The Internationalization of Higher Education in Vietnam in the Context of East Asian Regional Integration: National Policies and Institutional Implementation at Vietnam National University, Hanoi

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東アジア地域統合におけるベトナムの高等教育国際化 —国家政策と大学機関の取り組み：ハノイのベトナム国立大学の事例—

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Abstract

Over the past decades, globalization has become an irreversible process having impacts on the field of higher education. Higher education internationalization and regional integration are also taking place in many countries and regions the world over. Although East Asia is a diverse region, it is meaningful for regional countries to cooperate and integrate, especially in the context that most member countries are now internationalizing their higher education. In order to accelerate this process, in addition to learning from experiences of other regions, especially the Europe, it is necessary for East Asia to look into the case of each specific member country so as to have insightful understandings of one country’s educational system, its strategy, plans, aspirations as well as problems and challenges in the internationalization of higher education. Since its start of Doimoi policy in 1986, Vietnam has achieved remarkable development in higher education. However, it is still faced with serious chronic and emerging problems. Internationalization of higher education is therefore considered as one of the necessary solutions for Vietnam and its institutions to enhance educational quality and thus catch up with regional and international standards. The purpose of the paper is to investigate the internationalization of higher education in Vietnam at both national and institutional levels in which it takes the Vietnam National University, Hanoi (VNU) as a case study. Following the introduction part, the paper will first briefly look at the present state of higher education in Vietnam. Second, it will analyze the internationalization of higher education at the national level. Third, the paper will examine how this process is being implemented at the institutional level of VNU. Finally, it will offer some implications for Vietnam in this process and for East Asia to promote regional integration in the field of tertiary education.

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1. Introduction

Over the last few decades, globalization has become a central component in a number of academic discussions; its impact and influence being increasingly difficult to be ignored. Globalization is not a new phenomenon. It is a process with long history stemming from the early sixteenth and the late nineteenth century (McGinn, 1997; UNDP, 1999). However, from the 1980s, globalization has been drastically accelerated and become an irreversible (Altbach & Knight, 2007) and most influential process that permeates all fields of human life and academic disciplines. Cultural and social issues have been shaped by this direction as well and therein higher education is not an exception. Globalization can be viewed as the process of increasing worldwide convergence, interconnectedness and interdependence (Marginson, 2006; Van der Wende, 2001; Yang, 2005) with the compression of time and space (UNDP, 1999; Yang, 2005) and the blurring of national borders not only for trade, capital and information but also for ideas, norms, cultures and values (UNDP, 1999). Similarly, Jane Knight and de Wit (Knight, 2005) define globalization as “the flow of technology, economy, knowledge, people, values, ideas... across borders”. Globalization affects each country and institution in different ways, positively or negatively, directly or indirectly, varying by nation, by discipline and over time (Knight, 2005; Marginson, 2006).

Together with globalization, internationalization is a prominent process that is changing the scene of higher education (Knight, 2004). Some researchers consider internationalization as a response to globalization (Knight, 2008; van de Wende, 2001; Yang, 2005); while others believe that this process has been going on quite independently with globalization and that these two processes have a dialectical relationship (Anneke, 2002; Teichler, 2009). For some analysts, internationalization of higher education is perceived as a steerable policy process in which national states are not questioned, whereas globalization is external to higher education and can hardly be influenced (Luijten-Lub, Wende, & Huisman, 2005; van de Wende, 2001). Other researchers argue that the differentiation between these two processes “does not correspond to a national/global distinction” (Marginson, 2006) and that globalization should not be simply seen as a higher form of internationalization (Scott, 2000). Scholars like Marginson (2006), Teichler (2009) and Knight (2008) refer to internationalization as the increase of relations and cross-border activities between and among nations, while globalization means the worldwide scope and level (Knight, 2008; Marginson, 2006) and the blurring or even disappearance of national borders (Teichler, 2009). It can be stated that there have been a variety of definitions for internationalization of higher education. In this context, the paper will use the definition proposed by Knight (2004) which is a neutral one and has been widely accepted in the domain of international education (Beerkens, 2004). “Internationalization at the national/sector/institutional
level is the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of higher education at the institutional and national level” (Knight, 2008).

Together with internationalization, regional cooperation and integration in higher education have become an emerging trend in many parts of the world. Under the impacts of globalization such as the massification, commercialization, decentralization, and marketization of higher education, countries in many regions worldwide, especially developing countries are faced with the same issues of access, equity, broadened participation, and quality in higher education (SEAMEO RIHED, 2008), issues that go beyond the border of one individual nation or institution and therefore require the concerted efforts of the whole region. Moreover, the need to enhance the economic and educational competitiveness of one region as a whole and member nations and institutions in particular is another strong motivation to enhance regional cooperation and integration in different parts of the world today. Nations and institutions that are seeking to expand the education markets and attract an increasing number of international students into the domestic education systems also advocate this process. From the political, cultural, and social points of view, higher education regional cooperation and integration is considered to be one of the important methods for peace building and mutual understanding within one region.

There is a relationship between higher education internationalization and regional integration in the sense that they can facilitate and compliment each other. Regional integration can be considered a stepping stone for internationalization or can be used as a tool for countries and institutions to accelerate and deal with problems and challenges that may occur in the process of internationalization of higher education. For example, countries in a region can cooperate to enhance higher education quality and facilitate student mobility through the regional mechanisms and systems for quality assurance, accreditation, credit transfer and qualifications recognition. Regional integration is also a good way for education exporting countries to better target and access regional markets. Vice versa, internationalization can be a means and a facilitator for these actors to promote regional integration. Moreover, at different points of time and different stages of development, different countries and institutions may have different rationales and motivations and set up different priorities to promote regional cooperation and integration in higher education.

