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June 2012

Viet Nam

Education and Training Sector Assessment,  
Strategy, and Roadmap

## CURRENCY EQUIVALENTS

(as of 15 June 2011)

Currency Unit	–	dong (D)
D1.00	=	\$0.000048
\$1.00	=	D20,545

## ABBREVIATIONS

ADB	–	Asian Development Bank
ESSD	–	Education Sector Strategic Development 2011-2020
GDP	–	gross domestic product
GDVT	–	General Department of Vocational Training
HERA	–	higher education reform agenda
ICT	–	information and communication technology
LSE	–	lower secondary education
MDG	–	Millennium Development Goal
MOET	–	Ministry of Education and Training
MOLISA	–	Ministry of Labor, Invalid, and Social Affairs
PISA	–	Programme for International Student Assessment
SEDP	–	(5-year) Socio-Economic Development Plan
SESMP	–	Secondary Education Sector Master Plan
TVET	–	technical and vocational education and training
TVI	–	technical vocational institute
USE	–	upper secondary education
USEDP	–	upper secondary education development project
VTC	–	vocational training centers
VTEP	–	Vocational and Technical Education Project

## NOTES

In this report, "\$" refers to US dollars unless otherwise stated.

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## I. INTRODUCTION

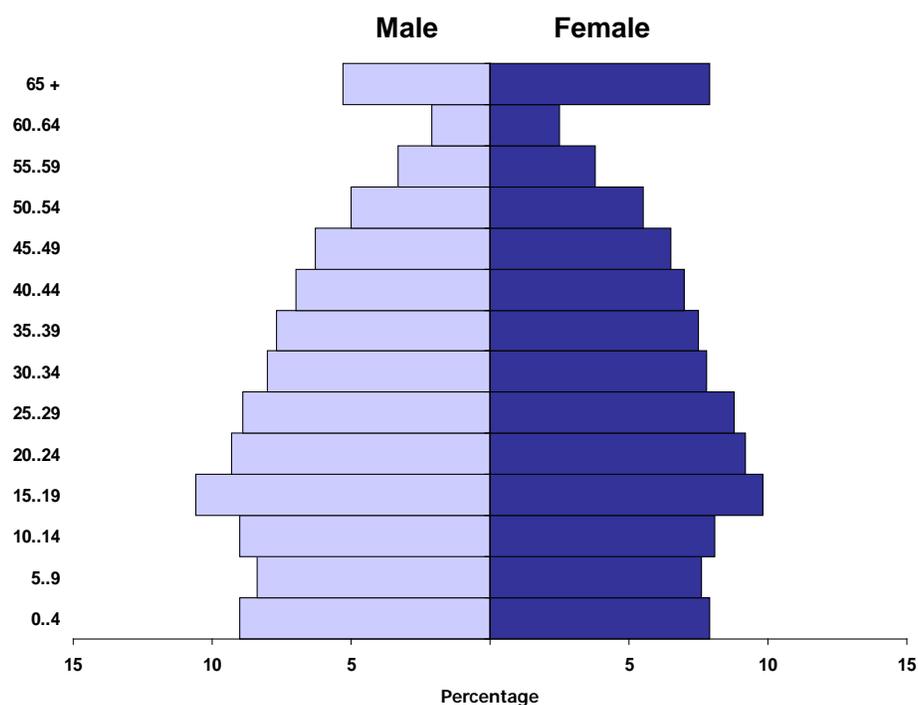
1. ADB's Southeast Asia Department and its Developing Member Countries (DMCs) are collaborating to systematically update sector analysis, strategies and roadmaps (ASRs) to routinely inform and better align country medium-term plans and ADB country partnership strategies (CPSs). The preparation of ASRs will form an integral part of the economic, thematic and sector work needed for effective policy dialogue and facilitating better alignment between DMC sector support needs and ADB's priorities. ADB's Human and Social Development Division (SEHS) and Viet Nam Resident Mission (VRM) are jointly preparing the education sector ASR, which covers secondary education, higher education and technical and vocational education and training (TVET) in close consultation with the Government of Viet Nam.

## II. SECTOR PROFILE

### A. Labor Market Context

2. In 2010, the population growth rate was 1.14 percent and the population of Viet Nam reached 86.9 million. The population is projected to increase to 97.0 million by 2015 and 101.0 million by 2020. Figure 1 shows the population by age group and gender (male/female) based on the census for 2010.

**Figure 1: Viet Nam Population Pyramid (as of 2009)**



Source: Population Census, General Statistics Office 2010

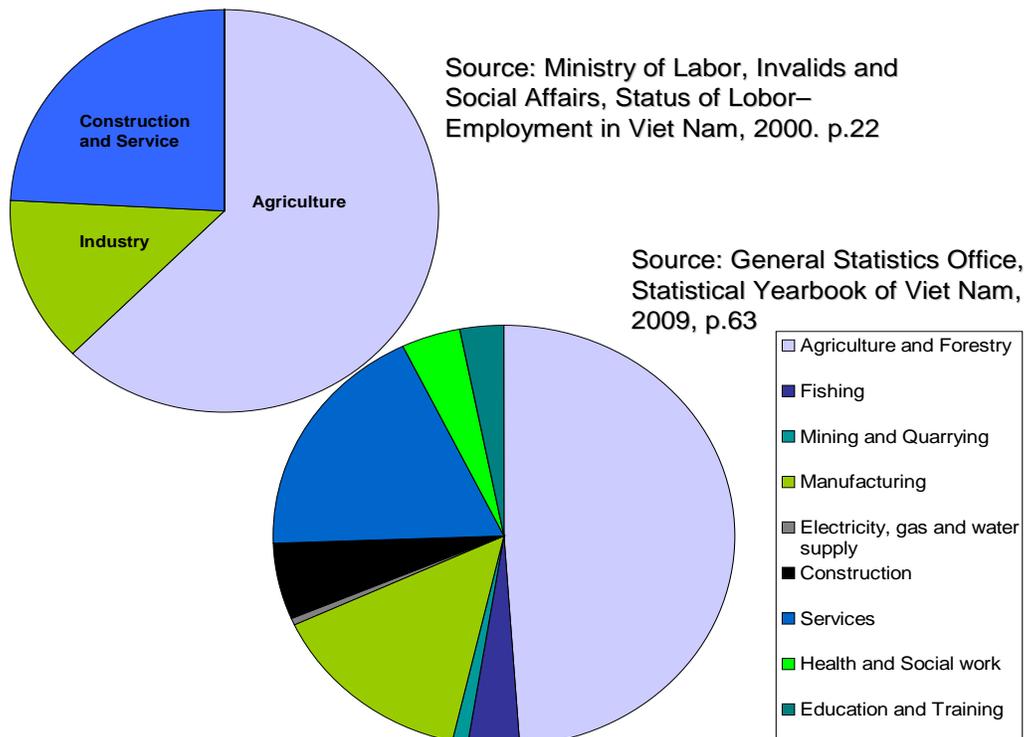
3. Economic growth increased from 6.8 percent p.a. in 2000 to about 10.0 percent p.a. from 2003–2005, 8.2 percent for 2006 and 8.5 percent for 2007. After dropping back to 6.3 percent in 2008 and 5.3 percent in 2009 due to the effects of the financial crisis, growth recovered to 6.8 percent in 2010. Consistently strong economic growth, together with limited population growth, more than tripled per capita incomes from \$390 in 2000 to \$1,224 in 2010.

Viet Nam more than halved the proportion of the population below the poverty line, from about 20 percent in 2000 to less than 10 percent by the end of the decade.

4. **Economic Trends.** As a consequence of recent rapid economic growth and development, the sectoral composition of the economy has changed. There has been a move away from traditional family-owned and operated subsistence and cash crop agricultural industries, to an urban wage economy based on agri-business (e.g., fish, rice and tea company managed farms), electronics and other light industries. As tourism and trade expanded, there has also been growth in the service sector. In 2010, GDP growth differed by sector, with agriculture growing 2.8 percent industry by 7.7 percent and services by 7.5 percent. It is predicted that, by 2015, agriculture's share of the labor force will have decreased to 40 percent and the industrial/construction and service sectors will make up 29 percent and 31 percent of GDP, respectively. In terms of production, this will require a further shift from primarily using manual labor to the application of advanced technology and modern production tools and control systems.

5. In order to enhance the competitiveness of the economy and to counter the economic downturn, the government has continued to maintain sound economic policies and push for sustained reforms. It has introduced new measures to increase investor confidence and create a conducive environment for business. It has acknowledged the need to improve the country's competitiveness by improving the infrastructure and development of a more skilled labor force. This shortage of skilled workers is seen as hampering economic competitiveness and has become a key impediment to the country's capacity to realize the full benefits associated with rapidly growing investments. Figure 2 outlines recent changes in the composition of the Workforce.

**Figure 2: Employed Population at Working Age  
(Comparison with 2000 and 2009)**



6. **Limited Competitiveness.** The size of the labor force grew from about 39 million in 2000 to 47 million in 2010. Female labor force participation is high at around 48 percent. Vietnam ranked 11<sup>th</sup> out of 134 countries on female labor force participation rate in the 2009/10 Global Competitiveness Report. Overall competitiveness has recently improved as shown in Table 1.

**Table 1. Global Competitiveness Index Rankings, Various Countries, 2006-2011**

	2006/07	2007/08	2008/09	2009/2010	2010/2011
Cambodia	106	110	109	110	109
Philippines	75	71	71	87	85
Sri Lanka	81	70	77	79	62
<b>Viet Nam</b>	<b>64</b>	<b>68</b>	<b>70</b>	<b>75</b>	<b>59</b>
Indonesia	54	54	55	54	44
India	42	48	50	49	51
Thailand	28	28	34	36	38
People's Republic of China	35	34	30	29	27
Malaysia	19	21	21	24	26
Republic of Korea	23	11	13	19	22
Taiwan, China	13	14	17	12	13
Singapore	8	7	5	3	3

Source: Global Competitiveness Reports 2010–2011, World Economic Forum,

7. However, there remain problems that need urgent attention in order to maintain and improve Viet Nam's regional competitiveness. If current trends continue it is predicted that by 2015 Viet Nam will have a work force (15 years to 60 years of age) of 52.8 million. Of this sum, approximately half will be below the age of 34. Currently 1.3 million workers are moving each year from the agriculture sector to the industry and services sectors and this is creating a strong demand to provide these agricultural workers with the skills needed in these sectors.

8. **Labor Productivity.** Generally, the Vietnamese workforce has low skills. The informal labor sector is significant in Viet Nam accommodating 85-90 percent of the labor force (e.g., domestic enterprise, informal and formal household businesses and agriculture). Women are believed to comprise a greater proportion of this sector due to household responsibilities that limit mobility and opportunities to be away from the house for long hours. The Department of Statistics estimates that 81 percent of female workers are in the informal economic sector. While informal employment offers flexibility and critical incomes for women, it also leaves them vulnerable and at risk of labor exploitation due to lack of regulation and access to social protection.

9. A greater proportion of women is employed as unskilled workers (68 percent compared to 57 percent for men). On average, 22 percent of the economically active population has completed vocational training or graduated from university. Men tend to be more educated or skilled—20 percent of economically active men have completed vocational training and 5.4 percent have graduated from university compared to 14.9 percent and 4.0 percent, respectively for women.

10. **Education and Training.** The level of competitiveness tends to be correlated with levels of education and training. Overall, the education system in Viet Nam has gained in quality and is now ranked 61 out of 139 countries that participated in the World Economic Forum's research program. Performance is ranked from 1=not well to 7=very well. Table 2 indicates the quality of Viet Nam's educational system compared to other ASEAN countries where Viet Nam is ranked at the mean of all 139 countries.

**Table 2: Quality of the Education system**

<b>Rank</b>	<b>Country</b>	<b>Score (Mean: 3.8)</b>
23	Malaysia	4.9
40	Indonesia	4.3
<b>61</b>	<b>Viet Nam</b>	<b>3.8</b>
66	Thailand	3.7
69	Philippines	3.7
82	Cambodia	3.4

Source: The Global Competitiveness Report 2010–2011, World Economic Forum

11. **Returns to Schooling.** The evidence of skill-biased technical change occurring in Viet Nam is demonstrated by changes in the returns to schooling. Additional schooling clearly contributes to additional income, and returns increased steadily from 2002 to 2006. The following tables indicate the likelihood of wage employment according to educational level, and the returns in earnings.

**Table 3. Key Education Indicators, Selected ASEAN Members, 2009/2010**

	Global Competitiveness Index Ranking (2009/2010)	Net Secondary Enrollment Ratio in Upper Secondary (Percent, 2009/2010)	TVET Enrollments as a Proportion of Secondary Enrollments (Percent, 2009/2010)
Lao PDR	N/A	34.9	1.2
Cambodia	106	30.8	3.2
<b>Viet Nam</b>	<b>64</b>	<b>61.0</b>	<b>5.0</b>
Indonesia	54	59.0	13.6
Philippines	75	60.4	N/A
Thailand	28	71.0	15.5
Malaysia	19	68.7	5.9

Sources: Global Competitiveness Report, World Economic Forum 2009/10 and UNESCO Institute for Statistics, 2010.

**Table 4: Probability of Finding Employment among those with a Vocational Training Qualification, 2009/2010**

Number of Years of Schooling	Technical Qualification	Level of Training	Probability of Getting a Job (Percent)	Probability of Becoming a Wage Earner (Percent)
(1)	(2)	(3)	(4)	(5)
5	Without technical knowledge	Primary	0.996	0.235
9		Secondary	0.995	0.334
12		High School	0.995	0.421
13	With technical knowledge	Vocational Training	0.995	0.482
14		Professional School	0.995	0.513
16		College, higher education	0.996	0.604

Source: Bui Ton Hien, unpublished thesis, based on *Estimate of probability of employment under the Logistic model based on household living standard survey of the year 2010* by GSO.

