CHAPTER 5

Sustainable Education Development under Globalization, and the Reforms of Teaching and Learning Methods in Teacher Training

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Abstract

Beginning with some considerations about the relationship between globalization and education, the particular significance of the tertiary education sector for a developing society like that in Vietnam is addressed. A glance at the Vietnamese record of educational reforms in general and in tertiary education in particular reveals considerable successes as well as huge challenges. While reform needs and reform goals are scarcely controversial, the basic problem of all reform attempts is how to achieve sustainable development of the educational system. In order to launch a proven and sustainable reform scheme, we recommend an action research approach. Some strategic starting points are given combining the approach of self learning reform with research methods. This combination promises an improvement of the scientific level of teacher training institutions in their core tasks, i.e. providing students continual encouragements and innovative learning abilities.

1. Education in the Context of Globalization

The term "globalization" was first used in social science and was found for the first time in *Encyclopaedia Britannica* in 1961. Since 1990, after socialism collapsed in Eastern Europe and the Cold War ended, the process of economic globalization has been developing rapidly and the term has continued to gain popularity.

Though the terminology of globalization began to be used as late as mentioned above, the sign of globalization process was appeared as early as the 15th century—a time of numerous exploration cruises, of which a well known example is the first cruise around the world of Ferdinand Magellan, who discovered trade routes among the Asian, American, and African continents. Modern globalization is known as an increasingly international integration in all fields of economics, culture and society. It has impacts on every individual, society, organization, and state. Technological progress, especially new technologies in telecommunication, and transportation as well as free trade policies in international trade are main reasons for its dissemination. Theodore Levitt (1925–2006), a German immigrant who was a professor in Harvard University, was the first to provide a definition of globalization from the viewpoint of economic policy makers in "The Globalization of Markets" in 1983.

From an economic viewpoint, globalization is characterized by a set of changes in economic structure, leading to basic changes in international labor allocation in recent years. It results in rapid growth of the global economy. Globalization can be described with the five following factors.

- New technologies, especially computer technology and transportation systems, rationalized at the highest level, have opened new opportunities to meet the demand for goods and services all over the world.
- Because opportunities also mean pressure, what were independent activities of each nation in the past have been narrowed down and replaced by the activities of international corporations, who are considered as global players. These corporations choose to invest in the locations where they can get the most benefits. Their investment decision does not depend on the viewpoint of the nation they invest in.
- Therefore, an international financial system appears. Billions of US dollars can be transferred through this system in a few seconds without any national control or management. The independent actors are now the largest economies in the world.
- The global labor allocation process enters a new period in which the labor force is supplied to the market where the supply and demand relation is most convenient. This results in the direct competition in labor supply among countries and regions, for instance, between the European and the Asian countries. The traditional production, agriculture production, and natural resource exploitation have all fallen into global competition where each country can have its own impact in certain conditions.
- A final factor is the appearance of information and telecommunication technologies a few decades ago. They have become innovative sectors which strongly spurred the growth of the global economic system.

Modern science marks a new step in human history. Intellectual and technological innovations are achievements of modern sciences; and as such, to meet the requirements of globalization, all the countries, including the most developed ones, need to have broad and deep scientific knowledge and applied experience. The capability to understand modern sciences as well as the ability to develop these sciences further are basic conditions to modernize the society (Evers *et al*., 2004).

All of the above characteristics of globalization show that economics is the field in which globalization happens most strongly. However, globalization brings much more than economic impacts to a nation. Actually, all fields of politics are affected by globalization. Furthermore, the development of culture and society follow global trends.

Although the above development trends are still new and at their beginning steps, all these trends are indispensable. All countries must follow this development model, regardless of their current development level. Any country which goes against this model—even partly—must pay a high price. Such a country's natural resources will become exhausted and the country will lag behind desperately. This goes especially for countries which are currently prosperous thanks to their rich natural resources but which are not willing to integrate their traditional values into global trends. For all countries, the time to adapt to this model is dwindling. Urgency is particularly high for the developing countries, which have to take fast reform and strive for sustainable results simultaneously. In the current globalization context, developing countries that want to modernize will no longer be able to apply the old European development model, which required decades—amounting to centuries—to move from agricultural production, to industrial production, to a service society, and then to the knowledge society based on electronic information and telecommunication technology. Now, emerging countries have to develop all fields at the same time, prioritizing the preconditions of knowledge production (Cetto, 2006).

With this understanding, the relationship between education and successful modernization under the context of globalization becomes clear. This relation has been the central topic in the theory of human capital (Organisation for Economic Co-operation and Development [OECD], 2002). The theory proves that investment in education and training increases the economic

productivity of the labor force. For developing countries in the context of the globalizing world, improving the simple labor skills is not enough because under the impact of changes in the international division of labor, some professions will disappear or change significantly. Therefore, the labor in the new context of globalization must, through education, be equipped with new skills and capabilities. Moreover, although developing countries undergoing cultural and social changes will cope with many difficulties in the integration process, these difficulties can be basically addressed by education. The theory of social capital explains this situation in detail. A publication in 2002 by Putnam (Putnam, 2002) —the most influential theorist of the social capital theory—indicates that social capital is constituted of social organizing capabilities comprising trust, norms, and cooperation. These are the main elements for societies to improve their capability to act in their parts and as a whole. For developing countries and countries who are stepping into the developed country community, investment in education and training is the basic material of the knowledge economy. Under the challenges of globalization, that material will become more and more meaningful (Temple, 2000).

The analysis of the relation between education and economic development reveals that all countries that want to achieve continuous social progress must be brave enough to apply a strong investment policy for education and training. While the western developed countries experienced many generations before they had developed their self-organizing capability and set up distribution structures in the way of social welfare states, developing countries do not have such advantages. What developing countries have is limited experience in innovation and development. In addition, they sometimes have to face dramatic changes in their societies. These changes are shuffling the solidarity tradition of agricultural societies and jeopardizing the cohesion of the whole community. Under these conditions it is understandable that great investments in social resources are more important for these countries than for the developed countries in the West. Therefore, the simple development models must be replaced by ones which discover and open new ways valuable for the future. Sustainable development is not to exploit and consume all the natural and social resources; conversely, it is to create conditions to integrate into the globalization process in both economic and cultural fields (World Commission on the Social Dimension of Globalization, 2004).

