

THE SOCIALIST REPUBLIC OF VIETNAM

**DATA COLLECTION SURVEY
FOR
VIETNAM – JAPAN UNIVERSITY
IN
THE SOCIALIST REPUBLIC OF VIETNAM

FINAL REPORT**

MAY 2014

JAPAN INTERNATIONAL COOPERATION AGENCY

ORIENTAL CONSULTANTS CO., LTD.

JAPAN INTERNATIONAL COOPERATION CENTER

JAPAN VIETNAM ECONOMIC FORUM

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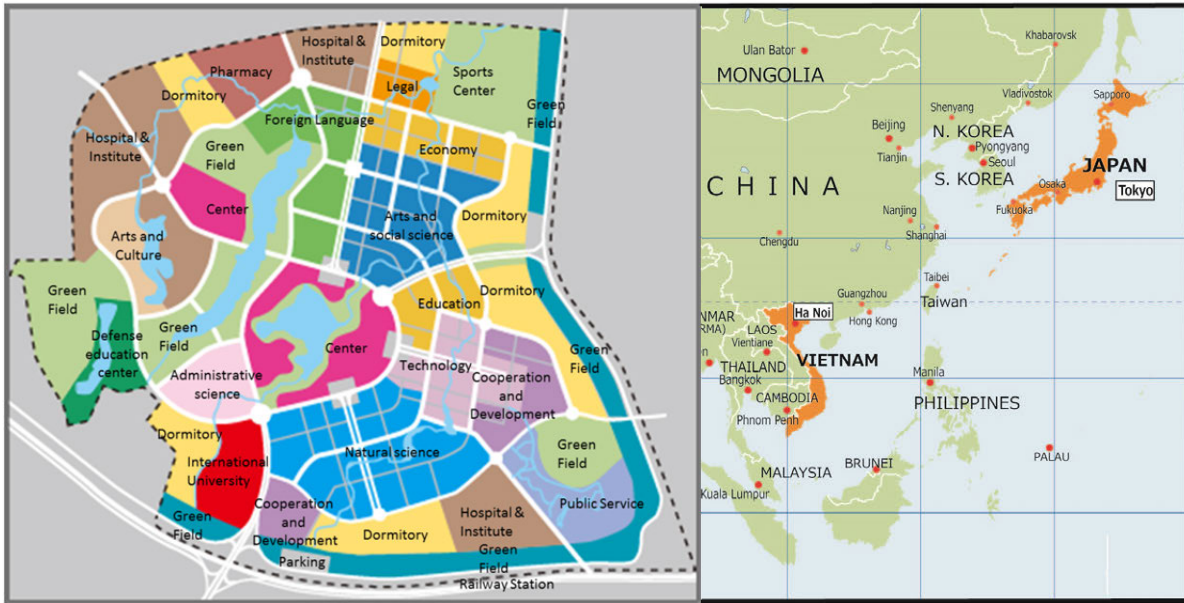
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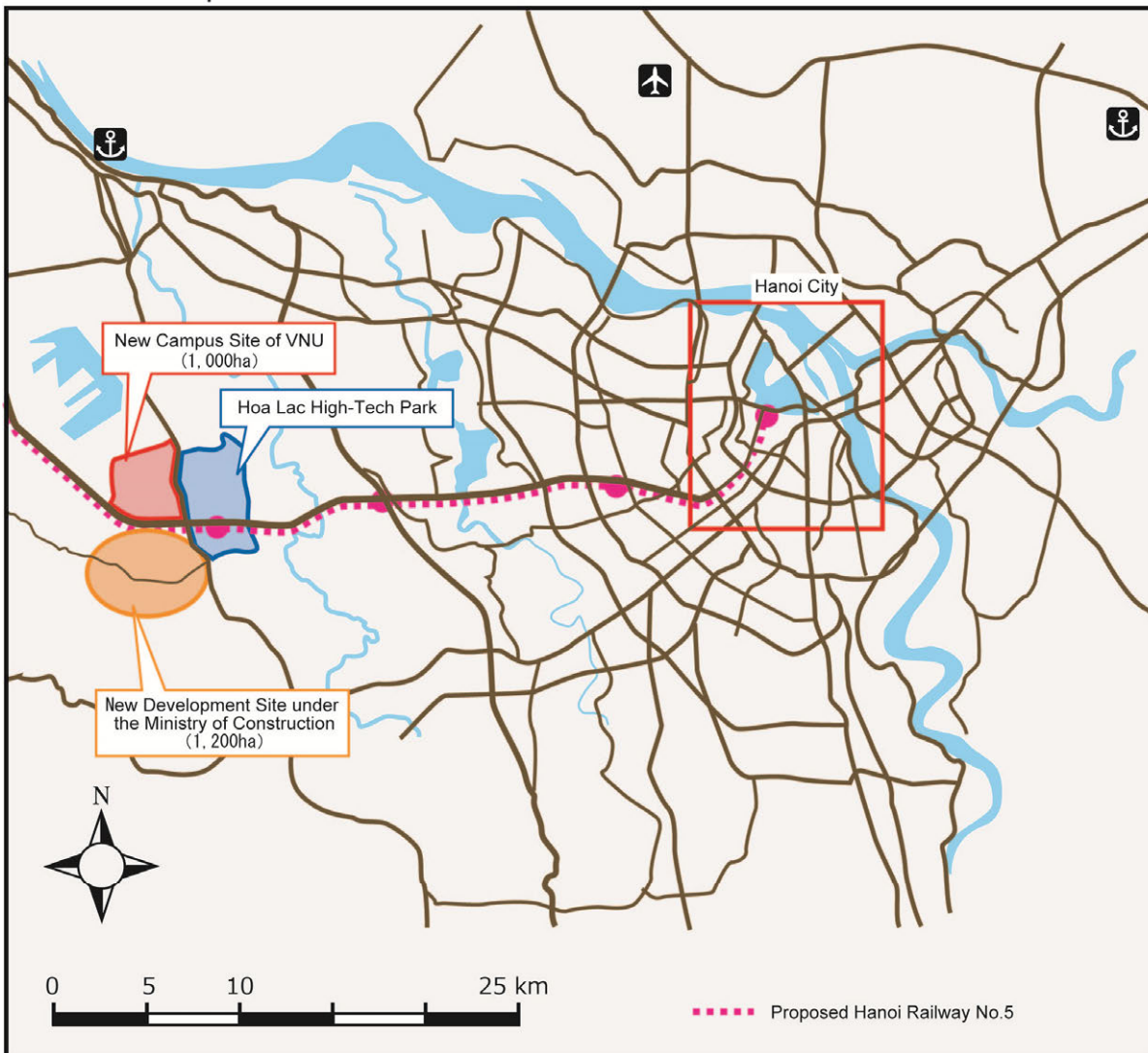
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New Campus Master Plan of VNU