**Table 5. Rate of Return to Skills, by Level of Education and Training, 2002, 2004 and 2006**

Number of Years of Schooling	Technical Qualification		Rate of Return (Percent)		
			2002	2004	2006
5	Without technical knowledge	Primary graduate	1.4	2.3	1.5
9		Secondary	3.8	5.4	5.5
12		High school	5.6	7.6	8.5
13	With technical knowledge	Vocational training	6.2	8.4	9.5
14		Professional School	8.8	9.2	10.5
16		College, higher education	7.4	10.7	12.5

Source: Bui Ton Hien, unpublished thesis, based on (1) Doan Hong Quang, Nguyen Lan Huong, Giang Thanh Cong, "Impact of free trade on wages and employment: Vietnam case", 2006 (2) World Bank, *Higher and skill education for development in Vietnam*, December 2007. P.124.

12. **Shortages of Skilled Workers.** Viet Nam is currently experiencing shortages of skilled workers. Several surveys suggest a large number of vacancies. A 2006 survey of Japanese manufacturing companies in Viet Nam revealed difficulties in recruiting middle-management staff and engineers. Between 2003 and 2006 the percentage of firms in Viet Nam that reported difficulties in recruiting workers increased from 37 percent to 63 percent for engineers and technicians, and from 54 percent to 70 percent for middle managers. In contrast, the percentage of manufacturers reporting difficulties in recruiting general workers, e.g. production-line workers, was low at 14-20 percent.<sup>1</sup>

## B. Education System and Structure

13. **Overall Education System and Structure.** The national education and training system is all-encompassing, ranging from nursery to the highest doctorates and from formal schooling and training to non-formal and continuing education. While there are a number of providers of

<sup>1</sup> JETRO survey, 2006 as reported in Mori, Junichi and Nguyen Thi Zuan Thuy and Pham Truong Hoang. January 2009. "Skill Development for Vietnam's Industrialization: Promotion of Technology Transfer by Partnership between TVET Institutions and FDI Enterprises". Hiroshima University. pp. 3-4.

education two ministries play a major role in providing and overseeing education nationally. The first is the Ministry of Education and Training (MOET), which has responsibility for pre-school, primary, secondary and higher education. The second is the Ministry of Labor, Invalids and Social Affairs (MOLISA), which has responsibility for managing much of the Technical and Vocational Education and Training (TVET) sector with a focus on training students to enter the workforce.

14. In order to manage its various educational responsibilities, the Government of Viet Nam decree 322008-ND-CP divided MOET into 19 separate departments and several related units, of which the most important are the primary and secondary education departments, higher education, teacher education, adult education and the finance and planning department.

15. While MOET has a clear management mandate, TVET is administered principally by MOLISA, but other central ministries including MOET, state-owned enterprises and local governments, also manage training institutions. About half the vocational colleges and 25 percent of vocational secondary schools are administered at the national level. Two distinct forms of TVET are provided at the secondary and college levels—one under MOLISA with an emphasis on practice, and another under MOET with a greater focus on theory. TVET is provided almost exclusively in schools and training institutions, rather than in the workplace.

17. MOET is responsible for pre-primary programs catering for students from age 3 to 5 years; primary education which provides for students at age 6 and who undertake a five year primary program; and secondary education. This is provided at three levels: lower secondary covering grades 6 to 9 and catering for students in the 12 to 15 age group; upper secondary for grades 10 to 12 with a focus on higher education, and alternatively, professional secondary for grades 10 to 12 or 13 with a focus on TVET. Through programs conducted in professional secondary schools, MOET manages approximately 25 percent of TVET programs, with the remaining ones under the oversight of MOLISA, but managed by a range of agencies including ministries, state-owned enterprises, provincial, city and district governments, and private providers.

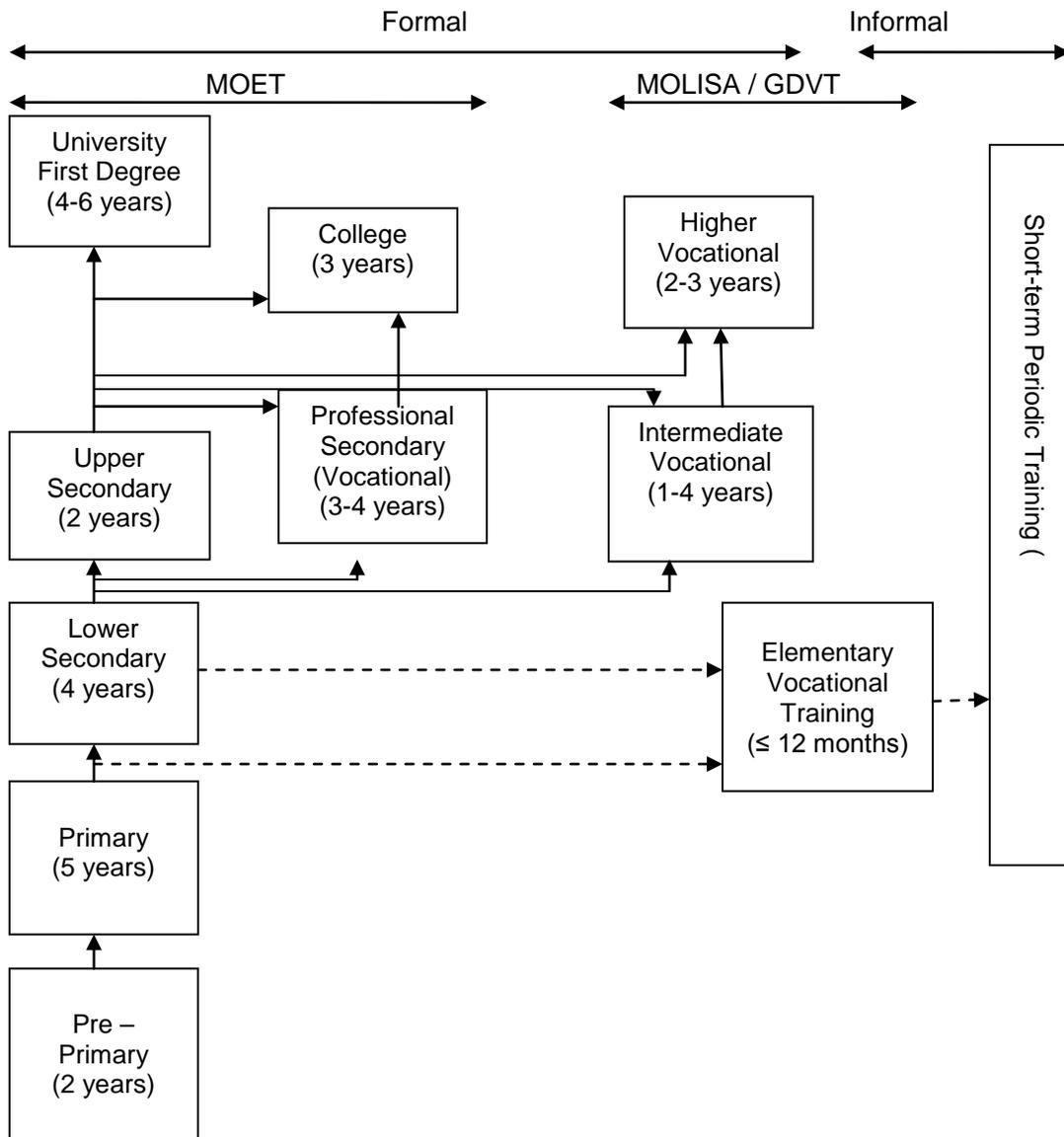
18. Higher education consists of colleges providing three to three-and-a-half year programs, and universities that offer undergraduate and post-graduate degrees. These programs are offered in over 376 institutions that range from small highly specialized units to large multi-campus institutions. Although still dominated by smaller specialized institutions, the system has become more multi-disciplinary with the formation of larger universities in regional centers. Research units and institutes have also been reorganized to help integrate research activities within universities.

19. To cater for school drop-outs who wish to either continue their education in a less formal setting or want to qualify for re-enrolment in formal education, non-formal education programs have been established and operate nationally in over 4,000 venues using a modified curriculum.

20. The second major provider of education is MOLISA whose mandate includes elementary vocational training (delivered partly through VTCs), intermediate vocational training (through VSS) and higher vocational training (through VCs). MOLISA proposes the establishment of bachelor degree training in “applied engineering” in vocational universities to overcome current difficulties faced by TVET graduates in having their experience and qualifications recognized by MOET.

21. Figure 3 outlines the structure of the education system in Viet Nam. Within MOLISA, TVET programs are managed through the Government Directorate of Vocational Training (GDVT). The figure also shows the role of non-formal education programs within TVET programs. MOET also provides extensive non-formal education programs through Community Education Centers where out-of-school youth are provided with bridging programs that enable them to re-enter the formal schooling system or undertake short term training programs.

**Figure 3: Structure of the Education System**



### III. SECTOR ASSESSMENT AND ANALYSIS

#### A. Key Sector Achievements

22. **Summary of Sector Achievements in SEDP 2006-2010.** There have been impressive achievements in education and training in Viet Nam. The general quality of education and training has improved; professional certificates and quality standards of teachers have been developed, and teachers have been trained and upgraded; student-centered teaching has been introduced in schools; an independent agency for school accreditation has been established; learning opportunities for girls, ethnic children, children in poor families, disabled children, and children in difficult circumstances have been expanded; support to students with financial difficulties in vocational training, colleges and universities has been expanded; and many universities have introduced international standard programs.<sup>2</sup> The state budget for education increased from 15.5 percent of total government spending in 2001 to 20 percent in 2007 and has been maintained at this level up to 2010; the number of non-state owned (semi-public and private) institutions and enrollments at these institutions have increased significantly. In school year 2007/08, there were 6,000 public preschools (52 percent of the total); 64 non-public colleges and universities (17 percent of the total). In 2010, 16 percent of students were in non-public schools (12 percent in 2000). By education level, the proportions were: 9 percent for schools, 18 percent for professional training schools, 31 percent for TVET institutions and 12 percent for colleges and universities.

23. **Increased Access to Education.** Considerable progress has been made over the past decade in increasing access to education at all levels of education and training as outlined in Table 6.

**Table 6: Enrollments by Education Level**

Levels of Education	2000	2005	2010
Kindergarten children	588,678	662,311	761,132
Pre-school children	2,338,017	2,738,882	3,086,972
Primary students	9,750,881	8,845,828	8,353,700
Lower secondary students	5,966,660	6,524,365	6,534,205
Upper secondary students	2,197,034	2,956,322	3,204,452
Professional secondary students	281,194	506,034	824,680
Vocational training students	337,433	759,051	1,149,467
College/university students (undergraduate)	969,403	1,162,922	1,767,609
Master's degree programs	11,727	19,000	38,000
Postgraduate	3,870	7,450	15,000

Source: Dept. of Finance and Planning, MOET

24. Primary education is now near universal with most students having access to a primary school. The targets of 99 percent net enrollment rate and 90 percent completion rate has been achieved in almost all locations. For lower secondary education (LSE), considerable effort is being made to ensure all provinces achieve the same universalization targets that have been set for primary education.

<sup>2</sup> Draft Socioeconomic Development Plan, 2011-2020

25. **Vocational training** has made tremendous strides in the past decade. By 2009 there were 2,270 vocational training institutes comprising 93 vocational colleges, 245 professional training schools, 757 VTCs and more than one thousand manufacturing, business and service units where vocational training is conducted. Student enrollment increased three fold.<sup>3</sup> More importantly, a strong legal and policy framework has been put into place, including the excellent Vocational Training Law of 2006, the Vocational Training Strategy and an Innovation Plan. Greater flexibility has been introduced with the addition of vocational training at the college level. Many of the elements for raising quality have also been developed, including skills standards, curricula frameworks and pilot learner assessment. Teachers have received upgrading through various ad hoc programs. Several key institutions have been strengthened and upgraded, in part with external assistance. The financial base has been widened through the introduction of cost sharing and tuition. Non-state training providers are becoming an important source for skill development. Contract training has been experimented with on a small scale, and with encouraging results. Facilities at the intermediate and higher levels are reasonably distributed throughout the country. The government has also adopted an ambitious program for agricultural and rural training.

16. Private training providers, which have been allowed since 1998, now make up an important share of TVET institutions, including 22 percent of vocational colleges (VCs), 13 percent of vocational secondary schools (VSSs) and 35 percent of vocational training centers (VTCs).

26. The higher education system in Viet Nam has changed markedly since 1990. In 2009–2010, there were more than 1.79 million Vietnamese enrolled in 376 higher education institutions (HEIs), 150 of which award degrees, compared with just 162,000 students in 110 HEIs in 1993, showing significantly increased access to higher education. Other improvements to the higher education system include a shift from small specialized institutes toward larger multidisciplinary universities, better integration of research within universities, and increased private financing and delivery of higher education. Despite these developments in increasing system capacity, the higher education system is ill-equipped to meet the needs of the fast-growing Vietnamese economy and the increasing need for innovation and higher-order skills.

27. Private universities have been allowed in Viet Nam since 1988. In 2009, there were 218,000 enrolments in the private higher education sector in Viet Nam, representing 13 percent of total enrolments and 81 private universities and colleges in Viet Nam, representing 22 percent of all higher education institutions in the country. The Government's Higher Education Reform Agenda (HERA) has established a target of 40 percent of higher education enrolments in the private sector by 2020.

28. **Improved Qualifications of Teachers.** To accommodate the increased enrollments, the Government has focused its efforts on the sustainable provision of qualified teaching staff. The number of teachers by level of education and their average academic qualifications by education level are shown in Tables 7 and 8.

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<sup>3</sup> MOLISA, 10 September 2009, "Proposal for Vocational Training Innovation and Development in the Period 2008-2015".

