a greater degree within the Vietnam National University – Ho Chi Minh City (VNU-HCM) system. This information provided a foundation for developing policies and procedures to approve, develop, and introduce new forms of online education at VNU-HCM.

The potential advantages of online education include access for non-traditional students, as well as greater flexibility and innovative teaching methods for students and faculty (Peeraer & Van Petegem, 2010; 2012; 2015). Increasing the use of technology in education has been on Vietnam’s national reform agenda since the early 2000s as a method to improve both the pedagogy and management of education. Despite the apparent government endorsement of online education, adoption of information and communication technology (ICT) in education has remained slow. Peeraer and Van Petegem (2015) noted that Vietnamese teachers were using ICT to move traditional teaching methods to an online format without changing the pedagogy. A study by Hue and Ab Jalil (2013) investigating the use of ICT in higher education in Vietnam noted that lecturers often do not use ICT in their courses despite recognizing the potential benefits. Hue and Ab Jalil (2013) further suggested that their findings regarding the relationship between attitudes of lecturers and slow adoption rates were compatible with Rogers’ (2003) theory of diffusion of innovations. Rogers (2003) defined diffusion as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (p. 5). Rogers (2003) outlined five key factors...
that influence the rate of an innovation’s adoption: relative advantage, compatibility, complexity, trialability, and observability (p. 221).

By understanding the barriers to the adoption of online education, faculty and administrators can plan and manage implementation of online programs more effectively. This study was important because leaders need to decide which programs should be accepted and approved for online delivery. Leaders need to know whether technical requirements, compatibility with institutional culture, or some other aspects are most important in administrators’ decision-making. Leaders need to understand the importance of testing or piloting programs to demonstrate their effectiveness. Without such an understanding, administrators may waste time on issues that are not as important, and completely miss those issues that could eventually destroy a program.

The audience for this topic starts with administrators and faculty in Vietnam who might be encouraged to consider using online courses. Students may benefit from the information by gaining confidence in the new method of learning. Foreign universities that plan to provide online courses in Vietnam should be able to use the results to plan for an entry of their programs.

The overarching question for the current case study was: What factors are important in the adoption of online education as an innovation in the VNU-HCM system? In other words: What factors would allow the use of online education to become more widespread? Following Rogers’ (2003) theories of the barriers to the adoption of innovations, key questions that were used to clarify this issue included:

1. Relative Advantage: What advantages exist to using online education at VNU-HCM? What advantages exist to avoiding the use of online education?
2. Compatibility: In what ways are online courses seen as being incompatible with the institution? What cultural aspects would not work well with online courses? What technological aspects would not work well with online courses? What administrative aspects would not work well with online courses?

3. Complexity: Do students, faculty and administrators believe they have the necessary skills to make the best use of online education tools? What specific parts of online education would be the most difficult to integrate into the current structure of the institution?

4. Trialability: What forms of online education would be the easiest to experiment with in the institution? How would a pilot program be designed? What issues might be confronted?

5. Observability: How would the results of such a pilot program be shared with colleagues? What specific aspects of the results would be the most important to share?

**Research Design**

**Design Approach**

Based on the desired topic and the existence of a defined group, the case study approach was the best type of qualitative research design. An instrumental case study has a bounded system and develops an in-depth understanding of the issues at hand (Creswell, 2013). This definition precisely described the goal of the study. Twenty-five administrators and faculty from the six branch universities under the VNU-HCM umbrella were interviewed to get their views on whether or not Rogers’ (2003) barriers exist and in what form these barriers were perceived. In addition, an administrator at
VNU-HCM’s Ho Chi Minh City headquarters was interviewed to discuss the evolving themes.

The goal of the research was to identify how important barriers were manifested. Interviews were conducted carefully to encourage responses in the participants’ own words. Participants were allowed to highlight their own perceived barriers and were then guided through Rogers’ five barriers to get their views in areas they may not have thought of on their own.

**Sample Selection and Population**

Vietnam National University – Ho Chi Minh City (VNU-HCM) is one of two national university organizations in Vietnam. The Ministry of Education and Training (MOET) also has universities within its system and MOET grants licenses to private universities as well. VNU-HCM is independent from MOET and is seen as a prominent and well-respected institution. This study focused on the academic programs of the six universities within the VNU-HCM system.

For this research, online education at VNU-HCM was investigated. The study provided a deeper understanding of the barriers that affect the adoption of online education at VNU-HCM as seen by faculty and administrators in 2014. Efforts were also made to obtain documented policies and procedures and other artifacts to better understand what was learned during the interviews.

VNU-HCM is an umbrella organization with six universities in the Ho Chi Minh City region as well as several institutes and centers of education. Table 1 provides a list of the universities that were investigated in this research.
A critical task of this research was selecting participants that could elucidate which factors may represent the largest barriers and give specific examples of how these factors influence the potential use of online education. A type of purposeful sampling was used for the selection process.

The overall strategy of this study was to start with two or three of the six local universities and to speak to one or two key individuals at each location. These participants were selected because of their positions of responsibility and institutional knowledge of how online courses were, or would be, approved and developed. The researcher was able to get introductions to these universities because one of the dissertation committee members was the director of an institute within the VNU-HCM system and was also a former Vice Rector at one of the universities being studied. While the researcher was asking for permission to interview at their schools, he also asked for the first two or three participants that would be involved in the decision-making process for online courses. These first participants were then asked for other contacts at their
universities. Interviews at the first few locations were helpful to clarify the interview questions before completing interviews at all six universities.

While seeking additional contacts within one university, attempts were made to identify individuals (faculty and administrators) that had specific positive or negative opinions of online education to learn why they believe online education was not growing more quickly. Finding such outliers was an accepted case sampling method that allowed comparison of extremes (Creswell, 2013).

Theoretical sampling, as described by Merriam (2009), was used by starting with rather obvious participants based on the theory as it was understood at the beginning and then selecting new participants as the theory became clearer. This method worked well with snowball or chain sampling (Creswell, 2013) because each participant was asked for names of other people that understood or had examples of barriers to online education. Some of the later participants were selected because they had specific knowledge of current or proposed projects.

The research methodology was approved by Creighton University’s Institutional Review Board (IRB) (see Appendix A). For each university, an email introduction was provided to the Rector of the university and asked for permission to conduct interviews. A description of the research was provided in both English and Vietnamese as well as an explanation of IRB requirements. A draft letter of agreement was provided to clarify the pertinent details required in the letter allowing interviews to proceed. Rectors often delegated responsibility of getting letters signed and the introduction to potential interview candidates. Copies of the approval letters from each of the VNU-HCM universities are provided in Appendix B. Once an introduction was made, the researcher
provided the candidate with a recruitment-type letter with a specific request to participate that included a brief outline of the study as well as the IRB safeguards. Sample questions were also provided to clarify what would be asked.

The 26 interviews were carried out from 6 December 2013 to 22 March 2014 and included all six universities within the VNU-HCM system (see Table 1). There were at least two and no more than six participants interviewed at each university. Nineteen participants were male and seven were female. Twenty of the participants held PhDs, five had master’s degrees, and one had a bachelor’s degree. The average years of experience in education as an academic or administrator was 15.8 years. Twenty-four of the twenty-six participants had spent time abroad for academic purposes. Locations of this travel included Europe and North America as well as the Australia-Asia region. Job titles included five Vice Rectors, nine deans and vice deans, three directors or vice directors of academic affairs, three heads of research and project management, three heads of support departments, and four lecturers. Five of the participants had studied in an online course, 13 of the participants had taught an online course, and 15 participants had experience in planning online courses.

**Data Collection**

Interviews with faculty and staff were the primary source of data for this study. An introductory script (Appendix C) and bill of rights for research participants (Appendix D) were provided before beginning each interview to clarify IRB concerns for confidentiality and the voluntary nature of the participant. The script was translated into Vietnamese. During each interview, an interview guide was used to ensure that the participant received a copy of the introductory script and the bill rights for participants
(see Appendix E). A list of questions was used as a template for each interview, but follow up questions were often necessary to overcome translation issues and to fully develop the participants’ responses (see Appendix F). In addition, quick references were provided to define types of online courses by the amount of online content (see Appendix G) and Rogers’ (2003) five barriers to innovation (see Appendix H).

The interviews lasted for between 40 and 60 minutes and were digitally recorded and transcribed to allow further analysis. Two android devices (a phone and a tablet) were used to record and assure redundancy. An assistant was hired to assist with the recording devices and to transcribe the files. The assistant also translated as needed during the interviews.

Names of the interview participants were not used within the transcripts or file names of document and audio files. Coded numbering was used to protect the confidentiality of the participants. Only the researcher had access to the list of actual names identifying the interviews and these files will be destroyed one year after the dissertation defense. Audio files were uploaded to a password-protected folder in Dropbox to share with the assistant for transcribing, and the document files were returned to the researcher in the same manner. Once the transfer was complete, these files were removed from Dropbox to ensure confidentiality. All files were kept on a password protected laptop with an extra copy on an external drive stored at the researcher’s home.

The interview was semi-structured to allow the participant to use their own words to describe issues involved in developing new online programs. A question guide was prepared in advance to ensure covering each of the five barriers. Participants were also
asked if they could identify other interview candidates with specific knowledge, experience, or opinion on the subject of online programs at their institution.

In addition to the interviews, participants were sometimes asked for documentation regarding online courses, faculty training seminars, student enrollment figures, and regulatory or policy-related information. These artifacts allowed fact-checking and provided valuable data to develop a fuller picture of VNU-HCM’s current status and capabilities.

**Data Analysis**

Data analysis began during the interviews through active listening and exploring examples identified by the participants. Notes were taken during the interview to highlight key phrases identifying the major points of the interview.

Audio files were given to the assistant that was present during the interview and he transcribed the interviews to allow coding. The assistant agreed to delete all files in his possession once the transcription document file was returned to the researcher. For a sampling of interviews requiring translation, a second Vietnamese person was asked to listen to the audio and determine if the translation correctly represented the intentions of the researcher and the participant. This second check was able to be done anonymously because names of the participants did not need to be given in the recording.

An ongoing inventory of the data set was maintained to manage the transcripts, audio files, documents, and researcher notes on each participant and reflections during the interviews. Backup files were kept separate and in a secured location. Scans of documents were made whenever possible as a backup in case of loss. Anonymity of the
participants was maintained within the inventory by keeping an identifying list of participants in a completely separate location.

The transcriptions were reviewed as quickly as possible following each interview to determine emerging patterns and allow the following interviews to better focus on important topics. The transcripts were uploaded to NVivo 10 software (2014) to allow digital coding and analysis of themes and patterns. This process enabled the researcher to identify the online education experience and perceived barriers of the participants. Coding was used to match key statements within Rogers’ (2003) five barriers. Within each of these categories, recurring themes were identified to demonstrate in which manner that barrier was manifested. These themes were identified as subcategories within the overall barriers identified at the outset. Coding allowed the researcher to compare data among various institutions and interview participants.

Merriam (2009) noted that saturation occurs when no new information, insights or understandings are found in further interviews. It is at this point that interviews become more deductive as the researcher tests the subcategories that were created through earlier interviews. A greater number of participants were interviewed at the first three universities where interviews took place. Fewer interviews were required at the last three universities because of saturation, the researcher was able to confirm that the same themes were recurring.

The final step was to interpret the general themes into an understanding of the case. The intent was to provide detailed lessons that could be used toward creating and implementing policy in the future. By pinpointing the barriers that exist, VNU-HCM could focus on policies meant to make online education possible as well as to manage
specific issues that are critical to success. By looking directly at relative advantage, compatibility, complexity, trialability, and observability, it became evident that more attention needs to be put in certain specific areas.

**Validity and Reliability**

In a study such as this one, efforts must be made to ensure trustworthiness (Creswell, 2013). The reader must be given reasons to trust the data and analysis of the study. In this case, prolonged engagement of the researcher was established by living in Vietnam for eleven years and teaching within the VNU-HCM system for nine years. It was assumed that the researcher had a deeper understanding of the responses to interview questions than someone performing such a study without such experience. The issue of trustworthiness also led to the need to clarify researcher bias. Regardless of the duration of the engagement, the researcher still had his own views on the situation based on his own culture and also experiences at VNU-HCM.

Triangulation (Creswell, 2013) was used to be sure that opinions of those interviewed were held by more than one person and also to see that policies were correctly understood. Examining documented policies as well as having participants describe how these policies affected them in their decision-making of online programs provided increased validity of the findings of the study.

The validity of the results and methodology of this case study were improved by employing member checking (Creswell, 2013). Several participants were asked to read and comment on portions of the preliminary transcript to ensure current policies and attitudes had been correctly described. Their feedback assisted in developing a clear
picture that readers of the dissertation can trust to be a valid representation of what was happening at VNU-HCM with regard to online education.

**Researcher Bias and Assumptions**

The researcher’s biases as well as understanding of the situation were important from the beginning. The researcher’s personal opinion was that online education could be a useful tool at VNU-HCM if it was managed appropriately. Creswell (2013) defined bracketing as the suspension of the researcher’s understandings in a manner that cultivates curiosity. Before beginning the interviews, the researcher bracketed his prior experience by documenting his own opinions with regard to the research questions. The researcher also periodically held discussions with his committee chair to maintain awareness of the potential for these opinions to bias interpretation of the data.

This study focused only on universities within the VNU-HCM system in the region of Ho Chi Minh City. It involved interviewing enough people to form an understanding of this group in general. The study was not exhaustive, nor did it attempt to cover every last program that existed. Only current recurring themes in processes and attitudes were identified.

A major assumption was that some form of online education would be a positive innovation for Vietnam. In addition, the present study assumed that those interviewed answered questions honestly and with full disclosure. Finally, this study also assumed that what was learned among the universities identified could be extrapolated to other universities in Vietnam and other countries with similar cultures and states of economic development.
Translation Issues

A major obstacle during the interview process was ensuring accurate interpreting in Vietnamese and English. Although attempts were made to use a single person to assist and translate through all of the interviews, the first assistant was not available for the entire list of interviews and a second assistant was hired to complete the research. Time was spent with each assistant before interviews began to be sure they understood the concepts being investigated. The first assistant gained a deeper understanding of the context and interview strategy by assisting during the first interviews with people who were fluent in English. The second assistant gained insight by listening to several interviews conducted with the help of the first assistant. A sampling of translations was verified by allowing another Vietnamese person to listen to the audio recording and affirming that the translations were accurate. Both assistants provided signed letters of confidentiality and neither had previous ties to VNU-HCM. All requests for approvals to interview, recruitment letters, introductory scripts and questions were provided in both English and Vietnamese.

Ethics – Protection of Participants

As noted, an introductory script written in Vietnamese was provided to each participant before beginning each interview. This script clarified Institutional Review Board (IRB) concerns for confidentiality and the voluntary nature of the interview. Names of the interview participants were not used within the transcripts or file names of document and audio files. Coded numbering was used to protect the confidentiality of the participants. Only the researcher had access to the list of actual names identifying the interviews and the list will be destroyed one year after the dissertation defense. All files
were kept on a password protected laptop or an external drive stored at the researcher’s home.

Each participant was made aware of the recording devices being used and was reminded of their right to stop the interview at any point. Although the study’s participants were not members of a marginalized group, concern for the participants’ anonymity was important given the sensitive nature of politically-related issues inherent within Vietnamese institutions.