Location of Vietnam



Location Map of the Project Site

Campus 1 at Xuan Thuy



VNU Management Center
& Auditorium



Department of Graduate Studies of Foreign
Language University

Campus 2 at Luong The Vinh



Library: view from main gate
The same location as Univ. of Education



High School for gifted students under Univ. of
Science, with dormitories

Campus 3 at Nguyen Trai



Management Board, Departments & Faculties of
University of Science (UOS)



Lecture buildings of
University of Social Science & Humanities

VNU Hanoi Existing Campus Map

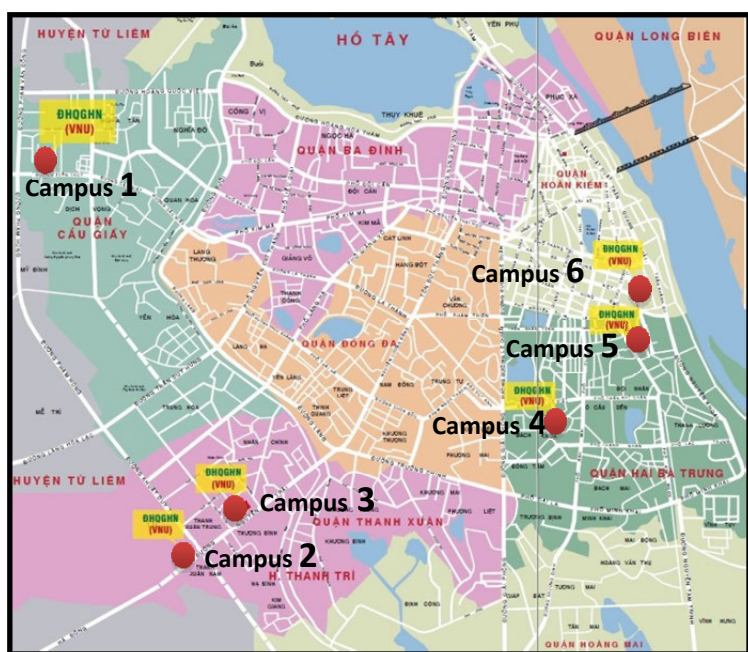
Campus 4 at Ta Quang Buu & Tran Dai Nghia



Marcel Dassault main hall of Francophone Institute for Computer Science (IFI)



A rather narrow yard of Faculty of Vietnamese Studies and Language



Campus 5 at Hang Chuoi



Printing & Publishing House of VNU, which is very close to residential area

Campus 6 at Le Thanh Tong



University of Science: beautiful French-style buildings of old University of Indochina



Student activity in the courtyard of Faculty of Chemistry and Biology of UOS



New campus in Hoa Lac, Thach That District, Hanoi with an area of 1,000 hectares.



② Approach road to campus



Site survey



③ New dormitory building



① Approach road to campus

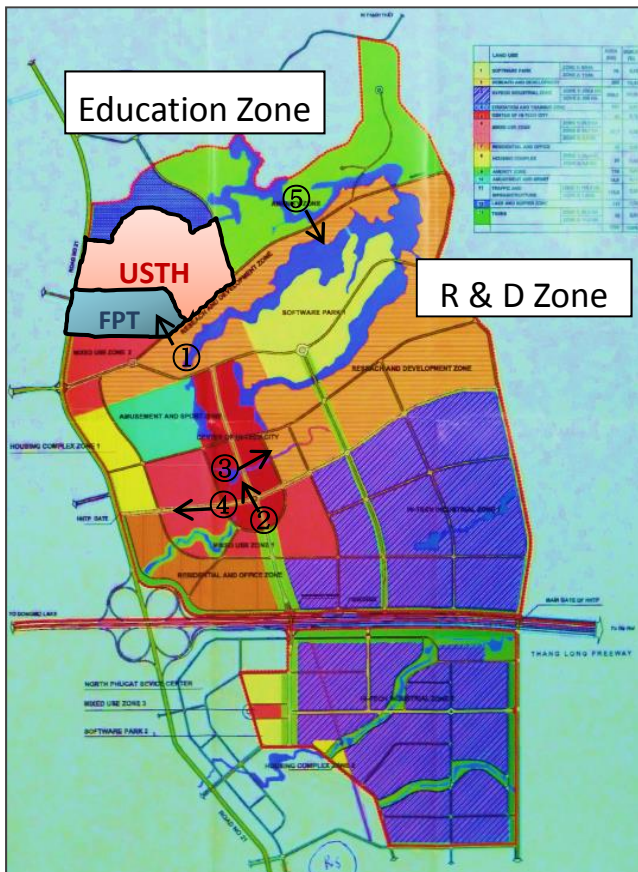
VNU New Campus



① FPT University entrance



Physical model of FPT



⑤ Site under construction



③ Green field
(R&D Zone, High-Tech Industrial Zone)