From the above analysis, within the requirements for education policies, these three trends must be taken into consideration:

(i) In the globalization wave, we can see a similarity at the global level in terms of education purposes, contents, and standards, regardless of the characteristics of each nation. Education as a future investment for the young generation must contribute to create and develop action capability, awareness ability, and the ability to understand profoundly complicated relationships in social life and professional life; it must encourage creativeness in thinking and acting. The characteristics of each nation must be defined in the content of education; this content reflects the special characteristics of each nation, including language, local and regional cultural traditions, and the living conditions influenced by natural geographic factors. However, there is a growing trend of the “global curriculum,” in which a popular international language (like English) will be taught early; the curricula of mathematics, natural sciences, and IT are equivalent. There are two issues that are important to the education standards: one is similarity in educational level structure from kindergarten to tertiary education, and the other is time and qualification requirements. An experimental system to measure education and training results has been developed for the past 15 years (OECD, 2004). The standards, process and methods were applied to measure the education and training results that have great impacts on national education systems. Moreover, some international comparative studies have put the national education systems into a global competition to which no nation can be indifferent.

(ii) Traditional models to develop education systems have established a certain order. It starts from eradicating illiteracy and moves to building higher degrees for a more complete education system. Decades are needed to build a complete education system, but under the pressure of globalization, such a process is not feasible. In order to join and succeed in global competition, and to reform the nation rapidly, each nation must give priority to elementary education because it is the foundation for other higher education levels. With great efforts in a short time, developing countries must achieve a common global education level to make social advances as rapidly as possible.

(iii) The core factor of the knowledge society, which is replacing the industrial society, is sciences. If developing countries want to modernize their economy, they must develop their own scientific system because this system is the key to international competition. Because global cooperation activities will follow scientific rules and will be based on thoughts, through exchanges among scientific workers, developing countries that want to advance to higher levels cannot escape the general trend of making things scientific on a global scale. In the knowledge economy, as scientific know-how is the most expensive in the global market, developing countries must quickly establish scientific production for themselves.

2. Scientific Development as an Important Task in Tertiary Education

When we consider the importance of tertiary education development to establish a particular effective science system for a country, we are talking about the core factor of sustainable development under globalization pressure (Knight, 2004). Apart from this pressure, and because of the high price of imported knowledge, each country must develop its own knowledge and creativeness with its own internal resources within its own scientific system. Long before economic globalization, the sciences were internationalized. In the relationship between globalization and sustainability, this affirmation is very meaningful, as demonstrated in the four following points:

- While the economic, cultural, and political impacts of globalization may partly fall in violent conflict with national and regional traditions and create new social conflicts and dependences, global linkages in the scientific field do not lead to similar problems and risks.
- Scientific advances will occur only in very small part under the conditions of national and regional competition. It is obvious that building a science infrastructure is very costly, but this investment will promise a linkage with the intellectual treasure of the world, and will enable the most effective participation in scientific debates beyond national and cultural borders. Finally, the working experiences, wherever they are gained, will be evaluated scientifically, and then popularized in the society.
- When we talk about sciences, we mention knowledge and awareness as “basic components.” These components have very specific characters: they are always symbolic and flexible, depending on location, time, situation, and reality. In addition, they are immaterial, and thus relatively stable. Physically, knowledge can be destroyed only when all knowledge documents are destroyed and all people who hold knowledge in themselves are killed. Knowledge and awareness are common property. They cannot disappear. They remain intact when they are shared, so knowledge should be disseminated. In short, sciences are related to the entities which are very different from goods and service products.

- The above characteristics make the sciences with their achievements a very important factor for the future of human society. Even errors can have scientific effectiveness. Any scientific viewpoint on teaching and learning can be analyzed in serious scientific debates and can then be verified through the teaching and learning practice. Such competition will verify the solidity of these teaching and learning viewpoints.

A fact that should not be neglected is that patents, copyrights of intellectual property, and scientific human resources are all very expensive. However, knowledge and creativeness do not have specific and separate cultural or national characteristics. Therefore, science development is the best way for a nation to make the most of its own unlimited human resources. Through this utilization, the nation can integrate into the global knowledge society.

3. Education Reform in Vietnam: Achievements and Challenges

3.1. Education System in Vietnam: An Overview

Where does Vietnam stand? It is not easy to answer this question because the statistical reports about the Vietnamese education system are not sufficient. In addition, the survey methods and reliability of the statistical data are not persuasive. In the following we use statistical data from the World Bank (World Bank 2006).

In 2005, there were about 48,000 kindergartens and nursery schools accommodating about 2.75 million children, among them 421,000 children aged from 3 months to 3 years old (accounting for 15 percent of the total children at the same age) go to nursery schools and 2.3 million to kindergartens (accounting for 58 percent of the total children at the same age). By 2010, the kindergarten and nursery school system should be expanded to receive 18 percent of the total children under 3 years old and 67 percent of the 3–5-year-old children.

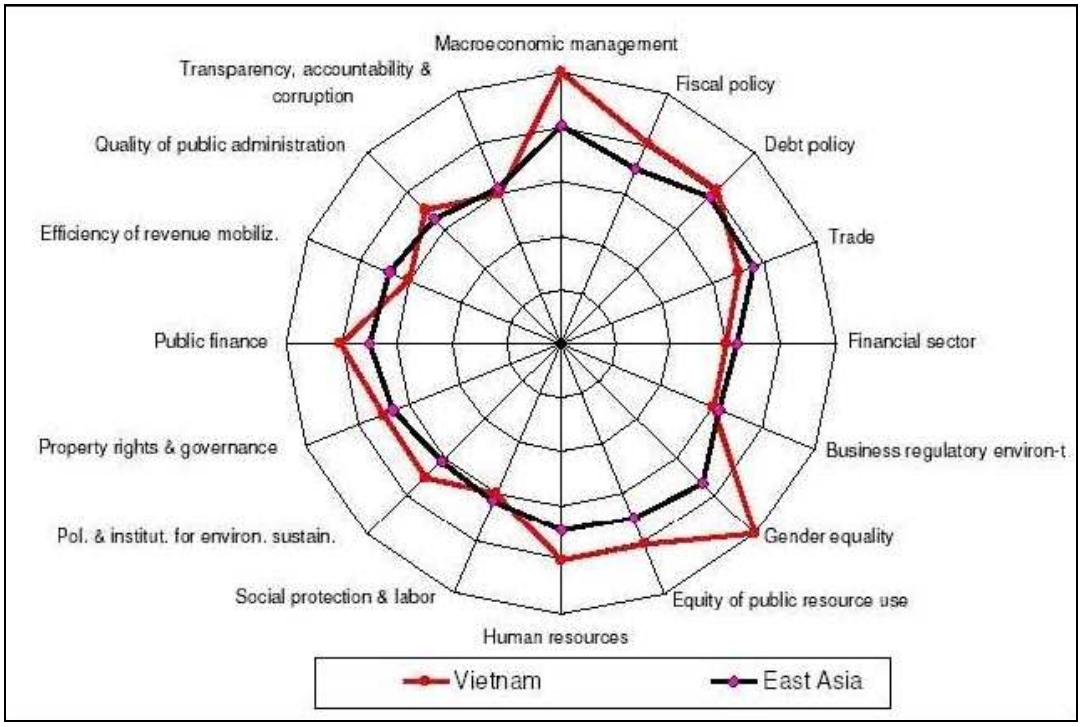
Also in 2005, there were 7.77 million children from 6 to 11 years old (accounting for 98 percent of the total children at the same age) attending five-year elementary schools. In the education system, there are 14,000 elementary schools and 1,000 elementary and secondary-combined schools. In comparison with the data at the beginning of this decade, the numbers of both pupils and schools are lower. Two reasons can be mentioned. Firstly, in Vietnam the birth rate has decreased. Secondly, there are fewer and fewer pupils at higher ages attending elementary school. A few years ago, under the pressure of illiteracy eradication programs, the rate of pupils at higher ages attending elementary schools was very high. One of the development goals for 2010 is that 99 percent of the pupils at elementary school age are going to school. A second goal is that full-day schooling is established. The third goal is that pupils from the age of three are beginning to learn foreign languages, and the number of the pupils, who have to repeat their classes, will be reduced significantly.