Summary

This qualitative case study began with five barriers to innovation as described by Rogers (2003) and allowed themes to emerge through the interviews. Themes within each barrier were identified to provide specific examples of barriers to the introduction of online education at VNU-HCM. Interviews began in the first universities offering the most promising information gathering and extended to other universities at VNU-HCM until saturation was achieved and all six universities were covered. Analysis was concurrent with each successive interview to focus and improve the questions and allow fact-checking and bracketing. Anonymity was maintained through careful use of coded references to the interview participants. A file system and data coding method was implemented to allow analysis of information gathered through the interviews. Document artifacts provided context and fact-checking of themes identified by the interviews. The results of the analysis took the form of detailed themes that could be used toward creating and implementing policy in the future. Examples of barriers to online education were provided from the perspective of the leaders and decision makers who would actually be part of implementing online education programs in the future.
CHAPTER FOUR: FINDINGS

Introduction

The purpose of this case study was to determine what barriers were perceived as important by faculty and administrators in deciding to use online courses to a greater degree within the Vietnam National University – Ho Chi Minh City (VNU-HCM) system. This information provided a foundation for developing policies and procedures to approve, develop, and introduce new forms of online education at VNU-HCM.

Before encouraging the use of more online courses, it was important to understand the many reasons for the limited use of online education in Vietnam. By understanding barriers to the adoption of online education, faculty and administrators can plan and manage implementation of online programs more effectively.

Restatement of Research Questions. The overarching question for the current case study was: What factors are important in the adoption of online education as an innovation in the VNU-HCM system? In other words: What factors would allow the use of online education to become more widespread? Following Rogers’ (2003) theories of the barriers to the adoption of innovations, key questions that were used to clarify this issue included:

1. Relative Advantage: What advantages exist to using online education at VNU-HCM? What advantages exist to avoiding the use of online education?

2. Compatibility: In what ways are online courses seen as being incompatible with the institution? What cultural aspects would not work well with online courses? What technological aspects would not work well with
online courses? What administrative aspects would not work well with online courses?

3. Complexity: Do students, faculty and administrators believe they have the necessary skills to make the best use of online education tools? What specific parts of online education would be the most difficult to integrate into the current structure of the institution?

4. Trialability: What forms of online education would be the easiest to experiment with in the institution? How would a pilot program be designed? What issues might be confronted?

5. Observability: How would the results of such a pilot program be shared with colleagues? What specific aspects of the results would be the most important to share?

Findings from the research were developed using coding in NVivo and then categorized within Rogers’ (2003) barriers to innovation.

**Research Question One: Relative Advantage**

Relative advantage refers to showing that the innovation provides greater benefit than the old way of doing things (Rogers, 2003). Participants identified two advantages to using more online education and seven barriers where the advantages were not perceived to outweigh the disadvantages.

**Advantage 1A: Perception that online education provides access for non-traditional students**

Online degree programs were seen as providing access to education for non-traditional students. Non-traditional could mean older students or those whose family
condition does not permit them to leave their hometown to attend a full-time degree program. “For part-time students, it is different because they have different needs. They want to keep the balance between working and learning. That is the reason why they want to acquire learning through online” (Participant #19). Non-traditional also meant those students who did not pass the national exam and were required to find an alternative university.

**Advantage 1B: Perception that online education provides students with a low cost alternative to leaving their home town**

Online degree programs were clearly seen as providing a lower cost alternative for students. Although tuition prices may not be different, the cost of traveling and living away from home was seen as a real consideration for students. “Even the cost for learning, the food, transportation and accommodation. I think if we study at [our university], the cost is quite significant, even greater than the tuition fee. So I think it is beneficial for online education” (Participant #12).

**Barrier 1A: Perception by the general public that online education does not have the quality required to secure good careers**

The strong reputation of VNU-HCM in Vietnam is supported by its fifth-place ranking in the most recent Ranking Web of Universities (Aguillo, 2016). However, four participants believed most Vietnamese were unsure of the future job opportunities for students graduating from lesser universities and had even less confidence in universities using online courses. “Do we have any statistics on the employability of the students when they graduate from the school? What are the employability ratings of the students?
What are [the employers] comments… regarding the quality of the students who graduate from the courses” (Participant #19)?

Participants said trust in the quality of online courses would require acceptance by employers in hiring graduates from such programs. Participant #03 noted, “The program needs to prove itself. If you provide the good quality and then the people that took that course get a good job after they graduate, then it will increase and build the trust from society.”

**Barrier 1B: Perception that online education has poor teacher-student interaction**

Many participants clearly understood online techniques to increase interaction between students and teachers. They were also aware of the tools for monitoring activity. However, within the same university, participants differed in their concern for the level of interaction.

In one university, Participant #02 said, “Yes, it increases the engagement between students and lecturers...students and lecturers can have more time.” Participant #16 noted, “for the online course, the relationship between students and teachers may be less compared to the offline or traditional class. This [example] may be one kind of challenge… Especially in a lot of universities here, they take advantage of relationship.”

In another university, Participant #22 said, “the lecturer and the students can contact very easily. For example, for myself, every day I spend so much time on the [system] if I am free. That means the students can contact me anytime.” However, Participant #15 believed that “the communication between the teachers and students is more difficult. For example, there are questions that are easier to discuss face to
face...The biggest negative is that I do not know if the students understand the issue that I am talking about.”

And in a third university, Participant #24 said, “The benefit [of online] is that we can monitor and assess the learner better. For example, when we give a test to the students, we know who does it and who does not… And we can better assess the students, monitor to see if they follow our requirements.” While Participant #01 said, “for the pure online method, I am afraid there will be a lack of interaction between the teacher and students.”

**Barrier 1C: Perception that online education does not fit with Vietnamese cultural preferences for face-to-face learning**

From a cultural perspective, six participants perceived online education as Western and impersonal and not fitting with Vietnamese society. Participant #05 noted, “the perception of the majority people of Vietnam has been influenced a long time ago from Chinese culture. It is like they require having face-to-face or direct communication with lectures and receiving instruction from lecturers.” However, seven of the participants expressed a positive side to opening new opportunities to learn and get an education. While Participant #24 had the opinion that “Vietnamese people will easily accept new things…A[s seen in one] thousand years of Vietnamese culture….Especially if they see it as beneficial, useful, interesting.” One participant stressed that the influence also has to do with ideology:

Because actually we belong to socialism and we are socialist country, and of course we have the culture of a socialist country. We are a little bit different from the outside world and the students do not have the chance and opportunity to go
out to deal with different people from outside and get in touch with different ideologies. So through the courses they can gain it and know about the world (Participant #21).

One participant challenged the notion that Vietnamese culture required face-to-face lectures with the idea that it is simply a matter of how students were taught in high school.

In Vietnam, high school students learn one way from the teacher. The teacher comes and says many things and they learn in a very inactive way. They just listen from the teacher. Now when the high school students graduate and move to the university, they keep the old learning style of being very passive and dependent on the teacher. The teacher at that time is just like the king in the class. I think that is the constraint (Participant #02).

**Barrier 1D: Perception that online courses are used only by inferior schools in the distance education system**

Seven participants noted that within Vietnam there were negative stereotypes against online degree programs because they were associated with being part of the distance education system, which was viewed as inferior to the mainstream university system. Participant #16 explained that some of the first online providers “did not do it well. So now they talk about the online program just like distance learning. They do not think it is a quality program or that is a good program.”

One participant noted the negative views of online education may in part be reinforced by the reluctance of the Ministry of Education and Training (MOET) to validate or accept foreign degrees that were obtained through an online format.
Participant #05 said that the MOET “may not accept the degree that has [used] e-learning… If the degree has been earned through online education, there are review and quality checks from MOET, so it creates a wrong perception toward the online education.”

Two participants were reluctant to add online content to mainstream programs for fear that it could damage the university’s reputation for quality. Participant #07 said, “it can have a negative impact on our image. We are a research-oriented institution, but online is only for teaching—and actually popular teaching, not high-end teaching.”

**Barrier 1E: Perception by faculty and administrators that benefits will not outweigh the costs especially in light of low tuition rates in Vietnam**

Two participants displayed confidence that investments in online education would be beneficial in the long run. These benefits would come from automating much of the education management system and achieving economies of scale in delivering courses. Participant #03 stated, “In my opinion, and I have nothing proved yet...I believe that the cost vs the benefit is very small. I mean that if we invest a small amount for online courses we get a big benefit. It is not a technical issue now, but it is an opinion.”

Other participants were less convinced that such investments would provide enough of a return.

You conduct the online courses for what? For money saving or a human gap? If it is for money saving, you have to consider whether it is saved or not. Because now we pay for the teacher to directly teach, it is not much. So if we conduct online courses, we have to pay much more because of internet equipment, IT technicians
and many other things. So in terms of money saving, I think I do not see [it happening]” (Participant #25).

One factor that might limit benefits exceeding costs was the general cost structure of such technology in the international market while Vietnam must base tuition revenue expectations on the local economy. Tuition rates are simply too low to recover the costs. Participant #05 said, “especially for public schools, they are receiving a low tuition fee from students. It is very challenging.”

Two participants said much of the early investment was in smaller pilot programs that were not scalable. There was also concern that additional costs would develop for unexpected improvements to the system. Participant #05 noted, “another thing is also related to additional costs...Sometimes they need to build up some add-on tools for the software and they cost more.”

**Barrier 1F: Perception by faculty and administrators that online content should be used only to augment traditional teaching methods rather than transitioning to a new pedagogy**

Fifteen participants were quite reluctant to push their courses to a 100% online experience. Web-facilitated functions were clearly seen as assisting faculty in organizing course content and the syllabus, but the notion of adding more online content presented difficulties. Blended or hybrid learning was perceived as providing students with content and resources that supplemented, but did not replace, the traditional face-to-face lecture. Participant #02 said “I will not use a purely e-learning or electronic learning. I favor blended learning and I want to use e-learning like an additional tool. I do not use e-learning to replace the traditional.”
Five participants said these resources were often viewed by students and faculty as optional and requiring more time in the students' already busy schedule. This viewpoint of augmenting traditional teaching methods with online content may have minimized the perceived value of incorporating such content.

Online is something as supporting role, not about the replacing role… The time for the students to come to the University is nearly the whole day or whole week. So the time to use online is very limited. Every semester [students] have around five courses—five sections in lecturers and five sections for lab. So the students come up five days from the morning to the afternoon for a whole week...Where is the time for online” Participant #06)?

Another example of a preference to augment traditional teaching was the perception that greater content often included video of lectures rather than incorporating a new pedagogy of reading and online discussion. Participant #14 described using a combination of online and offline by saying “the professor can record some lectures, and students can watch it at home, and after that they can come to class to discuss with the professor.”

A bias toward traditional teaching methodology was also seen in the preference of synchronous over asynchronous discussion. Participant #06 said, “asynchronous [discussion], it is a little bit too few of [sic] interaction. So we do not prefer it. With synchronous activity, the students can ask a question immediately instead of sending an email or message to wait for the next day to return.”
Barrier 1G: Faculty’s lack of knowledge or experience with the tools that can be used in online courses allows perception that only traditional methods are appropriate

Those participants that supported greater use of online education believed that faculty who were reluctant to use it did not fully understand the potential tools available in teaching an online course.

[Many teachers] think that an online course is something that you put on television or radio and you listen and you do it—you believe that is not enough interaction between the student and the lecturer. On the other hand, the people that have seen an interactive online course in which the student has forums to put questions—and there is two-way interaction—and they have a totally different point of view (Participant #03).

Four participants said it would take some effort to change the perception of those who have had no exposure to a well-designed interactive online course experience. Participant #01 said in order “to change the perception, we have to clarify the benefits brought by the project. Participant #10 noted:

The lecturers still do not recognize how important online learning is and how it can support our students…. [And for] the development of the university. Before we can talk about the money and infrastructure, etc. we have to somehow help them to recognize that. And of course in order to understand that they have to try some experience like me… Try the Kahn Academy, try Coursera.
Research Question Two: Compatibility

Rogers (2003) defined compatibility as whether the innovation is seen as consistent with the values, past experiences, and future needs of those who might adopt that innovation. Participants overall expressed few concerns in one area of compatibility, but identified twelve barriers where using more online education would not match well with the current environment at VNU-HCM.

Advantage: There was little concern that online education will harm the traditional relationship between teachers and students

Participant #08 summarized the Vietnamese traditional relationship between students and teachers by noting “we have a very famous saying in Vietnam that even if we learn only half of a character from someone, they are already our teacher, and teachers are parents.” Eleven participants did not believe this relationship would be affected more than it already was by modernization. Participant #01 said, “regarding the decreasing roles of the teacher in society—meaning people used to pay much respect, today they only view it as a profession—it is simply a trend in time. I think online education will not affect this [trend].” Participant #25 said:

It is quite different from 10 years ago. The students now have much influence from the Western style. They become more confident and independent, and they are just still afraid a little bit when challenging the teacher but they already start. In my generation, I never challenged my teacher. What the teacher says is right, but now the students start to challenge the teacher.
Barrier 2A: Internet bandwidth is often only good enough for small scale online initiatives

Participant #04 represented some participants’ confidence in the speed of the internet by saying “the school can manage the current system to adapt to the requirements of online education.” However, others clearly saw internet speed as an issue. Three participants said the system could manage only a limited number of students, but as the number of students taking online classes increased they would need to invest in increasing bandwidth.

Just for the current level of using the internet and online education, the current bandwidth may be enough. But with the development in number of users using online education system, maybe there is a requirement on improving the bandwidth of the internet to support them (Participant #09).

Part of the perceived need for bandwidth was for streaming video feeds. Participant #11 compared the internet speed in Korea with that in Vietnam and said “if you watch a video, in Korea, it is very smooth. In Vietnam it is not, so it is very distracting for the students to watch the video.”

Barrier 2B: More technology infrastructure is needed along with the support staff to maintain the systems

Twelve participants said more technology infrastructure was needed. Although some schools were managing their current programs, they would need more in order to grow. Participant #18 said, “the first step you have to look at [is] the technical advancement. Do you have enough machines and equipment and in what form you use the online?” Those participants who felt they had enough machines still noted they
required additional software. Participant #24 said, “The technology is fairly good here…The school has invested a lot. The only thing is that the school does not yet have software.”

While the technology-based universities were managing for the time-being, the non-technical university sisters were relying on expertise from the other schools and would require more technical support. Participant #21 noted they were “connected closely with [our sister university] so for the maintenance issue we can ask for support from the expert.” Participant #03 admitted, “we still do not have much experience with technical programs. We know there is going to be problem with the infrastructure, but we do not know how much.”

**Barrier 2C: Leadership support for moving to greater online content beginning with addressing issues of faculty workloads and compensation**

The idea of using a fully online format in courses within the mainstream programs was still not of much interest for most participants. However, four participants said even moving to a greater use of web-facilitated or blended-learning courses would require clear support from leadership. Participant #25 noted, “if you want to push the web-facilitated for every class, I think we can do it. [It only requires that] the Director needs to pay more attention.”

Some of the major barriers identified were the currently heavy workload of faculty matched with a low compensation structure. Participants said faculty do not have a desire to work harder without more compensation.

The main challenge is the problem of overworking with our staff. To develop something like that, it would cost a lot of effort and time, and we are busy
already. Yes, it is a good idea, but at the end of the day, we do not have a good policy to support our staff. If we are going to develop something new, we have to get rid of the responsibilities that we currently have. We cannot be three in one (Participant #08).

The difficulty for the instructors is they are all currently busy… We must first do it on a small scale… Once we have already chosen the faculty, we can implement a supporting policy. For example, for those who teach with e-learning, we can increase their compensation and reduce their responsibility during the first stage, to encourage them to participate. Once the perception of the instructors has changed, we can then broadly replicate it (Participant #01).