**Table 7: Number of Teachers by Level of Education**

	2000	2005	2010
Kindergarten Teachers	98,113	110,385	126,855
Pre-school Teachers	106,273	124,494	140,316
Primary Teachers	373,783	339,090	320,505
Lower secondary Teachers	275,958	301,752	302,207
Upper secondary Teachers	102,528	137,962	149,541
TVET teachers	16,871	37,952	57,473
Professional secondary teachers	14,059	25,301	41,234
College/University teachers	48,470	58,146	88,380

Source: Dept. of Finance and Planning, MOET

**Table 8. Average Academic Qualifications of Teachers by Level of Education**

Level	Qualification	2005 (Percent)	2010 (Percent)
Primary Teachers	Teacher Training School	70	60
	Teacher Training College	30	40
Lower Secondary Teachers	Teacher Training College	70	60
	Teacher Training University	30	40
Upper Secondary Teachers	Teacher Training University	95	90
	Teacher Training University (with master's degree)	5	10
Post Secondary Teachers (degree/masters/doctorate)	University Degree	48	30
	Master's Degree	32	45
	Doctorate Degree	25	25

Source: Dept. of Finance and Planning, MOET

29. **Sustainable Public Expenditure on Education and Training.** Trends in education expenditure are also encouraging. Public education expenditure has increased at a steady rate, on a progressive basis favoring disadvantaged areas. Public expenditure on education has maintained a share of 20 percent of annual state budgets over the last decade, while training's share has remained around 9 percent. Table 9 shows expenditure on education and training as a percentage of the GDP and annual state budget in 2000, 2005 and 2010.

**Table 9: State Budget Expenditure on Education and Training  
(Billion VND)**

Category	2000	2005	2010
GDP (Billion VND)	450,157	619,628	900,314
State Budget Spending Drawn from GDP	20,9	20,9	20,9
Total State Budget Spending (Billion VND)	94,532	130,121	189,065
Share of Spending on Education and Training (Percent of State Budget Expenditure)	15	18	20
Total State Budget Spending on Education and Training (Billion VND)	14,179	23,421	37,813
State Budget Spending on Education and Training (Percent of GDP)	3.2	3.8	4.2

Source: Dept. of Finance and Planning, MOET

## **B. Key Sector Development Needs**

30. The draft SEDP 2011-2020 identifies some of the constraints affecting the education system in Viet Nam. First, the national education system is not comprehensive and lacks strategic links between education levels. Second, the curriculum and textbooks are overcrowded. Third, the physical condition of facilities is poor; while the quality of education in remote and ethnic minority areas is below the national average. Fourth, vocational training does not meet labor market demands, while private enterprises, industrial zones and trade villages are not fully mobilized to provide vocational training. Fifth, the quality of science programs is not high, and few results of research have been applied to economic production and social life. Finally, too few private enterprises invest in advanced technology, capital investment in science and technology activities is not flexible; and the working conditions of many research institutes is poor and do not attract young and capable researchers.

31. To further the analysis of sector constraints, a problem tree analysis was carried out (see Attachment 1). As most of ADB's education and training portfolio is now concentrated upon post-basic education, the focus of the problem tree analysis is upper secondary education (USE), vocational training, and higher education. This analysis identified the core problem in post-basic education as follows:

‘The knowledge and skills of graduates from secondary and higher education and skills development do not meet the needs of a modernizing labor market and society.’

32. Four main contributing factors are identified: (i) low quality and relevance, (ii) inequities in access, (iii) weaknesses in sector management and governance and (iv) inadequate financing and investment in education.

33. Low quality and relevance are considered to result from, in part, weak systems for curriculum development and student assessment, shortages of well-qualified teachers and instructors at all levels, weak links with industry in public vocational training and higher education, low enrolments in skill areas in high demand in the labor market, too little emphasis on non-cognitive skills throughout, and poor creative thinking and higher order skills development. The inequities in access result partly from financial and cultural barriers to basic education for ethnic minority youth and disabled children, limited re-entry programs for out-of-school youth, and unequal access to skills development programs and higher education. Weak sector management and governance arise mainly from poor quality assurance of public and private institutions, complex and fragmented management in vocational training, and overly centralized and inflexible governance structures at higher education levels. Inadequate financing, particularly at higher levels of the system, arises from inadequate recurrent budget, the use of unsuitable cost norms in skills programs, limited budgets for research and development (R&D) in higher education, low private responsibility for the costs of higher education and limited private provision of training.

### **1. Low Quality and Relevance**

#### **Secondary Education**

34. **Curriculum Development and Upgrading.** There are two major issues related to the secondary curriculum: (a) there is no regulatory framework for periodic review and upgrading of the secondary curriculum; and (b) the curriculum content still mainly focuses on rote learning, and it does not help secondary students develop more problem solving skills and analytical abilities. As the curriculum is the basis for all other educational inputs, it is necessary to

establish a system for the constant supervision of curricular content, relevance, and application in schools and ensure the shift of the curriculum reform from an ad-hoc updating of subject content to a periodic comprehensive exercise. To address this concern, MOET has determined that the secondary curricula will be upgraded regularly after 2015 but a policy is needed to ensure that regular evaluation and revisions take place. It is anticipated that when MOET will have successfully developed and fully implemented the National Achievement Monitoring (NAM) system under ongoing ADB support, reliable and objective data on students' learning outcomes will be available to inform future decisions regarding the development of a more relevant curricula.

35. **Poor Learning Outcomes Assessment.** The concept of “learning outcomes” is not defined or fully recognized in Viet Nam. Learning outcomes are often considered amounts of memorized knowledge rather than the acquisition of analytical thinking, problem-solving skills, and development of desirable attitudes to learning required to compete successfully in the international labor market. MOET has been keen on monitoring student-learning outcomes assessed by national tests and examinations. However, a valid and reliable system and standard for students' performance and attainment are still under development. In addition, Viet Nam has not participated in the OECD's Programme for International Student Assessment (PISA).<sup>4</sup>

36. To address this concern, new assessment instruments are being developed such as item response theory (IRT) within the National Achievement Monitoring (NAM) program for secondary schools that need to be further developed and implemented under an ongoing ADB-financed project. The same project has also supported Viet Nam's first participation in the PISA in 2012 through capacity development and provision of consulting services to the national PISA committee and the MOET's Department of Evaluation and Accreditation.

### Vocational Training and Higher Education

37. **Programs are not Market Driven.** Considerable re-orientation that has taken place over the past decade in courses offered and program content. This is reported in the retrospective to the National Socio-Economic Development Plan. However, several training institutions have reported that curricula frameworks, e.g. in automotive or computer technology, do not correspond to actual requirements in the workplace even though they have been developed recently. This issue can be traced partly to the composition of the groups preparing curricula framework – they tend to be dominated by teaching staff some of whose knowledge is dated, and do not include enough enterprise representatives. Greater efforts should be made to involve enterprise representatives in the development or ratification of skills standards and training curricula.<sup>5</sup> The more skills standards can be developed and independent assessment achieved, the more training institutions should be given freedom to develop their own curricula to meet the output standards.

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<sup>4</sup> PISA is an internationally standardized assessment, which evaluates how far students of 15-year-olds near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in society.

<sup>5</sup> As stated by Mori, et al: “*in-depth skill and labor demand surveys, curriculum review meetings with enterprises and enterprises' involvement as management council members, are not regularly utilized yet.*” see Mori, Junichi and Nguyen Thi Zuan Thuy and Pham Truong Hoang. January 2009. “Skill Development for Vietnam's Industrialization: Promotion of Technology Transfer by Partnership between TVET Institutions and FDI Enterprises”. Hiroshima University.p33

38. At the higher education level, curriculum development for both public and private institutions is centrally controlled. Under Article 41 of the Education Law, 2005, the Minister of Education has the power to prescribe the curriculum framework for all undergraduate courses, the number of courses, content of the subject, duration of training, time allocation for studying, and practicing and recommended textbooks. Student assessment must also follow strict central guidelines. Any university wishing to introduce new programs must get permission from MOET and in most cases must await the MOET timetable to establish an expert panel and develop the curriculum framework.

39. Several issues are of concern in the medium to long term. One is specialization of training institutions by economic sector and the narrow specialization of programs of study. Many institutions have a history of providing specialized workers for particular sectors, e.g. transport, construction, agriculture, industry. This may have been appropriate under a command economy where the state owned the means of production and decided on growth in employment, and, by extension, enrollments by specialization.

40. However, sector specialization is much less appropriate in a market economy where skill demands are determined by market forces. Specialization is the enemy of flexibility. Training in a market economy must be for broad occupations that could be applied across sectors. In the medium to long term, the content of training programs should increase the proportion of time spent on general education (science, language, mathematics). Graduates will need a stronger background in these subjects to learn new skills on the job, to undertake periodic upgrading and to learn new jobs as the economic structure changes. In short, more general education is the necessary foundation for life-long learning

41. **Poor Quality Teaching.** Many high quality institutions exist in Viet Nam, but a central problem is the extreme variance in quality (i.e. knowledge and skill attainments) of graduates. This holds true especially for practical skills which account for the bulk of the time in VTIs. As stated by Mori et. al., “fundamental problems lie not in the number of workers with professional qualification, but the fact that graduates of TVET programs do not have the basic knowledge and enterprise skills required.”<sup>6</sup>

42. Several factors explain the variance. First, output standards have been lacking. Second, assessment of trainees is done exclusively by the teachers themselves. There has been no outside, independent assessment and employers have not been involved. Some high quality institutes organize their own external assessment; in some cases even bring in international assessors from other countries. As a result, vocational certificates are said to be virtually meaningless in attesting to achievement of minimum standards.

43. Among all the factors, instructors are one of the most critical problems. Qualified instructors are in short supply and deficient as a group in practical expertise. This comes from several reasons. First, there is an over-emphasis on academic credentials. The Vocational Training Law of 2006 specifies minimum academic preparation, but also allows for “or be an artisan.” This is not widely practiced. Second, instructors typically lack industrial and enterprise experience in the fields they teach. This is not a unique phenomenon. It is a common weakness in TVET systems throughout the developing world. However, TVET instructors are seldom sent to internships for upgrading of their practical skills.<sup>7</sup> Third, instructors lack competency-based pedagogical skills.

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<sup>6</sup> Ibid p12.

<sup>7</sup> PLANCO Consulting, 16.

44. At the higher education level, there are insufficient numbers of qualified academic staff. In 2008/09, only 10.5 percent of academic staff had a PhD – about the same proportion as in the late 1980s and below the 14.8 percent in 1999/00. There are a number of reasons why there are insufficient numbers of academic staff, including that the low salaries paid by universities and the cumbersome promotion procedures that limit rewards for academic achievement. The HERA targets are for 35 percent of university staff to be qualified to doctorate level by 2020, a target which is unlikely to be met the given current output of PHDs in Viet Nam.

45. **Overcrowded Classes and Workshops.** Overcrowded workshops are a widespread phenomenon. In general there are about 35 trainees for each instructor, much higher than international norms for TVET programs<sup>8</sup> (which would be 15-20). Overcrowding means that the trainees do not obtain sufficient time in using equipment and thus cannot master practical skills. Instead they must observe a demonstration by an instructor or work in a large group to carry out exercises. A general shortage of vocational training instructors may explain some of the overcrowding. Instructor shortages reportedly are endemic, in part because of the narrow system of supply, but also of uptake in the profession owing to low salaries.<sup>9</sup>

46. The current financing system creates incentives for institutions to increase enrollment at the expense of training quality. Public technical vocational institutes (TVIs) are not subject to enrollment limits. As public allocations for recurrent spending do not increase, raising tuition fees through increased trainee intake has become the most convenient way of increasing institutional income. As a result, increased intake has led to a lowering of unit costs, for example through larger class sizes or lower per trainee spending on materials- all impacting negatively on training quality.<sup>10</sup> The perverse incentive is to enroll as many students as possible. This can happen because physical norms and standards are lacking for workshop facilities and equipment, or are not enforced. The archaic system of expenditure norms also tends to under-finance workshop equipment. The norms were developed in 1998 and applied mainly to universities. At the time, the “norm” for vocational training was VND4.3 million/student. This was supposedly based on an average across eight occupational groups. However, it appeared only to be based on two fields and the outcome was the same as for academic secondary education with larger class sizes and less requirement for equipment. The norm has not been updated since 1998. Actual budget provision seems to be more in the order of VND2.5 million per student, 40 percent less than the intended norm. One of the consequences has been inadequate equipment provision for practical skills.

47. Internships, if properly organized and supervised, can compensate for lack of effective time in workshops. However, their use is sporadic, in part because of lack of employer interest. As reported by Mori, et. al., colleges sometimes struggle to find partners for internships or on-site- training.<sup>11</sup> As a consequence of the wrong skills taught improperly, a World Bank survey of human resources in Viet Nam found that 60 percent of graduates from vocational and technical schools had to be retrained by enterprises after recruitment.<sup>12</sup>

<sup>8</sup> Good statistics are lacking here. However, VTEP institutions managed to reduce the average teacher-student ratio from 35:1 in 2001 to 30:1 in 2007.

<sup>9</sup> Universities with vocational teacher training programs eliminate tuition charges for students undertaking teacher training, but there is no requirement that they actually enter teaching on graduation and reportedly few do.

<sup>10</sup> Franz, Jutta. December 2007. “Financing of Technical Vocational Education and Training (TVET): Vietnam.” Report of a Fact-Finding Mission, GTZ, Ha Noi.p 13.

<sup>11</sup> p.31.

<sup>12</sup> As cited in Hanh, Tran Thi. December 2008. “Study on Secondary Level Technical and Vocational Education: Policies and Rationales for Skills Development.” Unesco, Ha Noi., p4.

48. **Weak Links with Industry.** Improving the relevance of the programs offered in meeting emerging needs has been highlighted as one of the major challenges facing education. While much is being done to improve the quality and relevance of the curriculum offered at primary schools and lower secondary schools, it is at the levels beyond LSE that the lack of relevance and responsiveness is an ongoing issue.

49. At the upper secondary, TVET and higher education levels, industry needs to be more directly involved in identifying current and future needs and in the design of programs to meet these needs. Recent research studies conducted by the National Institute of Education and Science have come to the clear conclusion that it is critical that the quality of US schooling and the relevance and quality of learning outcomes must be improved in order for US graduates to have access to, and successfully undertake tertiary education and to improve their readiness for the labor market in future. The studies have identified inflexible curriculum and poor quality of pre-service teaching training as major causes for the poor learning outcomes of US students. Not only does relevance need to be addressed but the ability to respond to emerging needs to be dramatically improved. The slowness of the educational bureaucracy to accept the need for improvement is seen as a major impediment to improvement.