The past ten years have witnessed increasing interdependence among East Asian countries, as seen, for example, in the ASEAN + 3 process, especially in economic integration and policy collaboration. However, in the field of higher education, compared to other regions of the world, East Asia is lagging behind in creating and promoting the basic level of regional integration and policy harmonization to achieve common
objectives and interests (SEAMEO RIHED, 2008). In order to accelerate this process, in addition to learning from experiences of other regions, especially the Europe, it is necessary for East Asia to look into the case of each specific member country so as to have insightful understandings of one country's educational system, its strategy, plans, aspirations as well as problems and challenges in the internationalization of higher education. Only when being well equipped with deep and comprehensive knowledge about "who is doing what?" of countries in the region, can researchers and policy makers have suitable decisions, strategies, programs and activities appropriate for the whole region to further promote the process of higher education integration.

Since the adoption of the 'Doi Moi' policy in 1986, Vietnam, a developing East Asian country, has undertaken the dual process of transitioning from a centrally planned economy to a socialist-oriented market economy and integration into a rapidly changing world. Along with the open door policy and market-oriented reforms, Vietnam in recent years, especially from 1991, has accelerated international integration in many fields. In the field of higher education, Vietnam has achieved remarkable progress in terms of the magnitude, quality and efficiency of its system, narrowing the gap between itself and neighboring countries. However, like many other systems in the region, Vietnam's system of higher education is also struggling with a range of chronic and emerging problems. While internationalization is identified as a priority of utmost importance at both national and institutional levels, it is meaningful and necessary that Vietnam strengthens and accelerates cooperation and collaboration with other East Asian countries in the field.

So far, research in Vietnam which addresses the issue of internationalization of higher education remains modest. Internationalization, as a strategy for the development of higher education, is quite a new concept in Vietnam. The term has been used in several policy documents at both the national and institutional levels (MOET, 2008b; VNU, 2007e), as well as in academic papers (Briller & Pham, 2008; Ngo, 2007; Oliver et al., 2009). However, there has not been a specific definition for this process. Generally, the internationalization of higher education in Vietnam is interpreted as an enhancement of international and regional cooperation and integration in the field of higher education. In some policy documents, internationalization is narrowly understood and referred to as the integration of international dimensions into the curricula at higher educational institutions (MOET, 2008b; VNU, 2007e). Although some contents of internationalization such as international standards, international cooperation, international ranking and recognition, student mobility, international curricula have been broadly discussed and are now among the hot topics of higher education in Vietnam, there has not been a systematic and comprehensive research on this issue in the national context. This is due partly to the lack of available data and statistics conducted
by different responsible bodies in Vietnam nationally and institutionally. The underrepresentation of international dimensions of higher education in data collections and data analysis is a hindrance to academic research as well as policy and strategy direction in this field in Vietnam.

The purpose of the paper is to investigate the internationalization of higher education in Vietnam at both national and institutional levels in which it takes the Vietnam National University, Hanoi (VNU) as a case study. The paper will first briefly look at the present state of higher education in Vietnam. Second, it will analyze the internationalization of higher education at the national level. Third, the paper will examine how this process is being implemented at the institutional level of VNU. Finally, it will offer some implications for Vietnam in this process and for East Asia to promote regional integration in the field of tertiary education. Data and information used to analyze in this paper were collected by the author from various sources mostly during her research trips in Vietnam at the Ministry of Education and Training (MOET) as well as VNU and its member colleges. The paper therefore provides an insightful and comprehensive understanding of the current situation of higher education internationalization in Vietnam with a variety of facts and figures, highlighting its problems and challenges in this process and contributing to literature on this issue in Vietnam.

2. The state of higher education in Vietnam

Since 1986, together with the Doi Moi process, higher education in Vietnam has developed considerably, contributing to the intellectual advancement of the nation, human resource training, and to a number of socio-economic improvements.

The number of higher educational institutions has increased dramatically, from 153 in 1999 to 369 in 2008 (MOET, 2008b). Enrollment numbers have followed suit, with 1,603,484 students in 2008, a 179.4 percent increase from 1999. There are now 209 colleges and 160 universities, of which 305 are public and 64 are private (MOET, 2008b). The diversity in the types of institutions and the form of education has better served the growing demands of the population and has also helped generate new spaces of higher learning. Vietnam's higher education system has developed so as to be compatible with the global system in terms of qualifications and degrees granted; specifically, the modular approach (using credits) has been incorporated into the system in order to enhance the quality of teaching and learning (Nguyen, 2005).

Despite these initial achievements, Vietnam's higher education system remains "poor and improper" (MOET, 2005c). The Vietnamese higher education faculty is weak in terms of both quantity and quality. In academic year 2007–2008, the number of teachers is 56,120 whereas that of students is 1,603,484 making up the students/teacher
ratio of 28.57:1. In 2010 it is estimated that the number of higher education students in Vietnam will reach 1,799,920 (MOET, 2008b). Thus, if Vietnam is to achieve by this year the targeted students/teacher ratio of 20:1 as set up in the “Vietnam Higher Education Renovation Agenda Period 2006–2020”, it will need 33,876 more teachers, a number not easy to get in a two-year period from now. Moreover, the percentage of faculty members with doctoral and masters’ degrees is still low compared with other countries in the region (as shown in Figure 1 and 2). This fact is one of the main reasons explaining for the low teaching and research quality in Vietnamese higher educa-

Figure 1:

![Bar chart showing percentage of Vietnamese faculty members with doctoral, master and bachelor degrees](chart)

**Source:** 2000-2006 and 2020b: (MOET, 2008b);
2010 and 2020a: (MOET, 2005c);
*: Targeted figures

Figure 2:

![Bar chart showing percentage of faculty members with doctoral, master and bachelor degrees in some East Asian countries](chart)

**Source:** Data collected from website of Ministry of Education of each country and calculated by author
tional institutions nowadays.