**Barrier 2D: Many administrators need more knowledge on actual costs of properly configured online education systems to avoid attempts to “go cheap”**

Although some participants believed experience abroad had provided administrators with a good technical understanding of online education, others showed concern that this exposure was not enough. [Administrators] “know generally but not the very specific. The market for online learning is very wide and complex and nobody tells everything to general management” (Participant #06).

The technical skills and knowledge of the administration… is not enough. It posed a lot of challenges for the department to develop an e-learning system. A majority of the members of the committees, they do not have knowledge on IT or e-learning systems. That is why it is harder for them to make one of the choices (Participant #05).
Four participants said administrators may be biased by a belief that online systems can be done inexpensively. This bias made seeking approval of new online initiatives more difficult because administrators were unwilling to finance properly robust systems.

There are two things to consider. First, they need to recognize the roles and advantages of an online program. And the second thing is they need to assess to pay or invest. Actually they think online [should be] very cheap to deploy the program. And I think they may not be willing to invest [enough] for the system… If their perception is that it [should be] quite easy to start, that makes it easy for them to make a decision. But… if you want to deliver a good program, it is not cheap. If they realize that if they need the high-tech, they need to invest. It will be easier (Participant #16).

**Barrier 2E: Faculty perception that using online education will increase their already heavy workloads while providing no improvements in salary or compensation**

Although most participants understood the positive benefits of using online learning, a major barrier was the belief that such a move would unnecessarily increase their workloads while providing little in the form of increased salary or other benefits.

[Faculty members have] all the skills to do it but they do not prefer to do it...With online, they will have extra workload and they will not be paid better for that...They will work harder and longer, but the payment is the same—why (Participant #06)?

If you keep the same way that you are doing, nobody will complain about you. You just teach as you are usually teaching with 280 hours per year, and one article
in a Vietnamese journal. It is fine. Nobody talks to you anymore. So why do you have to do the new thing (Participant #25)?

The reluctance to make the switch from traditional methods was often more pronounced when the participant’s background was non-technical. Participant #05 said, “our school here is not a technology school as well...So the lecturers in here get used to the traditional method and it is hard for them to open up for a new kind of teaching.”

**Barrier 2Fa: Unclear/Conflicting Policy: Differing opinions on how much autonomy VNU-HCM has vs MOET**

MOET has created rules and regulations pertaining to higher education and distance education (MOET Decision 40/2003/QD-BGDDT, 2003), and the National Assembly has enacted laws on education such as the Law on Education 2005 (Law No: 38/2005/QH11, 2005) and the Law on Higher Education 2012 (Law No: 08/2012/QH13, 2012). However, VNU-HCM also operates under decisions and decrees that are specific to the national university system (Decision 16/2001/QD-TTg, 2001; Decree 16/CP, 1995; Decree 186/2013/ND-CP, 2013). Participants said VNU-HCM must abide by the regulations established by MOET, but should be able to determine their own path within these parameters. Some participants occasionally differed in their opinions on how much autonomy VNU-HCM actually had in relation to MOET. Participant #03 said, “we have enough authority in VNU-HCM...Yes, they give the frame work and then we just do our way within that framework. But the framework is very broad.” However, Participant #08 noted:

In theory, VNU-HCM is independent from MOET, but in fact it is not. VNU-HCM makes the final decision, but that final decision must comply with the
regulation set by MOET. They have some sort of independence when they make the decision given that they are not going to violate the regulation set by MOET.

Some participants said new initiatives in online learning may be hampered by misunderstandings of the approval process. Participant #11 explained they must follow “a framework that has been established by MOET. If we want to do something differently, we need to ask for permission. Some of the proposals may be harder for them to get approved.” Participant #12 described a network of heads of Offices of Academic Administration within VNU-HCM:

For online, if we have something that is totally new to our system, at that time we just ask for opinions from other people like “hey, in your university, have you ever tried this? [Does it] violate the regulation of VNU-HCM or MOET?

**Barrier 2Fb: Unclear/Conflicting Policy: Current interpretation of online education policy is often based on rules for distance education while use of online education within the mainstream universities is not specified**

Nine participants said the overall policy pertaining to online education was unclear. They explained that most faculty and administrators believed online education had to do with distance education, which had its own set of rules to address non-traditional students. Seven participants believed that adding online content to mainstream programs was not specifically addressed and the current interpretation of the regulations limited the amount of online content permitted within a course. Several examples were provided:

[An administrator] said that the minister requires to have a focus study of 70% of the whole content. The definition of focus or concentration study is not clear.
Whether or not the teacher can teach online and the student could gather at another place and still watch the lecturing online. Is it defined as 70% focused study (Participant #04)?

For the four-year students studying part-time, it is not about the barrier of technology. It is more on the decision of MOET regarding to 30% of their courses that the students need to have discussion of the lecturers either face to face or online. [There is also a] requirement of MOET… for full-time students to study face-to-face. That is why the school must comply to the requirements of MOET on providing that (Participant #19).

**Barrier 2Fc: Unclear/Conflicting Policy: Quota system on number of degrees permitted may limit ability to achieve economies of scale in online education infrastructure investments**

Two of the participants noted a quota system that limited the number of degrees any university could confer and which may limit potential economies of scale from new online programs. Participant #12 described the policy:

Right now the quota for the number of students that we train is still limited and controlled by the Minister… We do have conferences and meetings with the Board of Directors of VNU-HCM and we work out the quota boards for the university members… I think if there are any new rules or regulations, we still have to ask permission from MOET and the Minister.
**Barrier 2G: Historic low quality perception of online education as used by part-time distance learning programs.** “If it is online, it must be part-time,” “If it is part-time, it must be low quality,” therefore “If it is online, it must be low quality”

Two participants noted a distance education system had existed for many years and was regulated by MOET under a separate process from mainstream university programs. The participants said these programs were designed for those students that could not attend university far from their homes as well as for those students that did not pass the national exam. Participants said admittance to mainstream universities was competitive and had required a high score on the national exam. Although national exam requirements have shifted to other measures, public perceptions of quality were rooted in the original national exam system. Participants said these two systems were often differentiated by the terms part-time (distance) vs full-time (mainstream).

Participant #12 described the earliest version of the distance education system:

At the time, the lecture was delivered through radio and television. Students who register for the distance teaching are the ones living in the areas so they could not get access into the school. But when they have to take the exam, they have to go to the testing centers.

Participant #19 explained:

In Vietnam, we have a national entrance exam for study. All official students need to pass the exam to study full-time in school. But for the online courses, there is just the requirement on reviewing their past performance of high-school, there is no need to take any exam.
Three participants said online components were added to distance learning programs quite readily, while mainstream programs had mostly avoided them. Several mainstream universities did offer part-time programs under the distance education regulations, but these were segregated from their full-time programs. Full-time students had passed the national exam, while part-time students had not. The full-time and part-time programs shared no classes even if the curricula were often the same. The transcripts and physical diplomas that were conferred clearly noted the part-time status of the student.

[Full-time students] all passed [the national exam] with high scores. For part-time students they might not pass that. Those are the ones who enroll in the program specific for them… [Undergraduates] get a different diploma. The same diploma but written full-time or part time or online (Participant #17).

Participant #10 said they had web-facilitated courses for the mainstream students and described their online program as:

…totally for the students that did not pass the national exam. But the two are isolated. The content that we provide for students that did not pass the national exam is a little bit different from the content that we provide for our full-time students. So actually there is no intersection between the two programs.

Three participants said their full-time programs used primarily traditional face-to-face teaching and were beginning to implement web-facilitated techniques. Participant #14 said, “actually in the program for mainstream students, we do not apply much online technology here.” Participant #16 explained, “I do not think the full-time students… will
be interested in the [online] program and they will still go to class because they think this [method] is the most effective way for communication.”

Three participants said the reputation of online courses in Vietnam had been intertwined with part-time or distance education programs because that was where online courses had first been used. They added that the terms part-time, distance education and online learning were seen as synonymous in Vietnam. One participant noted that while some negative opinions of online learning were based on the actual performance of the online experience, much of the negative image was based on the overall public opinion that any part-time or distance program was not as good as a mainstream university regardless of the learning format.

The perception of Vietnam...is currently we have two kinds of training, full-time and part-time students. In most schools, people believe that e-learning is just only for part-time students but not full-time… And especially in Vietnam, the quality of part-time studying is not high. And it has been associated with online education. That is why it creates the wrong perception toward online education (Participant #05).

Two participants noted that students graduating with a part-time degree often had a more difficult time finding a job than would a full-time graduate. Participant #17 said simply that “in Vietnam if they have a part-time diploma, they may have hard time finding a job.”
Barrier 2H: Local administrators may use a traditional class mindset to manage issues regarding online content

Three participants expressed confidence that their local administrators would provide all the support needed to begin incorporating more online content into their curricula. Participant #24 said that support was:

…favorable, because firstly, this school is merely 10 years old. The team is young...Secondly, the faculty here include many members who have studied abroad, so they are more or less exposed to new teaching technologies. Thirdly, the culture here, as I know it, they will easily accept innovation, including new teaching methodologies.

In four interviews, concern was expressed about a disconnect between efforts to use online education and the interpretation of regulations by administration officials who were used to doing things the old way. Participant #16 provided a specific example of concern:

One teacher in e-marketing class gave students one day of class that was going to be an online experience. Somehow the student affairs office did not know about this [situation] and said well he was not actually in the class face-to-face with the students so the hours were not counted. And he had to fight to get the hours to be counted as the actual hours in the classroom, even though it was an e-marketing class and logically it should clearly be a good student experience in what they are talking about.
Participants said faculty might want to incorporate an online component, but such online class time might not be included in the number of hours a teacher was working. Participant #16 explained:

So we assume the leader wants to do [online education]. But it still goes through a lot of lower levels like the technicians, staff and faculty and the thinking or perceptions on the quality of the staff members. For example, if they say I do [something] online, they may think that I do not spend much effort and time like I do offline. And they think that ok I will pay you half. This is the culture here. Because you do not go to the class, you just stay home, and I think it looks like you are not working.

One participant said incorporating online courses from other schools may require significant validation of the syllabus and course content to be certain the course was sufficiently rigorous and did not touch on sensitive topics. Such approvals were made more difficult when course content had to be translated into Vietnamese.

In terms of online education, there is always a question of what content that professors overseas will deliver to the students here. I believe that the main concern is that it should not relate to any political issue. Nobody can control that. Second is that… they want to look at the content of the course delivered...[I]t is quite tedious when we deal with the administrative system when we have to translate all the materials into Vietnamese (Participant #08).
Barrier 2I: Perception that Vietnamese students lack the self-discipline and are too passive to succeed in an online environment

There was concern that Vietnamese students did not have the self-discipline to excel in an online learning environment. Four participants expressed the need to push students in traditional class settings and believed the passive nature of the students would not provide enough online discussion to make the experience valuable.

There is a difference between Vietnamese students and European students in the self-discipline or the active learning of the students. Maybe it is due to a different culture that creates the gap of discipline. But it is really important for the students to have the discussion with the lecturer and the lecturer helps them to focus on some of the key points during their learning process so that they can improve their learning (Participant #08).

One participant noted it would take time and attention to develop the students’ active self-learning mindset. A new pedagogy would be required to prompt students through frequent online interaction, and encourage and support their motivated participation. Participant #03 explained:

It depends on how you conduct the online course. If you conduct the online course and strictly follow the program, highly interactive, then you change the behavior of the student. The students do the work when they are checked… For a while they are checked [for participation], and they are checked correctly, and there are people to support them, then they get used to the good way…. When you have an assignment one week, you write and send feedback to the student week by week, week in week out, and force them to study, then we change the attitude.
Barrier 2J: Better English language skills are required to utilize online content

Seven participants noted that English language barriers exist in several areas and students without strong English skills may not be able to benefit from the many online sources of open content. Participant #10 said the lack of English skills was especially a barrier when trying to gain knowledge from outside Vietnam: “Online material… of course inside the university it is easy. All material is in Vietnamese, but if you assume to go out, and to find other material, it is a barrier.”

Participant #09 expressed concern that the current automated online translation from English to Vietnamese was only marginally effective, and an improved translation technology was needed. “How can we develop a software that can do translation from English to Vietnamese correctly so that Vietnamese students can access the wider pool of knowledge through their mother language, which is Vietnamese.”

Two participants said their universities may hesitate to collaborate with foreign universities in online course offerings because their students were not able to understand enough English. The issue of English language comprehension was especially a concern when video was used, and even more so if the lecturer was a non-native English speaker. Participant #23 noted, “if we deliver in English, the students may not get the lesson very well in English, and they do not have a chance to verify with the professors, maybe it is also a difficulty.” Participant #21 said:

Sometimes the professors from the partner university… are not very good at English as well, for example Japanese or Korean. They speak English but in the way of combining between their mother tongue and English. That is so hard for the students to understand.
On the other hand, Participant #21 noted such experience with foreign lecturers could provide an opportunity to improve their English language skills. “One of benefits of this training system is helping the students to increase their English skills. So do not invite so many Vietnamese overseas professors to join in.”

**Barrier 2K: Library and other student services are inadequate**

Three participants noted current library resources in Vietnam were a challenge even for traditional classes and better library resources would be required in support of any initiative to expand online learning. These improvements would include books and journals in electronic format as well as access to more databases. Much of this material is in English, or other foreign languages, which also presented a barrier to the broader use of online learning. Participant #09 explained:

The library must have a sufficient and adequate level of e-information systems to support teaching using an online education system...the library system in Vietnam currently has a lot of challenges...at the VNU-HCM level, the resources are quite adequate but the resources are in English. And for the library in VNU-HCM, they have more than 20 databases. The number may not be much compared to other international schools [that may] have more than 100 databases for resources… but the language is in English. [There is also a need for more] technical and operations staff who provide supporting services for the teaching, in particular library services.
Barrier 2L: There is no transfer credit policy for students taking online courses through other universities

Three participants said the issue of accepting transfer credits for students who take courses online through other universities raised another barrier. Questions of accreditation and perceived quality of the other university would require a uniform credit transfer system to clarify how decisions should be made. Participant #10 provided one example of this problem:

Some of our students joined a course...from Stanford University, and they earned very high points so they came to us and see whether they can be accepted as transfer credits. And we had some discussion. Unfortunately, it is still a discussion, not a final decision yet—but it is complicated—not simple.

Participant #03 said there was no regulation for accepting transfer credits, but “giving some flexibility gives more variety to the program and will improve the students' understanding of the course, and make the course more valuable… The regulation of VNU-HCM [should] allow the university to accept the transfer system.”

Research Question Three: Complexity

Complexity is concerned with whether or not the innovation is seen as being difficult to learn or use (Rogers, 2003). It was important to understand specifically which parts of an online course appeared to be difficult to implement or use so strategies might be developed to overcome the problems. Participants identified three areas of complexity as perceived barriers.
Barrier 3A: Many faculty members and administrators do not have the technical skills to use online education

Three participants said newer faculty were more likely to have the technology skills than older faculty, and faculty in technology areas were more likely to have the needed skills than the non-technology faculty. Administration officials and support staff were also described as having varying degrees of expertise based on their age, area of study and experience abroad. Participants said those faculty and staff without the required skill set would need a technology support staff that could offer training and assistance as needed. Participant #25 noted, “the [technical skills of the] young is good enough but the senior people like my age is the problem.” Participant #16 said:

They need the support from technicians. I think like myself, I liked the Blackboard idea and I tried to use it. But when I did not get the support and I failed many times....I mean that I like the technology but without the support…

Barrier 3B: Many faculty members do not understand the new pedagogy required for online education

Eleven of the participants expressed that a major barrier to using more online content was the need to transition from traditional teaching methods to a new pedagogy. Participants said most faculty lack the skills to develop an online course, and specific training and ongoing technical support would be needed to create a community of expertise.