Like in other countries, secondary education in Vietnam is divided into lower secondary school (from 6^{th} to 9^{th} form) and the upper secondary school (from 10^{th} to 12^{th} form). When pupils graduate elementary school, they can enter secondary school. When pupils graduate secondary school, they have to pass an examination to enter high school. In the 2004–2005 school-year, there were 6.7 million pupils attending 10,000 secondary schools and 2.8 million pupils attending 2,224 high schools. While the curricula for both elementary and secondary schools are standardized nationwide, the curriculum for high schools is divided into a general curriculum and a special curriculum for those who specialize in some certain subjects (science, social science, or arts) from the 2006–2007 school year on. The latter can be introduced by single schools, approved by the District Ministry of Education and Training. By 2010, secondary schools must be able to take all students at secondary school age. Half of lower secondary graduates will continue to the high school level. To meet these goals, the number of form repeaters must be lowered, and the number of school drop-outs must be reduced.

Vocational training has three levels: primary (duration under one year), intermediate, and college (each level lasts from one to three years). In 2005, there were 1,688 vocational training schools. There are many managing agencies of these vocational training schools. Most of the vocational training schools are under the management of the Ministry of Education and Training (MOET). Some others are under the management of the military. There are also private and foreign-supported vocational training institutions. In general, vocational training schools and centers in Vietnam are still weak and cannot meet the demand. By 2010, each province or city must have at least one vocational training school and the training contents must be improved to a higher level to meet the increasing demand of the economy. Thirty percent of the secondary graduate students and 10 percent of the high school graduates should enter vocational training schools and centers.

This information reveals from nursery level to high school level that Vietnamese education has achieved a higher level than would be expected based on its economic status (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2003). The education is impressive in terms of both the achievements and the growth rate. Along with such good achievements, some severe weaknesses are being addressed through strong reform efforts in all education sectors (Tran, 2002). Compared with the neighboring countries in the region, Vietnam has achieved significant progress, and this statement is supported by Figure 1.

Figure 1: Vietnam vs. East Asia in Development



Source: World Bank (2006) as quoted by McCarty (2006)

Priority for education in Vietnam also illustrates the appropriate insights about substantial investments in education, which have helped many developing countries to succeed. The Republic of Korea is an example. Thirty years ago, it was at the low development level as Afghanistan. Now, it is one of the most competitive Asian economies, and it scores at the top of the leading nations in international education (OECD, 2007). Annual financial investment into education in South Korea is as high as the investment of the United States of America (US). The Republic of Korea also stands at the third position among OECD countries and OECD countries' partners, after Israel and Ireland (OECD, 2007). There is a similar trend in Taiwan (China) and

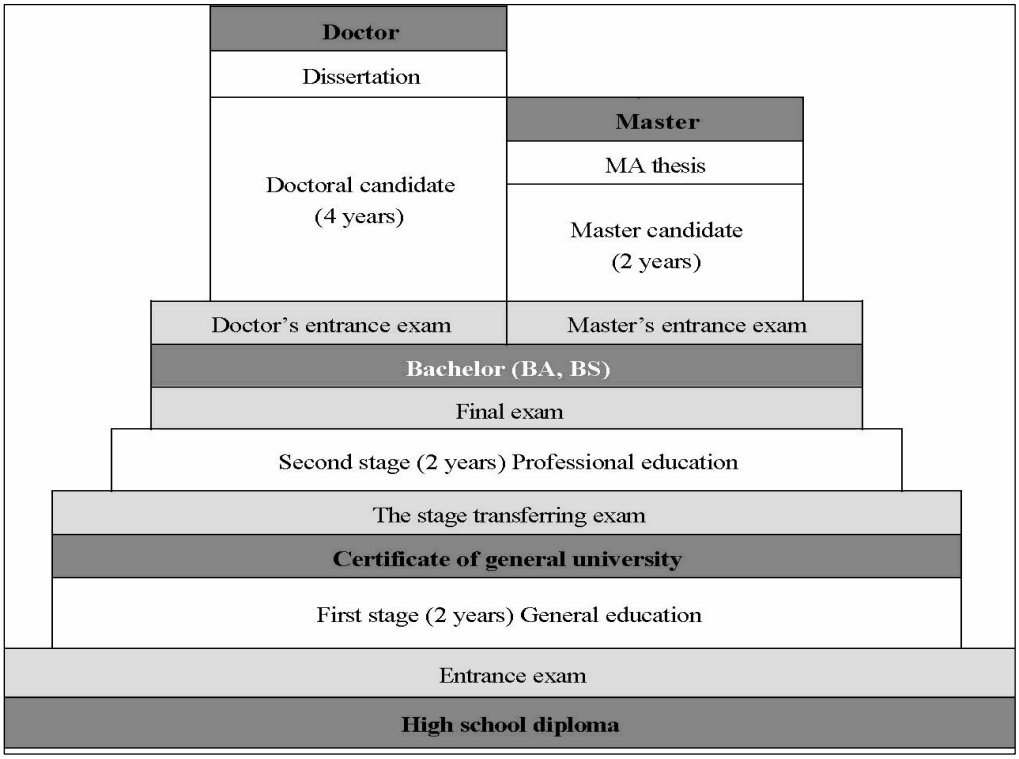
The People's Republic of China. This level of investment affirms the importance of education in globalization, including tertiary education, which plays an increasingly important role. Therefore, to develop and integrate into the globalization process, Vietnam must invest in tertiary education both financially and intellectually.