Due to the shortage of faculty members, a large proportion of the teaching staff has to spend a large amount of time on teaching and does not have appropriate conditions to upgrade their skills and knowledge. Furthermore, although the monthly average salary in education and training sector has been increased more than three times from 615,100 VND to 1,832,900 VND (1 USD = 17,779.50 VND as of May 26, 2009) in the period of 2000–2007 (General Statistics Office of Vietnam, 2009), Vietnam's education remains one of the lowest paid sectors in the economy (see Appendix), not to compare with that of other neighbouring countries. Therefore many lecturers are left no choice but to engage in a myriad of income-generating activities to supplement the meager

Figure 3: Number of scientific publication of select universities in 2006

Source: Ho, 2007

Figure 4:

Number of patents/million people registered in the US (2002)

Source: (Ho, 2007)
stipend. Faced with such working conditions, they are not able to conduct scientific research as a top priority. Figure 3 and 4 reveal an alarming situation of weak scientific research activities in Vietnam, far left behind by other countries and universities in the region.

Curricula and teaching methodology are undergoing a slow process of reviewing and modernization. However at present, they remain academically biased, with instruction that is incongruous with work skills, and a lack of creativity and vocational guidance. The ubiquitous 'chalk and blackboard' and dictative methods remain the main tools for delivering knowledge, none of which encourages active learning. According to Pham and Fry (Pham & Fry, 2004), about 75% of students can find jobs after graduation, but 50% of their jobs are not related to their college training. A report of the Ministry of Education and Training (MOET) presented at the "National conference on the quality of higher education" in January 2008 also shows that more than 50% of university graduates need re-training before starting their jobs (Tuong, 2008). Management in higher education is still characterized by an inflated bureaucracy, which is still too centralized and in which the division of functions and tasks has generated gaps, constraining innovation (Tran, 2005).

Fully aware of the important role higher education plays in the development process, as well as the limitations and shortcomings apparent in the present circumstances, the government of Vietnam has promulgated and implemented a number of plans, projects and policies to reform its higher education system. In 2001, the 9th National Congress of the Vietnam Communist Party set up the Socio-economic Strategic Development Plan 2001–2010 stating: "In order to meet the demand for human resources which is a decisive factor in the country’s development plan in the period of industrialization and modernization, it is necessary to create radical and overall changes in education and training" (Communist Party of Vietnam., 2001).

According to the Strategy for Educational Development 2001–2010 (Prime Minister, 2001), the goals defined for the higher education sector are to i) meet the demand for the high quality of human resources for industrialization and modernization; ii) enhance Vietnam's competitiveness in the process of international economic integration; iii) facilitate the expansion of higher education through diversification of training programs on the basis of a system, suited to the development framework, employment conditions, local and regional human resource needs and the training capacities of educational institutions; iv) increase the appropriateness of training to the employment needs of the society; and finally, v) empower the workforce to develop entrepreneurial skills.

In order to achieve these goals, a number of solutions have been proposed, some of which have already been carried out. Among these, internationalization is one of
the most important approaches adopted to ameliorate the higher education system in Vietnam, aiming to better integration in the region and the world.

3. Internationalization of higher education in Vietnam: National processes
3.1 National strategy for international cooperation and integration

As previously mentioned, internationalization of higher education in Vietnam is generally referred to as the expansion and promotion of international and regional cooperation and integration in the field of higher education. This process is considered indispensable to improving the higher education system in Vietnam. To this end, the Strategy for Education Development 2001–2010 and the Vietnam Higher Education Renovation Agenda 2006–2020 outline policy targets, as listed below:

- Developing an international integration strategy for the national higher education system within the context of the Vietnamese-American Bilateral Trade Agreement (BTA), the ASEAN Free Trade Area (AFTA) and the General Agreement on Trade in Services (GATS);

- Expanding cooperation with foreign countries and institutions to establish high-tech centers in higher education institutions; carry out joint scientific research projects;

- Launching a strategy on teaching and learning in foreign languages, especially in English; using advanced foreign training programs, curricula and materials, which are suitable for Vietnam’s development needs;

- Improving the quality of research and training programs with specific national features in order to attract foreign researchers and students, while maintaining national identity and traditional values;

- Exchanging lecturers and students, implementing joint training and research programs and continuing to send teaching staff and students overseas to study in key areas by using state funding;

- Developing mechanisms and policies to facilitate and encourage study abroad for self-financed students;

- Ratifying the “Regional Convention on the Recognition of Studies, Diplomas and Degrees in Higher education in Asia and the Pacific”, and signing similar bilateral
treaties and establishing organizations for the promotion of related activities;

- Encouraging foreign entities with experience, potential and high qualifications to establish education institutions with 100% foreign capital or joint training programs with Vietnamese partners in higher education, vocational training and distance education, offering courses at regional and international level;

- Exercising quality control in training services (including on-line programs) provided by foreign training institutions; participating in regional and international quality accreditation organizations;

- Attracting highly qualified experts from foreign countries to provide training and research support, while formulating systematic policies to attract overseas Vietnamese and Vietnamese citizens trained abroad to come back and make contributions to nation-building;

- Participating in the international human resource training market, and aiming at exporting skilled labor.

It can be recognized from the international dimensions in these policy targets that academic rationale is the top one for internationalization of higher education in Vietnam. This process is expected to bring about radical reforms in many aspects of higher education. Especially, it is considered a good way for Vietnam and its institutions to increase the teaching and research quality with an aim to win regional as well as international standards and recognitions.