The most difficult problem that they have is regarding the content of the courses. At this time, to build up content of the courses and to get students to be familiar
with the way they deliver the courses are the real challenge for them at the implementation stage (Participant #19).

We will have contact with some very good universities that use online and we will ask them to give us some training. Training for the group of excellent lecturers and then use them as the model and train them to train more lecturers. So we will train the trainers. And hopefully, in about five years everybody will maybe have the skill. And also we will have a technical team in each university to help the lecturers. There are some people, they do not have good computer skills, but they want to use that (Participant #03).

Five participants said the transition will also require a change of focus from faculty because participating in discussions with students online several days a week is much different from preparing a weekly lecture.

It is so difficult… [Students] develop their critical thinking… they question… so it means that now lecturers must have the ability to accept questions from the students. First accept… some of them say I am always 100% right… so teaching pedagogy… teaching method… how to change it is very difficult. And you know to change it for the young lecturer, who studied outside, who are motivated to study, who understand about life-long learning, it is easy. But for the old ones… it is difficult. And I see no way to help the old ones to get adapted to the new environment (Participant #10).

**Barrier 3C: Some students may not have the skills to use online education**

The prevailing opinion was that students did have the necessary technical skills to adapt to the new environment. Three participants expressed concern that the technical
skillset of the students was not adequate for online learning. Participant #17 asked, “If they do not know about in-class teaching, how can they study online? It is difficult. This is their first time in a university, if we teach only online, it is very hard for them.”

However, other participants said the technical skills of the students “is not the main problem because the system is developed based on a user-friendly mind set so it is user-friendly already. Also at the beginning of studies, there are some training courses to facilitate the learning” (Participant #04).

Two participants noted that the students' technical skills may often be better than the lecturers’ skills. Participant #07 had no doubt about the students and said “I think that they have the skills. But I am a little bit worried about the teachers.”

**Research Question Four: Trialability**

Trialability looks at whether or not an innovation can easily be experimented with at a minimum cost or risk (Rogers, 2003). It was important to understand which forms of case studies were acceptable to administrators and faculty or which barriers need to be overcome to allow for such trials. Participants identified one barrier that inhibits the ease of creating a new test case.

**Barrier 4: The approval process to try new online education initiatives is perceived as unclear, complex, and time-consuming**

Three participants said using an online conduit to add learning materials to an existing course does not require much approval. However, replacing face-to-face class hours with online components would require a lengthy approval process.

If they just want to use the [web-facilitated] facility, there is no approval. We encourage them to do that. They still have a normal class, but this [use of
technology] is an additional part for the program. We encourage them to use that as much as possible... We just ask them to give us the plan, and we say okay because it is better to have that technology, so there is no approval. But in case they want to do the course 100% online, it needs approval. The approval process is at first they write proposal, and the proposal goes first to the university, and then to VNU-HCM (Participant #03).

Three participants did not know much about the process other than to seek approval from the head of their department who would then assign the resources necessary to complete the approval process. Eleven participants described an institutional and bureaucratic process that required specific committees to give approvals at increasing levels of authority. Convincing people that a fully online course for mainstream students was necessary, or better than traditional courses, was still seen as a challenge.

The university always wants to support the lecturers using more online [content] but the mainstream [program] is always using the traditional way. If you want to get an online course, you should show that this is a very special circumstance... And that must be approved by the academic committee to get the online mode like that. Some already happened but they are not preferred by all the deans because the process is so complicated... Write the reason, convince the board about the things, and we have the responsibility that the quality is the same as the traditional (Participant #06).

The decision process begins with an idea. The idea will be proposed to the highest authority... So it begins with the board of management. The idea is proposed to the board of management. If they think the idea is good, we will put the idea out to a
little broader scale—the deans, managers, doctors, professors, associate
professors—the key personnel. After that, there will be discussion on an even
broader scale that includes the school faculty. If the idea is well supported, we
will develop a proposal...with more details on each aspect. How to do it, what
benefit it would bring, arrangement for finance and resources, and how to equip
the infrastructure. The proposal will sufficiently include the methodology,
resources, and timeline for implementation. We will defend the proposal within
the school (Participant #01).

Research Question Five: Observability

Observability goes hand in hand with trialability and is concerned with whether or
not the results can be seen (Rogers, 2003). The results of trial cases or current online
courses need to be compared to expected outcomes and then shared with colleagues
within the university community. It was important to identify the processes by which
results were measured and shared. Attitudes and perceptions of such sharing were
reviewed to determine methods used within the current culture. Participants identified
four barriers that inhibit the sharing of experience with new programs with other
departments.

Barrier 5A: Perception that current online programs would not translate well for
use within other departments or that the program is not yet good enough to share

Although 22 participants agreed that sharing a model with other locations would
be a good thing, several participants described specific issues with trying to share models.
Four participants noted their current system was not yet good enough to share or that
there was no specific measurement to determine a superior system. An additional concern
was that such pilot programs were run on the minimum required systems and expanding the system would require greater investment in infrastructure.

We feel that it is not very strong to show the whole university to follow our direction. Another issue is [that] this is a pioneer project developed by students and lecturers. So it will not run smoothly and not good enough to deploy for a big number [of students]. We do not have strong servers to use, so this is a pilot project. But we cannot to afford to deploy in a big scale. It is not yet ready, and the software is not good enough to share (Participant #06).

One participant noted that some systems would work well within a certain curriculum, but not translate well into another program.

At the beginning, it is easy to develop this kind of thing and it is relatively cheap. But when I showed it to my colleagues from [another department], they wanted me to help do it...and it was not easy. We were stuck at that time… something that was easy in the beginning and then we switch to another subject or area it becomes very difficult (Participant #10).

Participant #03 said that VNU-HCM headquarters is encouraging the use of the CDIO approach: Conceive, Design, Implement and Operate. It was hoped that with proper documentation and dissemination of results, models could be better assessed and shared.

With each project we intend that the faculty of the school that we choose be a model, they need to analyze, they need to summarize all of their experience. The pros and the cons and… and they need to share… And we have used that model quite well in the CDIO approach. Conceive, Design, Implement, Operate...And
after they do it, they need to write it out and to share. So we publish a book. We organize a seminar. We organize a conference, we organize just sit down and talk. We organize some training. So after they get money, they have a responsibility to share (Participant #03).

**Barrier 5B: Perception that there are no official methods to share online experience within VNU-HCM and only word-of-mouth is used**

Many participants were not aware of official methods for sharing ideas and results of online education experiences within the VNU-HCM organization. Participant #10 said, “even though the policy exists, there is no process, no guidelines on how to share.” But several participants described an active meeting schedule.

We have meetings regularly. For example, among the top directors, they have meetings. We also have meetings among the heads of academic affairs… from different universities. We have such meetings and we can talk and share information very easily. I think VNU-HCM now is very supportive and helpful. They organize and create a good environment for different universities to talk and share experience (Participant #26).

Nine participants expected to share their experience or learn from others through word-of-mouth. Four participants noted that others were not willing to share their knowledge because they hoped to protect a competitive advantage. Participants said people were especially not willing to share lessons from failures or difficulties.

I will use word-of-mouth. Some pioneers will convince their friends working in the same school. Those friends will see the benefits of applying e-learning and try to follow… To tell the truth, we do not share this [information] with others
because we need to keep the competitive advantage. In the market of higher education, we do not want to show our weapon to other universities (Participant #02).

Participants said those projects that had followed an official proposal process to obtain funding and resources were more likely to be shared because it was built into the program. Participant #03 agreed sharing results of projects was a problem, but said:

We need to force them to share and we have a policy to do that. We have a stick and a carrot. We can avoid that to happen on a big scale. But if you manage them, and go along with them step by step, it is not easy for them to hide.

**Barrier 5C: Perception by faculty that there are limited official training venues and the only source of information is from distant colleagues or internet searches**

Those participants interested in learning how to implement online education said they used varying sources of information. Some sought out colleagues, some searched through Google or YouTube for ideas. Participant #01 learned from a senior colleague abroad:

When I taught [overseas], there was a senior professor, and he shared with me how to do it, how to deal with a number of materials and quizzes online… I know that I will not get a lot of useful things from observation in this [university]. But I think that I will google online, or talk to my friends and colleagues in the US, they can give me more clues.

Participant #14 said, “I do not yet learn from other faculty members here about online classes. I learn from other people outside. For example, I search on YouTube, and I consult other people who design online courses.”
Six participants said they were willing to attend open seminars. At International University, one specific example was found of a workshop on blended-learning approaches provided by University of Sterling, U.K. (Bostock, Shinn, & Kaye, 2012).

**Barrier 5D: Lack of observable quality measurements in mainstream online courses to differentiate from poor quality reputation of online education in distance programs**

Participants said the general public opinion of online education was that it was of lower quality than traditional methods. This opinion was based primarily on the reputation of the distance learning programs that had used online courses. Nine participants said using more online courses in the mainstream programs would require a better understanding of quality measurements specifically for online courses. Without confidence in the quality of the online courses, participants said there would be little desire to make a change to greater online content.

In order to know or measure the success of online courses… what we are looking at is the learning outcomes of the program… [W]hether or not the learning outcome of the program is measured or evaluated against a certain set of criteria and satisfies the requirements of VNU-HCM or another international reviewer. These are international criteria that we need to comply with… so they can improve the quality of the course. And to answer the question on quantity, we need to have the quality first. When we improve the quality, the quantity will come later because if the student enjoys the experience of the study, they can spread the news to their friends, networks and colleagues about the courses (Participant #19).
Three participants shared a concern that implementing poor quality online courses could harm the reputation of the university. Participant #02 noted “if we misuse the e-learning, we might decrease the quality of education. We have much concern about that.”

One way to determine the degree quality is to look at the quality of the institution, the quality of the program. In this sense, if you introduce an online program here in Vietnam, in most cases you cannot control the quality of the learner. And then in the end, the quality of the program will suffer. And the image of the online program will take a very long time to improve… to be accepted in Vietnam (Participant #07).

One participant said online education would become prevalent when it was seen as providing a quality education and thereby overcoming negative stereotypes. This effort would need to start in smaller pilot programs and grow with each proven success.

Participant #03 described a desired assessment program for new projects:

We analyze from many different perspectives, after the student takes a course and after the student finishes the whole program, so it takes quite a long time and we have many different kinds of evaluations… measuring the achievement of students in each class before and after introducing the new program…. For example, for the new program we set a target that up to five years after first class of students graduate, you need to do QA, or accreditation for that. In the meantime, we use the AUN [QA]system (ASEAN University Network, 2006), [with] 15 criteria looking at how you develop the program, looking at how you accept the students, looking at achievement of students, looking at the idea of the stakeholder, from the employee, from the student, from the lecturer, from every
point of view. So we already have the set of QA to accept one program. [This QA system] is quite general for any program. If there is an online program, we will see how much the online acts to the value of the total quality.

**Analysis and Synthesis of Findings**

Interviews with the participants did identify perceived barriers that could be categorized following Rogers’ (2003) theories of the barriers to the adoption of innovations. The research questions following the five barriers to the adoption of innovations did provide insight into a large range of issues. However, a number of the issues crossed over between categories and the proposed solutions or remedies in Chapter Five were developed using a more unified vision of the problems.

**Summary**

Chapter Four presented perceived barriers to increasing the use of online education at VNU-HCM as identified through interviews with 26 participants. These barriers were categorized following Rogers’ (2003) theories of the barriers to the adoption of innovations that include: relative advantage, compatibility, complexity, trialability, and observability.

The barriers identified were:

**Relative Advantage**

1A Perception by the general public that online education does not have the quality required to secure good careers

1B Perception that online education has poor teacher-student interaction

1C Perception that online education does not fit with Vietnamese cultural preferences for face-to-face learning
1D Perception that online courses are used only by inferior schools in the distance education system

1E Perception by faculty and administrators that benefits will not outweigh the costs especially in light of low tuition rates in Vietnam

1F Perception by faculty and administrators that online content should be used only to augment traditional teaching methods rather than transitioning to a new pedagogy

1G Faculty’s lack of knowledge or experience with the tools that can be used in online courses allows perception that only traditional methods are appropriate

Compatibility

2A Internet bandwidth is often only good enough for small scale online initiatives

2B More technology infrastructure is needed along with the support staff to maintain the systems

2C Leadership support for moving to greater online content beginning with addressing issues of faculty workloads and compensation

2D Many administrators need more knowledge on actual costs of properly configured online education systems to avoid attempts to “go cheap”

2E Faculty perception that using online education will increase their already heavy workloads while providing no improvements in salary or compensation

2Fa Unclear/Conflicting Policy: Differing opinions on how much autonomy VNU-HCM has vs MOET
2Fb Unclear/Conflicting Policy: Current interpretation of online education policy is	only based on rules for distance education while use of online education within
the mainstream universities is not specified

2Fc Unclear/Conflicting Policy: Quota system on number of degrees permitted may
limit ability to achieve economies of scale in online education infrastructure
investments

2G Historic low quality perception of online education as used by part-time distance
learning programs. “If it is online, it must be part-time,” “If it is part-time, it must
be low quality,” therefore “If it is online, it must be low quality”

2H Local administrators may use a traditional class mindset to manage issues
regarding online content

2I Perception that Vietnamese students lack the self-discipline and are too passive to
succeed in an online environment

2J Better English language skills are required to utilize online content

2K Library and other student services are inadequate

2L There is no transfer credit policy for students taking online courses through other
universities

Complexity

3A Many faculty members and administrators do not have the technical skills to use
online education

3B Many faculty members do not understand the new pedagogy required for online
education

3C Some students may not have the skills to use online education
Trialability

4 The approval process to try new online education initiatives is perceived as unclear, complex, and time-consuming

Observability

5A Perception that current online programs would not translate well for use within other departments or that the program is not yet good enough to share

5B Perception that there are no official methods to share online experience within VNU-HCM and only word-of-mouth is used

5C Perception by faculty that there are limited official training venues and the only source of information is from distant colleagues or internet searches

5D Lack of observable quality measurements in mainstream online courses to differentiate from poor quality reputation of online education in distance programs

The described barriers have provided a foundation for developing policies and procedures to approve, develop, and introduce new forms of online education at VNU-HCM. In addition, this better understanding of the barriers to the use online education will allow faculty and administrators to plan and manage implementation of online programs more effectively. Chapter Five will offer recommendations aimed at improving the perceptions of online education to improve the adoption of innovations.
CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this case study was to determine what barriers were perceived as important by faculty and administrators in deciding to use online courses to a greater degree within the Vietnam National University – Ho Chi Minh City (VNU-HCM) system. This information provided a foundation for developing policies and procedures to approve, develop, and introduce new forms of online education at VNU-HCM.

The aim of this study was to create a plan for overcoming the most important perceived barriers to online education and to offer solutions that guide administrative decisions concerning future online learning projects at the university. Before encouraging the use of more online courses, it was important to better understand the reasons for the limited use of online education in Vietnam. By understanding barriers to the adoption of online education, faculty and administrators can plan and manage implementation of online programs more effectively.

This chapter provides recommendations for actions that would help to resolve barriers to the greater use of online education at VNU-HCM. Implications for implementation of the recommendations are discussed.