④ Access road to HHTP gate



② View from Mixed-Use Zone toward FPT

Hoa Lac High-Tech Park

Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
AUN	ASEAN University Network
BTO	Build - Transfer - Operate
BRT	Bus Rapid Transit
CDF	Clean Development Fund
CEFR	Common European Framework of Reference for Languages
COE	Center of Excellence
DF/R	Draft Final Report
DONRE	Department of Natural Resources and Environments
EIA	Environmental Impact Assessment
EV	Electric Vehicle
FTICO	FPT Technology Innovative Company
FPT	Corporation for Financing and Promoting Technology
F/R	Final Report
GDETA	General Directorate for Educational Testing and Accreditation
GDP	Gross Domestic Product
GDVT	General Department of Vocational Training
GIS	Geographic Information System
GSO	General Statistics Office (Vietnam)
HAIDEP	The Hanoi Integrated Development and Environmental Program
HEI	Higher Education Institution
HELP	Higher Education Learning Philosophy
HERA	Higher Education Reform Agenda
HET	Higher Education Town
HHTP	Hoa Lac Hi-Tech Park
HKUST	Hong Kong University of Science and Technology
HPC	Hanoi City People's Committee
HR	Human Resources
HRDMP	Human Resource Development Master Plan 2011-2020
HRDS	Human Resource Development Strategy 2011-2020
HUS	(VNU) Hanoi University of Science
HUTDPUM	Hanoi Urban Transport Development Project Management Unit
IC/R	Inception Report
ICT	Information and Communication Technology
IS	International School
IU	International University
JICA	Japan International Cooperation Agency
JVEF	Japan-Vietnam Economic Forum
LOS	Level of Service
MLIT	Ministry of Land, Infrastructure, Transport and Tourism (Japan)
MOC	Ministry of Construction (Vietnam)
MOET	Ministry of Education and Training (Vietnam)
MOF	Ministry of Finance (Japan)
MOIT	Ministry of Industry and Trade (Vietnam)
MONRE	Ministry of Natural Resources and Environments (Vietnam)
MOLISA	Ministry of Labor, Invalids and Social Affairs (Vietnam)
MOST	Ministry of Science and Technology (Vietnam)

MPI	Ministry of Planning and Investment
MQA	Malaysian Qualification Agency
MRT	Mass Rapid Transit
MSCHF	Middle States Commission on Higher Education
NAC	National Accreditation Council
NAFOSTED	National Foundation for Science and Technology Development
NITE	National Institute of Technology and Evaluation (Japan)
NMU	New Model University
NPO	Non-Profit Organization
ODA	Official Development Assistance
O&M	Operation & Maintenance
PPP	Public–Private Partnership
QAA	Quality Assurance Agency (England)
QAC	Quality Assurance Control
SOC	Sumitomo Osaka Cement Co., Ltd.
SPC	Special Purpose Company
SUDICO	Song Da Urban & Industrial Zone Investment and Development Joint Stock Company
TLIP II	Thang Long Industrial Park II
TOR	Terms of Reference
TU9	German Institutes of Technology
UEL	University of East London
ULIS	University of Languages and International Studies (VNU)
USTH	University of Science and Technology of Hanoi
VAST	Vietnam Academy of Science and Technology
VGU	Vietnamese-German University
VCCI	Vietnam Chamber of Commerce and Industry
VINACONEX	Vietnam Construction and Import - Export Joint Stock Corporation
VJCC	Vietnam Japan Human Resources Cooperation Center
VJU	Vietnam Japan University
VND	Vietnam Dong
VNR	Vietnam National Railways
VNU	Vietnam National University
VNU-HCM	Vietnam National University – Ho Chi Minh
VNU-HN	Vietnam National University – Hanoi
VNU-IS	Vietnam National University –Hanoi, International School
WB	World Bank
WTO	World Trade Organization
XJTLU	Xi'an Jiaotong– Liverpool University

Rate (March 2013)		
1 USD	0.6	GBP
	110	JPY
	21,000	VND

1. Outline of the Survey

1.1. Background of the Survey

In Vietnam, rapid economic development has continued since the Doi Moi policy. However, while the economic growth is strong, industrial development and international competitiveness are still the biggest challenges. The Vietnamese Government has set the goal for industrialization of the country by 2020, the same goal as in the "Ten-Year Socio-Economic Development Strategy (2011-2020)" and the "Five-Year Socio-Economic Development Plan (2011-2015)". In order to realize becoming an industrialized country and to achieve sustained economic growth, the development of industrial human resources is crucial. By establishing the "Human Resource Development Strategy 2011-2020 (HRDS)" and the "Human Resource Development Master Plan 2011-2020 (HRDMP)", Vietnam aims to strengthen international competitiveness of human resources to achieve international integration and social stability. In particular, the "Higher Education Reform Agenda 2006-2020 (HERA)" was made to attain qualitative improvement and quantitative expansion of higher education institutions, and also to strengthen the management capacity and research capability of the university.

The working population in Vietnam, which accounts for about 60% of the total population and has abundant young labor, is one of the strengths for foreign direct investment. With such rich human resources, many Japanese companies have expanded their business to Vietnam. However, among this working population, the number of workers who have received professional training in universities or vocational training institutions is relatively small, and specifically there is a lack of managers for clerical and technical employees and skilled labor. JICA, in these circumstances, has been supporting to improve the capability of Vietnam's institutions for human resource development (university and vocational training institutions), for the purpose of upgrading training for managers and engineers and supporting small/medium-sized enterprises, while considering the needs of Japanese companies.

The year 2013 is the 40th anniversary of the establishment of diplomatic relations between the Socialist Republic of Vietnam and Japan (1973 – 2013). In these 40 years, with the consensus and determination of the governments and people of two countries, friendly and cooperative relations between Vietnam and Japan have undertaken long, strong and intensive development steps. The fact that the two countries agree to bring the relation into "*Strategic partnership for peace and prosperity in Asia*" level illustrates the connection and important level of two countries to each other.

The concept of supporting Vietnam to establish a high-quality human resource training center at higher education level has officially been given since 2006. This concept was supported by the general declaration of Vietnam–Japan, dated 31/10/2010, on the Strategic Partner Relation for Peace and Prosperity in Asia, when the Japanese prime minister visited Vietnam:

Prime Minister Nguyen Tan Dung asked Japan to consider the possibility of establishing a high-quality university in Vietnam, and expressed the belief that it would be a realistic content and have special meaning to the Vietnam – Japan relationship in the long term. The Japan side also expressed intentions to consider Vietnam's abovementioned proposition.

In addition, as part of the HERA concerning the realization of a university with international standards, the Vietnamese Government is seeking the possibility of establishing Vietnam-Japan University (hereinafter as "VJU") as a symbol of friendship between Japan and Vietnam.