Table 1 shows the cornerstone events which have direct or indirect impacts on the internationalization of higher education in Vietnam. Each of these events will be discussed in detail in the following parts of the paper.
<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
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| 1986 | Introduction of market economy  
      | Implementation of open door policy  
      | Third Educational reform |
| 1991 | Multi-lateralization & diversification of international relations |
| 1992 | Board of Minister's Instruction on Sending Vietnamese citizens abroad for training in the new circumstance |
| 1999 | MOET's Regulation on foreigners studying in Vietnam |
| 2000 | Government's Decree on foreign investment in education, health care, and scientific research  
      | Establishment of RMIT-first 100% foreign investment university in Vietnam  
      | MOET's Project 322: Vietnamese Government Scholarship |
| 2001 | Government's Strategy for Education Development 2001-2010  
      | Government's Decree on Stipulating the Setting Up and Operation of Vietnam-Based Foreign Cultural and/or Educational Establishments |
| 2004 | Government's Official document "About the continuation of university and college network improvement" |
| 2005 | MOET's "Vietnam Higher Education Renovation Agenda Period 2006-2020"  
      | Government's Decree on Fundamentally and Comprehensively Reform of Vietnam's Higher Education Period 2006-2020  
      | MOET's Circular on Guidelines on investment cooperation with foreign partners in the fields of healthcare, education and training, and research |
| 2006 | MOET's “Advanced programs” Pilot project  
      | Prime Minister's Decision on policy and main guidelines to construct international standard universities of Vietnam |
| 2007 | 150th WTO member |
| 2008 | Establishment of the Vietnamese-German University  
      | MOET's proposal 20,000 PhDs Plan  
      | Government's Decision on “Advanced programs”  
      | MOET's drafted Strategy for Education Development 2009-2020 |
3.2 Staff and student mobility
3.2.1 Study abroad

Since the implementation of the Open door policy in 1986, especially from 1991 when the Vietnam Communist Party Central Committee decided the policy of multilateralization and diversification of international relations, there has been a significant growth in the number of Vietnamese students going abroad to study. Between 1990 and 2005, this number increased by 22.4 times from 1,139 to 25,505 (MOET, 2005b). There are now figures showing that the number of Vietnamese students studying overseas has been as high as 60,000 in 2008 of which the largest proportion is privately-funded students (Vietbao, 2008). According to the 2008 "Open doors" report of the Institute of International Education, Vietnam now ranks 13th among the 20 leading countries of origin in the USA (International Institute of Education, 2008). Australia is now hosting the largest number of 15,931 Vietnamese students in 2008 (Australia Education International, 2008). Some Asian countries such as Japan, China, South Korea and Thailand have also become popular destinations for students from Vietnam during recent years. The rapid growth of Vietnamese students seeking overseas study can be due to the following reasons:

Firstly, unlike the period prior to 1990 when Vietnam only had educational cooperation with socialist countries, in the past 18 years, MOET has expanded its relationships with a wide range of nations, international organizations and institutions all over the world. Many of these countries and organizations provide scholarships to Vietnamese students to study in their countries or overseas. Among the countries which offer the greatest number of scholarships annually for Vietnamese students are Australia, Russia, Japan, China and India, followed by other countries, such as the Netherlands, France, Germany, USA, the UK, Korea, Singapore and Thailand, to name but a few (MOET, 2004).

Secondly, cognizant of the country's urgent need for qualified human resources, in 1992 the Board of Ministers issued the "Instruction No. 270/CT on sending Vietnamese citizens abroad to study in the new circumstance" (Board of Minister, 1992). This important document which emphasizes the necessity to diversify the countries of destination, types of training and financial resources to send students abroad, is a cornerstone for other later policies relating to student mobility. Accordingly, privately funded students who want to study abroad would be considered and allowed by MOET. Under this green-light, together with the increase in family incomes, more and more Vietnamese students have pursued studies abroad outside the official financial help.

Thirdly, in 2000, the MOET's project "Training Scientific and Technical Cadres in Institutions Overseas with the State Budget" known as 'Project 322' started to train
and cultivate leading science and technology staff in key sectors (MOET, 2000). VND 100 billion of the national budget is spent to send annually some 450 students overseas, of which 200 cadres will study in doctoral programs, 100 in master degree programs, 60 to become engineers and 40 to become scientific trainees (MOET, 2006). This is the first time that the Vietnamese government uses its own budget to send its staff overseas for training. Priority training sectors are telecommunications, information technology, biological technology, and new materials. Recently, in late 2008, MOET promulgated a plan to train 20,000 PhDs by 2020 half of whom will be trained abroad, in order to provide universities and colleges with qualified lecturers. Project 322 is one of the policies to realize this target. These newly trained teachers are expected to make up 25% of the total higher education faculty members, meeting 50% of the country’s demand for lecturers at this level (Ngo, 2007). Up to October 2008, 3,106 students and cadres have been sent to study abroad with state funds, of which 2,366 are postgraduate students and 740 are undergraduate ones (MOET, 2008a). Figure 5 shows the top 10 leading host countries for state-funded Vietnamese students in which we note the presence of three most attractive Asian countries including Thailand, Japan and China.

Figure 5: Top 10 Countries Chosen for Postgraduate Studies by State-sponsored Vietnamese Students

![Bar chart showing the number of Vietnamese students studying abroad in top 10 countries from 2000 to 2008.]

*Source: MOET, 2008c*

According to Decision No.356/QD-TTg issued by the Prime Minister in 2005, the second phase of Project 322 will continue until 2014, spending VND 260 billion each year to send students abroad. MOET will sign contracts with foreign countries
enabling 10,000 junior faculty members to study abroad. MOET will send 2,500 to the United States; 1,000 to the United Kingdom; 1,000 to Germany; 1,000 to Australia; 1,000 to Japan and 700 to France.

3.2.2 Foreign students in Vietnam

In the past ten years, Vietnam has welcomed an increasing number of foreign students to its higher education sector. Between 1998 and 2001, there were 568 students from 12 countries under different agreement schemes and more than 2,000 students from 18 other countries studying in Vietnam (MOET, 2004). According to the Global Education Digest 2007 (UNESCO, 2007), the number of inbound mobile students in Vietnam in 2005 is 2,053, of which 2,016 students are from East Asian and the Pacific countries. In 1999, MOET issued the "Regulation on management of foreigners studying in Vietnam" in which it required international students to have an appropriate level of Vietnamese language in order to pursue the study in Vietnam. Partly due to this requirement, the study-field options for these students are mostly constrained to Vietnamese language and Vietnamese studies (MOET, 2004). Recently the 14th version draft "2009–2020 Vietnam Educational Development Strategy" (MOET, 2008b) has set up an objective number of 15,000 foreign students by 2020. In order to reach this target, MOET and Vietnamese higher educational institutions have made much effort to raise the attractiveness of the system generally and each individual institution particularly. The international joint training programs and the advanced curricula project which will be discussed in detail in the following sections are among the main ways to realize this plan. These programs are supposed to significantly increase the academic quality, broaden the choices of instruction languages and diversify the fields of study for international students.