Proposed Recommendations and Implementation Considerations

The general advice offered from this study is to have a clear online education strategy that addresses the effort to increase acceptance of online education wherever possible. A strategic vision statement should specify the institution’s goals with enough detail to guide planning and budgeting (Rovai & Downey, 2010). Following Rogers’
(2003) theories on the adoption of innovations, the recommendations are intended to improve the perception of online education and thereby hasten the rate of adoption.

Specific recommendations emerged as responses to the barriers directly identified by the interview participants as presented in Chapter Four. A unified vision of the problems and solutions was used to address any one barrier that required attention through several recommendations and allowed any one recommendation to resolve issues for more than one barrier. A summary of the relationships between barriers and recommendations is presented in Appendix I and Appendix J. An overview of the recommendations was discussed with several colleagues within the VNU-HCM system to provide feedback and ensure that the suggestions were feasible.

The first four recommendations relate to macro-level policy decisions in salaries and workloads of faculty, as well as student quotas, financing projects, administrative policies set through the Ministry of Education and Training (MOET) or VNU-HCM, and the focus on quality. The fifth recommendation is a set of attributes that would be helpful as part of future pilot projects. The sixth recommendation aims to improve the communication of results of online learning projects within the VNU-HCM system. Recommendations seven and eight deal with technical support and training for faculty, administrators, and students. Lastly, a special project is suggested that would increase the usefulness of online education on a wider scope and thereby increase the level of acceptance in the eyes of the public at large.
Recommendation 1: Major Policy Issues – Faculty Salary and Workloads, and Student Quotas

It was beyond the scope of this research to advise on specific policy that is made at the national and ministerial levels covering topics such as faculty workloads, compensation, and quota systems. However, it was appropriate to make recommendations on how to address these issues within the current policy structure. With regard to online education, VNU-HCM administrators should continue to focus on what they are able to do, rather than waiting for policies to change.

Those faculty members who see personal benefits and enjoyment in transitioning to online education should be the pioneers. Pilot programs should be reviewed on a case-by-case basis to determine the most appropriate methods to accommodate workloads. Top-level policy on these issues will evolve once online education becomes better recognized.

The future formation of policies regarding quota systems will be affected by a better understanding of the true costs and benefits of online education. Pilot programs will be needed to demonstrate these factors and what size is required to achieve economies of scale.

Participants expressed clear concern that their current workloads did not allow time for new projects and that the compensation structure offered few incentives to make changes. This issue was also repeated in several studies (Allen & Seaman, 2015; Renfrew-Knight et al., 2009). The quota system was identified as a barrier by several participants and discussion at the national level has occasionally appeared in the news.
One news article in particular noted a recent proposal to further limit student enrollment as an effort to improve the quality of education (Thanh Nien Daily, 2016).

VNU-HCM administrators struggle to balance the needs of faculty workloads and compensation with the need to build infrastructure. This situation is made more difficult in a developing nation dedicated to maintaining low tuition rates (Hayden & Le, 2013; Kính & Chí, 2008; London, 2011; Renfrew-Knight et al., 2009).

The issue of faculty workloads and compensation will not be resolved according to any given timeline. Improvement of the issue will be evidenced by an increasing number of faculty members that participate in online education. An annual survey should be used to demonstrate this trend. The potential for improvement on the issue of quotas will be evidenced by clear data on the costs and benefits of online courses to determine how best to achieve economies of scale.

**Recommendation 2: Major Investments**

It was beyond the scope of this research to advise on the allocation of funds or the projects for which they should be assigned. However, pilot programs should be used to quantify specific requirements and their related costs. Those pilot programs that aid in the overall strategy of improving the acceptance of online education should receive priority in funding.

The needs for improved internet bandwidth, as well as additional hardware and software, were repeated by many participants. The infrastructure and staff required to provide technical support was also described by participants. The need for improvements for the library and other student support services was identified as a specific issue that might otherwise be overlooked. The importance of fiscal resource allocation is
recognized as an important element of Surry’s (2002) model for integrating instructional technology into higher education.

As noted above, VNU-HCM administrators struggle to balance the needs of faculty workloads and compensation with the need to build infrastructure. Creating budgets for operations and capital infrastructure at the university level will be an annual event. Improvements for online education will be evidenced by increases in the budget. Matching budget line items to specific goals for increasing online education will confirm that progress is being made.

**Recommendation 3: Communicate Clear Policy Through Action**

Although it was beyond the scope of this research to advise on specific policy issues regarding online education, it was reasonable to address the perceived absence of clear policy definitions. Given the balance between MOET and VNU-HCM within the current regulatory structure, overt policy declarations may create a focus for debate or simply be overlooked. Perhaps the best recommendation would be to demonstrate these policies through action rather than words.

Creating specific online education projects within the mainstream university programs would demonstrate the potential level of online content permitted by VNU-HCM. Because the Office of Academic Affairs would be included in the current approval process of new projects, clear and direct communication with them would provide better understanding of the administration’s intent. Expediting the approval process would encourage more attempts to explore the use of online education.

Participants noted the lack of clear policy definitions and confusion between regulations for distance education and the mainstream programs. In addition, several
participants provided specific examples where policy for an online class experience was reviewed with a bias toward traditional teaching methods. Surry (2002) noted that policies developed before technology was widely used may inhibit the increased use of the innovation.

The offices of academic affairs within any university play a critical role in developing the use of online education (McCarthy, 2009). Their responsibility as gatekeeper in permitting new uses requires a clear understanding of the regulations and the intent of VNU-HCM administrators. Faculty need to understand what is permitted, but also should have the expectation that new ideas will be evaluated with an open mind.

Policies will evolve and change over time. Because this recommendation seeks actions rather than words, improved clarity on regulations and policy definitions will be evidenced through the attitudes of faculty and administrators. An annual survey of faculty and staff on perceptions and attitudes about online education should include questions on their understanding of policy, as well as on the perceived acceptance of online education.

**Recommendation 4: Focus on Quality within Mainstream Programs**

Efforts to improve the perception of quality for online education should focus on courses within mainstream programs rather than distance programs. The overall poor reputation for online courses in Vietnam was closely tied to the prevalence of online education in the distance education system. Any quality improvements for online courses within the distance programs would likely have little effect on the general perception of online education.

Participants described that the negative perception of distance programs in Vietnam had been attached to the reputation of online education. Regardless of the actual
quality of online courses, those students graduating from distance programs were said to have more difficulty finding good jobs. The importance of communicating the role of academic quality in the online education strategy was noted in a benchmarking study conducted as a resource for campus leaders in the United States (McCarthy, 2009). Weak quality assurance is noted as a leading cause of failure for online programs (Rovai & Downey, 2010).

Changing perceptions at large will require impressing students taking the courses, as well as employers hiring the graduates. Support from faculty and administrators will be required before adding quality online courses to the mainstream programs. Improving the perception of quality in online courses will take many years. Annual surveys should include questions to assess changing attitudes of students and faculty. Surveys of employers should become part of developing their relationship with VNU-HCM.

**Recommendation 5: Using Pilot Programs**

5a: **Build a track record of approved projects.** It was beyond the scope of this research to advise on specific pilot projects because they should be identified by those departments most willing to participate and where demand is highest. However, visibility of the successful approval of the first projects would encourage others to follow. Again, with the current regulatory structure between MOET and VNU-HCM, actions are better than words. The administration should ensure that the current approval process includes a method to track proposals from their initiation through their approvals. Once a project is approved, it should become visible to others through a shared database.

Participants noted either that they did not know the approval system or that it was overly complex. Managing proposals through one system conforms to findings that
online learning initiatives benefit from centralizing certain administration functions (McCarthy, 2009).

Administration officials will need to encourage a creative and proactive effort to approve the first projects as expeditiously as possible. Lessons learned from the first approvals could then be applied to the future approval process. As noted earlier, the staff in the offices of academic affairs are key players in the approval process in developing the use of online education. Administrative staff need to be assigned to track approvals and make the information available throughout the VNU-HCM system.

A target should be set to approve perhaps three to five projects in the first year. Achievement of this goal could be evidenced by demonstrating that the details of a given number of approved projects are visible on a database open to VNU-HCM faculty and staff.

**5b: Create a partnership with employers.** Specific pilot projects should be selected to include in a program that reaches out to future employers and demonstrates the focus on quality. As noted in Recommendation 4, employers are a key part of the public perception of online education. VNU-HCM should rely on the future hiring of graduates from mainstream programs with online courses to sway public opinion. Public opinion cannot be changed directly, and there must be a real basis of quality that will finally have a positive effect.

Participants said the perception of the general public was that online education does not have the quality required to secure good careers. A few participants also said that Vietnamese people had a cultural bias in favor of face-to-face learning. Concern for the quality of online education and biases toward face-to-face instruction is cited in Allen
and Seaman (2013; 2014; 2015). The benefits to online education of partnerships between employers and higher education is noted in several studies (Arif et al., 2005; Howell et al., 2003; Rovai & Downey, 2010).

Employers are a conduit and must be part of the ongoing communication. Including them in the early stages of curriculum development will ensure their knowledge of the program’s effort and level of online content. Working with employers requires a coordinated effort to plan specific points for engagement. Meeting times, places, and resources must be planned in advance to accommodate various time schedules. A reporting structure is required with a single person assigned to track progress on the project and responsible to administration officials rather than the department in charge of implementation. Because there would be direct contact with employers, care should be taken to ensure the reputation of VNU-HCM is protected.

It will require many years between developing online courses and seeing graduates hired in the workforce. It will take even longer for the trend of those employers to be perceived by the public. Progress will be evidenced during the design and implementation stages through feedback from those employers participating in the program. As noted earlier, surveys of employers should become part of developing their relationship with VNU-HCM. In addition, a specific timeline and reporting structure should be created as part of this project so progress can be tracked. The timeline should include the frequency and nature of contacts with employers. Progress reports should flow up to administration officials and should also be included in a database for tracking all strategic projects.
5c: Demonstrate true costs and specific savings. The approval process for online pilot projects should already require financial requirements, but these should also be reviewed post-implementation to determine if forecasts were accurate and to develop a guideline for future projects. A system of tracking and using the information should be developed.

Several participants noted their doubts that the benefits of online courses would outweigh the financial costs of creating and maintaining the systems. Another concern was that administrators did not understand the true costs of a properly designed system. Reduced operating costs and economies of scale should be seen as part of the overall justification for online initiatives that are intended to improve learning (Surry, 2002).

The administrators responsible for approving projects should require well-documented cost estimates. Specific administrative personnel need to be assigned to manage the cost-tracking database. Faculty and administrators implementing the projects should attempt to maintain good-faith efforts to provide accurate and useful information.

The first data collection is required at the earliest stages of the approval process. Achieving this goal could be evidenced by demonstrating the details were available to administrators in a database. Periodic progress updates and the post-implementation report should be required with a verification process to ensure the implementation team provides the information in a timely manner. Explanations for cost variances should appear in the post-implementation report and form the basis of establishing future cost estimates. All reports for approved projects should be available to VNU-HCM staff and faculty involved in creating future proposals.
5d: Establish quality measurement criteria and techniques. The approval process for online pilot projects should already require identifying how quality will be measured and how a successful implementation will be defined. These criteria should also be reviewed post-implementation to determine if they were adequate and to develop guidelines for future projects. A plan to assess student learning should also be included. A system of tracking and using these metrics should be developed. Specific research projects into quality measurement should be encouraged.

Participants expressed the need for a process to measure the quality of online education to increase acceptance of online courses. Faculty concerns about the quality of online courses are also noted in other studies (Seaman, 2009). Several participants noted that approvals sometimes required convincing administrators that an online course would provide a learning experience equal to face-to-face courses. Quality assurance is an important factor in the success of online initiatives (Rovai & Downey, 2010)

Building relationships with foreign universities could offer opportunities to collaborate on these research projects. As a research project, grant proposals should be included in the application process.

Although all projects should include a description of the expected metrics to measure success, only a few initiatives would be used to incorporate a research project specific to quality measurement. A target should be set to commence at least one quality-related research project in the first year. Achievement of this goal would be evidenced by the approval of a project. A timeline for completion with periodic progress updates and a final report should be set and tracked.
**5e: Test student experience.** In addition to general quality measurement research, one specific research project should investigate the extent of student involvement as compared to traditional classes. An appropriate pilot project should be selected to allow formation of a research plan while the project is being designed and offer a before-and-after assessment of student learning.

Several participants expressed concern that Vietnamese students lacked the self-discipline to succeed in online courses. A properly designed course should provide an active-learning experience and keep the student engaged (Rovai & Downey, 2010). Student outcomes and student satisfaction are important metrics used to demonstrate the success of online programs (Abel, 2005). Collaboration with a foreign university on this research project could improve the visibility of the results.

A target should be set to commence at least one research project on student involvement in the first year. Achievement of this goal would be evidenced by the approval of a project. A timeline for completion with periodic progress updates and a final report should be set and tracked.

**5f: Use cross-department development teams.** An appropriate pilot project should be selected that provides the opportunity for separate academic departments to collaborate in the design phase. This type of collaboration would allow identification of specific attributes that are unique or universal within projects. Attempts could be made to eliminate as many unique aspects as possible. A collection of universal functions could then be made available for use in future projects. Several participants noted that a system for online courses might work well for one type of class, but then not work for a course in another department. The use of cross-department development teams is presented as a
This recommendation entails careful selection of the appropriate project and participating departments. A spirit of true collaboration would be required rather than one department dominating the process. A target should be set to commence at least one cross-department development project in the first year. Achievement of this goal would be evidenced by the approval of a project. A timeline for completion with periodic progress updates and a final report should be set and tracked.

**Recommendation 6: Encourage a Sharing Culture**

All pilot projects should be tied to a clear process of approval, design, implementation, post-implementation review, and sharing of results. Sharing of lessons learned should be required even when the results are poor.

Inherent to most of these recommendations is the need for a system to track the initiatives. Various surveys would need to be carried out and published, individual projects would need to be managed and progress reports should be submitted and tracked through a central database. All of this information should be available online to faculty and administrators throughout VNU-HCM. Specific events for open forum discussions on the results should be organized. The most useful reports (whether the project was a success or a failure) should be recognized in a significant manner to encourage others to be as thorough as possible.

Many participants noted that their primary method to share information about online education projects was word-of-mouth. Several participants noted a department might not share information because they felt it was not good enough or because their
experience with online courses represented a competitive advantage. Following Rogers’ (2003) theory, sharing information on current initiatives creates the visibility needed to change perceptions of online education and encourage further adoption. McCarthy’s (2009) study found that successful programs have certain administrative functions centralized, which supports the use of a central database.

A top-level person should be appointed to validate that each project provides a post-implementation report. The approval of each project should require identification of a person responsible for the report and the target date for submission. One study noted that an important success factor for the ability to change the institutional culture was if the president and other top administrative officials were fully engaged with communicating the message (McCarthy, 2009). Administration officials should begin by publicizing a clear online education strategy with a list of goals that could be tracked. Top management could reinforce its support for online education and for the sharing of information by including summary reports of these projects in regularly scheduled meetings. Management should also make an appearance at the open forum events to show support.

Because of the need to track the progress of all initiatives, this project should commence as quickly as possible. A one-year target should be set to assign staff and build a functioning database. Achievement of these goals would be evidenced by the announcement of the person taking charge of the project and demonstration that the database is functioning properly. A timeline for open forum discussions should be developed and advertised together with details for a recognition program.
Recommendation 7: Increase Technical Support Staff

Technical support staff should be increased in relation to the development of new online education projects. Budgets for new projects should include the manpower, infrastructure, and costs of this support. Priority can be given to those projects identified as critically important.