1.2. Objectives of the Survey

Based on the above situation, the objectives of this study are as follows:

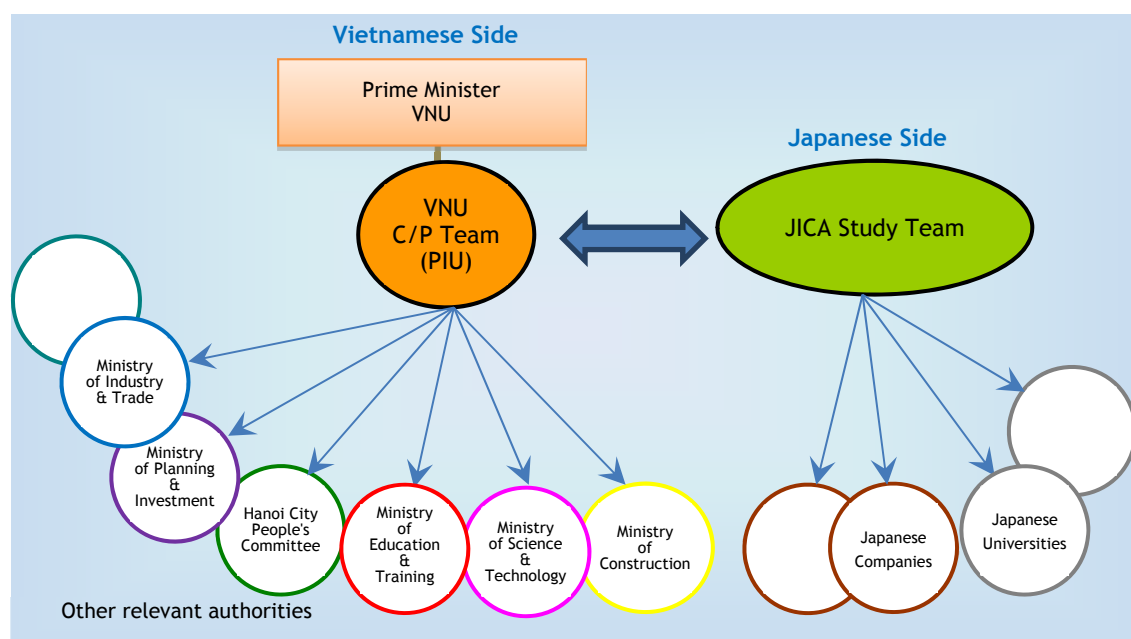
- Collection and analysis of data/information relevant to the Vietnam-Japan University (VJU)
- Alternative study of potential scenarios for VJU
- Study on possible implementation program, and clarification of opportunities/constraints for implementation by private initiatives

While proceeding with the concept of "VJU", based on the fact that it is considered as the center of the "Hanoi Science School Concept", the development of the surrounding area shall also be considered.

1.3. Outline of the Survey

(1) Organizational Structure of the Study

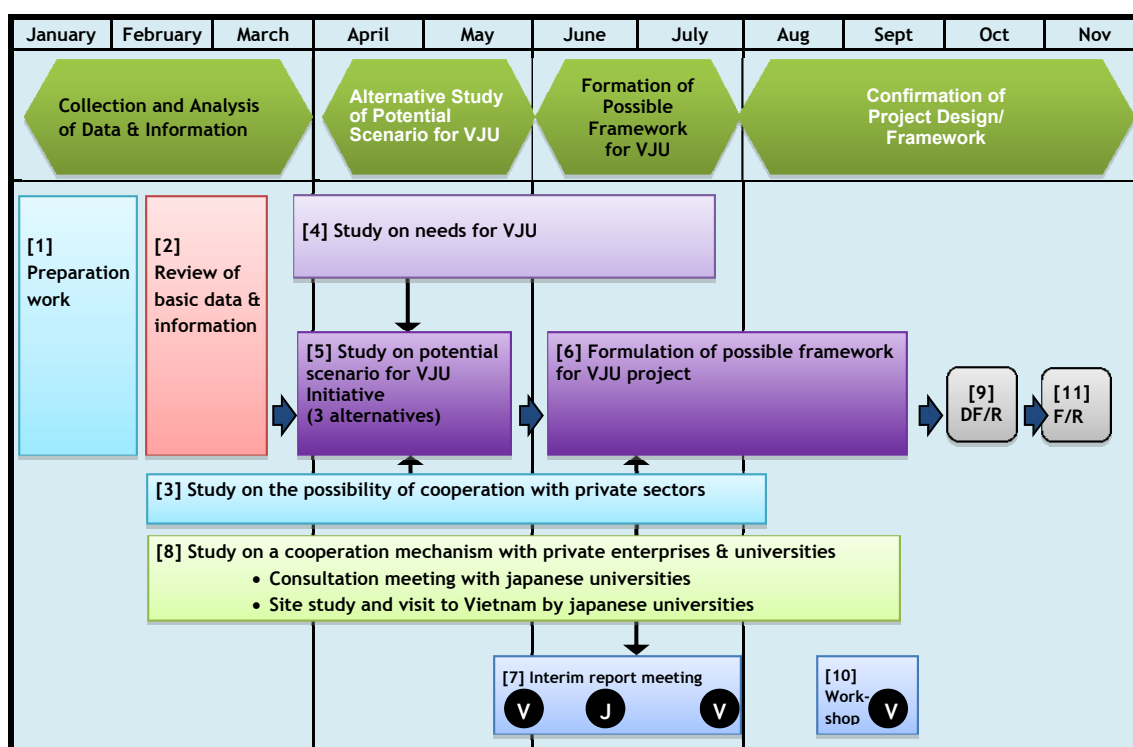
To implement the survey, the following organizational structure, which consists of the Vietnamese side and the Japanese side, was established.



Source: JICA Study Team

Figure 1-1 Organizational Structure of the Survey

(2) Survey Schedule



Source: JICA Study Team

Figure 1-2 Survey Schedule

(3) Implementing Agency from Vietnam's Side

This study was conducted in accordance with the intention from Vietnam's side by assuming that the counterpart of the VJU initiative will be Vietnam National University Hanoi (VNU-HN). However, regarding higher education, as well as the development of the Hoa Lac region, a wide range of information was gathered from the organizations involved.