3.3 International training programs and institutions

Since 2000, there has been tremendous development in the establishment of international training programs run either entirely by foreign universities or through some form of joint venture. Two important policies creating platform for this process are the Governmental Decree No. 06/2000/ND-CP dated March 6, 2000 (Government, 2000) and especially, the Governmental Decree No. 18/2001/ND-CP dated May 4, 2001 "Stipulating the setting up and operation of Vietnam-based foreign cultural and/or educational establishments" (Government, 2001). In 2005, MOET issued Circular No. 14/2005/TTLT-BGD&DT-BKH&DT (MOET, 2005a), which required foreign organizations wishing to operate in Vietnam to submit an establishment license from their home country to the Ministry of Foreign Affairs and MOET. This was done to protect domestic learners and assure the quality of educational services of these programs.

The Royal Melbourne Institute of Technology (RMIT) International University, Vietnam established in 2000 was the first 100% foreign owned international university
in Vietnam with two campuses in Hanoi and Ho Chi Minh City. In an effort to significantly increase the quality and international recognition of Vietnamese higher education, MOET has set up a target to newly establish four international standard universities by 2015 following the university models of academically advanced countries such as Germany, France and Russia (MOET, 2008b). The Vietnamese-German University (V GU) opened in September 2008 following the German model and standards is the first to be realized by the Vietnamese government.

The last few years have witnessed a mushroom growth in international collaborated degree programs which are operated jointly by a Vietnamese institution and a foreign partner(s). According to MOET's statistical data, by October 2007 there have been 133 programs of this kind in Vietnam the majority of which have partners from Western countries (MOET, 2007). MOET is now encouraging Vietnamese universities to further develop these joint programs as a way to enhance the educational quality and achieve regional and international standards.

3.4 Internationalization of curricula

Curriculum development is an important ingredient in improving the overall quality of higher education (Chapman & Adam, 2002). Cognizant of this, in 2004, the Vietnamese government issued Official document No.1269/CP-KG “About the continuation of university and college network improvement” (Government, 2004), which assigned MOET to instruct higher education institutions to carry out advanced curricula and programs. Advanced curricula refer to those which are "properly designed and established by universities on the basis of the curricula currently used at prestigious universities in the world, including the content, teaching method, organization and training management process and are instructed in English" (MOET, 2008c).

In academic year 2006/2007, MOET allowed 9 universities to start 10 advanced programs as pilot attempts. After two years, in 2008 MOET decided to realize these programs in a larger number of Vietnamese universities. By November 2008, there have been 17 universities nationwide offering 23 advanced programs (Table 2). Recently in 2008, MOET officially proposed the Project: "Training by advanced programs at some Vietnamese universities in period 2008–2015" which was then approved by Prime Minister in Decision 1505/QD-TTg dated October 15, 2008 (MOET, 2008c). The overall target of this project is to “put into operation some advanced programs at higher education level in order to establish and develop a number of fields, faculties and universities which reach the regional standards and international ranking; contribute to the enhancement of educational quality and the fundamental and comprehensive renovation of Vietnam’s higher education; endeavor to have some Vietnamese universities being ranked in the top 200 of the world universities by 2020” (MOET, 2008c).
<table>
<thead>
<tr>
<th>No.</th>
<th>Vietnamese University</th>
<th>Program/Starting year</th>
<th>Partner University</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Architecture of HCM City</td>
<td>Urban Design/2008</td>
<td>Oxford Brookes University (UK)</td>
</tr>
<tr>
<td>2</td>
<td>Hanoi University of Technology*</td>
<td>Biomedical Engineering/2008</td>
<td>Duke University (USA)</td>
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<td></td>
<td></td>
<td>Mechatronics Engineering/2006</td>
<td>California State University-Chico (USA)</td>
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<td></td>
<td>Materials Science and Engineering/2006</td>
<td>University of Illinois at Urbana-Champaign (USA)</td>
</tr>
<tr>
<td>3</td>
<td>University of Transport and Communications</td>
<td>Civil and Structural Engineering/2008</td>
<td>University of Leeds (UK)</td>
</tr>
<tr>
<td>4</td>
<td>Water Resources University</td>
<td>Water Resources Engineering/2008</td>
<td>Colorado State University (USA)</td>
</tr>
<tr>
<td>5</td>
<td>Thai Nguyen University of Technology</td>
<td>Mechanical Engineering/2008</td>
<td>State University of New York at Buffalo (USA)</td>
</tr>
<tr>
<td>6</td>
<td>Nong Lam University</td>
<td>Food Science and Technology/2008</td>
<td>University of California - Davis (USA)</td>
</tr>
<tr>
<td>7</td>
<td>Hanoi Architectural University</td>
<td>Architecture/2008</td>
<td>University of Nottingham (UK)</td>
</tr>
<tr>
<td>8</td>
<td>Can Tho University*</td>
<td>Aquatic Culture/2008</td>
<td>Auburn University, Alabama State (USA)</td>
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<tr>
<td></td>
<td></td>
<td>Biology Technology/2006</td>
<td>Michigan State University (USA)</td>
</tr>
<tr>
<td>9</td>
<td>National Economics University*</td>
<td>Finance/2006</td>
<td>California State University - Long Beach (USA)</td>
</tr>
<tr>
<td>10</td>
<td>Foreign Trade University</td>
<td>International Economics/2008</td>
<td>Colorado State University (USA)</td>
</tr>
<tr>
<td>11</td>
<td>Hanoi University of Agriculture*</td>
<td>Agricultural Business Administration/2008</td>
<td>University of Wisconsin - Madison (USA)</td>
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<tr>
<td></td>
<td></td>
<td>Crops Science/2006</td>
<td>University of California - Davis (USA)</td>
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<tr>
<td>12</td>
<td>Da Nang University*</td>
<td>Embedded computing System/2008</td>
<td>University of Washington (USA)</td>
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<td></td>
<td></td>
<td>Electronics Engineering/2006</td>
<td>University of Washington (USA)</td>
</tr>
<tr>
<td>13</td>
<td>Hue University*</td>
<td>Physics/2006</td>
<td>University of Virginia (USA)</td>
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<td>Information System/2008</td>
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**Source:** (MOET, 2008c)