Participants noted that many faculty members, administrators and students would require improved technical support to fully utilize online learning. The need for adequate technical staff is demonstrated in various studies (McCarthy, 2009; Rovai & Downey, 2010; Yang, 2010). Technical support is often more complex than anticipated. Infrastructure and procedures are required to allow users to seek assistance online, by telephone and in person. Collaboration with a foreign university would be helpful in researching and implementing best practices for the technical support services required in online learning.

A target should be set to commence a research project for best practices in the first year. Achievement of this goal would be evidenced by the approval of the research and publication of the results. All future proposals should include detail of anticipated requirements for additional technical support infrastructure and staff. Project progress updates and post-implementation reports should include information on technical support. Ongoing technical services should include customer service feedback to assess quality.

Recommendation 8: Online Training Courses: MOOCs

8a: An online course for faculty and administration. A fully online course targeted for faculty and administrators should be developed to demonstrate the many functions and attributes of a high-quality online course. Those taking the course would
experience an online course in action while specifically learning about the tools available. The format should likely be that of a Massive Open Online Course, or MOOC, with a duration of several weeks.

Content should include:

1. Learning material to read, as well as video about online courses
   a. Types of content
   b. Pedagogy
2. Exercises to reinforce learning materials
3. Online discussion forums
4. Quizzes and exams
5. Class management and monitoring of student activity
6. Other best practices techniques

Several participants noted that many faculty members and administrators would not fully understand the powerful tools of online education without experiencing an actual online course. Many participants described various negative perceptions of online education that need to be changed. These perceptions included: poor student-teacher interaction, inferiority to face-to-face learning, unacceptability within Vietnamese culture, increased workloads, and a difficult technology to master. Various studies suggest that once faculty understand the value of online education, they will be more likely to use it (Sahin, 2006). It is important to understand the perceptions of potential adopters before designing a training program (Surry, 2002). Faculty development for online programs should allow faculty to experience an online environment as a learner and practice online discussions (Rovai & Downey, 2010).
Developing this course would be a major project. A partnership should be sought with an international university that is familiar with the technical and pedagogical components of fully online courses and MOOCs. Funding should be sought through grants. Creating such a course would provide a greater internal skillset that VNU-HCM can use in future projects. Some incentive or requirement may be needed to encourage a large number of faculty and administrators to enroll in the course.

Selecting a partner would require a timeline that included defining the desired characteristics of the partner, as well as a preliminary description of the course. Planning should include enough time for discussions with suitable candidates and obtaining preliminary approvals. A target should be set to commence the partnership with a foreign university in 12 to 18 months. The next phase of the project would entail a full proposal to design and implement the course. Application for grants would also be required. Achievement of these goals would be evidenced by the approval of the partner, submission and later approval of the full proposal, and approval for grants. Progress reports and a post-implementation report would be required. Successful implementation would be evidenced by the number of faculty and administrators enrolled in the course, as well as by surveys before and after the course.

**8b – An online course for students.** A Massive Open Online Course, or MOOC, should be created to provide students with an opportunity to experience a fully-online course without affecting their GPA. Successful completion of this course could be required as a non-credit class. The topic of the course could be generic, but it would be beneficial to use this opportunity to create a course on Critical Thinking or other universally desired topic.
Content should include:

1. Learning material about a sample topic
   a. Reading material
   b. Video
   c. Other forms of online content
2. Exercises to reinforce learning materials
3. Online discussion forums
4. Quizzes and exams
5. Explanation of how student activity is monitored
6. Other best practices techniques

Several participants noted the need to prepare students for learning in an online environment. Training on equipment and software is an important part of the general support that should be provided to students (Yang, 2010).

Developing this course would be a major project in addition to recommendation 8a. A partnership should be sought with an international university that is familiar with the technical and pedagogical components of fully online courses and MOOCs. Funding should be sought through grants. Creating such a course would provide a greater internal skillset that VNU-HCM can use in future projects. A less expensive alternative to creating this course from scratch would be to use an existing MOOC and, with the permission of the owner, translate the content into Vietnamese. However, this alternative would lessen the opportunity to improve the skillset of VNU-HCM’s staff.

In the same manner as recommendation 8a, selecting a partner would require a timeline that included defining the desired characteristics of the partner, as well as a
preliminary description of the course. Planning should include enough time for discussions with suitable candidates and obtaining preliminary approvals. A target should be set to commence the partnership with a foreign university in 12 to 18 months. The next phase of the project would entail a full proposal to design and implement the course. Application for grants would also be required. Achievement of these goals would be evidenced by the approval of the partner, submission and later approval of the full proposal, and approval for grants. Progress reports and a post-implementation report would be required. Successful implementation would be evidenced by the number of students enrolled in the course, as well as by surveys before and after the course.

8c – An online course for English language training. A Massive Open Online Course, or MOOC, could be created to provide students with English language training. The portals and menus could be in Vietnamese to make it more user-friendly for all learners. As a MOOC, learners would be learning English while experiencing the benefits of an online course.

A less expensive alternative to creating an entirely new course would be to use an existing online English language tutorial with the permission of the owner. Another alternative would be to develop this module as a fully public utility and earn revenues through advertisements. Many participants noted that the lack of English language skills was a barrier to using online education. This barrier has also been noted in various studies of the adoption of online education in Vietnam and other developing nations (Geith & Vignare, 2008; Materi & Fahy, 2004).

The project should utilize the knowledge base of one of VNU-HCM’s departments in linguistics or language studies. Again, similar to recommendations 8a and
8b, this effort would be a major project. A partnership should be sought with an international university that is familiar with the technical and pedagogical components of fully online courses and MOOCs. Funding should be sought through grants. Creating such a course would provide a greater internal skillset that VNU-HCM can use in future projects.

In the same manner as recommendations 8a and 8b, selecting a partner would require a timeline that included defining the desired characteristics of the partner, as well as a preliminary description of the course. Planning should include enough time for discussions with suitable candidates and obtaining preliminary approvals. A target should be set to commence the partnership with a foreign university in 12 to 18 months. The next phase of the project would entail a full proposal to design and implement the course. Application for grants would also be required. Achievement of these goals would be evidenced by the approval of the partner, submission and later approval of the full proposal, and approval for grants. Progress reports and a post-implementation report would be required. Successful implementation would be evidenced by the number of students enrolled in the course, as well as by surveys before and after the course.

**Recommendation 9: Project to Improve Online English-to-Vietnamese Translation Software**

Officials from VNU-HCM should approach a major partner such as Google to collaborate on improving the quality of online Vietnamese language translation software. Funding for this major project should be sought through the partner or through grants. The project should utilize the knowledge base of one of VNU-HCM’s departments in linguistics or language studies, as well as some of the technically-based departments. It
would provide a greater internal skillset that VNU-HCM can use in future projects and it would also develop interest in online education among the humanities programs.

Several participants noted that a lack of English language skills was a barrier to using online education and that online software for translation from English to Vietnamese is inadequate. One study analyzed the translation of a business-related book using Google Translator and found approximately three errors per sentence, with sentences averaging about 13 words in length (Linh, 2013). Rovai and Downey (2010) noted that alliances and partnerships play an important role in successful online strategies.

This recommendation is based on the assumption that someone within the VNU-HCM network can make an introduction to an intended partner in a manner that would receive serious consideration. The ability to create interest from a partner such as Google would rely on using the reputation of VNU-HCM as an institution and would require support from the highest levels of VNU-HCM’s administration. In addition, the project would only be possible if the departments with the required skill sets were eager to participate.

An alternative to this project would be to simply wait. English is taught in high schools and the level of English use would increase over time. Google or another provider could improve their translation systems on their own. However, this alternative would do little to increase internet access for older non-English speakers or change their perceptions of online learning.

Before contacting a potential partner, VNU-HCM administrative officials should have already established a clear online education strategy (as noted in recommendation 6).
and be able to demonstrate why the project is important to their future plans. A period of six months should be sufficient for an organized effort to recruit the VNU-HCM personnel that would work on the project and ensure their commitment. Another three to six months would be needed to develop a preliminary outline of the proposed project as part of the initial attempt to contact the intended partner. Details of VNU-HCM’s talent base and reasons for interest in the project should be included as part of the introduction. If the response to the introduction is positive, further discussions would provide greater detail of the parameters and scope of the project.

A full proposal should then be developed with the partner and provide specific milestones, timing and budgets. Achievement of these goals would be evidenced by the submission and approval of the full proposal and grants. Progress reports and a post-implementation report would be required. Successful implementation would be evidenced by comparing the accuracy of translations using the old and new systems.

**Discussion on Prioritization**

Prioritizing the barriers can be viewed noting Rogers’ (2003) emphasis on the perceptions of individuals. “The individuals’ perceptions of the attributes of an innovation, not the attributes as classified objectively by experts or change agents, affect its rate of adoption” (Rogers, 2003, p.223). In this case, perception plays a direct role in the barrier of relative advantage. Faculty and administrators need to view online education as a better alternative than traditional teaching methods. The cross-over between categories of barriers is highlighted by considering the perception of individuals. Compatibility of the use of online education is based on the perception of those
considering its use. Observability is the basis of providing the information to change perceptions.

The specific barriers within each category can also be prioritized by noting their effect on perceptions of individuals. Within relative advantage, the highest priority barriers involve perceptions of poor teacher-student interaction, reluctance to transition to a new pedagogy, and the lack of knowledge and experience with online education tools (1B, 1F and 1G). Resolving issues within these barriers could alleviate problems in the remaining barriers of relative advantage. With regard to compatibility, leadership issues present the greatest barriers in the form of a lack of clear policy, limited support for faculty, and a knowledge gap for administrators (2C, 2D, 2E, 2F). Adapting to a new pedagogy (3B) is likely the greatest barrier under complexity. The only issue categorized as a barrier in trialability was the complexity and uncertainty of the approval process (4). The greatest barriers of observability involved the ability to share knowledge (5C) and a lack understanding with regard to quality metrics (5D).

Prioritizing the recommendations should also focus on altering the perceptions of online education. A strategic plan to increase the adoption of online education should focus first on activities that improve perceptions of those individuals who will be implementing the innovation. Communicating clear policy through action (3) would be the starting point. The specific actions should be in the areas of pilot programs (5a, 5d, 5f), developing a sharing culture (6), and training faculty in the benefits of online education (8a). The remaining recommendations address perceptions of students, employers and the public.
Leadership Implications

There are several leadership implications inherent in the recommendations that have been presented. The importance of communication as a major role of leadership is the premise of the first three recommendations. Leaders at VNU-HCM must communicate their support of a clear strategy in order to prioritize projects that are necessary to achieve their goals (Kenny, 2003). The proper allocation of scarce resources can only be managed with an understanding of how each project fits into the strategic plan. In addition, the concept of identity leadership implies that communicating a clear strategy provides an opportunity to build a sense of shared social identity, which unites faculty and staff in a common purpose.

A strong leadership role is also important for the development of an innovative culture (Kirkland & Sutch, 2009; Oke et al., 2009; Renfrew-Knight et al., 2009). Recommendations four, five, and six provide an opportunity for VNU-HCM leadership to demonstrate support of online education initiatives by implementing policies and procedures in line with these goals (Gaytan, 2009). Leaders should promote an innovative culture, which encourages sharing responsibilities and taking risks in new initiatives. Particular attention should be given to the gate-keeping role of the offices of academic affairs (McCarthy, 2009).

Appropriate leadership styles vary based on the institution and the issue at hand. Kirkland and Sutch (2009) indicated a distributed leadership style enables staff and creates a shared responsibility for innovation. The professional context and specialized skillsets at VNU-HCM would also suggest the use of a distributed leadership style (Jones et al., 2012). Appointing champions for initiatives would recognize the important role of
group members in achieving goals and ensure that focus is maintained for projects. An inclusive leadership style would ensure that all group members are encouraged to participate in developing strategy and setting goals.

Regardless of other choices in leadership style, VNU-HCM leaders should exhibit authentic leadership. Statements of policy and goals must be matched with actions in meaningful ways. Leaders should remain true to themselves while dealing with realities of the organization and society. The endorsement of online education technologies should be accompanied by actions that encourage real change. Recommendations seven, eight, and nine recognize the potential barriers of adopting online education by providing the necessary training and support to faculty, staff and students in implementing new initiatives.

Although the implementation of online education at VNU-HCM is clearly transformational, there should be a balance between the use of transactional and transformational leadership. Developing an innovative culture requires transformational leadership that promotes a sense of shared values and encourages the pursuit of a higher purpose (Haslam et al., 2011). A transactional leadership style is based on the agreed exchange of resources that meet the needs of leaders and followers. A transformational leadership style would be particularly useful in the creative aspects of innovation, whereas a transactional leadership style may be required to satisfy the needs of faculty and staff during the implementation phase (Oke et al., 2009).

Finally, there are several leadership implications that are particularly relevant within the context of Vietnam. The cultural shift from a historically authoritarian hierarchical system to a more distributed leadership style at VNU-HCM will require
determined leadership over a long period of time (Nguyen et al., 2014). Online education initiatives presented in the most recent VNU-HCM strategic plan will be implemented by leaders who will be appointed in 2016 (VNU-HCM, 2015b). Ensuring the continuity and sustainability of these initiatives requires an understanding of the national system of 5-year appointments to leadership roles and 5-year plans.

**Internal and External Implications for the Institution**

The many perceived barriers to online education cannot be addressed directly or all at once. A strategic effort to increase the use of online courses will require proper selection of initiatives and the time for results to be observed. The development of positive attitudes will lead to the greater acceptance and adoption of online courses.

VNU-HCM would benefit from these changes by the ability to better manage future online initiatives, and the adoption rate of new technologies should be improved. Faculty members should benefit from a better understanding of the inevitable transition to online education. Students will benefit from courses that are designed to provide the best possible education.

Employers should be able to better understand the improvements they can expect to see in future graduates. Parents should be more comfortable with the quality of universities that use online courses. Vietnamese society will benefit as new opportunities for education are created, bringing more employment and a growing economy.

**Implications for Future Research**

This study has already noted several areas of research that should be included as part of future online initiatives. It will be important that quantitative assessments follow the findings of this qualitative study. With regard to major policy issues, future research
is required to better understand the most appropriate methods to accommodate faculty workloads. In addition, research is required to better understand cost-benefit analysis for online education and how economies of scale are achieved. Research would be valuable to verify that VNU-HCM’s online strategy has been clearly communicated and whether or not the strategy actually guides the selection of projects or the formation of policies. Ongoing quantitative research on the perceptions and attitudes of online education should be conducted in the form of annual surveys of students, faculty, and employers. Specific projects should be encouraged to provide a better understanding of quality metrics and then applied throughout various programs to provide a large body of data for future research. Student experience should be tested to better understand satisfaction and learning outcomes. Online courses should be compared to traditional face-to-face classes as a means of establishing parity. Collaboration with a foreign university would be helpful in researching and implementing best practices for the technical support services required in online learning. The development of training courses and MOOCs will require a great deal of research in new pedagogies, as well as information and communication technology. The project to improve online English-to-Vietnamese translation software will require research in the areas of linguistics and computer science.

**Summary of the Study**

This research study involved interviews of 26 faculty and staff members at the universities within the VNU-HCM system to investigate the perceived barriers to the adoption of online education. The study identified barriers related to relative advantage that were based primarily on the perceptions of poor quality and the suitability of online education within the context of Vietnam. Perceived barriers related to compatibility dealt
with a lack of technology infrastructure, issues of faculty workloads and compensation, ambiguous and conflicting policies, and concerns for students’ English language skills and self-discipline. Perceived barriers related to complexity were focused mainly on the concern for the technical and pedagogical skills of faculty members. The perceived barrier related to trialability dealt with concerns that the approval process to try new online education initiatives was unclear, complex and time-consuming. Perceived barriers related to observability were focused on concerns for quality metrics and a lack of forums for sharing what had been learned in previous online education initiatives.