Vietnam's tertiary education system has been restructured and improved comprehensively from its low starting level at the end of the last century. The initial reform in education started in the North after Vietnam gained independence and then in the whole country, after the Vietnam War against the US ended. At that time, Vietnam's tertiary education structure was copied from the education model of the Soviet Union. There were a series of small scientific institutions, which were highly specialized, mono-disciplinary, and with low linkages between teaching and doing research. To suit the centrally planned economy, universities were put under the management of relevant ministries (Kelly, 2000). The education bill from 1998 opened this structure, delivered increased autonomy to the universities, and articulated a modern understanding of the close connection of research and academic teaching. Since the middle of the 1990s, five new universities were established by mergers of smaller universities. These new universities were Hanoi National University, Ho Chi Minh City National University, Da Nang University, Hue University, and Thai Nguyen University. These universities all follow the worldwide models of multi-disciplinary campus-universities. Applying the government resolution Number 14/2005 on basic and comprehensive reform in tertiary education, MOET has recently taken further action. It set up a reform plan to carry out reforms based on successful international experiences. One of the tasks is to remove the central ministerial steering mechanism for universities by self-management and self-responsibility. This is a basic reform effort to address the inborn stagnation of centrally run universities in Vietnam.

There are two levels in the tertiary education system in Vietnam—undergraduate and graduate levels—with a variety of studying time options and entrance conditions (Institute of International Education, 2004). Undergraduate education is divided into two levels: (i) college level (requires 2–3 years or 1.5–2 years, depending on the entrance levels of the students) and (ii) university level, which has two phases and lasts for 4–6 years, depending on each profession. The first phase lasts for 1 or 2 years, in which students study general subjects. The second phase focuses on professional study. Graduate education includes (i) master's degree, which lasts for 1.5–2 years, and mainly focuses on professional training and (ii) doctorial degree, which lasts for 2–4 years for students with master's degrees, and 4 years for students with bachelor's degrees.

Figure 2 shows the basic structure of Vietnam's education system, although it may vary depending on the individual university. The diagram also indicates that while the level classification is in accordance with the current global trends, the trust of higher levels in the education quality of lower levels is quite poor because there are plenty of entrance examinations. The existence of so many entrance examinations in Vietnam reveals weaknesses of quality all over the education system. These examinations are an attempt to compensate for a lack of accredited standards by an inefficient comprehensive control system. Although examinations create high pressure for students and lecturers, their results do not indicate the real study performance of students. Therefore, the reform of the examination scheme throughout the education system is another important task in modernizing education in general and tertiary education in particular.

Figure 2: The Vietnamese education system



Source: Nguyen (1999)

In Vietnam there are seven types of universities. They differ by their graduations and their administrative competence. These types are:

- Multi-professional universities, following the western tertiary education models,
- Teacher-training universities and colleges,
- Technical and industrial universities with different numbers of disciplines,
- Universities related to economic branches, public institutions, and professions like universities for agriculture, forestry and fishery; military and public service; architecture; journalism; and communication,
- Medical and pharmaceutical universities,
- Culture and art universities and universities for sports, and
- Open universities, open institutes, and private universities.

Though the administrative homogeneity of tertiary education in Vietnam is making progress the institutional landscape is still very fragmented. Some universities are under the management of the local departments of education and training or provincial people's committees. However the general competence standards of MOET are arduously imposed. This causes laborious co-ordination and approval procedures and reinforces bureaucracy, which is widespread in Vietnam. Moreover, the country's tertiary education system is facing an uncoordinated growth of different study programs and specializations without consistency in curricula between universities.

In the study year 2004–2005, there were 1.3 million students enrolled in 230 universities and colleges and 35,000 master and doctoral students participating in 122 different programs.

Because the demand for education is much higher than the supply, private and open universities and colleges, where students often have to pay high study fees, are successfully offering many programs to meet the demand.

High targets have been set up in the tertiary education development plan. However, implementation plans have not been put down in detail. According to the governmental action plan, the following performance must be achieved in tertiary education reform by 2010 (Social Republic of Viet Nam, 2002).

- Time, entrance condition required, and graduation of all levels of tertiary education system must be consistent nationwide
- Vietnam's tertiary education system must come closer to the international standards. "Major trends and achievements and development experiences in higher education in the world at the end of the 20th century and the beginning of the 21st century represent the second grounds for Vietnam's education policies. It is always considered an important task to review successful educational development policies in other countries so that they can be applied creatively to the concrete situations in Vietnam. Thanks to this approach, perceptions and ways of thinking have been gained … In the world of globalization and economic integration, the Government supports the expansion of international relations to exchange views, ideas, experiences, advanced progresses in researches, studies, technologies and to enhance mutual understanding among peoples for peace, friendship and co-operation. International co-operation provides opportunities to mobilize external resources for the development of higher education" (Ministry of Education and Training, Higher Education Department, 2006).
- Quality improvements must be implemented basically and comprehensively in all aspects: equipment for all universities, curricula, teaching methods, evaluation, and cooperation with foreign university partners. The most competitive universities should be cultivated to become academic centers of excellence.
- Research activities in universities must be developed and fostered. Quality of teaching and learning should be improved. Research results should be applied in reality and knowledge and technology transfer must be increased. Tertiary education should effectively combine training, research, and knowledge transfer to increase the adaptability of graduates with the labor market requirements, and to decrease the high unemployment rate of graduates.
- Management for tertiary education must be improved: standards and accreditation should be implemented, resources should be used more effectively and education statistics must be more comprehensive, reliable and topical.
- By 2010, the number of students should increase from 140 in 2005 (World Bank, 2006: 19) to 200 per 10,000 citizens, the number of master students must increase to 38,000, and the number of doctoral students must increase to 15,000. The proportion of lecturers in universities holding master's degrees will be increased to 40 percent (in 2000, it was only 27 percent), and doctoral degrees must be held by 25 percent (in 2000, it was 18 percent).

Vietnam needs to travel a long way to catch up with the developed regional and global education level in overcoming its own weaknesses in education. Some of the main weaknesses are presented in the next section.