*: Pilot-project university implementing advanced programs in 2006
In this on-going project, the advanced curricula are entirely 'imported' from prestigious universities which are listed among the top 200 universities in the world. However, these curricula must be suitable with Vietnam's socio-economic development orientation. Apart from the Marxist-Leninist science courses in Vietnamese compulsory for Vietnamese students, all other courses are delivered in English by invited professors from partner universities and/or by Vietnamese lecturers. MOET has proposed that by 2020 advanced programs will be implemented in at least 30% of the Vietnamese universities (MOET, 2008b). By means of these programs which are instructed in English and considered to have high quality, MOET expects to attract 3,000 international students and at least 700 international scholars to Vietnam by 2015 (MOET, 2008c).

3.5 Other activities of international cooperation in higher education

For the past few years, Vietnamese higher educational institutions have been supported by international organizations and foreign countries through various schemes. Hitherto, approximately 100 projects of different sizes have been carried out at a number of Vietnamese universities and colleges. These projects have contributed to improving educational quality and strengthening the relationships between Vietnamese and foreign institutions (MOET, 2005c).

Vietnam has also played its role in helping other less developed countries in the region such as Laos and Cambodia to improve their higher education systems. A number of Laotian and Cambodian students have been trained in Vietnam. Moreover, Vietnam also helps develop educational infrastructure in these countries. For example, Vietnam has supported Laos to establish several upper secondary schools in Sekong and Champasac provinces and a dormitory for foreign students in Vientiane National University (MOET, 2005c).

Promoting and strengthening cooperation with Southeast and East Asian countries is considered one of the priorities in Vietnam's international cooperation strategy, at both the national and institutional levels. Vietnam has been an active member in almost all regional higher education networks such as the Association of Southeast Asian Institutions of Higher Learning (ASAIHL), ASEAN Minister of Education Organization (SEAMEO), ASEAN University Network (AUN) and Regional Institute for Higher Education and Development (RIHED). Vietnam has also actively participated in the regional integration programs and initiatives carried out by some regional organizations like RIHED and AUN. Vietnam has become the host country for a number of regional and international conferences, for example, the 6th ASEAN Sub-Committee on Education Conference (1998), Globalization and Integration in Higher Education Conference (2006), and the First ASEAN Education Forum (2007).
3.6 Issues and challenges

The internationalization of higher education in Vietnam has been significantly promoted during the past 20 years. This process has brought about important opportunities for Vietnam to develop its higher education system. However, the country is also faced with a number of challenges that are not easy to solve.

With the dramatic increase in the number of Vietnamese students to study abroad, brain drain has become one of the most concerned problems in Vietnam. A large number of students choose to remain abroad after graduation many of whom are qualified professional experts with advanced knowledge and high capacities crucial for Vietnam's development in general and higher education reform in particular. The Vietnamese government has been making efforts to deal with this issue, however, the results so far have not been impressive.

Another problem is the quality assurance and control of the blooming international joint degree programs in Vietnam. The abundance in number and diversity in types have made it more difficult for MOET and the government to manage. There have been concerns about the educational quality, accreditation and sustainability of these programs as well as the social disparity that they can bring about.

Thirdly, given the constraint of state budgets, the Vietnamese government has to take into careful and serious consideration the effectiveness and efficiency of every strategy, policy or plan. There have been ambitious targets and projects proposed by MOET and the government such as the 20,000 PhDs project, the 4 international standard universities, which have raised controversial debates on their necessity and feasibility.

The following part of the paper will take Vietnam National University, Hanoi as a case study to examine how the internationalization of higher education is actually promoted at the institutional level.

4. The case study of Vietnam National University, Hanoi

Vietnam National University, Hanoi (VNU) is one of the two state-owned comprehensive universities in Vietnam established in 1993 by the Governmental Decree No. 93/CP dated October 12, 1993 (Government, 1993) with the amalgamation of three big universities in Hanoi, namely, the University of Hanoi, the Hanoi Pedagogy University No.1 and the Hanoi Pedagogy Foreign Language University. VNU is a special university model in Vietnam in terms of structure and management.

VNU is the largest comprehensive higher education and research center in Vietnam which has been entrusted with the task of producing highly qualified human resources and talent for the country's industrialization and modernization.
(…) VNU belongs and reports directly to the Prime Minister and has high autonomy (…) VNU is entitled to work directly with ministries, ministerial level organizations, governmental bodies, people's committees of central cities and provinces (VNU, 2007e).

It can be said that VNU has been given great enabling conditions by the Vietnamese government in order to fulfill its mission to rapidly develop into a leading comprehensive university in Vietnam, comparable to other advanced universities in the region, and gradually striving to achieve international standards (VNU, 2007e). Moreover, VNU has a key role to play in Vietnam's higher education system, participating in the preparation of national policies and strategies on socio-economic development and providing various forms of academic support to other universities and colleges throughout the country. VNU is also aiming at becoming an advanced higher education center capable of creating new knowledge, producing highly qualified human resources and providing original intellectual and academic services (VNU, 2007e).