Recommendations to increase the adoption of online education started with communication of a clear strategy for online education, which would guide decisions on major investments, as well as policy issues regarding faculty salary and workloads. Recommendations were also presented for the selection of pilot programs that would assist in the overall goals of VNU-HCM’s online education strategy. Lastly, recommendations for technical training and support were focused on building a community of practice as well as forming a basis of quality within online courses.

Increasing the acceptance and adoption of online education will require changing perceptions within the university and in Vietnam. Information from this report should assist faculty and administrators to plan and manage the implementation of online programs more effectively. Leadership will be the determining factor in developing the innovation culture required to achieve the strategic vision communicated within the VNU-HCM system.
References


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Appendix A

Creighton University IRB Approval

November 22, 2013

Robert Thomas Connolly, MA, MBA, EdD Candidate
Graduate School

IRB:
IRB #: 13-10913
TITLE: BARRIERS TO THE DIFFUSION OF ONLINE EDUCATION AS AN INNOVATION AT VIETNAM NATIONAL UNIVERSITY

Dear Mr. Connolly,

Thank you for submitting the above mentioned proposal to the Institutional Review Board office for review. This project has been determined to be exempt from Federal Policy for Protection of Human Subjects, as per 45CFR46.101 (b) 2. This IRB approval is for a 2 year period. The following documents were received, reviewed, and approved:

1. Application for Review of Exempt Status under 45CFR46.101 (b) 2
2. Description of the Study
3. Study Design (Data Collection)
4. Questions for the Interview

Continued approval is conditioned upon your compliance with the following requirements:

1. Compliance with the Creighton University IRB policies and procedures
2. Problems must be reported using the Reporting Form for Reportable New Information. Problems requiring report can be found in the IRB Policy 134 "Reportable New Information"
3. All protocol amendments and changes to approved research must be submitted to the IRB and not be implemented until approved by the IRB. Please use the modification form when submitting changes to protocol or consent documents.
4. This study cannot continue after the expiration date, which is November 21, 2016.
5. You are required to submit a renewal/termination prior to this date. If you wish to continue the project, the renewal must be in the IRB office on week prior to the expiration date.
Appendix B

Interview Approvals from VNU-HCM Universities

1 November, 2013

Office of Research and Compliance
Creighton University
2500 California Plaza
Criss 1, Rm 111
Omaha NE 68178

Re: Doctoral Dissertation of Robert Connolly - Barriers to the Diffusion of Online Education as an Innovation at Vietnam National University

Dear Research and Compliance Officials:

With regard to the doctoral dissertation research to be conducted by Robert Connolly, I have been asked to acknowledge our approval for him to proceed with his interviews.

I have reviewed the parameters of his research and I understand he is requesting to interview 8-10 members of our faculty and administration for their opinions on why online education is not being used more widely and what might increase the use of online education at our institution. He intends to begin interviews this month and be complete by May 2014.

I am also aware that Mr. Connolly's research protocol must be approved through Creighton University's Institutional Review Board (IRB) process and therefore we are happy to allow him to conduct the interviews needed for his dissertation.

We will do our best to introduce him to one or two potential participants at our institution who can then make suggestions for others to participate.

Sincerely,

Rector
International University - Vietnam National University of Ho Chi Minh City
28 February, 2014

Office of Research and Compliance
Creighton University
2500 California Plaza
Criss 1, Rm 111
Omaha NE 68178

Re: Doctoral Dissertation of Robert Connolly - Barriers to the Diffusion of Online Education as an Innovation at Vietnam National University

Dear Research and Compliance Officials:

With regard to the doctoral dissertation research to be conducted by Robert Connolly. I have been asked to acknowledge our approval for him to proceed with his interviews.

I have reviewed the parameters of his research and I understand he is requesting to interview 6-8 members of our faculty and administration for their opinions on why online education is not being used more widely and what might increase the use of online education at our institution. He intends to begin interviews this month and be complete by May 2014.

I am also aware that Mr. Connolly's research protocol must be approved through Creighton University's Institutional Review Board (IRB) process and therefore we are happy to allow him to conduct the interviews needed for his dissertation.

We will do our best to introduce him to one or two potential participants at our institution who can then make suggestions for others to participate.

Sincerely,

Vice Rector,
University of Economics and Law
Ho Chi Minh, 2 December, 2013

Office of Research and Compliance
Creighton University
2500 California Plaza
Criss 1, Rm 111
Omaha NE 68178

Re: Doctoral Dissertation of Robert Connolly - Barriers to the Diffusion of Online Education as an Innovation at University of Information Technology, VNU-HCM

Dear Research and Compliance Officials,

With regard to the doctoral dissertation research to be conducted by Robert Connolly, I have been asked to acknowledge our approval for him to proceed with his interviews.

I have reviewed the parameters of his research and I understand he is requesting to interview 6-8 members of the faculties and administration for their opinions on why online education is not being used more widely and what might increase the use of online education at our university. He intends to begin interviews this month and be complete by May 2014.

I am also aware that Mr. Connolly’s research protocol must be approved through Creighton University’s Institutional Review Board (IRB) process and therefore, I am happy to allow him to conduct the interviews needed for his dissertation.

We will do our best to introduce him to one or two potential participants at our university who can then make suggestions for others to participate.

Sincerely,

[Signature]

Vice Rector
University of Information Technology
Vietnam National University – Ho Chi Minh City
Office of Research and Compliance
Creighton University
2500 California Plaza
Criss 1, Rm 111
Omaha NE 68178

Re: Doctoral Dissertation of Robert Connolly - Barriers to the Diffusion of Online Education as an Innovation at Vietnam National University

Dear Research and Compliance Officials:

With regard to the doctoral dissertation research to be conducted by Robert Connolly, I have been asked to acknowledge our approval for him to proceed with his interviews.

I have reviewed the parameters of his research and I understand he is requesting to interview 3-5 members of our faculty and administration for their opinions on why online education is not being used more widely and what might increase the use of online education at our institution. He intends to complete interviews by May 2014.

I am also aware that Mr. Connolly’s research protocol must be approved through Creighton University’s Institutional Review Board (IRB) process and therefore we are happy to allow him to conduct the interviews needed for his dissertation.

We will do our best to introduce him to one or two potential participants at our institution who can then make suggestions for others to participate.

Sincerely,

Associate Professor, Vice President, International Relations
University of Science, Vietnam National University Ho Chi Minh,
Ho Chi Minh City, Vietnam
LETTER OF ACCEPTANCE

Office of Research and Compliance
Creighton University
2500 California Plaza
Criss 1, Rm 111
Omaha NE 68178

Re: Doctoral Dissertation of Robert Connolly - Barriers to the Diffusion of Online Education as an Innovation at Vietnam National University

Dear Research and Compliance Officials,

Warm greetings and best regards from the University of Social Sciences and Humanities (USSH), Vietnam National University – Ho Chi Minh City.

With regard to the doctoral dissertation research to be conducted by Robert Connolly, I have been asked to acknowledge our approval for him to proceed with his interviews.
I have reviewed the parameters of his research and I understand he is requesting to interview 6-8 members of our faculty and administration for their opinions on why online education is not being used more widely and what might increase the use of online education at our institution. He intends to begin interviews this month and be complete by May 2014.
I am also aware that Mr. Connolly’s research protocol must be approved through Creighton University’s Institutional Review Board (IRB) process and therefore we are happy to allow him to conduct the interviews needed for his dissertation.
We will do our best to introduce him to one or two potential participants at our institution who can then make suggestions for others to participate.

Yours sincerely,

Prof. Dr. Vo Van Sen
President
University of Social Sciences & Humanities
Vietnam National University - Ho Chi Minh City
17 February, 2014

Ho Chi Minh City University of Technology
268 Ly Thuong Kiet Str., Ward 14, Dist. 10 Ho Chi Minh City

Office of Research and Compliance
Creighton University
2500 California Plaza
Criss 1, Rm 111
Omaha NE 68178

Re: Doctoral Dissertation of Robert Connolly - Barriers to the Diffusion of Online Education as an Innovation at Vietnam National University

Dear Research and Compliance Officials:

With regard to the doctoral dissertation research to be conducted by Robert Connolly, I have been asked to acknowledge our approval for him to proceed with his interviews.

I have reviewed the parameters of his research and I understand he is requesting to interview 3-5 members of our faculty and administration for their opinions on why online education is not being used more widely and what might increase the use of online education at our institution. He intends to complete interviews by May 2014.

I am also aware that Mr. Connolly's research protocol must be approved through Creighton University's Institutional Review Board (IRB) process and therefore we are happy to allow him to conduct the interviews needed for his dissertation.

We will do our best to introduce him to one or two potential participants at our institution who can then make suggestions for others to participate.

Sincerely,

Vice Rector
Appendix C

Introductory Script – English

Introduction

Dear Participant:

As part of my doctoral dissertation, I am conducting a study of the barriers to using online education at Vietnam National University (VNU). You are being asked to participate in this study by agreeing to be interviewed for your opinions on why online education is not being used more widely and what might increase the use of online education at your institution.

I have lived in Vietnam since 2005 and I have taught courses at International University (VNU-HCMC) since 2007. It is my belief that some online courses would be useful at VNU, but only if there is an appropriate method of vetting courses and considering the institutional and cultural aspects of such a move. This study is intended to identify those factors which are important to the proper selection and implementation of online courses at VNU.

You are not required to participate in this study and your decision to not participate will not be reported to any administrative representative. If you do agree to be interviewed, I do not expect there will be any risk to you. I will maintain the confidentiality of your remarks and only a code number will identify you. A digital audio recording will be made during the interview to ensure that translations have correctly expressed your meaning, but the recording will be deleted after the dissertation defense is complete. All transcription files will remain secured in a personal laptop and only non-identified notes will be made available to others. At any time, you may request that the audio recording be stopped or that the interview be terminated.

I am not able to provide compensation to you for this interview. However, by assisting me with this study, you will be providing valuable insight that can be used in the future to determine how online courses might be implemented at VNU. I will be happy to provide the results of the study upon request.

If you have any questions about my research, please contact me at   or by my email at . If you have questions about your rights as a participant in this study, please contact the Institutional Review Board at (in the United States) or by email at

Sincerely

Robert Connolly
Kính gửi những người tham gia,

Là một phần của luận án tiến sĩ của tôi, tôi đang tiến hành một nghiên cứu về các rào cản đối với sự dùng giáo dục trực tuyến tại Đại học Quốc gia Việt Nam (Đại học Quốc gia). Bạn đang được yêu cầu tham gia vào nghiên cứu này bằng cách đồng ý để được phỏng vấn cho ý kiến của bạn về lý do tại sao giáo dục trực tuyến không được sử dụng rộng rãi hơn và những gì có thể làm tăng việc sử dụng của giáo dục trực tuyến tại trường của bạn.

Tôi đã sống ở Việt Nam từ năm 2005 và tôi đã dạy các khóa học tại Đại học Quốc tế (Đại học Quốc gia TP HCM) từ năm 2007. Tôi tin rằng một số các khóa học trực tuyến sẽ rất hữu ích tại Đại học Quốc gia, nhưng chỉ khi có một phương pháp thích hợp ra soát các khóa học và xem xét các khía cạnh thế hệ và văn hóa. Nghiên cứu này là nhằm xác định những yếu tố rất quan trọng để lựa chọn phù hợp và thực hiện các khóa học trực tuyến tại Đại học Quốc gia.


Tôi không thể trả công bao cho cuộc phỏng vấn này. Tuy nhiên, bằng cách hỗ trợ tôi trong nghiên cứu này, bạn sẽ được cung cấp cái nhìn sâu sắc có giá trị mà có thể được sử dụng trong tương lai để xác định các khóa học trực tuyến có thể được thực hiện tại Đại học Quốc gia. Tôi sẽ rất vui lòng cung cấp các kết quả nghiên cứu theo yêu cầu.

Nếu bạn có thích mặc về nghiên cứu của tôi, xin vui lòng liên hệ với tôi theo số hoặc qua email của tôi tại hoặc . Nếu bạn có thích mặc về quyền lợi của bạn như một người tham gia trong nghiên cứu này, xin vui lòng liên hệ với Ủy Ban Duyệt Xét chất ở (Mỹ) hoặc qua email tại .

Trân trọng,

Robert Connolly
Appendix D

Bill of Rights for Research Participants – English

Bill of Rights for Research Participants

As a participant in a research study, you have the right:

1. To have enough time to decide whether or not to be in the research study, and to make that decision without any pressure from the people who are conducting the research.

2. To refuse to be in the study at all, or to stop participating at any time after you begin the study.

3. To be told what the study is trying to find out, what will happen to you, and what you will be asked to do if you are in the study.

4. To be told about the reasonably foreseeable risks of being in the study.

5. To be told about the possible benefits of being in the study.

6. To be told whether there are any costs associated with being in the study and whether you will be compensated for participating in the study.

7. To be told who will have access to information collected about you and how your confidentiality will be protected.

8. To be told whom to contact with questions about the research, about research-related injury, and about your rights as a research subject.

9. If the study involves treatment or therapy:
   a. To be told about the other non-research treatment choices you have.
   b. To be told where treatment is available should you have a research-related injury, and who will pay for research-related treatment.
Bill of Rights for Research Participants – Vietnamese

Tuyên ngôn Quyền lợi cho người tham gia nghiên cứu

Nhu một người tham gia trong một nghiên cứu, quý vị có quyền:

1. Có đủ thời gian để quyết định có hay không tham gia trong nghiên cứu, và đưa ra quyết định mà không có áp lực từ những người đăng tải hành nghiên cứu.

2. Từ chối không tham gia nghiên cứu nếu cảm thấy không thể hoặc không có thể không tham gia nghiên cứu.

3. Được cho biết nghiên cứu đang diễn ra và tầm ảnh hưởng của việc tham gia sẽ làm gi khi bạn bắt đầu nghiên cứu.

4. Được thông báo về những rủi ro có thể dự đoán hợp lý của việc nghiên cứu.

5. Được thông báo về những lợi ích có thể có của việc nghiên cứu.

6. Được thông báo nếu có bất kỳ chi phí liên quan khi tham gia nghiên cứu và nếu bạn sẽ được trả công khi tham gia nghiên cứu hay không.

7. Được thông báo ai sẽ có quyền truy cập vào thông tin thu thập được về bạn và làm thế nào để bảo mật cho bạn.

8. Được thông báo ai để liên hệ nếu có các câu hỏi về nghiên cứu, về chấn thương liên quan đến nghiên cứu, và về các quyền của bạn như là một chủ đề nghiên cứu.