50. In higher education, quality systems rely on several forms of university-industry collaboration which ensure higher relevance by helping align degrees, skills and R&D to labor market demands and higher research capacity by ensuring higher funds for R&D. Universities nowadays are becoming increasingly active in supporting industries, through consulting, research collaborations, training of workers and start-ups. This is the case in the US with the development of formal multi-stranded university-industry linkages including training, knowledge exchange and start-ups. In most of East Asia, university-industry linkages are generally considered to be weak, with most of the research still carried out in public research centers. Some countries, like Singapore and Taiwan, however, are now pursuing more closely the US model by shifting the emphasis towards universities providing fundamental R&D and incubator services. Universities in China, especially those located in more dynamic regions of Beijing and Shanghai, are also actively involved in commercializing their knowledge.

51. With the exception of two relatively successful cases, such as the cities of Ho Chi Minh and Da Nang, Viet Nam university-industry linkages are weak. Vietnam scored only 4.96 (out of 10) on the 2008 World Bank Knowledge Economy indicator for university-company collaboration – well below countries such as Malaysia (8.64) and Thailand (7.12) – and below the 7.96 score for East Asia and the Pacific. Viet Nam's low score is due to a number of constraints which include: (i) a credibility gap between industry and academia from both sides; (ii) bureaucratic regulations and attitudes not conducive to the development of innovative partnerships and linkages between academia and industry; (iii) insufficient understanding about intellectual property rights and related matters which might constrain efforts to build partnerships; and, (iv) inadequate incentive structures in place to support university industry linkages and financial support programs.

52. **Creative Thinking and Higher Order Skills Development.** Highly effective systems provide diverse instructional methods or pedagogical techniques, making use of 'student-

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centered' approaches more consistent with the kinds of learning needed by economies nowadays such as thinking skills, practical skills as needed, and higher order behavioral skills, such as teamwork and decision-making. In Viet Nam and other East Asian countries, pedagogies tend not to be 'student-centered'. In general, there is a growing concern in East Asia that workers are not being sufficiently equipped to think critically and creatively, and have insufficient command of foreign language and business skills, as, in the increasingly competitive environment, firms seek to develop, design and market new products independently. 'Student-centered' techniques may also help be more inclusive of students coming from disadvantaged and difficult backgrounds.

53. **Low Enrolments in Science and Technology.** Diverse systems offer a variety of fields of education. Recent UNESCO data show that upper income East Asian countries and most European countries have between 20 and 30 percent of their graduates enrolled in science and technology fields, with often one third in sciences. Another 25 to 35 percent in social science, business and law, and the remaining 35 to 55 percent enrolled in a variety of disciplines, such as education and humanities and arts. Even middle-upper income Latin American countries, such as Colombia, Mexico and Chile, while their enrolment is fairly centered on social sciences, have between 20 to 30 percent of their graduates in science and technology fields.

54. By contrast, in Viet Nam, nearly 50 percent of all students enrolled in higher education are enrolled in the two academic majors of economics/business and education, with only about 15 percent of students enrolled in technology and almost none in hard sciences. Limited enrollment in the hard sciences could be due, in part, to the relatively higher tuition fees for students in these disciplines, which is primarily driven by the high cost of laboratory equipment. It also reflects the limitation on non-state institutions from offering courses in the hard sciences. Historically, many higher education institutions which were established to meet the human resource demands of particular ministries and state-owned enterprises are still highly specialized and not well connected to market forces. If industry is to be innovative and have the ability to develop new approaches and products, it is critical that Viet Nam develops a national strategy to increase the numbers of students studying the 'hard sciences'.

55. While there is concern over the quality and numbers of school students undertaking mathematics and science education programs, Viet Nam ranks 51 out of 139 countries and is placed above the mean score. This provides some evidence that recent programs designed to improve the quality of mathematics and science education within schools is having some success. Table 10 indicates the quality of other ASEAN country schools in relation to mathematics and science education. Quality is ranked from 1=poor to 7=excellent.

**Table 10: Quality of Mathematics and Science Education**

<b>Rank</b>	<b>Country</b>	<b>Score (Mean: 4.0)</b>
31	Malaysia	4.8
46	Indonesia	4.5
<b>51</b>	<b>Viet Nam</b>	<b>4.4</b>
57	Thailand	4.3
112	Philippines	3.1
111	Cambodia	3.1

Source: The Competitiveness Report 2010–2011, World Economic Forum

56. **Higher Education R&D.** Viet Nam is well behind other East Asian competitors, such as Thailand and Malaysia, in areas related to R&D. While Viet Nam has been particularly

successful in attracting FDI, the number of researchers and the total spending on R&D is less than in Thailand and Malaysia; and private sector spending on R&D, the number of patents granted and its percentage of high-tech exports are comparatively lower. These trends indicate a weak capacity to innovate and adapt knowledge. In part, this is due to a higher education system which is still not a source of technical innovation as it is in other upper or middle-income countries. China and other regional economies are integrating research and teaching in universities to elevate the reputations of their universities and enhance national economic competitiveness. However, historically, research and teaching have been separate functions in Viet Nam, with research conducted primarily at separate research centers and not at higher education institutions. Research projects at many universities are also behind schedule or delayed, with about 70 percent of research projects yet to be evaluated one to seven years after their scheduled completion.

57. In order to create a high quality higher education system, the role of research in universities should be expanded. Research can be defined as critical and creative investigations undertaken on a systematic and rigorous basis, with the aim of extending knowledge or solving particular or theoretical problems. It can be academic work that contributes to a particular discipline, tackles problems of social and economic significance, or produces original works of intellectual merit. Universities have a key role in innovation systems in a country, playing the role of incubators of technical progress, helping to train future researchers and generating and communicating new knowledge to students. Research activities may also lead to improvements in teaching and student learning. Many universities worldwide now require that all their academic staff engage in research activities<sup>13</sup>.

## 2. Inequitable Access

58. Persistent educational inequalities by household income, ethnicity, disability, and gender. Having achieved impressive overall economic growth rates, there has been a shift in poverty incidence—from being widespread throughout the population it is now concentrated in specific groups that are harder to reach. Four groups are particularly vulnerable: poor households, ethnic minorities, people with disabilities, and women and girls.

59. Households incur substantial direct and indirect costs for education, including school fees and the cost of textbooks, materials, uniforms, food, and transportation, all of which combine to hinder school enrollment among poor families. A large part of the opportunity cost of education, which increases at the LSE level, is the loss of child labor from household production. Poor families, for this reason, are held back from investing in the education of their children, particularly daughters, for whom the opportunity costs are greater. The contribution of the child to the family income may be more important to the household in the short term. Primary pupils from the poorest quintile of the population work twice as long as students from the richest quintile, and female students work 20–50 percent longer hours than males across all income quintiles and ethnic groups. There is a need for more focused measurements of the financial burden of direct education costs on poor families and innovative awareness-raising programs to promote the longer-term benefits of investing in their children's secondary education.

60. Ethnic minorities, in particular, have not progressed to the same extent as other groups. In 2006, 52.3 percent of ethnic minority households were poor, compared with 10.3 percent of

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<sup>13</sup> Harmon, Kay. "Strengthening the links between teaching, learning and research in higher education." Washington, DC: The World Bank, 2005.

ethnic Kinh and Chinese households. Poverty among ethnic minority groups is closely associated with low or limited access to opportunities for education and training, often resulting in low agricultural productivity and exclusion from participation in local governance.

61. As of March 2008, about 12.8 million persons have physical or mental disabilities in Viet Nam.<sup>14</sup> While the Government has provided financial support programs to the disabled, they remain restricted in accessing education opportunities leading to lack of life skills and job opportunities. Provision of schooling at secondary level is particularly limited. Until 2000, there was only one lower secondary school in the country which was able to accept disabled children and provide integrated education. In the school year (SY) 2007/2008, Viet Nam had 99,941 disabled students receiving schooling; 80,187 students at primary schools, but only 17,329 at lower secondary school (LSS) and 2,425 at upper secondary school (USS).

62. A lack of social awareness regarding disability issues combined with traditional negative stereotypes can restrict educational opportunities for children with disabilities. Parental attitudes may hinder enrollment and support for the child to attend school. The direct cost of education to families is also a barrier as families may not value the education of disabled children or have restricted earning capacity due to the requirements of caring for a disabled child; hence high levels of private costs are a disincentive to enrollment. Other barriers include traditional teaching methods that do not address the particular learning needs of disabled students, low expectations for children with disabilities, rigid assessment/promotion procedures and an emphasis on the role of special separate schools for disabled children.

63. The main obstacle for entry at intermediate and especially college level vocational training for the poor is they tend to have lower educational levels.<sup>15</sup> Part of the reason for inequitable access is also structural. The movement between general education and vocational training is one way only. That is, graduates of general secondary education can enter vocational secondary schools or vocational colleges, but graduates of vocational secondary schools and vocational colleges cannot enter professional colleges or university. The reason is the relatively low level of theory that students take in the TVET stream. This accounts partly for the low status of TVET in comparison with general and higher education. The proposed solution, which would involve creation of degree level TVET such as a degree for applied engineering, risks keeping students in a parallel and inferior (in terms of general education foundation) structure.

64. Female enrollment in vocational training is only about 30 percent of the total, implying inequitable access to skills development by gender. The reasons for this are largely historical: vocational training institutes were established to train mainly for traditional male occupations in industry. However, this needs to change as many of the new jobs will be created in services and industrial branches where gender is not a consideration. TVET institutions had great success in increasing female enrollment and obtaining post-graduation employment at virtually the same salary levels (94 percent) as males.

65. Tuition fees are a critical element in mobilizing additional financing for vocational training. However, this limits access for trainees from low income households. The government has policies in place that reduce or eliminate tuition for low income students, but implementation may not be effective. Private institutions rely on tuition for their operating expenses, so reducing

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<sup>14</sup> Government of Viet Nam. General Statistics Office. 2007. *Living Standard Survey 2006*. Hanoi.

<sup>15</sup> *Ibid.*, p.19

fees can be difficult. More generally concern has been expressed about the effectiveness of the exemption scheme.<sup>16</sup>

66. In higher education, there is also evidence that females, minority ethnic groups, the disadvantaged and those from particular regions are not represented proportionate to their numbers in the population, which limits the capacity of the country to draw on the largest possible talent pool, with negative implications not only for the equity of the provision but also for the provision of skills for growth. While there are differences in access to education between the rich and poor across all levels of education, it is most striking in higher education. Although economic growth has helped reduce Viet Nam's poverty rate and improve the livelihoods of many households, poverty remains an important barrier in accessing higher education. Ensuring all students with talent have access to quality higher education programs ensures that national goals will be best achieved. Not only does this build capacity but ensures social cohesion as all strands of society are treated with equal respect and provided with opportunities to excel based on a strategic plan that addresses traditional barriers.

67. Providing a system that recognizes different needs and provides programs to meet those needs is essential if the education system is to be more inclusive. While providing access is a key requirement, this in itself is not sufficient as students need to feel valued and that the programs they are participating in are relevant. For too many groups this is not the case as the programs are rigid and not able to meet local needs. For many out-of-school youth there is the need to improve the quality of support so that these young people are able to access programs that better equip them for a more productive life.

68. **Limited Private Provision.** Diverse systems rely increasingly on a mix of public and private education providers, and even on a mix between domestic and foreign private providers. The private sector is growing fairly fast in Southeast Asia. Since the mid-1990s private institutions have provided 70 percent or more of tertiary education in Korea, Japan and Taiwan. In the Philippines, the private sector already accounts for two-thirds of the enrolment. India and Indonesia, countries that did not have large private higher education sectors until 2000, now have more than half of all students attending private institutions. Experience around the world shows that private education is the quickest way to achieve expansion in higher education as private providers can move faster, and sometimes more effectively, to fill supply gaps in higher education. In Viet Nam, although overall enrollment in the non-state sector is growing, it represents only about 13 percent of all students enrolled. There is the need to significantly alter the mix of public and private participation to enable greater diversity and increased enrollments, however, such diversity needs to occur within a strengthened, outcomes focused accountability framework. To facilitate an increase in the private sector role in higher education, the Government will need to address a number of aspects of the regulatory framework governing the private sector.

### 3. Weakness in Sector Management and Governance

69. The management of education is a concern and there is a clear need to improve management at all levels and across all sectors. In a Directive on the renovation of Higher Education Management the following is stated, "...*the management of universities and colleges remains persistently inadequate, responsibility of the lecturers, managers and students to*

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<sup>16</sup> Franz, Jutta. December 2007. "Financing of Technical Vocational Education and Training (TVET): Vietnam." Report of a Fact-Finding Mission, GTZ, Ha Noi. p7

*renovate higher education strongly and basically*". Management weakness is also found at the school level and the World Economic Forum's Global Competitiveness Index rated Viet Nam 107 out of the 139 countries involved in the study. Table 11 shows the ranking of other ASEAN countries on the quality of management or business in schools. Quality is ranked from 1=poor to 7=excellent.

**Table 11: Quality of Management of Schools**

<b>Rank</b>	<b>Country</b>	<b>Score (Mean: 4.2)</b>
35	Malaysia	4.7
55	Indonesia	4.4
58	Thailand	4.4
61	Philippines	4.3
<b>107</b>	<b>Viet Nam</b>	<b>3.5</b>
118	Cambodia	3.3

Source: The Competitiveness Report 2010–2011, World Economic Forum

70. **Secondary Schooling.** One issue in the management and governance of secondary schooling is quality assurance. Awareness of this need has been exacerbated by the recent growth of private or non-state schooling. The education law states that private, people-founded and semi-public schools all belong to, and contribute to, the national education system. Non-state schools benefit from existing incentive policies on facilities, land, taxes, fees, credit, insurance and reward systems as they are part of the national system. The same expectations and laws apply to non-state schools as apply to public schools in implementing the objectives, contents, curriculum, textbooks, teaching methods and regulations relating to enrollment, teaching and learning, examining, completion requirements, diploma certification and other matters. The government has outlined a policy for the phasing out of semi-public students from public schools but the recent and unexpectedly high numbers of students wanting to continue their education to the USE level has created a demand for schools that MOET has been unable to meet. In addition, the issues of low quality teachers and facilities and the unstable financial foundations of some semi- and non-state secondary schools are often a cause for concern.

71. To address this, the Government (with ADB support) has established a regulatory system and independent agency for the quality assurance of secondary schools. This accreditation agency is expected to periodically undertake transparent and systematic accreditation of all secondary schools, to ensure that all schools provide at least a minimum quality of schooling.