3.2. Weaknesses and Challenges of the Education System in Vietnam

3.2.1.Research and Studying Conditions (Nguyen 2007, forthcoming)

- The current curricula for students now are overloaded in terms of contents. This is also a weakness in some other countries because lecturer and management agencies (ministries, departments, universities) always want to provide students as much knowledge as possible. But in fact, students' time and ability to learn all the taught knowledge and skills are limited. Another curriculum weakness is that almost all subjects focus on theory and that many subject curricula are too detailed. Students often are weak in generalizing their knowledge and in transferring it to practical problems. Vietnam's lecturers often fail to convey to their students broad knowledge and a consolidated understanding about a profession or a field. Vietnamese students study much but focus only on their narrow profession. Moreover, the information provided in the lecture is sometimes out of date. All these weaknesses can be seen in the curriculum contents of any university.
- Another weakness is the traditional routine learning methodology. Students keep following the pre-set "recipes," like in cooking. They follow exactly what they are told by their lecturers. Lecturers are practicing teacher-centered methods and students learn by heart the lecture contents without sufficient understanding. In exams students are evaluated through their memory performance. Students are weak at research. They do not know how to select a research topic, to set up a research plan, to choose a research methodology and to evaluate the formulation of a research question, even during the initial steps.
- Vietnamese students are industrious in studying, not least because of the pressure of the examinations. From the first day of school, they get used to stressful learning programs. They have to attend classes outside school to get more knowledge and skills to pass the examinations. Students in Vietnam nowadays seem to have only one way to enter a promising personal future: passing the university entrance exam. Therefore, the pressure of the university entrance exam is very high. Students bring their study habits from high school to university. They do not have time to develop a new learning behavior or find innovative ways to approach a topic. They also do not have time or experience to learn from their faults. It can be said that students study because they have to cope with the exams and passing these exams is their main purpose. As a result students often know a stunning number of facts without any appropriate understanding of the overarching meaning and importance. At all levels from school to university, the necessary creative virtues for students are not paid enough attention. Far too little progress is thus made in core competencies like self-confidence, independence, ability to be critical, and social and communicative skills.

3.2.2.University Lecturers

The qualifications of many university lecturers are rather low and heterogeneous. Normally the better lecturers with good professionalism are gathered in the big universities in the cities. There are many older lecturers with limited command of their subject. Most of them graduated from universities in Eastern Europe decades ago and have had no chance to upgrade their knowledge so far (Tipton *et al*., 2003). The targets of education development of Vietnam to 2010 described above are indicating that, even when Vietnam achieves these targets, the level of Vietnam's tertiary education will be still far from an internationally competitive system.

Deputy Prime Minister Pham Gia Khiem said in a conference about tertiary reform in June 2004 that the education infrastructure of universities in Vietnam was thirty years behind that of other developed countries (Vietnam News, 2004). The main reasons for the poor performance of many universities are: low payment, shortage of research resources, and lack of scientific cooperation with other universities (especially foreign ones). Another reason is the weakness in foreign language ability of many Vietnamese lecturers. Despite the common problem of

language difficulty, many Vietnamese students have graduated from both foreign and domestic universities with excellent scientific achievements. However, only few of them are willing to work in Vietnamese universities because doing so would not give them much chance to develop their future and career. Therefore, improving the professionalism and scientific performance of university lecturers is as important as it is difficult to achieve (Tran, 2006).

Another problem related to the limited professionalism of university lecturers is a particular trouble affecting many university courses. Students sometimes bribe lecturers directly or indirectly to get higher marks or to pass the exams. Addressing this problem is part of the resolute governmental fight on corruption (Asian Development Bank and OECD, 2006). However, the real situation is mostly concealed and outside the view of the broad public (Tran, 1999). Recently, some cases in violating exam regulations have been reported on some newspapers and people were very disappointed (Hoang, 2006).

3.2.3.Quality Problems

Quality of tertiary education is always a hot topic in open debates about education reform (see, for instance, Ha, 2006). Apart from the above mentioned points, an underdeveloped quality understanding in education is another reason for the quality deficits. A nationwide system of indicators for obligatory standards was developed only in late 2004 to accredit universities, departments, and study courses (Ngo, 2006). New and modern insights of a reasonable understanding of quality are elbowing arduously against traditional input-concentrated approaches. According to this new view for educational processes, quality is the difference between intention and delivered resources on the one hand and the evaluated results on the other hand. To follow this understanding, it is necessary to identify the input-output-quality. Since there is not a consistent standard system with international comparability applied for the whole country, the scoring for students' achievements have limited value. Students holding excellent degrees may not really be excellent. This discrepancy is often worsened by the already mentioned problem of illegal acquisition of faked or purchased degrees.

The high unemployment of graduates in Vietnam is caused considerably by universities' quality deficits and their lacking willingness to meet the needs of the economy. According to the statistical data of the Ministry of Labour, Invalids and Social Affairs (MOLISA) dated on 5th May, 2006, 80 percent of the graduates are working in professions different from the subject they studied at university (Ho Chi Minh City [HCMC] National University, 2006). Because enterprises do not believe in the training and certificate quality coming from the universities, they only recruit students after an additional qualification in specialized training institutions providing them urgently needed core competencies like independence, responsibility, creativeness, and foreign language abilities.

3.2.4.Weaknesses in Research

There is a traditional and considerable gap between teaching and research in universities in Vietnam. Most of universities consider teaching as their first priority. Only when the tertiary education reform was implemented recently, the strong connection between teaching and research was imposed. Enhancing of research activities inside universities is demanded as is networking with independent research institutes outside. Hanoi National University and HCMC National University are being developed into centers of excellence. Vietnam has a long road to go before reaching a research level at which universities play a key role in the country's further development and where modern teaching stems back to the lecturers' own research practice. Most universities in Vietnam lack research infrastructure like labs and information equipment, and many libraries are in poor condition. Many subjects are based only on outdated curricula. Many lecturers do not have their own research experiences. Only small research projects are generally carried out in universities. In "An Open Letter to the new Minister of MOET",

Professor Ha Van Thinh wrote that "in the past five years, lecturers of HCMC National University had written only 1.7 articles on average, and only one research paper submitted to a global copyright organization had received a copyright."[1] This is a common problem of all universities in Vietnam, not only the problem of HCMC National University. The national science communities are gathered in the research institutes of the Vietnam Academy of Sciences and Technologies (VAST) and the Vietnam Academy of Social Sciences and Humanities (VASSH). Meanwhile, many university lecturers do not participate in any scientific discourse (Anon, 2006). Corresponding to this, international networking is also poor, caused not least by insufficient language capabilities. The latter is the main reason for failure to exploit the opportunities given by accessing the huge and relatively cheap Internet sources and communication platforms.

4. Sustainable Reforms through Action Research

The weaknesses and restrictions discussed above been deeply rooted for a long time in Vietnam's education system; they are revealed very clearly in all education levels. In the Vietnamese training establishment, there is not yet *a new learning culture*, called also *a future-oriented learning culture*, corresponding to the present level of development of science and technology as well as to the demands of the times. Firstly it must be affirmed that the traditional Vietnamese learning culture has two salient characteristics: it is scholastic and reproductive, and it serves the purpose of examinations almost exclusively. This learning culture hinders reform efforts being carried out actively in Vietnamese education, particularly in tertiary education. Of course, it is not too difficult to find out where the most pressing problem is and which models are suitable to apply. The most difficult thing is creating a proper learning culture. If the learning culture does not change—especially in tertiary education—the reform effort cannot be as effective as expected. Moreover, the achievement of the education system has not been able to meet the development requirements of the society in the context of globalization. As mentioned above, there is no shortage of suitable and future-oriented initiatives on reform. These initiatives are all able to meet the requirements of sustainable changes. Nevertheless, when implementing these tasks, we have to take into account the barriers of usual habits and behavior in Vietnamese traditional society.