9. Nếu nghiên cứu liên quan đến điều trị hoặc liệu:
   a. Được thông báo về những sự lựa chọn điều trị (không tham gia nghiên cứu) khác mà bạn có.
   b. Được thông báo nơi điều trị sẵn có nếu có một chấn thương liên quan đến nghiên cứu, và ai sẽ chỉ trả cho việc điều trị liên quan đến nghiên cứu đó.
Appendix E

Interview Guide

Interview Guide
Barriers to Online Education at VNU
Robert Connolly
December 2013 – January 2014 Field Research

Interview Number: ____________
Name of Subject: ____________________________________ M / F
School and Position: ______________________________________
Years at Institution: ______________________________________
Years in Education: ______________________________________
Highest Degree (s): ______________________________________
Study Experience Abroad: __________________________________
Date of Interview: ______________
Start Time: ______________ Provided Introduction info: ______
End Time: ______________ Provided Bill of Rights: ______
Context Notes:
Appendix F

Interview Questions

Questions for the interview: Các câu hỏi phỏng vấn

A) Gauging participant’s level of experience:
   Khảo sát kinh nghiệm của người tham gia về việc học trực tuyến:
   1. Have you ever taken an online course?
      Bạn đã bao giờ tham gia một khóa học trực tuyến?
   2. Have you ever taught an online course?
      Bạn đã bao giờ dạy một khóa học trực tuyến?
   3. Have you ever been involved in discussions or actual planning for the implementation of an online course?
      Bạn đã bao giờ tham gia vào thảo luận hoặc lên kế hoạch cho việc ứng dụng học trực tuyến?

B) Regarding the University:
   Về trường đại học:
   1. What types of online programs do you have now or would like to have in the future?
      Loại hình chương trình học trực tuyến nào bạn muốn tham gia bây giờ hoặc trong tương lai không?
   2. Is written documentation available describing your school and your online programs?
      Các nội dung hướng dẫn miêu tả về trường và nội dung chương trình học có có sẵn dưới dạng văn bản và tài liệu không?
   3. How are decisions made on introducing a new online course?
      Việc giới thiệu một khóa học trực tuyến mới được quyết định như thế nào?
   4. Which departments or faculty would be involved in the decision?
      Các phòng hoặc ban nào tham gia vào việc thực hiện quyết định trên?

C) Specific to barriers to using online education:
   Các rào cản cụ thể về việc học tập trực tuyến
   1. What factors are important in starting or increasing the use of online education at your university?
      Đâu là những yếu tố quan trọng quyết định đến sự bắt đầu và phát triển của việc học trực tuyến tại trường đại học?
   2. How can you increase the number of online offerings at your institution?
      Làm thế nào để tăng cường số lượng khóa học trực tuyến tại trường học?
D) More probing questions as needed to ensure coverage:

1. What are the benefits of using online education in your institution?
   Đầu là những lợi ích của việc sử dụng chương trình học trực tuyến tại trường đại học?

2. What other factors exist to using online education in your institution?
   Những yếu tố khác có thể ảnh hưởng đến việc sử dụng chương trình học trực tuyến là gì?

3. In what ways can online courses work well with your institution? Work poorly with your organization?
   Bằng những phương pháp nào mà chương trình học trực tuyến có thể ứng dụng tốt tại trường đại học? hoặc ứng dụng không thành công tại trường đại học?

   Prompt in the following areas if necessary:
   Phát triển thêm vào những lĩnh vực sau đây nếu cần thiết:
   a. Technology - Công nghệ
   b. Administrative Structure - Cấu trúc hành chính
   c. Culture of the institution - Văn hóa trường học
   d. Culture of Vietnam - Văn hóa học của người Việt

4. What specific parts of online education would be the most difficult to integrate into the current structure of your university?
   Trong những yếu tố sau thành chương trình học trực tuyến, phần nào sẽ gặp trở ngại nhất trong việc tích hợp vào cấu trúc hoạt động hiện hành của trường học của bạn?

   Prompt in the following areas if necessary:
   Phát triển thêm vào những lĩnh vực sau đây nếu cần thiết:
   a. Technology – Công nghệ
   b. Technical skills of Administrators – Kỹ năng về kỹ thuật của quản trị viên
   c. Technical skills of Faculty – Kỹ năng về kỹ thuật của phòng ban khoa học
   d. Technical skills of Students – Kỹ năng về kỹ thuật của học viên

5. What factors would be most important to you if you were designing a pilot program?
   Đâu là yếu tố quan trọng nhất trong việc thiết kế chương trình thử nghiệm cho khóa học trực tuyến?

6. What difficulties exist in creating a pilot program?
   Những khó khăn hiện tại trong việc thiết kế chương trình thử nghiệm cho khóa học trực tuyến là gì?

7. How would you share the results of such a pilot program with your colleagues?
   Làm thế nào để chia sẻ kết quả của chương trình thử nghiệm cho các bên liên quan?

8. If you already have an online program, how can other departments at your institution learn about the program and its results? Within the VNU community?
   Nếu trường bạn sẵn sàng cho chương trình học trực tuyến, làm thế nào để các phòng ban khác trong trường có thể tìm hiểu về chương trình cũng như kết quả hoạt động của chương trình đó? Trong hệ thống trường quốc gia thì như thế nào?

9. Is there anything else you would like to tell me?
   Có vấn đề nào khác bạn muốn chia sẻ thêm không?
## Appendix G

### Levels of Online Content

<table>
<thead>
<tr>
<th>Proportion of Content Delivered Online</th>
<th>Type of Course</th>
<th>Typical Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Traditional</td>
<td>Course where no online technology is used — content is delivered in writing or orally.</td>
</tr>
<tr>
<td>1 to 29%</td>
<td>Web Facilitated</td>
<td>Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a course management system (CMS) or web pages to post the syllabus and assignments.</td>
</tr>
<tr>
<td>30 to 79%</td>
<td>Blended/Hybrid</td>
<td>Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings.</td>
</tr>
<tr>
<td>80+%</td>
<td>Online</td>
<td>A course where most or all of the content is delivered online. Typically have no face-to-face meetings.</td>
</tr>
</tbody>
</table>

### Mục Đ opted nội dung trực tuyến

<table>
<thead>
<tr>
<th>Tỉ lệ nội dung được giảng dạy trực tuyến</th>
<th>Loại khóa học</th>
<th>Giải thích</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Truyền thống</td>
<td>Khóa học không sử dụng công nghệ học trực tuyến — nội dung học được truyền tải bằng văn bản hoặc bằng giảng dạy trực tiếp.</td>
</tr>
<tr>
<td>1 đến 29%</td>
<td>Được hỗ trợ Web</td>
<td>Khóa học sử dụng công nghệ Web để truyền tải những thông tin cơ bản thay cho giảng dạy trực tiếp. Công nghệ này có thể sử dụng hệ thống quản lý khóa học (CMS) hoặc trang Web để cung cấp giáo trình và bài tập cho khóa học.</td>
</tr>
<tr>
<td>30 đến 79%</td>
<td>Kết hợp/hơn hợp</td>
<td>Khóa học được thực hiện với sự kết hợp giữa học trực tuyến và trực tiếp. Một phần lớn nội dung được giảng dạy trực tuyến, thông thường từ thảo luận nhóm trực tuyến thay thế cho gặp mặt trực tiếp.</td>
</tr>
<tr>
<td>80+%</td>
<td>Trực tuyến</td>
<td>Khóa học có gần như toàn bộ nội dung được giảng dạy trực tuyến. Khóa học không sử dụng phương pháp dạy trực tiếp.</td>
</tr>
</tbody>
</table>

Appendix H

Barriers to Innovation
Các rào cản của việc cải tiến

Complexity
Tình phức tạp

Compatibility
Tính tương thích

Trialability
Tính thử nghiệm

Relative Advantage
Lợi thế liên quan

Observable
Tính hiện hữu

Other?
Tính chất khác?

Appendix I

Barriers with Recommendations

Barrier 1A: Perception by the general public that online education does not have the quality required to secure good careers

5b: Using Pilot Programs: Create a partnership with employers

Barrier 1B: Perception that online education has poor teacher-student interaction

8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 1C: Perception that online education does not fit with Vietnamese cultural preferences for face-to-face learning

5b: Using Pilot Programs: Create a partnership with employers
8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 1D: Perception that online courses are used only by inferior schools in the distance education system

4: Focus on Quality within Mainstream Programs

Barrier 1E: Perception by faculty and administrators that benefits will not outweigh the costs especially in light of low tuition rates in Vietnam

5c: Using Pilot Programs: Demonstrate true costs and specific savings

Barrier 1F: Perception by faculty and administrators that online content should be used only to augment traditional teaching methods rather than transitioning to a new pedagogy

8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 1G: Faculty's lack of knowledge or experience with the tools that can be used in online courses allows perception that only traditional methods are appropriate

8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 2A: Internet bandwidth is often only good enough for small scale online initiatives

2: Major Investments

Barrier 2B: More technology infrastructure is needed along with the support staff to maintain the systems

2: Major Investments
Barrier 2C: Leadership support for moving to greater online content beginning with addressing issues of faculty workloads and compensation

1: Major Policy Issues: Faculty Salary and Workloads, and Student Quotas

Barrier 2D: Many administrators need more knowledge on actual costs of properly configured online education systems to avoid attempts to "go cheap"

5c: Using Pilot Programs: Demonstrate true costs and specific savings

Barrier 2E: Faculty perception that using online education will increase their already heavy workloads while providing no improvements in salary or compensation

8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 2Fa: Unclear/Conflicting Policy: Differing opinions on how much autonomy VNU-HCM has vs MOET

5a: Using Pilot Programs: Build a track record of approved projects

Barrier 2Fb: Unclear/Conflicting Policy: Current interpretation of online education policy is often based on rules for distance education while use of online education within the mainstream universities is not specified

3: Communicate Clear Policy Through Action

Barrier 2Fc: Unclear/Conflicting Policy: Quota system on number of degrees permitted may limit ability to achieve economies of scale in online education infrastructure investments

1: Major Policy Issues: Faculty Salary and Workloads, and Student Quotas

Barrier 2G: Historic low quality perception of online education as used by part-time distance learning programs. "If it is online, it must be part-time," "If it is part-time, it must be low quality," therefore "If it is online, it must be low quality"

4: Focus on Quality within Mainstream Programs

Barrier 2H: Local administrators may use a traditional class mindset to manage issues regarding online content

3: Communicate Clear Policy Through Action

Barrier 2I: Perception that Vietnamese students lack the self-discipline and are too passive to succeed in an online environment

5e: Using Pilot Programs: Test student experience

Barrier 2J: Better English language skills are required to utilize online content

8c: Online Training Courses: MOOCs: An online course for English language training

9: Project to Improve Online English-to-Vietnamese Translation Software
Barrier 2K: Library and other student services are inadequate

2: Major Investments

Barrier 2L: There is no transfer credit policy for students taking online courses through other universities

3: Communicate Clear Policy Through Action

Barrier 3A: Many faculty members and administrators do not have the technical skills to use online education

7: Increase Technical Support Staff
8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 3B: Many faculty members do not understand the new pedagogy required for online education

8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 3C: Some students may not have the skills to use online education

7: Increase Technical Support Staff
8b: Online Training Courses: MOOCs: An online course for students

Barrier 4: The approval process to try new online education initiatives is perceived as unclear, complex, and time-consuming

5a: Using Pilot Programs: Build a track record of approved projects

Barrier 5A: Perception that current online programs would not translate well for use within other departments or that the program is not yet good enough to share

5f: Using Pilot Programs: Use cross-department development teams
6: Encourage a Sharing Culture
8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 5B: Perception that there are no official methods to share online experience within VNU-HCM and only word-of-mouth is used

6: Encourage a Sharing Culture

Barrier 5C: Perception by faculty that there are limited official training venues and the only source of information is from distant colleagues or internet searches

7: Increase Technical Support Staff
8a: Online Training Courses: MOOCs: An online course for faculty and administration

Barrier 5D: Lack of observable quality measurements in mainstream online courses to differentiate from poor quality reputation of online education in distance programs

5d: Using Pilot Programs: Establish quality measurement criteria and techniques
Appendix J

Recommendations with Barriers

Recommendation 1: Major Policy Issues: Faculty Salary and Workloads, and Student Quotas

2C: Leadership support for moving to greater online content beginning with addressing issues of faculty workloads and compensation

2Fc: Unclear/Conflicting Policy: Quota system on number of degrees permitted may limit ability to achieve economies of scale in online education infrastructure investments

Recommendation 2: Major Investments

2A: Internet bandwidth is often only good enough for small scale online initiatives

2B: More technology infrastructure is needed along with the support staff to maintain the systems

2K: Library and other student services are inadequate

Recommendation 3: Communicate Clear Policy Through Action

2Fb: Unclear/Conflicting Policy: Current interpretation of online education policy is often based on rules for distance education while use of online education within the mainstream universities is not specified

2H: Local administrators may use a traditional class mindset to manage issues regarding online content

2L: There is no transfer credit policy for students taking online courses through other universities

Recommendation 4: Focus on Quality within Mainstream Programs

1D: Perception that online courses are used only by inferior schools in the distance education system

2G: Historic low quality perception of online education as used by part-time distance learning programs. "If it is online, it must be part-time," "If it is part-time, it must be low quality," therefore "If it is online, it must be low quality"

Recommendation 5a: Using Pilot Programs: Build a track record of approved projects

2Fa: Unclear/Conflicting Policy: Differing opinions on how much autonomy VNU-HCM has vs MOET

4: The approval process to try new online education initiatives is perceived as unclear, complex, and time-consuming

Recommendation 5b: Using Pilot Programs: Create a partnership with employers

1A: Perception by the general public that online education does not have the quality required to secure good careers

1C: Perception that online education does not fit with Vietnamese cultural preferences for face-to-face learning
Recommendation 5c: Using Pilot Programs: Demonstrate true costs and specific savings

1E: Perception by faculty and administrators that benefits will not outweigh the costs especially in light of low tuition rates in Vietnam

2D: Many administrators need more knowledge on actual costs of properly configured online education systems to avoid attempts to "go cheap"

Recommendation 5d: Using Pilot Programs: Establish quality measurement criteria and techniques

5D: Lack of observable quality measurements in mainstream online courses to differentiate from poor quality reputation of online education in distance programs

Recommendation 5e: Using Pilot Programs: Test student experience

2I: Perception that Vietnamese students lack the self-discipline and are too passive to succeed in an online environment

Recommendation 5f: Using Pilot Programs: Use cross-department development teams

5A: Perception that current online programs would not translate well for use within other departments or that the program is not yet good enough to share

Recommendation 6: Encourage a Sharing Culture

5A: Perception that current online programs would not translate well for use within other departments or that the program is not yet good enough to share

5B: Perception that there are no official methods to share online experience within VNU-HCM and only word-of-mouth is used

Recommendation 7: Increase Technical Support Staff

3A: Many faculty members and administrators do not have the technical skills to use online education

3C: Some students may not have the skills to use online education

5C: Perception by faculty that there are limited official training venues and the only source of information is from distant colleagues or internet searches

Recommendation 8a: Online Training Courses: MOOCs: An online course for faculty and administration

1B: Perception that online education has poor teacher-student interaction

1C: Perception that online education does not fit with Vietnamese cultural preferences for face-to-face learning

1F: Perception by faculty and administrators that online content should be used only to augment traditional teaching methods rather that transitioning to a new pedagogy

1G: Faculty's lack of knowledge or experience with the tools that can be used in online courses allows perception that only traditional methods are appropriate

2E: Faculty perception that using online education will increase their already heavy workloads while providing no improvements in salary or compensation
3A: Many faculty members and administrators do not have the technical skills to use online education
3B: Many faculty members do not understand the new pedagogy required for online education
5A: Perception that current online programs would not translate well for use within other departments or that the program is not yet good enough to share
5C: Perception by faculty that there are limited official training venues and the only source of information is from distant colleagues or internet searches

**Recommendation 8b: Online Training Courses: MOOCs: An online course for students**

3C: Some students may not have the skills to use online education

**Recommendation 8c: Online Training Courses: MOOCs: An online course for English language training**

2J: Better English language skills are required to utilize online content

**Recommendation 9: Project to Improve Online English-to-Vietnamese Translation Software**

2J: Better English language skills are required to utilize online content