72. **Vocational Training.** The Vocational Training Law of 2006 provides an excellent legal framework for the future development of vocational training in Viet Nam. Several developments have strengthened the organization and management of skills development. Notable among these was the creation of the vocational college level. This corresponds broadly to higher skills requirements as industry develops. In addition, the General Department for Vocational Training (GDVT) has been further developed with the addition of two new departments. Several Departments of Labor, Invalids and Social Affairs have also established units for handling vocational training. However, more needs to be done in terms of organizational development.

73. Two issues stand out about the organization and management of vocational training: the multiplicity of public organizations administering TVIs, and the lack of consolidated statistics about the dimensions and performance of the system. The existing fragmentation and complexity of institutional ownership and governance complicates policy implementation, including efforts to improve effectiveness of skills acquisition. Some institutions report to center,

some to province and within that to different sectoral departments. Functions are duplicated between MOET and MOLISA, including curriculum development, materials development, accreditation, and sub-sector planning. Each organization prepares separate plans and strategies for MOET and MOLISA skills development.<sup>17</sup> As a consequence of the organizational fragmentation, no one has an overview of all skills development (although the Ministry of Public Investment is currently preparing an integrated human resource development strategy to 2020). Fragmentation of state management of vocational training is the main reason for poor coordination in vocational training activities.<sup>18</sup>

74. Second, except for numbers on institutions, total enrollments and teacher qualifications, there is a paucity of national information and statistics to use as a basis for monitoring, evaluation and planning of sub-sector progress. This is a major shortcoming in management of skills development. Available figures are usually targets. The basic statistic on enrollments by level, type, gender; internal efficiency, teachers by program, student progression, recurrent costs and graduation could be used to prepare various indicators on system performance. However, the mission was informed that such statistics do not exist. The knowledge base about costs and expenditures in TVET is particularly weak.<sup>19</sup> There is no requirement of parent organizations to report to GDVT about actual spending on TVIs.

75. **Higher Education.** The current governance structures in HE are characterized by central control of inputs and place too little emphasis on the quality, appropriateness or validity of the outputs or the outcomes achieved. MOET exerts control over the formation of universities, enrollment numbers, the ways in which students are taught and graded, and how higher education institutions generally manage themselves. For public universities, MOET is also intimately involved in the budgeting, the structure of the school management, staffing, and procurement rules. There is little internal and external control on the managerial practices, the quality of administrative services, and the internal efficiency of the higher education institutions. Because of their poor organization and diminished managerial freedoms, higher education institutions are unable to improve education quality, and to adapt their enrollment numbers, training areas and degrees to the changing needs of the market economy. The funds for higher education development are restricted by inappropriate mechanisms for mobilizing private resources into public universities, leaving universities with particularly small budgets for R&D activities. There is a need to implement the HERA management objectives and provide HEIs with increased flexibility especially in the choice and design of inputs, but within a stronger outcomes focused accountability framework that is closely linked to national and industry needs.

#### 4. Inadequate Financing and Investment

76. **Weak Budgeting and Financial Management** is a particular problem in VTIs. As noted earlier, inappropriate and outdated budgeting norms continue to apply to public VTIs. Moreover, public financing is not linked to performance. The system of public subsidies does not provide incentives for improving training outcomes.<sup>20</sup> The current structure of vocational training contributes to some inefficiency. First, training for some occupations appears to take too long. This could be avoided by rigorous application of modular competency-based training with easy

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<sup>17</sup> See also Hanh, Tran Thi. December 2008. "Study on Secondary Level Technical and Vocational Education: Policies and Rationales for Skills Development." Unesco, Ha Noi.p 9.

<sup>18</sup> Ibid., 19.

<sup>19</sup> Franz, Jutta. December 2007. "Financing of Technical Vocational Education and Training (TVET): Vietnam." Report of a Fact-Finding Mission, GTZ, Ha Noi., 9.

<sup>20</sup> Franz, 13.

entrance and exit. The structure at present assumes a vertical progression – almost all graduates of VSS intend to enter VCs. This means that 2 or 3 years at intermediate level is followed by 2 or 3 years at college level before entry to the labor market. However, VT is expensive because of the equipment needed, consumable supplies and smaller than normal class sizes for workshop practice. Spending 4-6 years in vocational training before employment entails costs that developing countries can ill afford.

77. In many respects the vocational training system is still supply driven, but driven by national targets for increased numbers. The overall target is to increase the proportion of the labor force with training which is very general. Also, the financing system (income from tuition) places the incentive on increasing enrollments, regardless of the job market.

78. The vocational training administrative system devolves some authority to VTIs to run their own affairs. Generally they can admit students on their own, hire their own teachers (within national criteria on qualifications), but must follow national regulations on teaching programs. They test and certify their own graduates. They can keep all or most of the revenue generated at the institution.<sup>21</sup> Still, in the long run, devolution will need to go further so that VTIs can define their own markets and train for them without undue bureaucratic interference. Devolution can help stimulate local initiatives, mobilize resources and find and supply local markets. To work properly the governance structures of VTIs will need to change, especially at the college level. At present no outside stakeholders participate in institutional governance<sup>22</sup>, but in future enterprises and employers will need to play a greater role. Artificial ceilings on tuition fees will need to be lifted to enable institutions to finance a greater share of their own expenditures. Removal of tuition ceilings must be accompanied by financing for disadvantaged groups, perhaps as vouchers so as to mitigate any adverse social consequences.

79. The management of private training provision needs further strengthening. In general Viet Nam has an enlightened policy regarding private (non-state) training provision. It does not impose burdensome controls over private training providers. No guidelines exist for registration of private providers. Also, no provision is made for follow up after initial registration to ensure that the private providers maintain quality. Official documents state that private VTIs will be eligible for support in the form of land, rentals and credit. However, this has not materialized.

80. **Low Industry Involvement of Industry in Vocational Training and Higher Education.** Improving the relevance of the programs offered to meet emerging needs has been highlighted as one of the major challenges facing education. While much is being done to improve the quality and relevance of the curriculum offered at the primary and lower secondary levels, relevance and responsiveness remain key issues beyond LSE.

81. The World Economic Forum has ranked Viet Nam 104 out of 139 nations on the extent and quality of specialized training services that are available to support research and training. This indicates that to be competitive with the rest of the world much more needs to be done to ensure Viet Nam is well placed to add value to industrial and commercial enterprises. While it is recognized that there is a desire to improve research activities, there is an urgent need to improve current practices to ensure international competitiveness and maximization of

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<sup>21</sup> Government Decree 43/2006/ND-CP gave public service delivery institutions more authority and responsibility for their performance. Principals have the right to make decisions on recruitment of staff, use of the allocated, self mobilized and retained funds. The actual payment teachers receive depends in part of the income generated by the schools. (Hanh, 24)

<sup>22</sup> PLANCO Consulting, 17.

economic opportunities. Table 12 outlines the local availability of specialized research and training facilities compared to other ASEAN nations.<sup>23</sup>

**Table 12: Local Available of Specialized Research and Training Services**

Rank	Country	Score (Mean: 4.1)
25	Malaysia	4.5
52	Indonesia	4.4
69	Thailand	4.1
77	Philippines	4.0
<b>104</b>	<b>Viet Nam</b>	<b>3.4</b>
111	Cambodia	3.3

Source: The Competitiveness Report 2010–2011, World Economic Forum

82. At the TVET and higher education levels, industry needs to be more directly involved in identifying current and future needs and in the design of programs to meet these needs. Recent research studies conducted by the National Institute of Education and Science have concluded that it is critical that the quality of US schooling and the relevance and quality of learning outcomes be improved in order for US graduates to have access to, and successfully undertake tertiary education and to improve their readiness for the labor market in future. The studies have identified inflexible curriculum and poor quality of pre-service teaching training as major causes for the poor learning outcomes of US students. Not only does relevance need to be addressed but the ability to respond to emerging needs to be dramatically improved. The slowness of the educational bureaucracy to accept the need for improvement is seen as a major impediment to improvement.

83. **Research and Development.** The HERA specifically states that, by 2020, non-state budget research revenue should make up 15 percent of the overall budget of key institutions. Developing research capacity, particularly in science and technology, is also important for Viet Nam as a transitional economy seeking to transform itself into a more modern, industrialized nation. China and other economies in the region are moving in similar directions, integrating research and teaching in universities to elevate the reputations of their universities and enhance national economic competitiveness.

84. Universities rely on research income from the state budget, with a negligible amount coming from outside sources. The amount of research income a university receives is an important indicator of its research capacity and is widely used in international rankings of universities. Most universities around the world rely on public funds to support their research activities; however, these often come from a variety of public sources and are given directly to teams of researchers. With the expansion of research activities at universities, many countries have created government research funding agencies that determine which research projects and researchers at specific universities will be funded. These agencies tend to have some independence from ministries and thus are able to more objectively evaluate research proposals. Viet Nam has not yet established this type of agency and instead research money is allocated to universities, in particular the 'key' universities, based on student numbers and program specializations.

85. International rankings suggest that the total research income for institutions of all types is low when compared with other countries. The public national universities and semi-public and

<sup>23</sup> On the scale, 1=equals research and training facilities being not available, while 7= widely available.

private institutions have the largest shares of revenues from R&D, but they are all still relatively low and even the most prestigious universities in Viet Nam have not developed strong linkages with local industry or international groups. Additionally, this reliance on state funds limits university control over their research funds: MOET allocates budgets to major research projects and monitors their implementation. Korea, Malaysia, China, and many other countries also offer significant and/or increasing opportunities of post-graduate studies for students capable and willing to continue at a higher level. In Viet Nam less than 4 percent of all those enrolled in higher education are post-graduate students with only about 10 percent of those enrolled in doctoral programs. Currently graduate education is only available in national, regional, and other public universities with non-state institutions and local universities not having any post-graduate programs.

**86. Private Provision of Education and Training.** Diverse systems rely increasingly on a mix of public and private education providers, and even on a mix between domestic and foreign private providers. Private provision is growing in vocational training, actively encouraged by the Government. In 2010, 30 percent of all vocational secondary schools and vocational colleges were private. Many of the new private providers are industrial conglomerates, which establish TVIs in order to supply labor to their various industries. The expansion of private provision services two aims: enrolment is expanded without significant government funding, and the programs at the private TVIs are more closely aligned with labor market needs, so that employment outcomes will be better. Experience around the world shows that private education is also the quickest way to achieve expansion in higher education as private providers can move faster, and sometimes more effectively, to fill supply gaps. In Viet Nam, although overall enrolment in the non-public sector is growing, the share of overall enrolment in the non-public sector only still represents about 10 percent of all students enrolled. There is the need to significantly improve the mix of public and private participation to enable greater diversity and increased enrolments, however, such diversity needs to occur within a strengthened, outcomes focused accountability framework.

**87. Enterprise-Based Training.** Many governments and businesses in Southeast Asia have invested significant resources in improving the skills of their work forces through training in the enterprises. Training workers improves the productivity of enterprises and promotes economic growth and poverty reduction. Training in enterprises is seen to be market responsive, and allows for continuous learning and adaptation to new technologies. On-the-job training in the enterprise can be a means to expand access to skills training, with the advantage that it can be delivered in less time than school-based training. However, the level of training carried out by enterprises in Viet Nam is lower than regional averages.

**88.** While Viet Nam's education sector is now better organized, more diversified, and better funded, schools, colleges and universities are still facing many issues which limit their capacity to respond to the needs of a growing economy. Low access, low quality, and a severe shortage of close linkage between higher education institutions and scientific research, business, production and employment remain as the most significant problems of the higher education system in Viet Nam. It is the lack of relevance and the slowness in responding to changing needs that is a major issue at all levels.

**89. Inadequate Provision of Higher Level Skills.** The demand for skills has been increasing significantly in Viet Nam, due to a combination of inter-industry employment changes particularly from agriculture to manufacturing, capital accumulation and some evidence which is consistent with skill-biased technical change. As a result, increasing employment opportunities for higher education graduates exist both within traditional sectors of occupation, such as

education and training, and newly developing sectors, such as manufacturing, electricity, gas and water, and trade oriented sectors, requiring therefore a variety of education fields and strong core skills which can be applied across jobs. Higher education graduates are therefore increasingly needed in Viet Nam. However the relative demand for higher education graduates is rising faster than the relative supply and many firms report a skills shortage. Beyond skill shortages, poor quality and relevance of skills also contribute to this increasing skill gap. Higher education graduates lack some of the skills needed for good performance in the work place including problem solving and team work.

### C. Retrospective of ADB's Sector Support Program to Date

90. **Completed Projects.** Two loans for secondary education and one loan for vocational training have been completed. The key achievements and contribution of these projects, based on project completion reports (PCRs), are summarized below.

91. Loan 1537-VIE: Lower Secondary Education Development Project (LSEDP, 1997-2006). The general objective of the Project was to assist the Government in developing LSE through 3 expected outputs: (i) improving quality of LSE; (ii) increasing access to LSE; and (iii) institutional development for LSE. Overall, LSEDP was effective in improving the quality and equity of LSE. The increase in number of fully furnished classrooms enhanced the access to schooling facilities and eliminated triple shifting in poor areas. The enrolment rate increased from 77 percent in 1998/99 to 89 percent in 2003/04. The Project target of reducing the gap in enrolment rate by 15 percent was achieved, the dropout rate reduced by 35 percent, the repetition rate decreased by 60 percent, the completion rate increased by 16 percent, on-schedule graduation rate increased by 20 percent and the ratio of student/teacher ratios decreased due to the increase of teachers in project schools. By the end of the project, 31 out of 64 provinces of the country had achieved universal LSE.

92. Loan 1718-VIE: Teacher Training Project (1999-2008).<sup>24</sup> The overall objective of this project was to assist the Government in improving the quality and efficiency of LSE through provision of a sufficient number of qualified teachers. The project contributed to achieving the intended impact of improved overall quality and efficiency of LSE. It equipped new lower secondary teachers with the knowledge and skills needed for the modernized curriculum, active-learning teaching methods, and revised textbooks and instructional materials. By the end of the project, the net enrollment rate for LSE increased from 49 percent in 1997/1998 to 81 percent in 2005/06; the percentage of qualified LSE teachers increased from 84 percent to 96 percent the LSE student/teacher reduced from 29:1 to 21:1; and the LSE dropout rate decreased from 8 percent to 1 percent.