It should be noted that in August as this study was ongoing, VNU was officially appointed as counterpart for the study of this VJU Initiative within Vietnam's government.

Table 1-1 Implementation Agency from Vietnam and the Relevance to this Study

Agency	Relevance to this Study, Checklist
VNU	Counterpart (as appointed by the Prime Minister)
MOET	Higher education jurisdiction
MOST	Vietnam Academy of Science and Technology (VAST), in charge of Hoa Lac Hi-Tech Park
MOLISA	Vocational training jurisdiction
MPI	Human resource development strategy, industrialization strategy jurisdiction
MOIT	Industrialization strategy jurisdiction
MOC	Development permit, Hoa Lac Southwest jurisdiction
MOT	Rail, LRT (transportation inside University site), etc.
Hanoi People's Committee	University (permit), regional development, living environment, railway (highway management), etc.

Source: JICA study team

1.4. Methodology of the Survey

The Survey was implemented through eleven (11) steps listed below. Relations of these eleven (11) steps are shown in Figure 1-2.

- [1] Preparation work
- [2] Review of basic data and information
- [3] Study on the possibility for cooperation with private sectors
- [4] Study on needs for VJU
- [5] Study on potential scenario for VJU initiative (3 alternatives)
- [6] Formulation of possible framework for VJU project
- [7] Interim report meetings (3 times, 1st and 3rd in Vietnam and 2nd in Japan)
- [8] Study on a cooperation mechanism with private enterprises and universities
- [9] Preparation of DF/R
- [10] Holding Workshop
- [11] Preparation of F/R

The methodology/activities/points to consider of each step are summarized below.

(1) Preparation work

- As preparation work, data/information that was available in Japan was collected and analyzed.

(2) Review of basic data and information

Collection of the following data/information, and review of the collected data were conducted.

- Policies and plans for higher education in Vietnam
- Governmental/Donor's/Private Sector's efforts and challenges in higher education sector in Vietnam
- Collection of the following data/information, and review of collected data were conducted
- Standards/regulations for universities in Vietnam, and necessary procedures required to establish a new university in Vietnam
- Confirmation of similar projects

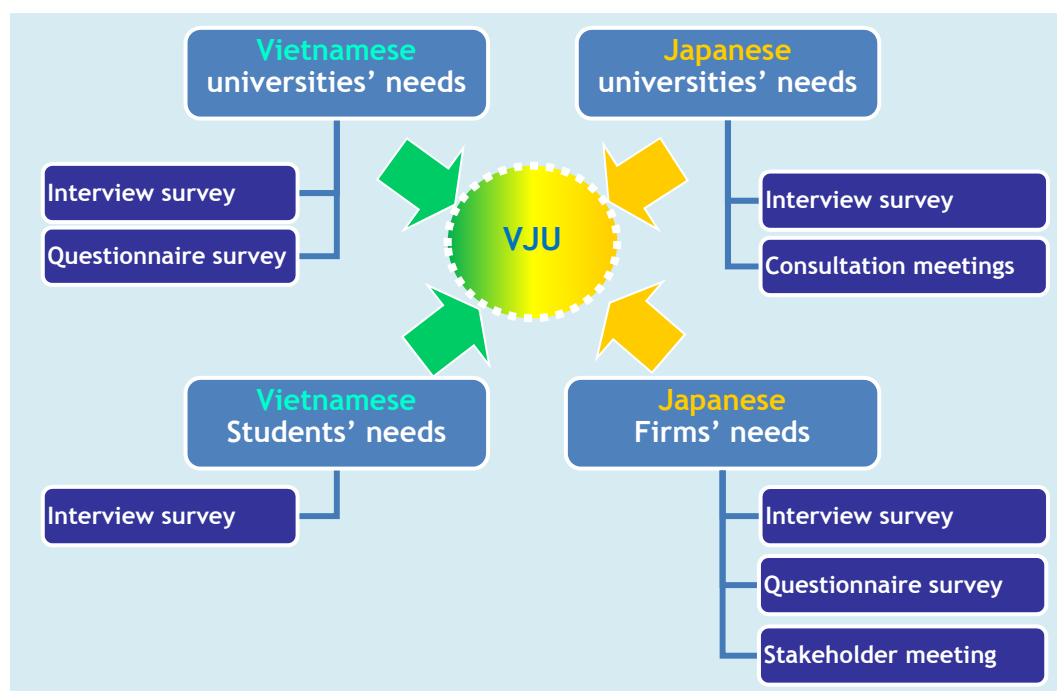
(3) Study on the possibility of cooperation with private sectors

In order to study the possibility for cooperation with private sectors, the following processes were undertaken.

1. Study on the further data/information collected
2. Interviews with domestic enterprises that are interested in the project
3. Interviews with domestic universities that are interested in the project

(4) Study on needs of VJU

The needs of VJU were studied through interview surveys, questionnaire surveys and consultation meetings.



Source: JICA Study Team

Figure 1-3 Needs Study Framework

(5) Study on potential scenario for VJU initiative (3 alternatives)

Based on the collected information, alternative scenarios for VJU initiatives were discussed mainly on the following aspects.

- **Premises:** location and available land
- **Branding:** mission, legal entity/status
- **Educational program:** education level, academic degree, field of education, curriculum, teaching staff, language and place to study
- **Sustainability:** project finances, financial sources of O&M, fund

(6) Formulation of possible framework for VJU project

Based on the study of 3 alternatives, a possible framework for the VJU project was discussed through consultation with Japanese Universities and VNU.