Under the conditions of national development and globalization pressures, all fundamental reforms must rapidly show their impact and effectiveness. Therefore, it will not be enough if after setting up reasonable and necessary reform targets we only wait for their slow and progressive realization through growing generations. Beyond that, we should be more active in implementing the reform targets: reforms must be implemented first where there are unsuitable routines and traditional sluggishness and where there are opportunities for new reform experiences and sustainable effectiveness.

Because such action plans require concrete actions by people, it will be unreasonable if at the beginning we design a plan and try to apply to the whole country. The most important task is to encourage as many as possible of those working in training establishments to have meaningful changes in their attitudes and behaviors suitable to the particularities of every specific domain.

For instance, if we want to effectively carry out sustainable reform in a central area of tertiary education, which is studying sciences scientifically in universities, we should have programs and plans which can meet the following conditions:

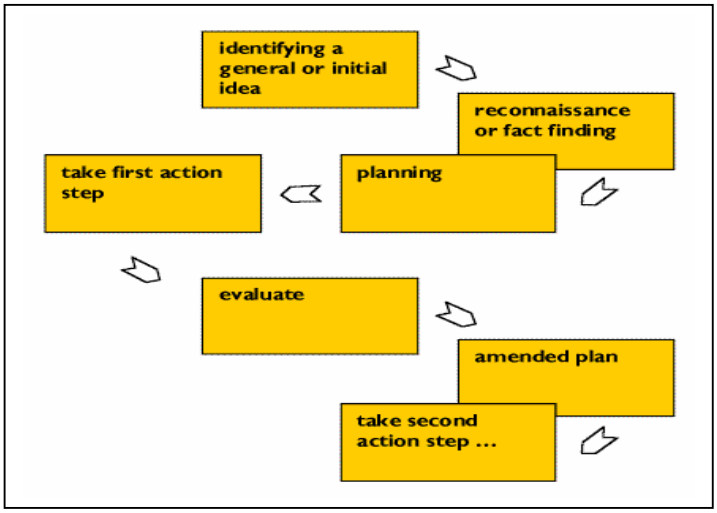
- Must be implemented in a certain location (university, department, and subject) and should be able to point out a clear action plan for all participants.

[1] (Laodong Newspaper, No.181, July 03, 2006)

- Could be implemented with current available conditions and human resources.
- Must be oriented directly to the most pressing problems about which nearly all members are concerned.
- Must be able to create a new studying habit which can be applied in all circumstances
- Must have a clear potential for sustainable development. First priority is not how to achieve the targets but how to get sustainable changes in attitudes, habits and actions.
- Must take into account complicated social issues, benefit conflicts among members, and how to link all the members and encourage them to contribute to their organization. Should also identify clearly the responsibilities and encourage studying activities for long term purposes.

Action research is a theory with an increasing impact on sustainable reform. This theory can satisfy all of the above criteria. It was first developed in the 1940s by Lewin, a German and American socio-psychologist. This theory focused on finding sustainable solutions to the problems of social research and reform. Lewin's viewpoint was that direct participants in the reforms must participate in an action program, in which action steps are planned carefully and comprehensively. Figure 3 shows all the steps in that process.

Figure 3: Action Research



Source: Smith (2001)

Each action has six factors, which are created successively and are related to one another. Observing the order of these steps will ensure achievement of the target. This theory is associated with learning through experience, elaborated by Dewey (1938) and later recognized by the education science with the planned social action model. Based on this theory, many research alternatives can be implemented to directly change the social activities. Moreover, it can be applied in all social fields (Zuber-Skerritt, 1996). While the theory of action research is not applied equally in all western countries as it has been largely preferred in the UK and Australia (Action Research Resources, 2007), it seems to be very effective in implementing reform projects in developing countries (Huizer, 1997).

This theory's special point, which helps distinguish it from traditional experimental social research, is that its research objects are not external passive objects; they are acting subjects who study their own activities themselves. In other words, the research subject systematically studies his or her own activities; the research objectives are the activities of the subjects who carry out this research, aiming at sustainably changing themselves and the action system in which they

participate based on their expected targets. The basic schema describes the cycle of realizing research based on action research theory following the spiral in which each grade comprises six steps with the following contents (O'Brien, 1998).

- Step 1: A given situation should be changed, so it is studied by researchers or participants (or insiders) and then the core issue is identified and expressed clearly and exactly.
- Step 2: Collect information to be able to describe carefully the core of the research issue.
- Step 3: Discuss solutions and build a tool kit to evaluate; systematically study steps to solve the problem.
- Step 4: Test the most promising solutions.
- Step 5: Evaluate the achieved results together.
- Step 6: Analyze the achievements, find new problems to be solved in the next steps.

The next step will be a higher level in the spiral and another process will begin similarly. Action research occurs continuously in this pattern.

The techniques here are rather simple. The researchers do not study the actions and behaviors of the research objects (other people), and then based on research results explain and show the research objects what they should and should not do. Instead, the researchers—or the insiders—do the research about their own behaviors, actions, and problems and then find solutions to those problems. By learning how to solve their own problems, the researchers will be able to improve their own behaviors and actions with their own exclusive strategies. They do not need outside influence. Like in any other systematic and positive studying activities, results can be achieved only with certain conditions. The direct participants must have a certain autonomy and be equipped with basic professional qualifications, for example, methods for organizing gradual project implementation and systematic measures in supervising the process of project implementation. Indirect participants must actively support this process.

If the above-mentioned conditions are met, all the criteria of sustainable reform will be satisfied. Of course, this theory can only be applied to specific aspects or fields, where concrete experience can be learnt. This is also a issue of the theory of action research: at first it has only local influence. Like all other bottom-up strategies, it also faces the question of how to make the strategy's impact reach beyond the limit of direct participants. In contrast, all experience drawn from top-down reform indicates that such reforms may lead to structural changes or changes in actions and behaviors. However, such top-down reforms also reveal that stimulations from outside often meet obstacles and become ineffective where there exist sluggish conservative routines and ingrained behaviors. In such cases, there is no chance for "learning by doing" as indicated by the theory of action research.

The two reform orientations (top-down and bottom-up) are neither opposite nor exclusive to each other; they should supplement each other effectively in order that the reform can deploy its effect more widely. In addition, the bottom-up reform strategy, as mentioned in the theory of action research, needs to have appropriate conditions in terms of organization structure (the independence of each member, conditions and ability to approach information, current conditions to experiment with the reform and avoid unnecessary risks) to be able to develop itself.