93. The bulk of past assistance for vocational training, \$121 million, was for the Vocational and Technical Education Project (VTEP)<sup>25</sup> financed by the ADB, the Nordic Development Fund, and the French Development Agency (ADF), plus a grant from JICA. The completion report for this project found substantial achievements in policy reforms and capacity development, upgrading 15 key institutions to higher standards and greater market orientation. The PCR found that the project was highly relevant, satisfactory in achieving outcomes in the three areas, efficient in the use of resources and likely to be sustainable. The VTEP had thorough impacts

<sup>24</sup> ADB. 1999. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Social Republic of Viet Nam for the Teacher Training Project*. Manila.

<sup>25</sup> ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Social Republic of Viet Nam for the Vocational and Technical Education Project*. Manila.

on the whole system, from macro management (laws and policies, market orientation, capacity enhancement, etc.) to specific key schools, contributing to expand the training scope and improve initially training quality, meeting the demand of labor markets.

94. As stated in the PCR, “The project has largely achieved its intended impact of reforming the vocational training system in support of the Government’s market-oriented industrialization policy by supplying well-trained workers and production technicians for key occupations.” (ADB, PCR, para. 40). Specifically, 86 percent of graduates from the 15 key schools obtained relevant employment within 12 months; female graduates received 94 percent of male graduate remuneration. In addition, the number of students per teacher decreased from 36 to 1 to 30 to 1, and the proportion of teachers with degrees increased from 63 percent to 94 percent. The annual dropout rate remained low at 4 percent p.a. In addition, expenditures per student increased from VND 2000 (in 2001) to 4000 by 2007. The proportion of female students increased from 41 percent to 52 percent.

95. L1979-VIE: USEDP (\$55 million, ongoing)<sup>26</sup> aims to help the Government expand quality USE by supporting quality improvement in USE: improving access, equity, and participation in USE in disadvantaged provinces: and strengthening management. The Project will be completed in June 2011 but the Government has already summarized some key achievements in the project provinces:

- (i) the number of the US schools increased by 24 percent compared with 15.5 percent for the rest of the country;
- (ii) the number of US students increased by 5 percent while the national rate was 3 percent;
- (iii) the number of female students and ethnic minority students in upper secondary schools increased respectively by 15 percent while the national rate was 11 percent, and 12 percent while the national rate was 8 percent;
- (iv) the number of US teachers increased 52.6 percent in 2009 in comparison with the number in 2004, while the national rate was 37.9 percent;
- (v) the graduation rate increased from 50 percent in 2007 to 86 percent in 2010; and
- (vi) the number of students who successfully passed the university/college entrance examinations increased from 31,456 students in 2004 to 97,321 students in 2009.

96. TA 4603<sup>27</sup> a public expenditure review of secondary education and related capacity development programs prepared the ground for an increase in the share of education to 20 percent of total government expenditure. In 2010, ADB approved the Skills Enhancement Project for \$70 million.

97. **Ongoing Portfolio.** As the lead donor in the education sector, ADB has a current project portfolio valued at about \$417 million. The Upper Secondary Education Development Project aims to expand access to USE and improving the quality of in-service teacher training for USE teachers.<sup>28</sup> The Second Lower Secondary Education Development Project<sup>29</sup> is improving the

<sup>26</sup> ADB. 2002. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Upper Secondary Education Development Project.* Manila.

<sup>27</sup> ADB. 2006. *Technical Assistance to the Socialist Republic of Viet Nam for Strategic Secondary Education Planning and Cooperation.* Manila.

<sup>28</sup> ADB. 2006. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Upper Secondary and Professional Teacher Development Project.* Manila.

quality of LSE by developing a new assessment framework for student learning outcomes and setting fundamental levels of quality for schools. Another project approved in December 2006 is improving pre-service teacher training for USE and professional secondary education teachers by supporting teacher training universities. A Japan Fund for Poverty Reduction (JFPR) grant for the expansion of learning opportunities for ethnic minority youth is providing scholarships and academic support to enable ethnic minority upper secondary students to attend teacher training colleges and become LSE teachers in their communes.<sup>30</sup> Loans 2115 and 2384 have helped to increase LSE participation rates through support for school construction and lower secondary schools teacher development.

98. The Skills Enhancement Project (\$70 million, 2010-2015)<sup>31</sup> began implementation under MOLISA in 2011. The project supports Viet Nam's efforts to increase its competitiveness in regional and global markets, by developing highly skilled industrial workers. The project will fund training programs in public and private vocational colleges in the automotive technology, electrical manufacturing, hospitality and tourism, information and communication technology (ICT), and navigation and shipping industries – all of which currently lack sufficient skilled workers. It will provide management and instructor training to upgrade skills and improve planning and allocation of resources, and will also help develop new curricula and training materials, with support from the industries. Credit will be also made available to approved private colleges to upgrade their equipment and facilities, with institutions expected to borrow up to \$3 million to \$4 million each.

99. Women in Viet Nam, who make up nearly half the labor force, are underrepresented in skilled occupations, with vocational training largely targeted at males in the industrial trades. The project aims to address gender inequity by including programs in ICT and hospitality and tourism where females are well represented. It is also carrying out a social marketing campaign for vocational training targeted at poor rural students, women and ethnic minorities, along with school pilot programs designed to attract more females into male-dominated industries such as electronics.

100. ADB's first higher education project, the University of Science and Technology of Ha Noi Development (New Model University) Project (\$213 million)<sup>32</sup>, was approved in April 2011. This project seeks to establish an international standard teaching and research university focused on science and technology.

101. Table 13 provides details of ADB projects in the education and training sector.

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<sup>29</sup> ADB. 2004. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Second Lower Secondary Education Development Project*. Manila.

<sup>30</sup> ADB. 2006. *Japan Fund for Poverty Reduction for Expansion of Learning Opportunities for Ethnic Minority Youth*. Manila.

<sup>31</sup> ADB. 2010. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Skills Enhancement Project*. Manila.

<sup>32</sup> ADB. 2011. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the University of Science and Technology of Ha Noi Development Project*. Manila.

**Table 13. Performance of Ongoing Projects in the Education and Training Sector  
(as of 7 July 2011)**

No.	Project Name	Approval Date	Date of Effectiveness	Original Closing Date	Revised Closing Date	Original Amount	Net Amount	Elapsed Period	Cumulative Contract Awards	Cumulative * Disbursements
1979	Upper Secondary Education Development	17/12/02	22/03/04	31/12/09	30/06/11	\$55m	\$64m	98%	\$61.07m (95%)	\$61.56m (95%)
2115	Second Lower Secondary Education Development	26/11/04	18/03/05	30/06/11	30/06/13	\$55m	\$58m	80%	\$49.88m (85.2%)	\$51.58m (80.31%)
2298	Upper Secondary and Professional Teacher Development	18/12/06	10/07/07	31/12/12	31/12/13	\$34m	\$35m	67%	\$24.97m (70%)	\$23.06m (66%)
2582	Secondary Education Sector Development	25/11/09	03/05/10	30/06/13	No Extension	\$20m	\$19m	31%	\$4.63m (24%)	\$4.63m (24%)
2583	Secondary Education Sector Development	25/11/09	03/05/10	31/12/15	No Extension	\$40m	\$39m	22%	\$3.8m (9.7%)	\$2.38m (6%)
2384	Lower Secondary Education for the Most Disadvantaged Regions	10/12/07	09/05/08	31/12/14	No Extension	\$50m	\$50m	46%	\$28.92m (57%)	\$21.38m (44%)
2652/53	Skills Enhancement	15/07/10	14/02/11	29/02/16	No Extension	\$70m	\$74m	8%	\$0m -	\$0m -
9099	Expansion of Learning Opportunity for Ethnic Minority Youth	29/11/06	18/10/07	30/11/10	31/05/11	\$1.5m	\$1.5m	95%	\$1.46m (97%)	\$1.07m (71%)
2750/51	University of Science and Technology of Hanoi Development (New Model University) Project	25/04/11	Loan not yet signed; Not yet effective	31/12/17	open	\$190m	\$190m	na	0	0

\*Cumulative Disbursements: including Disbursement of prior TA+IDC+Disbursement without PCSS as of 7 July 2011.  
ADB staff estimates

#### D. Lessons Learned and Better Practices

102. **Provision of Adequate Operational and Maintenance Costs.** One of lessons learned from VTEP was the lack of adequate level of costs for operational and maintenance for vocational training equipment and facilities. Future projects should consider setting aside an endowment from the loan and counterpart funds from the Government and employers for operation and maintenance.

103. **Better Coordination with DPs.** In cases where ADB projects have parallel cofinanciers, a streamlined and effective coordination framework should be established and the PMU should take a lead for coordination in line with their organizational structure and capacity.

104. **Long-term Capacity Building.** Project-driven and project-based activities have not been fully successful in eliminating persistent weaknesses in equity, quality, systemic accountability, and institutional capacity. A comprehensive and dedicated plan for institutional and human resource development must be designed to carry out and sustain educational reforms in a dynamic socioeconomic environment to meet the country's new and emerging challenges. The reform actions, when implemented, will also protect ongoing investments in other development projects in the sector.

105. **Focus on Results.** Many education projects tend to set out vague project outcomes such as "improved quality of secondary education," and do not have a time-bound action plan with monitoring indicators. More attention is paid to individual activities and inputs rather than to results. For this reason, although several large-scale investment projects in secondary education have been implemented successfully in Viet Nam, their impact has limited synergy.

106. **Pro-poor Geographic Targeting.** In previous ADB projects where targeted assistance was to be provided to disadvantaged areas, the Government identified disadvantaged areas at the province level and with a very broad geographic spread, covering almost one third of Viet Nam's provinces. The assistance, as a result, was spread too thinly—within a given area it was too small in real terms to have significant impact. Survey data show marked intra-provincial disparities: the education conditions in some districts belonging to relatively wealthy provinces are often far worse than in better-off districts in poorer provinces. However, these poor districts in wealthy provinces were neglected in past projects, where province-based target selection was the norm. To provide substantial assistance to the most disadvantaged groups, project sites should be identified at the district level on the basis of an integrated assessment of education, socioeconomic, and poverty indicators.

107. **Implementation Delay.** A number of ADB's education projects have had a late start-up because of delay in the declaration of loan effectiveness or the signing of the technical assistance letter. With better-harmonized procedures for project administration, the performance of many projects has gradually improved. Close consultation and communication with the Government Office, the Ministry of Planning and Investment, the Ministry of Finance, and the State Bank of Viet Nam has helped develop the executing agencies' ownership and commitment to smooth implementation. However, there are still delays caused by such factors as the slow and complex approval of procurement plans and the limited number of staff in the State Treasury assigned to the education sector. To ensure timely, good-quality implementation, there is need for close monitoring and intensive support from the Government and ADB.

108. **Governance.** The governance-risk assessment study undertaken in May 2009<sup>33</sup> and the Fiduciary Assessment and Financial Management Assessment for the MOET<sup>34</sup> identified the major risks and proposals for mitigation in the education, energy and transport sectors. The findings are summarized in Table 14.

**Table 14. Risk Management Plan**

Major Risks	Proposals for ADB Action
<b>National Systems</b>	
Weaknesses in financial management and accountability	a) Continue current support for PFM and CSR b) Continue to engage in Government/DP governance reform dialogue c) Intensify activity towards harmonizing Government and Six-Bank procurement procedures
<b>Project Systems</b>	
Limited FM capacity in central PMUs	a) Strengthen ADB-MOET engagement by delegating project supervision and transferring project officers to VRM b) Strengthen VRM staffing and capacity to train and mentor PMUs as required, notably in financial management and procurement
Inconsistencies in financial procedures and reporting systems between GoV and ADB	a) Continue to engage in Government/DP governance national reform dialogue b) Intensify activity towards harmonizing Government and Six-Bank procurement procedures
Differences in GoV & ADB procurement procedures and collusion/works-quality risk at provincial/district level	a) Intensify activity towards harmonizing Government and Six-Bank procurement procedures b) Establish a facility within VRM to enable training and spot-checking of provincial procurement staff.

#### IV. SECTOR STRATEGY

##### A. Government Education Strategy, Policy and Plans

109. **Education Sector Strategic Development 2011–2020 (draft).** The key policy targets of the ESSD are (i) a 99 percent net enrollment rate for primary education and LSE; (ii) an 80 percent net enrollment rate for USE or its equivalent; (iii) a 90 percent completion rate for primary education, LSE, and USE; (iv) vocational training for 60 percent of the labor force; (v) a 21 percent share for education in state expenditures; (vi) secondary school students with subject knowledge, lifelong skills, a general understanding of science and technology, a vocational orientation, and proficiency in foreign languages; (vii) better quality continuing education through diversified programs; (viii) a 70 percent schooling participation rate for people with disabilities; (ix) foreign language training for all students from grade 3 onward; and (x) increased attention to the education of gifted students. The targets outlined for HE are; (i) developing key HE institutions into major scientific centers for the country by growing income from science and technology activities (services and products) to 15 percent of the total HE revenue by 2010, and to 25 percent by 2020; (ii) increasing enrolments to 200 students per 10,000 population by 2010, and to 450 students per 10,000 population by 2020; (iii) raising the proportion of university staff with a master's level

<sup>33</sup> ADB. 2009. *Mid-term Review of Country Strategy and Plans 2007-2010. Governance Risk Assessment and Risk Management Plans for the Education, Energy and Transport Sectors.* Hanoi

<sup>34</sup> ADB. 2009. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Secondary Education Sector Development Program.* Manila.

degrees to 40 percent by 2010, and to 60 percent by 2020; (iv) raising the proportion of university teaching staff with doctorate level degrees to 25 percent by 2010, and to 35 percent by 2020; and, (v) reducing the ratio of university students to teaching staff to 20:1 by 2020. Table 15 summarizes these targets.