(7) Interim report meetings (3 times, 1st and 3rd in Vietnam and 2nd in Japan)

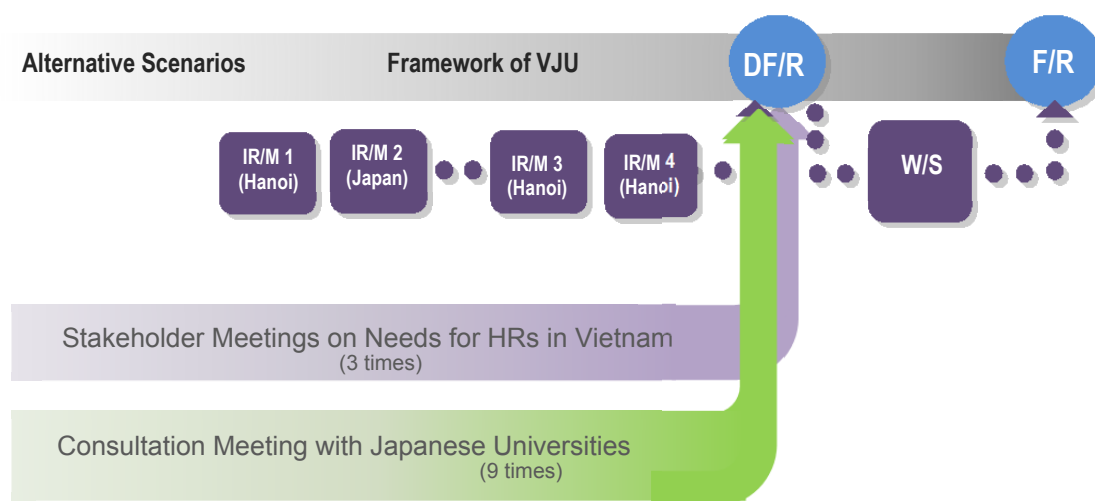
The 3 interim report meetings were held with the following topics.

IR/Meeting 1: (Hanoi) May 17, 2013. Discussion on 3 alternatives with VNU members.

IR/Meeting 2: (Japan) June 4, 2013. Discussion on 3 alternative scenarios with VNU and Japanese universities.

IR/Meeting 3: (Hanoi) August 2, 2013. Discussion on the potential scenarios.

IR/Meeting 4: (Hanoi) November 7, 2013. Discussion on the VNU's proposal and potential scenario.



Source: JICA Study Team

Figure 1-4 Cooperation Mechanism

(8) Study on a cooperation mechanism with private enterprises and universities

a) Consultation meeting with Japanese universities

As a process to formulate the VJU framework, several consultation meetings with Japanese universities were organized as follows:

Table 1-1 List of Meetings with Japanese Universities

Meeting No.	Date	Topics
1 st Meeting	March 3	Introduction of this study and idea of VJU
2 nd Meeting	March 26	Discussion on possible framework of VJU
3 rd Meeting	May 24	Report of the result of IR/M-I in Hanoi and discussion points in IR/M-II
4 th Meeting	June 4	Combined with IR/M-II
5 th Meeting	July 4	Preparation of framework of VJU, which will be proposed in IR/M-III
6 th Meeting	August 30	Discussion on the result of the IR/M-III and Japanese universities' visit to Hanoi
7 th Meeting	October 11	Discussion on the possible education program for VJU
8 th Meeting	November 22	Report of IR/M-IV and discussion on possible corporation with private sectors
9 th Meeting	December 17	Consultation on specific policy of VJU

Source: JICA Study Team

b) Individual consultation with Japanese universities

In parallel with the consultation meetings, consultation meetings with the following universities were held to interview about each university's interest and concerns.

- The University of Tokyo
- Kyoto University
- Osaka University
- Nagoya University
- Japan Advanced Institute of Science and Technology
- Waseda University
- Ritsumeikan University

c) Consultation with Japanese Private Companies

In order to understand the needs of Japanese private companies, a consultation meeting was held on November 19.

(9) Preparation of DF/R

Prepare Draft Final Report based on the Interim Report Meetings, collected information and data, as well as the survey result.

(10) Holding Workshop

Hold a workshop at the Consultation Meeting to give explanation about the result of the Survey and Draft Final Report to the local stakeholders.

(11) Preparation of F/R

Summarize the Final Report in the light of comments from JICA and related organizations in Vietnam regarding the DF/R and edit the necessary area.

2. Higher Education in Vietnam and Hanoi

2.1. Socioeconomic Status and Development in Vietnam and Hanoi city

Since implementation of reformation and international integration, Vietnam has very impressive socioeconomic achievements. In over 20 years, Vietnam has produced one of the strongest records of economic development in Asia, with average GDP growth of about 7.8% per year. In the recent 10 years of implementing the strategy on socioeconomic development in phase of 2001 - 2010, in spite of overcoming difficulties and obstacles, especially the disadvantageous effects of two financial-economic crises at the regional and global level, the Vietnamese average economic growth was still 7.26% per year. To the year 2010, the average GDP per capita reached USD 1,168; thus Vietnam has overcome its previous underdeveloped situation, and become one of the developing countries in terms of average income.

However, the achievements have not reached Vietnam's potential. The economic development has not been stable. The growth quality, efficiency, effect and competitiveness of the economy have still been low, and the macroeconomic balances have not been solid. Planning, mobilization and use of resources have been limited and less effective. The economic growth has been based on extensive development, slowly transferring to intensive development. The living environment in many places has been polluted; natural resources and land have not been under good management, and there is inefficient exploitation and use. Lack of market economic mechanisms, human resources quality and infrastructure are the main sticking points for development. The foundations for Vietnam to become an industrial country towards modernization need improvement. In 2011, 2012 and half of 2013, the economy grew slowly. Business production and living conditions had a lot of difficulties, and average GDP only increased to 5.6% per year.

In the strategy on socioeconomic development in the phase of 2011-2020, the party identified the general target for 2020 to become an industrial country moving towards modernization and striving to get the average gross domestic product (GDP) to be about 7-8% per year. GDP in 2020 could be 2.2 times that of 2010; average GDP per capita based on real prices could reach USD 3,000. The value of the high-tech products and applying high-tech products could be 45% of total GDP. The value of manufacturing products would be about 40% of total industrial manufacturing.