The two basic factors of action research, to study a) systematically through b) practicing research on subjects' own actions, are finding their ideal realization environment where just these purposes are institutionalized: in education institutions in general (Hermes, 2001) and in

universities in particular. Finally, the real problems here are to teach and to learn with strict scientific methods and for both the lecturers and students to keep studying and researching continuously (Nguyen and Muszynski, 2004).

This is the most successful studying strategy developed so far. In the scope of this study, we will expect an improvement in studying method, not a good studying result. Strict scientific rules, systematic analysis, and correct answers covering effective and long-term studying models are all the strengths of the model discussed in this paper.

5. Framework Concept for Reforming Teaching and Learning Methods in Teacher Training

The set of principles of action research reveals a simple to understand strategy for sustainably reforming teacher training institutions in their core tasks: **self-researching the subject's own actions in improving teaching and learning methods as a scientific learning process.**

The research problem is not imposed from outside but is an issue coming from inside the participating actors. The action subjects are studying themselves and the research object is the subjects' own doing. The order of necessary steps in an action research project can be shown briefly as follows:

- Step 1: Define which current teaching/learning methods in a concrete study subject/course/study task are problematic from the viewpoints of the persons directly affected (students and lecturers) and what should be changed in which direction.
- Step 2: Find out what the main obstacles are to overcome the defined problems.
- Step 3: Decide what the new teaching/learning methods should look like, how they could be carried out, and how to analyze with scientific methods the experiences which are made and what could be a concrete and feasible reform project.
- Step 4: Carry out the reform project, which is simultaneously accompanied by self-research based on scientific standards.
- Step 5: Evaluate the achieved results of the project in terms of: (i) the experiences and insights achieved and (ii) whether the empirical research results reflect the process of the project adequately. Is there any major difference between the experience of the participants and the scientific evaluation?
- Step 6: Determine what has been achieved by the results regarding the initial project goals. How can we improve the accompanying research in using additional or modified problem formulation or empirical instruments? What should be the connecting project?

As discussed briefly regarding action research projects, some conditions are required to implement such projects. Firstly, apart from the direct participation of students and lecturers, we need the supportive participation of authorities and service providers inside the university. This participation is especially important for sustainability. Another important prerequisite is a qualification of all directly affected persons. They have to learn beforehand how to recognize and apply:

(i) The basic methods to practice team activities in partial independence (the concrete targets are not pre-set, the implementation method is not regulated, and there is no continuous outside supervision),

(ii) Methods and techniques for empirical research on a basic level, and

(iii) Careful documentation of the project courses and easy-to-understand reporting for everyone outside the project.

The mentioned methods, instruments and techniques are easy to learn in a short time on the necessary basic level and can be made available for students and lecturers of all subject areas. By doing so, the benefits of the project will be much greater in comparison to the efforts undertaken. Thanks to their excellent learning capacity, scientific self-learning projects have the potential to enable any institution—especially teacher training institutions—to become a learning institution at all levels.

This paper is not the place to deal with the framework conditions for necessary content elements, pragmatism, and project design. These conditions should be considered and paid careful attention in the action research project (see for details in Nguyen and Muszynski, 2004). In order to have sustainable reform in tertiary education in Vietnam in general and in teacher training in particular, the following closing remarks should be focused upon.

- Self-researching reform projects suits well to developing countries like Vietnam because the process can be applied under limited conditions of equipment and qualified human resources, like the situation of teacher training institutions in Vietnam.
- Adaptability with current available and restricted conditions and little supplementary requirements is possible because these projects do not need great scientific efforts and achievements. The scientific results do not provide the learning success. Rather, the experiences from carrying out the project are important. Even errors and mistakes can be fruitful learning elements.
- Reform processes are always reflected in detail through the accompanying scientific research; the whole project always remains under the command of the participants. It is their own problem, addressed and controlled by themselves, which is a much better approach than being confronted with instructions from outside. It has been empirically established that externally motivated reform requests suffer from short expiry dates.
- Action research projects also bring multiple valuable sub-results. If these projects are implemented effectively, the reform work will bring students, lecturers, management, and service suppliers together so that effective and innovative communication structures will spread and a common understanding about the university's goals can be found.

Even if these projects have not been successful in all aspects at the beginning, the mid- and long-term learning achievements are still meaningful. Finally, it should be underlined again that the purpose of the projects described above is not to create a "definitely reformed" teacher training institution but an institution with better learning capacity—an institution that is able to conduct self-reforms continuously.

References

Action Research Resources 2007. From http://www.scu.edu.au/schools/gcm/ar/arhome.html, accessed on 20 February 2007.

Anon. 2006. "Forschungslandschaft Vietnam. Deutscher Akademischer Austauschdienst." (Research Landscape Vietnam. German Academic Exchange Service), May 30. 2006): 14-15.

Asian Development Bank and Organisation for Economic Co-operation and Development (ADB/OECD). 2006. *Anti-Corruption Initiative for Asia and the Pacific Self Assessment*

Report Viet Nam. From http://www1.oecd.org/daf/asiacom/pdf/str_vietnam.pdf, accessed on 30 August, 2006.

Cetto, A. M. 2006. "Scientific and Technical Co-operation." Paper presented at the United Nations University and United Nations Educational, Scientific and Cultural Organization (UNU-UNESCO) International Conference *Globalization: Challenges and Opportunities for Science and Technology* in Yokohama, Japan on 23–24 August, 2006. Accessed on 12 September, 2006 at http://www.unu.edu/globalization/files/Cetto_GlobalST.pdf.

Dewey, J. 1938. *Experience and Education*. New York: Touchstone.

Evers, H. D.; S. Gerke; and R. Schweisshelm. 2004. "Malaysia, Singapur, Indonesien: Wege zur Wissensgesellschaft." (Malaysia, Singapore, Indonesia: Ways to Knowledge Economies) Working Paper No. 20, South East Asian Studies. Bonn: University of Bonn.

Greathouse, J. 1997. *Kurt Lewin (1890–1947)*. Ohio: Muskinggum College. Accessed on 28 October, 2006 at http://www.muskingum.edu/~psych/psycweb/history/lewin.htm.

Ha, V. T. 2006. "Vietnamese Education Fails to Satisfy Social Needs." Accessed on 12 November, 2006 at http://www.thanhniennews.com/commentaries/?catid=11&newsid=19574.