**Table 15. Target Indicators under the Education Sector Strategic Development 2011–2020 (August 2010 draft)**

<b>Subsector</b>	<b>Access</b>	<b>Quality</b>
<b>Pre-school education</b>	<ul style="list-style-type: none"> <li>• 99 percent of 5 year old children attend kindergarten before entering grade 1</li> </ul>	<ul style="list-style-type: none"> <li>• 90 percent of 5 year old children achieve development standard</li> <li>• The rate of malnutrition under 10 percent</li> </ul>
<b>Primary education</b>	<ul style="list-style-type: none"> <li>• The rate of eligible age children (children go to school at the right age) reaches 99 percent</li> <li>• The rate of EM children in the schooling age reaches 90 percent</li> </ul>	<ul style="list-style-type: none"> <li>• At least 90 percent of primary children complete the level.</li> <li>• 90 percent of children satisfy requirements in the national assessment of reading comprehension and numeracy.</li> <li>• Children study foreign languages from grade 3 and 70 percent of children obtain level 1 in the international foreign language competency.</li> <li>• 100 percent of children receive 2 sessions/shifts/day schooling</li> </ul>
<b>Upper secondary education</b>	<ul style="list-style-type: none"> <li>• 80 percent of Vietnamese youngsters within the age group complete USE and equivalent level</li> </ul>	<ul style="list-style-type: none"> <li>• At least 90 percent of LS children complete the level.</li> <li>• Lower secondary children are equipped with basic knowledge, life skills and initial knowledge of technology and basic profession; have the ability to use a foreign language equally to countries in the region.</li> <li>• Attention is paid to academically gifted children.</li> </ul>
<b>Education for children with disability</b>	<ul style="list-style-type: none"> <li>• 70 percent of people with disability and 95 percent of disadvantaged children attend inclusive education</li> </ul>	
<b>Vocational education</b>	<ul style="list-style-type: none"> <li>• 30 percent of LSE and USE graduates attend vocational training institutions</li> <li>• The proportion of trained labor within the labor force reaches 65 percent;</li> </ul>	<ul style="list-style-type: none"> <li>• 95 percent graduates of vocational training institutions meet job requirements</li> </ul>
<b>Continuing education</b>	<ul style="list-style-type: none"> <li>• The proportion of literate from 15 years old onwards reaches 99 percent, of which the age group of 15 to 35 reaches 99 percent</li> </ul>	<ul style="list-style-type: none"> <li>• The quality of continuing education is improved, providing learners with practical knowledge and skills for participating in a variety of programs, meeting the job's requirements and improving the quality of life</li> </ul>
<b>Higher education</b>	<ul style="list-style-type: none"> <li>• There will be 450 students for every 10,000 population, of which the age group of 18–24 reaches 40 percent;</li> </ul>	<ul style="list-style-type: none"> <li>• 80 percent of graduates meet the job's requirements, of which at least 5 percent have qualification equal to good student from top university in ASEAN</li> <li>• Vietnam will become a member of 50 leading countries in terms of human resource competitiveness</li> </ul>
<b>Budget for education and training</b>	<ul style="list-style-type: none"> <li>• Budget for education will account for 21 percent out of the total state budget.</li> </ul>	<ul style="list-style-type: none"> <li>• Budget for education is allocated on the basis of real need and efficiency; accountability and autonomy of education institutions.</li> </ul>

110. **Secondary Education Strategies.** The secondary education sector has achieved many of the current national secondary education targets and MDGs. While the Government is responsible for determining national policies and programs, local autonomy for management decisions has been a long-standing feature of Viet Nam's political landscape. While this has resulted in local ownership, it has created fundamental challenges in relation to clarity of functional assignments, financial management, accountability, and monitoring and evaluation of the efficiency of educational expenditure programs. This has resulted in significant differences in outcomes and performance across local governments where there are critical gaps in access and quality of service provision in some districts.

111. In order to address concerns over the inconsistent quality of local delivery of educational services there is an increasing need for the central government to ensure that its policy reform agenda and actions emphasize government leadership and ownership. This is a complex task within a devolved system and requires that the education policy framework is clear and relevant and adopted as the underpinning framework for local decision-making. As national policies and programs apply at the local level, there is a need to establish clear policies, goals and measures including rewards and sanctions, all linked to the principles of access for all, equity of outcomes and an expectation of excellence and transparency of processes and outcomes that underpin the achievement of the MDGs.

112. **The Secondary Education Sector Master Plan (SESMP)**<sup>35</sup> was developed with the assistance of ADB and other partners. The plan sets out to (i) achieve universal LSE nationwide by 2010; (ii) improve the quality of learning outcomes; and (iii) strengthen capacity for better resource management and mobilization, as key subsector targets. A new secondary education master plan will be developed for 2011–2015 in accordance with the ESSD 2011–2020.

113. New SESMP 2011-2015 will cover in-depth analysis of the following agenda for secondary education: (i) school facilities, equipment and learning materials; (ii) secondary teacher quality; (iii) curriculum revision and update; (iv) learning assessment; (v) instruction time; (vi) accountability and standards of secondary teaching and learning; (vii) budget process for the educational sector; (viii) school level funding needs; (ix) capital & recurrent expenditure allocation; (x) fiscal forecasting tools; (xi) overall education sector expenditure; (xii) composition of education expenditure by sub-sectors; (xiii) economic composition of education expenditure; (xiv) state budget & education expenditure projections; (xv) forecasts for total public expenditure for education; (xvi) expenditure forecasts for secondary education; (xvii) projected demand for SE and unit cost estimates; (xviii) education financing strategy; (xix) sustainability risk assessment; and (xx) policy recommendation for a new strategy on school fees and charges

114. **Vocational Training Policy and Strategies.** Within the vocational training programs the same issues can be found but they are complicated by the management of the program by two ministries. While there is some degree of cooperation, there is a need to clarify ministerial responsibilities. This will require central government intervention and it is expected that a large scale review is needed that examines what is happening internationally to ensure all students have the opportunity to undertake both academic and vocationally oriented studies as part of their secondary education.

115. The Socio-economic Development Plan gives attention to vocational training, but it is not clear what priority it is assigned compared with other education sub-sectors and other economic

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<sup>35</sup> ADB. 2006. *Technical Assistance to the Socialist Republic of Viet Nam for Strategic Secondary Education Planning and Cooperation*. Manila.

sectors. An important priority within VT is supplying high level skills needed for international competitiveness. In fact, one of the objectives is to “making high quality human resources become Vietnam’s main and long-term competitive advantage.” The principal quantitative target seems to be the proportion of the workforce that has been training, to increase from 40 percent in 2010 to 55 percent of the labor force by 2015. However, this target is very general and does not specify anything about the kind of training. Still, this target seems to be the one that drives MOLISA goals.

**116. MOLISA VT Development Strategy 2011–2020 (for approval).** The Vocational Training Education Development Strategy sets out general and specific objectives, strategic tasks, and seven sets of means (or “solutions” as well as broad implementation and financing guidelines. The means include:

- Improve awareness about the value and importance of VT
- Expand the scale and structure of VT
- Enhance quality assurance to achieve a breakthrough in training technical workers.
- Develop VT standards
- Enable enterprises to become important stakeholders in VT
- Strengthen resource mobilization (“socialization”) for VT
- Strengthen management of VT
- Ensure resources for development of VT
- Promote international cooperation in VT.

117. The strategy has a great deal to recommend it. It gives first priority to the development of high tech training where the economic payoff is likely to be high. Still, it does not ignore the need to provide skills development for underprivileged regions and people. These are the two main strategic tasks. It accords important roles for enterprise-based training and private provision in supplying the skills needed for economic growth.

**118. Higher Education Policy and Strategies.** The government’s most recent HERA 2006-2020 is the most ambitious reform effort to date and represents an important commitment by the government to the higher education sector. The main objectives of the strategy are: (i) a dramatic increase in capacity to allow an increase of the participation rate in higher education (or tertiary) institutions, which implies huge investments in infrastructure and in training of new lecturers and faculty; (ii) simultaneous increase in quality and/or efficiency of the system; (iii) the introduction or reinforcement of research in universities -- in order to train the future new teachers, to enrich and upgrade present teachers’ teaching and to upgrade the quality level and international visibility of Vietnamese universities; and (iv) improved governance of the higher education and research system at both national and regional levels, as well as of universities. These goals imply greater autonomy for individual institutions and measures that create a climate of competition between and within institutions.

119. In HERA, the Government has set the following targets for the higher education sector: (i) revenue from science and technology activities increased to 15 percent of total university revenue by 2010, and to 25 percent by 2020; (ii) the proportion of university teaching staff with masters level degrees increased to 40 percent by 2010, and to 60 percent by 2020; (iii) the proportion of university teaching staff with doctoral level degrees increased to 25 percent by 2010, and to 35 percent by 2020; and (iv) the ratio of university students to teaching staff reduced to 20:1 by 2020.

120. While HERA lays out a set of goals and targets for the higher education sector, it does not sufficiently address how these will be realized over time, which will likely weaken implementation.

## **B. Development Partner Support Programs**

121. **Official Development Assistance for Education.** Many donor agencies and NGOs have been involved in education. The Government gives high priority to education and training, and has called for increased investment in the sector by development partners. In the past several years, official development assistance funds for education and training composed 5.5-6.0 percent of total public expenditures on education. Thirteen loan and grant projects totaling \$782 million are providing ongoing support for education sector development. While basic education has the largest share of official development assistance (ODA) funds, all levels of education, from nursery to tertiary, have received substantial assistance from development partners.

122. The World Bank has supported primary, tertiary, and special education. The World Bank and the Like-Minded Donor Group<sup>36</sup> have been working toward a medium-term expenditure framework in primary education. The European Commission has recently completed a teacher quality improvement project for basic education, and is providing ongoing support to the education sector including the Support for the Renovation of Education Management and the Sector Policy Support Programme for Education for All, which is being implemented with other donors. The United Nations Educational, Scientific and Cultural Organization (UNESCO) is also a key development partner in both primary and secondary education. It is a focal agency for the National Action Plan for Education for All and for girls' education, the capacity development of local education authorities, literacy though adult education, and HIV/AIDS preventive education. The United Nations Children's Fund (UNICEF) is active in early childhood care and education, bilingual education for ethnic minority youth, and the introduction of "child-friendly" schools.

123. France is the largest bilateral partner in the education sector. The Government of France on average allocates 8 percent of its official development assistance to education, mainly for language training, research studies, scholarships, and vocational training. The Government of Japan is also a key bilateral donor to the sector. The Japan International Cooperation Organization (formerly Japan International Cooperation Agency) has been working mainly on primary education through school construction and equipment provision since the early 1990s, but recently indicated a shift in priority from primary to secondary and higher education. Germany provides financial and technical support for TVET through German development cooperation (GIZ and KfW). Australia and Belgium have also financed scholarships and have provided grant assistance to LSE as cofinanciers of some of ADB's technical assistance projects. The United Kingdom has similarly participated in World Bank projects as a cofinancier.

124. **Vocational Training** has enjoyed increasing attention, not only from the public budget, but also from donor assistance. Some US\$156 million of assistance has been completed under six projects, including two projects supported by the Korean Government and two projects by the German government. Currently, twelve vocational training projects are under implementation for about \$214 million, including three projects financed by the German government, two loans from the French Development Agency (ADF) and a \$35 million loan from the Korean government. ADB has financed the Skills Enhancement Project (USD 70 million) since 2010, which continues support for many of the reforms started in VTEP, and provides assistance to an additional 15 vocational training institutions. Essentially, the German and ADB approach are similar and focus on two

<sup>36</sup> A group of 10 bilateral donors that share a common commitment to Viet Nam's Comprehensive Poverty Reduction and Growth Strategy for promoting pro-poor growth and aligning official development assistance.

levels: to help national systems and to strengthen specific institutions, e.g. centers of excellence through comprehensive assistance.

125. **Donor Coordination and Harmonization.** ADB is one of the principal development partners in the education sector in Viet Nam together with the World Bank, the Government of France, and the European Commission. It maintains close collaboration with the key development partners, in particular with the World Bank, to ensure a coordinated approach across all education subsectors and to harmonize efforts within each subsector. ADB is a member of the sector donor coordination framework, the Education Sector Group (ESG), comprising most development partners active in the sector. The major functions of ESG include providing consolidated comments on various government education policies and decrees, sharing information on ongoing and upcoming education projects financed by ESG members, and organizing joint retreats and field trips among members. Since 2007, ADB has contributed to the formulation of several new education policy initiatives and joint studies with other development partners. The large number and different approaches of external donors in the vocational training sector suggests the need for a more formal coordination mechanism, which was initiated recently by MOLISA.

126. **Links to Thematic Issues–Gender.** ADB interventions will promote gender equality in secondary and higher education as well as in technical vocational education and training sectors. Interventions in the secondary education sector address access and affordability issues, lack of gender sensitive and locally relevant curricula and teaching methods; lack of qualified female teachers and role models at the secondary level. Gender specific interventions in the sector include social equity measures such as scholarships and financing schemes to increase access and affordability; transitional and remedial courses for lower secondary and out-of-school girl children to meet upper secondary standards; gender sensitive curricula and physical design of schools, setting targets and capacity development for female and ethnic minority teachers, managers, and education planners etc. In the higher education sector, ADB project will address key constraints to female access to higher education, female perceptions related to science and technology studies and careers; as well as gender imbalance in academic staff at the tertiary level. Strategies in TVET will promote greater alignment of women's education and skills to labor market needs, women's access to training in non-traditional fields as well as public private partnerships to mobilize entrepreneurs to employ women in non-traditional trades.

127. **Environment and Climate Change.** The Education and Training Sector is not a major driver of environmental degradation or climate change. However, the links between low levels of education and vulnerability to environmental impacts, and in particular climate change impacts are well documented in development literature and could be referenced in the ASR. The paper does mention the transition of the population from the agriculture sector to industrial and service sectors which will intensify with climate change. The NTP on Climate Change and the National Climate Change Strategy, stress the importance of raising awareness about climate change and potential responses. Furthermore, Viet Nam's National Strategy on Climate Change, the SEDP and the draft Green Economic Development Plan emphasize the need to transition Viet Nam to a higher-tech, more energy efficient economy.