To achieve the abovementioned targets, the strategy on socioeconomic development in the phase of 2011-2020 has identified that development and improvement of human resource quality, especially high quality human resources, is a strategic determinant. In detail, the strategy on socioeconomic development in the phase of 2011-2020 emphasizes goals on the following: developing good team leaders and managers, professional experts and business administrators, skilled laborers and scientists in leading technology fields; training human resources satisfactory for diversity and multiple functions according to the demand of technology and development level of sectors and careers; close connection among enterprises, units using labor, training centers and the State in order to develop human resources as demanded by society; implementing the programs, projects on training high quality human resources for important major sectors; and paying attention to discovering, training and developing talent, training human resources to develop the knowledge economy.

In the field of science and technology, the strategy is on promoting study-implementation and application of technology; reasonably and synchronously developing social science, natural science, technical science and technology; orienting the study and application of science and technology together with the development demand of each sector, each field

and each product, and connecting training and business. Promptly establishing some study and application centers that can receive, improve and create new technology links to business; promoting efficiency of important main national laboratories; concentrating on developing the fundamental sectors, technologies for the knowledge economy, such as information technology, biotechnology, new material technology and environmental technology.

2.2. Historical Overview of Higher Education in Vietnam

The current higher education system in Vietnam has been formed through educational reforms since 1993, which have been implemented under the introduction of the market-oriented economy under the socialist system (Doi Moi).

In 1993, the government issued Decree No. 90/CP, which was to unify and restructure the higher education system, considering the importance of education for Vietnamese socioeconomic development and the necessity of reform and expansion of higher education. By the decree, the state government shifted to promoting the establishment of large-scale, research-oriented and comprehensive universities from the conventional, small-scaled and specialized institutions that were established under the Soviet model and focused either on teaching or research. Under the decree, two national universities were established (one in Hanoi in 1993 and the other in 1995 in Ho Chi Minh City) and three regional universities (in Hue, Da Nang and Thai Nguyen) were established through merging several smaller institutions. These five universities conducted both teaching and research and became exemplary institutions.

Also, the government allowed public universities to collect tuition fees and to become market-oriented from centrally-planned with a lot of limitations. Moreover, the establishment of semi-public and non-public universities, funded by tuition fee incomes, was approved. This was the first time in Vietnam that higher education institutions would be owned by private entities.

Higher education has expanded dramatically since 1993. There were about 160,000 students at higher education institutions in 1992-1993, but there were about two million students in 2011-2012 (about 13 times increase). The number of higher education institutions also increased from 103 in 1992-1993 to 419 in 2011-2012. It should be mentioned that most higher education institutions in 1992-1993 were small-scale and specialized with 300-400 students.

In 1998, the Education Law¹ was promulgated and came into effect in 1999. According to the law, higher education programs could only be provided by designated colleges or universities. The law stipulated that degrees awarded at college completion were college diplomas and degrees awarded at university completion were university degrees. Also, all universities and research institutions were allowed to award master and doctoral degrees when they satisfied certain requirements. The government tried to depart from the Soviet model, which stipulated “universities for teaching and national specialized research institutes for research”.

¹ Decree No.90/CP, dated 2 December 1998. The Education Law was replaced by the new Education Law promulgated in 2005.

Distinctions among higher education institutions were set in 2000.² That is, universities could provide multi-disciplinary academic programs and develop research capacities; on the other hand, colleges could limit their services in providing a specific academic program and did not have research capacities. In 2001, community colleges were added as higher education institutions.³ Moreover, in 2004, 14 universities, including 5 universities selected previously, were selected as “key” universities.⁴

The government decided in 2005⁵ that all higher education institutions in Vietnam would become either public or non-public in the future, which meant that there would be no semi-public institutions. It was also decided that the proportion of non-public institutions’ students to all students would be 40% by 2010, which was later reset to 2020. Furthermore, new classifications for non-public institutions were introduced, which were for-profit and not-for-profit, and the government provided not-for-profit institutions with generous tax exemptions and land grants in order to increase the number of not-for-profit institutions.

Also in 2005, an important higher education policy was approved for implementation, which was the so-called “Higher Education Reform Agenda (HERA)”⁶, and several measures started to be implemented since then.

In 2008, it was announced that New Model Universities (NMUs) would be established as public universities, which was one initiative under HERA. NMUs were supposed to be supported by foreign donors and foreign universities. Vietnamese-German University (VGU) was the first NMU, established in 2008, and the special charter for VGU was approved in March 2009. In 2009, the University of Science and Technology of Hanoi (USTH) was established with support from the French government and French universities.

Recently, in 2012, the Higher Education Law was approved, which came into effect in January 2013. This is another initiative under HERA.

Achievement in the field of Education

Education attainment and growth in Vietnam have been impressive. The country has expressed strong commitment to achieving universal basic education as a foundation for social development and economic growth. Accordingly, primary and secondary net enrolments have grown rapidly with the upper levels of education having seen the greatest expansion: enrolment in colleges and universities has nearly doubled from 2001 to 2011. This increase can be explained by: (i) an initially low enrolment rate; (ii) high demand for HE as a result of higher returns to skills; and (iii) the government’s actions in expanding the sub-sector.

Despite the rapid increase in HE enrolment, overall coverage remains low compared with other countries in the region. The fast growing economy and the increasing need for innovation and higher quality skills have placed major demands on the existing HE system.

² Decree No. 43/2000/ND-CP, dated 30 August 2000

³ Decision 47/2001

⁴ Decision 1269/CP-KG, dated 6 September 2004

⁵ Resolution No. 05/2005/NQ-CP, dated 18 April 2005

⁶ More explanation on it is written in 2.2.2.

The Vietnam Household Living Standards Survey (VHLSS) data show that the HE gross enrolment rate increased from about 11 percent in 1998 to 18 percent in 2008 to 24 percent in 2010 but remains low compared with countries such as Thailand, Malaysia or Korea.

Access to HE is becoming more equitable across urban and rural areas and income quintiles but ethnic minority groups have yet to see significant improvement. Individuals from more advantaged groups still outpace those from other groups in terms of HE enrolment, but rural areas and groups from lower income have registered the fastest gross enrolment rate growth.

These trends, however, stand in stark contrast with almost insignificant improvements of ethnic minorities' access to HE between 1998 and 2010. Therefore, reducing the large differences in enrolment between advantaged and disadvantaged groups and closing the large educational attainment gap will require a sustained effort.