Hermes, L. 2001. "Action Research–Lehrkräfte erforschen ihren Unterricht." (Action Research: Teachers Are Researching their Teaching). Soest, Germany: Landesinstitut für Schule und Weiterbildung Nordrhein-Westfalen. Accessed on 7 November, 2006 at http://www.learn-line.nrw.de/angebote/qualitaetsentwicklung/download/e-actionresearch.pdf.

Ho Chi Minh City [HCMC] National University. "Sinh dong "Quoc hoi tre"" (Active National Assembly of Youth). Access on October 20, 2006 from http://www.hcmuns.edu.vn/DoanTN/index.aspx?MaTinTuc=812&MaChuDe=29

Hoang, V. M. 2006. "Tu 2 diem nang len thanh…50 diem." (Two points are increased to fifty points). From http://www.laodong.com.vn/Home/xahoi/2006/10/6090.laodong, accessed on 7 November, 2006. Ho Chi Minh City [HCMC] National University

Huizer, G. 1997. "Participatory Action Research and People's Participation: Introduction and Case Studies." Accessed on 22 November, 2006 from http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/PPdirect/PPre0030.htm.

Institute of International Education (IIE). 2004. *Higher Education in Vietnam: Updated May, 2004*. Hanoi: IIE.

Kelly, K. 2000. "The Higher Education System in Vietnam," *World Education News and Reviews (WENR)* 13: No. 3, May/June 2000. Accessed on November 30, 2006 from http://www.wes.org/ewenr/00may/feature.htm.

Knight, J. 2004. "Internationalization of Higher Education: Practices and Priorities." In *The 2003 IAU Survey Report*. Paris: Organisation for Economic Co-operation and Development.

Levitt, T. 1983. "The Globalization of Markets.", *Harvard Business Review*, May/June 1983.

McCarty, A. 2006. "Vietnam: Economic Update 2006 and Prospects to 2010." Paper prepared for the Regional Outlook Forum in Singapore, January 2006.

Moock, P. R; H. A. Patrinos; and M. Venkataraman. 1998. "Education and Earnings in a Transition Economy: The Case of Vietnam." World Bank Working Paper No. 1920. Washington, D. C.: World Bank.

Ministry of Education and Training, Vietnam (MOET), Higher Education Department. 2006: *Higher Education in Vietnam*. Accessed on 12 November, 2006 at http://en.moet.gov.vn/index.php?page=6.13&view=4404.

Ngo, D. D. 2006. "Higher Education Accreditation–Situation in Vietnam and the United States' and Japan's Experiences." *Vietnam National University Hanoi Newsletter*, 11 June 2006. From http://100years.vnu.edu.vn:8080/BTDHQGHN/Vietnamese/C1794/2006/05/N8051/, accessed on 28 October, 2006.

Nguyen, T. P. H, and B. Muszynski. 2004. *The Road to Improve the Reform Quality in Teacher Training Institutions: Theories and Solutions*. Hanoi: Publishing House of Hanoi University of Education.

Nguyen, T. P. H. 2007. "Vietnam's Impetus and the Role of Education Policy." Forthcoming in *WeltTrends*, February 2007.

Nguyen, U. 1999. *Bildungs-und Wissenschaftsorganisation in Vietnam*. Münster, New York: Waxmann.

O'Brien, R. 1998. "An Overview of the Methodological Approach of Action Research.". From http://www.web.net/~robrien/papers/arfinal.html#_Toc26184650, accessed on 9 October, 2006.

Organisation for Economic Co-operation and Development (OECD). 2002. *Financing Education: Investments and Returns*. Paris: OECD.

_____. 2004. *Programme for International Student Assessment (PISA), OECD: Learning for Tomorrow's World*. Paris: OECD.

_____. 2007. *Education at a Glance, 2006*. Paris: OECD.

Putnam, R. 2002. *Democracies in Flux: The Evolution of Social Capital in Contemporary Society*. Oxford: Oxford University Press.

Smith, M. K. 2001. "Action Research.". London: Infed (The Informal Education Homepage). Accessed on 3 November, 2006 at http://www.infed.org/research/b-actres.htm

Socialist Republic of Viet Nam. 2002. *Education Development Strategic Plan for 2001–2010*. Hanoi.

Temple, J. 2000. "Growth Effects of Education and Social Capital in the OECD Countries." OECD Economic Department Working Papers No. 263. Paris: OECD.

Tipton, F. B.; D. S. L. Jarvis; and A. Welch. 2003. "Re-Defining the Borders Between Public and Private in Southeast Asia: Malaysia, Philippines, Vietnam, Thailand, and Indonesia." Research Report 2002/2003 of the Building Institutional Capacity in Asia (BICA) Project of the Research Institute for Asia and the Pacific, University of Sydney. Sydney: Research Institute for Asia and the Pacific.

Tran, H. 1999. "Vietnamese Higher Education: In Search of an Identity." *International Higher Education, Spring 1999*. Center for Higher Education, Boston College. Accessed on 30 August, 2006 at http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/News15/text12.html.

Tran, K. 2002. *Education in Vietnam: Current State and Issues*. Hanoi: Gioi Publisher.

Tran, N. C. 2006. "Universities as Drivers of the Urban Economies in Asia: The Case of Vietnam." World Bank Policy Research Working Paper No. 3949. Washington D. C.: World Bank.

United Nations Educational, Scientific, and Cultural Organization (UNESCO). 2003. *EFA Global Monitoring Report 2003/4*. Paris: OECD.

Vietnam News. 2004. "Higher Education Reform Crucial if VN to Progress: Deputy PM." Accessed on 22 October, 2006 at http://vietnamnews.vnanet.vn/2004-06/23/Stories/02.htm.

_____. 2006. “Vietnam Educational Woes a Hard Nut to Crack”. Quoted from website of the Vietnam Economic Times (VnEconomy). Accessed on 22 August 2006 at http://www.vneconomy.com.vn/eng/?param=article&catid=10&id=dc20ac7919301f.

World Commission on the Social Dimension of Globalization. 2004. *A Fair Globalization: Creating Opportunities for All*. Geneva: World Commission on the Social Dimension of Globalization.

World Bank in Vietnam. 2006. *Education in Vietnam*. Accessed on 2 August 2006 at http://siteresources.WorldBank.org/EDUCATION/Resources/278200-1121703274255/1439264-1153425508901/Education_Vietnam_Development.pdf.

_____. 2006. “Overview on Education in Viet Nam: Development History, Achievements, Challenges, and Solutions.” Presentation to Senior Education Policy Makers from Six African Countries in Hanoi on 26 June, 2006. Accessed on 2 August, 2006 at http://siteresources.WorldBank.org/EDUCATION/Resources/278200-1121703274255/1439264-1153425508901/Overview_Edu_Vietnam_Development.ppt.

Zuber-Skerritt, O. 1996. *New Directions in Action Research*. London: Falmer Press.