128. Viet Nam stands to benefit from significant amounts of climate and carbon finance in the coming decades. If these resources are leveraged strategically, they could be used to position Viet Nam as a leader in climate change adaptation and green growth in the region. Specifically, Viet Nam may use its growing experience in coastal protection, flood management and adaptive management of agriculture to build skills of rural and disadvantaged populations, in particular those who are vulnerable to environmental and climate impacts. In addition, Viet Nam could gain by attracting efficient enterprises to contribute to VET. Enterprises may follow the established private

VET model by teaching and employing Vietnamese to work in low-carbon enterprises. Furthermore, such enterprises could promote research and development. In collaboration with Ministry of Environment and Natural Resources and MPI, MOET could expand successful environment and climate change pilot projects to serve as education and training opportunities, positioning Viet Nam to be at minimum climate resilient and ideally, an exporter of clean technologies in ASEAN.

129. **Public-private Partnerships.** The private sector exists at all levels of education in Viet Nam – from early childhood to higher education. The private sector in education is particularly prominent at the early childhood, vocational and higher education levels. The existence of a growing private education sector can open up significant opportunities for countries such as Viet Nam to tap into private sector resources and expertise to help them meet their educational and economic objectives. One potentially fruitful direction for reform is the adoption of education public-private partnerships (PPPs). PPPs can bring many benefits, including greater efficiency and quality in delivery, improved targeting of education spending toward target groups such as girls and the disadvantaged and providing scope for bypassing rigid regulations such as government employment rules and pay scales that hamper schools' ability to meet the needs of the communities they serve.

130. There is a range of possible PPP models that could be adopted to enhance the performance of the school sector in Viet Nam. These include both service delivery and infrastructure PPPs. Examples of the former include: (i) the private management of public schools, whereby the government pays a private provider to manage a public school; (ii) contracting for the delivery of education services, whereby governments pay private providers to enroll students at public expense; and (iii) voucher and scholarship programs, whereby the government provides students with an entitlement that can be used to defray the costs of education at private schools. Infrastructure PPPs involve the private sector in financing, designing, building and operating school infrastructure under a contract with the state. There are many examples of both service delivery and infrastructure PPPs throughout the world.<sup>37</sup> The Government of Viet Nam has shown it is receptive to private involvement in education and partnership between the public and private sectors. For example, under Decree 73/1999/ND-CP, non-public higher education institutions are eligible to receive public property, exemptions from land taxes, and the transfer of academic staff from public institutions. The Government has also included a private sector component in the ADB Skills Development Project, which was approved in 2010, including the provision of training to staff at private vocational providers, and access to a \$20 million line of credit.

### C. ADB's Sector Forward Support Approach and Programs

131. **ADB Education Sector Operations Plan.**<sup>38</sup> The 'Education by 2020: a Sector Operations Plan' (July 2010) states that ADB will: (i) continue to align its support in the education sector to meet the changing needs and priorities of its developing member countries; (ii) emphasize strengthening quality, inclusiveness, and relevant skills at all levels of education, and adjust subsector priorities while recognizing major differences in education needs across countries; (iii) utilize new and innovative models of service delivery and financing; and (iv) Promote regional cooperation and cross-border collaboration. The Plan also commits the ADB to (i) strengthen knowledge sharing in the education sector; (ii) build partnerships; and (iii) concentrate on achieving measurable results.

<sup>37</sup> LaRocque, N. 2008. *Public-private Partnerships in Basic Education: An International Review*. CfBT Education Trust. Reading.

<sup>38</sup> ADB. 2010. *Education by 2020: A Sector Operations Plan*. Manila

132. Future ADB assistance to education will contribute to meeting the broad challenges of *innovation, inclusiveness and integration* for all sectors of education including TVET and higher education. There is a recognized need to strengthen, '*TVET's links with industry and workplace training and basing TVET on standards that are set or validated by industry*'.<sup>39</sup> Similarly, improving access, raising the quality and relevance of HE is also seen as central to Viet Nam's future growth and sustainability.

133. The issues that have been identified and the actions proposed closely align with ADB plans and priorities. There are actions proposed that will require innovation and which in themselves foster innovation, examples include the recommendation to increase R&D and establish a national approach to increasing enrolments in science. Improving inclusiveness will not only to ensure improved opportunities for all but will enable the wealth of talent available is able to harnessed and developed to ensure international competitiveness and internal cohesiveness. The successful implementation of the actions proposed also relies on a significant increase in the integration of programs and services. This is a particular challenge for Viet Nam where services and programs have been disconnected from each other and from the needs of industry and commerce.

134. The current ADB projects in secondary, TVET and higher education support the 2020 plan vision for education that aims to:

- Improve secondary education generalization
- Support continuing education development
- Review curricula, textbooks and teaching materials
- Reform learning-teaching assessment
- Develop an accreditation system of educational quality of secondary, TVET and higher education
- Train and upgrade teaching staff and educational managers
- Build up information systems on labor markets and train according to social needs
- Improve the capacity of vocational education
- Support education in mountainous/disadvantage areas, ethnic minority and disadvantage students for all levels of education
- Increase inclusive education for handicap children
- Improve school's infrastructure
- Develop IT human resources and apply IT widely in education.

135. **ADB Sector Forward Strategy.** The forward strategy in the sector was developed from this analysis. The context is that Viet Nam is industrializing rapidly and has in fact already reached lower middle-income status. The Government wants the country to reach industrialized status by 2020. However, the economy is not performing efficiently compared with its neighbors, and the productivity of labor is low. Further increases in competitiveness can be spurred by increasing productivity and reducing skills shortages, particularly in foreign direct investment industries where there are frequent complaints about the lack of highly skilled labor, and managers and supervisors. In addition, Viet Nam needs to improve its efficiency by moving to higher value-added and knowledge industries. Currently, this is declining.

136. At the same time, measures must be put in place to ensure that growing industrialization and the need to improve efficiency are not accompanied by widening inequality. The strong thrust

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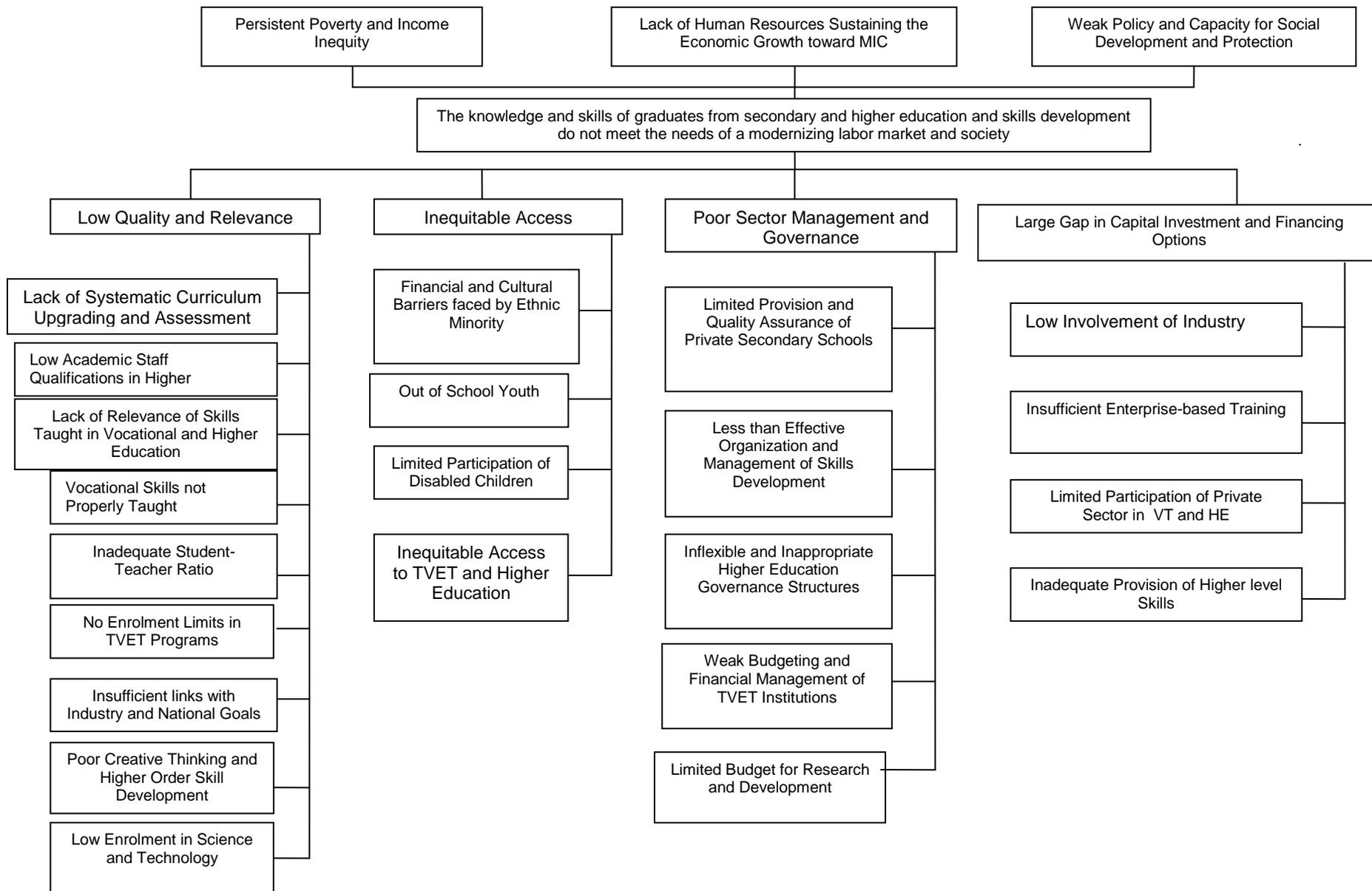
<sup>39</sup> ADB. 2010. *Education by 2020: A Sector Operations Plan*. Manila

towards greater competitiveness and higher levels of value added must be accompanied by an equally strong thrust to promote social inclusiveness.

137. ADB's support to education has mirrored Viet Nam's development. Initial support was to basic education (lower secondary) and middle-level skills development. This was very successful in expanding access and inclusiveness in basic education and in building the foundation for a modern vocational training system. LSE provides the basis for students to progress to upper secondary education, TVET and higher education. It is critical that the quality and relevance of LSE programs continues to be enhanced and that specific action continues to be undertaken to ensure access for all, irrespective of background, ethnicity or location. It is only when the full range of student talent available is able to progress beyond basic education that competitiveness is enhanced and inclusiveness expanded.

138. The Government and industry are aware of the consequence of the shortages in higher level skills and are determined to improve the responsiveness of the education and training system to the needs of the changing labor market. In response, ADB is strengthening its focus on the upper levels of the education system and the transfer of higher level skills. The aim is to help prepare students with the general skills needed to function effectively in a rapidly industrializing society with changing workplaces, along with higher level skills development for key high technology industries, and capacity building for research and innovation. ADB's future investment support will therefore focus upon upper secondary, college level vocational training and higher education, with a focus on greater relevance to societal and labor market needs. One way in which this will be promoted is through Increasing industry and private sector participation in the planning and provision of training. At the same time, the strong focus on inclusiveness—for which ADB has become known through its considerable support to basic education and alleviating disadvantage—will be maintained to enhance social and gender equity.

# Problem Tree Analysis



## SECTOR ROADMAP AND RESULTS FRAMEWORK

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contribution	Indicators with Targets and Baselines	Outputs with ADB Contribution	Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	Main Outputs Expected from ADB Interventions
The knowledge and skills of graduates from secondary and higher education and skills development meet the needs of a modernizing labor market and society.	20% of the total labor force receives academic qualification and/or vocational training by 2020 (2010 baseline: 14.7%)	Quality and relevance improved	<p>85% of secondary teachers assessed as qualified through newly developed teacher standards by 2015 (2009 baseline: 75%)</p> <p>20% increase in employees in the skilled labor force by 2020</p> <p>Increased employer satisfaction with the knowledge, skills, and attitudes of employees from vocational colleges by 2020</p> <p>80% of graduates meet job's requirements, of which at least 5% have qualifications equal to a good student from a top university in the Association of Southeast Asian Nations</p> <p>Viet Nam becoming among the 50 leading countries in terms of human resource competitiveness by 2020</p>	<p><b>(i) Planned key activity areas and pipeline projects</b></p> <p>Upper Secondary Education (37.5% of funds); Phase 2 (\$90 million)</p> <p>Lower Secondary Education (33.3% of funds); Lower Secondary Education for the Most Disadvantaged Regions (Phase 2) (\$80 million)</p> <p>Vocational and Technical Training Secondary (29.2% of funds); Skills Enhancement (Phase 2) (\$70 million)</p> <p><b>(ii) Ongoing projects with approved amounts</b></p> <p>Upper and Professional Secondary Teacher Development (\$34 million)</p> <p>Lower Secondary Education for the Most Disadvantaged Regions (\$50 million)</p> <p>Secondary Education Sector Development Program (\$60 million)</p> <p>University of Science and Technology of Hanoi Development (\$190 million)</p> <p>Skills Enhancement (\$70 million, effective 2010)</p>	<p><b>(i) Planned key activity areas</b></p> <p>90% of upper secondary curriculums upgraded by 2015 and gender-sensitive</p> <p>Lower secondary education net enrollment rate increased from 82% in 2011 to 85% in 2015, with 48% of enrollees female</p> <p><b>(ii) Ongoing projects</b></p> <p>40% of unqualified teachers receive upgrading training by 2015, of which 50% are women</p> <p>Ministry of Education and Training registers in PISA, and the average performance of Vietnamese grade 12 participants improves from the average performance of Vietnamese students in PISA 2012 to that in PISA 2015</p> <p>42,000 secondary teachers trained, 50% of them female</p> <p>20% increase in graduates in 15 occupational training programs by 2015, 30% of them female</p> <p>85% of graduates from 15 occupational training programs employed within 6 months of graduation, 40% of them female</p> <p>100% of University Science and Technology Hanoi Development Project academic staff, including 20% females, with PhDs by 2017</p> <p>90% of graduates, including 35% females, in related employment or undertaking further study by 2016</p>

Source(s): ADB staff estimates.

PISA = Programme on International Student Assessment (organized by Organisation for Economic Cooperation and Development)