4.1 Internationalization at VNU

The concept of 'internationalization' has not been clearly defined in VNU’s official documents. However, it can be inferred from its development strategy and plans, that internationalization at VNU means achieving regional and international standards. In order to realize this goal, VNU focuses on establishing training programs congruent with international standards, developing a teaching and management staff with international qualifications, whereas the expanding and strengthening of international cooperation with regional and international institutions is considered the main method of implementation.

4.2 International cooperation

VNU has developed close and sustainable relationships with more than 130 higher education institutions, research institutes and educational organizations all over the world. In the period from 2001-2007, VNU signed about 150 Memoranda of Understanding and Memoranda of Agreement with internationally recognized institutions and organizations, of which more than 50% were from Asian countries. Japan and Korea are the two countries which have the largest number of MOUs signed with VNU (Figure 6).
By way of these relationships, VNU has carried out a number of joint research projects, training programs, joint workshops/conferences and staff/student exchange programs. From 1996–2007, among the exchange and cooperation projects undertaken, 76 programs and projects worth USD 20 million were accomplished (VNU, 2007e). These activities have contributed to strengthening VNU’s development potential, improving its physical infrastructure and upgrading the academic staff’s qualifications. Each year VNU receives important financial support and assistance from different international funds originating from Australia, Japan, Korea, the USA, among other countries. These funds are offered in the form of scholarships for qualified, but disadvantaged students.

VNU is now a member of international and regional organizations such as the AUN, the ASAIHL, the Asia Pacific Quality Network (APQN) and the University Mobility in Asia and the Pacific (UMAP). In 1999, VNU became a member of BESETOHA, an annual forum of the four leading national universities in East Asia; namely, the University of Tokyo, Peking University, Seoul National University and Vietnam National University, Hanoi. This is a place where senior administrators of the four universities can meet and promote mutual understanding in order to advance common initiatives aimed at improving the development of each institution. By participating in this important forum, VNU can enhance the educational quality and promote its reputation in the region and throughout the world.

4.3 Staff and student mobility

Ensuring VNU staff and faculty members the possibility to upgrade their skills,
knowledge and qualifications, is considered a crucial way for VNU to enhance the quality of teaching, learning and research. To this end, VNU has implemented a number of policies. For example, lecturers can retain tenure while they are out of the country for further trainings.

In recent years, opportunities to study abroad have become bigger for VNU’s staff and students. The following graphs present figures for VNU students who have studied abroad in, as well as destination countries:

Figure 7:

![Graph showing host countries for studying abroad of students from the College of Social Sciences and Humanity, VNU, H.](image)

*Source: (VNU, 2007b)*

Figure 8:

![Graph showing host countries for studying abroad in Academic year 2006-2007 of Students from the College of Sciences, VNU, H.](image)

*Source: (VNU, 2007a)*
As illustrated in Figures 7 and 8, East Asian countries have become a popular destination for VNU faculty members and students for further studies. There are two reasons for this. First, most of the students chose to study in Japan, Korea, China and Singapore because they received scholarships from the host governments. Another reason is that many students belonging to the Faculty of Oriental Studies preferred the countries of their study as destinations.

In the meantime, VNU acts as a host institution for researchers and students

Figure 9:

Source: (VNU, 2007b)

Figure 10:

Source: (VNU, 2007a)
from foreign countries, as well. Each year, VNU receives about 500 foreign students for short or long-term courses and research projects (VNU, 2007e). It must be noted, however, that most of these students are not privately funded but receive financial supports through governmental bilateral agreements. A large number of foreign students in VNU come from East Asian countries, especially China, Thailand, Laos and Cambodia.

Those students from more developed countries, such as the USA, Japan, Korea or China, usually come to VNU to take courses of Vietnamese language and Vietnamese studies in the final years of their programs at the home institutions. However, for less developed countries, such as Laos and Cambodia, VNU helps to train their students in scientific majors on a full-time basis in pursuit of undergraduate degrees.

Attracting more foreign students, especially in joint and high quality education programs, is considered of significance for VNU. This will lead to greater regional and international recognition and will contribute to acquiring a more international study environment, as well as generating financial resources. However, thus far, no specific and detailed plans to achieve this target have been put forward.

4.4 International education programs

Over ten years, VNU has established 34 joint degree programs with 24 international education institutions overseas, many of which are prestigious universities, such as the University of New South Wales, La Trobe University (Australia), Massey University (New Zealand), Paris-Sud University (France), to name but a few. These comprise 14 undergraduate and 20 graduate programs, offering courses in various fields. Most of these programs are jointly offered by VNU and non-Asian international universities. There are only 9 among 34 joint degree programs that have Asian institution partners including Malaysia (4), China (4) and Taiwan (1) (VNU, 2007d).

The implementation of international joint degree programs is considered an important way for VNU to enhance the educational quality and achieve regional and international standards. These programs offer opportunities for students to study advanced curricula, allowing greater access to digital libraries and modern study environments. VNU’s faculty and professionals can better their qualifications via curriculum exchange and technology transfer, accessing and utilizing knowledge and teaching materials of international standard, learning from experiences in curriculum development, teaching methods as well as management skills.

In recent years, VNU has become more selective in signing MOUs and establishing joint degree programs with foreign institutions. Joint training programs must be implemented by VNU with universities in the top 500 of the world ranking. They must offer high quality education programs which are suitable to Vietnam’s development. In the mean time, VNU is preparing a regulating document concerning its
international cooperation activities.

4.5 Strategy to achieve regional and international standards

VNU’s Strategic Development Plan sets an objective to achieve by 2010 the level of an ‘advanced university’ in the Southeast Asia region and gain international standards in several key fields and sub-fields. VNU’s long-term goal is to be ranked in the list of top Asian universities and later recognized as a prestigious university internationally (VNU, 2007e).

In 2007, VNU launched the ‘16+23 Project’ which focuses on establishing and developing 16 scientific/high technology and socio-economic fields and 23 sub-fields, both of which are to achieve international standards by 2010. The project gives priority to international training programs and student/staff exchange, targeting qualification improvement in key science and technology fields. VNU and its member institutions have also introduced policies to encourage their faculty and professionals to develop scientific research, to actively take part in international conferences, as well as increase the number of publications in regional and international peer-reviewed journals.

In the coming years, VNU will focus on promoting cooperation with powerful countries in the field of education and scientific research, namely with North American, EU, Northeast Asian and Eastern European countries. It also places a significant emphasis on the promotion of close and sustainable cooperation with countries and educational institutions in ASEAN and East Asia. This is perceived as a good way for VNU to quickly attain a higher quality in higher education, while preserving its national character and identity (Mai, 2007). VNU actively supports and contributes to the higher education harmonization process among ASEAN countries. It is now seeking the ‘AUN-QA label’, an accreditation of quality standards used by the ASEAN University Network. This is an essential step forward in harmonizing education between VNU and other AUN universities (Mai, 2007).

As a comprehensive and research university aiming at regional and international standards, VNU is one of the leading universities in Vietnam which has developed rapidly the internationalization process. VNU has set up goals with specific plans to achieve them. VNU is also on the way to find essential solutions to deal with such challenges as brain drain, quality assurance and effectiveness. In order to fulfill its missions and reach the targets, there are many more things VNU needs to do and further promoting internationalization is one of its utmost priorities.

5. Conclusion and implications for Vietnam’s higher education internationalization and East Asian integration

Since 1986, Vietnam’s higher education sector has made remarkable progress. However at present, the system is still faced with a wide range of problems and
challenges. Internationalization is considered an important approach to secure the development and progress of Vietnam's higher education sector, while striving to achieve international standards and greater regional cooperation.

At both national and institutional levels, an East Asian dimension to internationalization is quite discernable in a number of aspects. In terms of staff and student mobility, the number of Vietnamese students going to East Asian countries for further study has been on the rise. Internationally recognized educational quality, competitively low tuition fees, affordable cost of living, as well as geographical proximity and better opportunities for employment after graduation are among the advantages attracting Vietnamese students to pursue higher education in these host countries. Moreover, the availability of scholarships offered by governments and organizations from East Asian countries is also a pull factor for Vietnamese students. Vietnam has strengthened relationships and collaboration with countries in East Asia and has become one of the core members of organizations and associations concerned with higher education in the region. Vietnam is now playing an active role in promoting the harmonization of higher education within the Southeast Asian region and amongst East Asian countries, as well.

However, with regard to international standards at both national and institutional levels, it seems that Vietnam is orienting itself toward Western models of regulation and standardization. This shift is most obviously evidenced in the internationalization of curricula and the establishment and implementation of joint degree programs, where universities from Anglo-Saxon countries dominate. By way of these curricula and programs, it is expected that Vietnam and its institutions would be able to access and capture the so-called "source technology" in higher education, which is believed to belong to Western countries.

It can be stated that the two processes of higher education internationalization and regional integration are mutually supporting and facilitate each other. With programs instructed in English and curricula imported from prestigious Western countries, Vietnam can possibly improve its higher educational quality and be able to attract more foreign students, most of whom would be from East Asian countries. Regional integration will be put into more serious consideration as one of the main components of the overall internationalizing strategies and plans when internationalization of higher education is more systematically discussed and implemented. Better national systems of international student services and specialized bodies for cooperation as well as improved data collections and statistics in international dimensions of higher education will also play as a basis and facilitator for the promotion of regional integration in the field.

Vice versa, by joining the regional higher education harmonization process,
Vietnam can better tackle with problems and challenges occurring in the internationalization process as discussed in the previous section. For example, participating in the regional quality assurance systems such as the ASEAN University Network-Quality Assurance (AUN-QA) or APQN-Asia-Pacific Quality Network, Vietnam can better manage its educational quality, especially that of the many international degree programs. Regional integration can also be a stepping stone for internationalization as in the case of Vietnam National University, Hanoi, where the institution sets up a target to gain regional standard before striving for international recognition and competitiveness. By taking part in regional mechanisms such as the quality assurance and comparable and readable degree systems, Vietnam can more easily align with other higher education areas, facilitate freer movement of students, and provide them of wider choices and opportunities to study abroad and to access the labour markets after graduation regionally as well as internationally.

From the study of the higher education internationalization in Vietnam, it can be stated that to promote regional cooperation and integration in higher education, it is important for regional organizations to have continuous campaigns and activities to raise awareness on the significance of this process among countries and institutions in the region. These key actors should fully recognize and understand the rationales behind the cooperative schemes and their objectives and the benefits they can gain from further regional higher education integration. Once the participants take the necessity of regional cooperation and integration into serious consideration and incorporate them into their strategic development plans, they can gradually and more effectively tackle other problems. Although regional organizations play a very important role in promoting higher education regional integration, it is the nations, the institutions, and the individuals who are the deciding actors who will determine the success of this process.

References


MOET. (2008b). 2009-2020 Vietnam educational development strategy, 14th edition draft (Publication., from MOET:
http://vanban.moet.gov.vn/?page=1.15&script=viewdoc&view=856&opt=brpage


Tuong, L. (2008). Vietnam’s Higher Education Sector has a long way to go.


Van der Wende. (2001). The international dimension in national higher education policies: What has changed in Europe over the last five years? European Journal of
# APPENDIX

## Monthly average income of labor in the governmental sector at current prices by economic sectors

**Thousand dongs**

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<td><strong>TOTAL</strong></td>
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<td>642.1</td>
<td>697.1</td>
<td>728.7</td>
<td>849.6</td>
<td>954.3</td>
<td>1068.8</td>
<td>1246.7</td>
<td>1421.4</td>
<td>1639.5</td>
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<td>514.0</td>
<td>563.9</td>
<td>680.0</td>
<td>589.8</td>
<td>740.2</td>
<td>987.6</td>
<td>1250.4</td>
<td>1126.2</td>
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<td>1931.4</td>
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*Source: (General Statistics Office of Vietnam, 2009)*