The emergence of private HE started in the mid-1990s in response to an increasing demand for enrolment in HE. By 2012, Vietnam counted 419 HEIs, of which 80 are private. Although the government remains by far the main provider in the sector, private provision is playing a critical role and has become an increasingly important share of the total sector provision.

2.3. Higher Education Policy in Vietnam

Policy framework for higher education in Vietnam is based on Education Development Strategy and Higher Education Reform Agenda.

2.3.1. Education Development Strategy (2011-2020)

The current overall strategy of the education sector, including the higher education sector, of Vietnam is the "Education Development Strategy for the period of 2011-2020" (Decision No.711/QĐ-TTg, dated 13/06/2012 by the prime minister). The strategy was developed to implement the "Resolution of the Eleventh National Congress of the Vietnamese Communist Party and the Socioeconomic Development Strategy 2011-2020", which identified the importance of improvement of human resource development for further development.

In the beginning of the strategy, weaknesses and shortcomings of Vietnamese education were listed as below in addition to the achievements. One of the purposes of the strategy is to overcome these weaknesses.

- No consistency among public education structure
- Low quality compared to the requirements for the country's development and other advanced countries
- Inconsistencies and out-of-date practices in education management
- Insufficient capacities and imbalances of allocation of teachers and educational administrators
- Slow updates of curricula and teaching methodologies
- Insufficient and/or degraded school facilities
- Limited scientific research and application

The general purpose of the strategy is "by 2020, Vietnam's education system will have been fundamentally and comprehensively reformed towards standardization, modernization,

socialization and international integration”. Under the general purpose, specific objectives are set by the level of education.⁷

As for “Professional education and higher education”, the specific objectives are as follows:

- To improve and stabilize the professional and higher education system
- To restructure and enhance the training quality to meet the human resource demand for socioeconomic development
- To specifically focus on development of high quality human resources
- To strengthen creativity capacity, independent thought, individual social responsibility, ethics and professional skills
- To improve labor discipline and capability to adapt to self-employment and the labor market’s changes.
- To ensure full articulation between programs and levels of training in the whole system.
- To develop research-based and profession-based training programs in the higher education sector

The target figures for the objectives are “by 2020, 30% of upper secondary education graduates attend professional and higher education; the ratio of laborers trained at professional and higher education institutions is about 70%; and the rate of students at all training levels per ten thousand people shall be 350-400”.

In order to achieve the strategic targets, the following eight solutions are supposed to be implemented.

- Innovation of education management
- Development of teaching and education management staff
- Reform context and methodology of teaching, examination and quality assessment
- Increase of investment resources and innovation of financial mechanism for education
- Enhancement of the connection between training with use, scientific research and technology transfer to meet the society’s demands
- Enhancement of support for disadvantaged regions, ethnic minorities and social beneficiary students
- Development of education science
- Extension and enhancement of international cooperation in education

The implementation period is divided into two phases. Phase I is from 2011 to 2015 and Phase II is from 2016 to 2020. Phase I includes “to establish several model universities”, “to perfect the national education system”, “to train and improve capacity of teaching staff for new curricula and textbooks” and “to improve the capacity of education managers”. Assessment and adjustment of indicators will be done by the end of Phase I.

2.3.2. Higher Education Reform Agenda

(1) Higher Education Reform Agenda

The governmental policy document specific to higher education is the so-called “Higher Education Reform Agenda (HERA)”, which is a Government Resolution on Sustainable and

⁷ In addition to “Professional education and higher education”, specific objectives are set for “Pre-school education”, “Primary and secondary education”, and “Continuing education”.

Comprehensive Renewal of Vietnam's Tertiary Education in the 2006-2020 Period (Government Resolution No. 14/2005/NQ-CP). HERA was issued in November 2005.

The general objective of HERA is as follows:

- To substantially and comprehensively renew tertiary education and make substantial changes in education quality, efficiency and scale, thus satisfying the requirements of national industrialization and modernization, international economic integration and people's learning demands. By 2020, Vietnam's tertiary education shall attain the regional advanced standards, approach the world's advanced level, have a high competitiveness and suit the socialist-oriented market mechanism.

Under the general objective, the specific objectives are also set, which are summarized below:

- Perfecting the national network of tertiary education institutions
- Developing tertiary education programs under the research orientation and career-application orientations
- Expanding the training scale to build up a sufficient contingent of tertiary education lecturers and administrators
- Scaling up and raising the efficiency of scientific and technological activities in tertiary education institutions
- Guaranteeing the autonomous right and social responsibility of tertiary education institutions.

Some of the specific objectives have target indicators shown in the table below.

Table 2-1 Target Indicators of Specific Objectives of HERA

Item	By 2010	By 2020
Number of students out of 10,000 people	200 people	450 people
Students in career-application programs	70 – 80%	
Students at non-public education institutions	40%	
Student-teacher ratio (at maximum)	20:1	
Lecturers with master degree	40%	60%
Lecturers with doctoral degree	25%	35%
Revenue from scientific and technological production and service provision in the total revenue of tertiary education institutions	15%	25%

Source: Made by JICA Study Team based on HERA

In order to achieve the objectives, seven solutions are indicated as follows:

- Renewal of training structure and improvement of the network of tertiary education institutions
- Renewal of training contents, methods and processes
- Renewal of the planning, training, fostering and employment of lecturers and administrators
- Renewal of organization of scientific and technological activities
- Renewal of mobilization of resources and financial mechanism
- Renewal of the management mechanism
- Regarding international integration

(2) Initiatives under HERA

Based on HERA, several government initiatives are implemented.

- Training of 20,000 Ph.D.s for colleges and universities:

Through Project 911, twenty thousand people will be trained to get Ph. D. degrees from 2011 to 2020, half in Vietnam and half in foreign countries.

- Development of international standard universities (Model University, or Universities of Excellence):
Two universities, one of which is supported by Germany and the other by France, have been established and others are under consideration.
- Development of some “major” universities in Vietnam:
16 higher education units have been selected as major universities. These universities will have strong autonomy and play a leading role in training and research in the regions and country as a whole.
- Import of advanced international curricula:
Curricula for certain academic fields of internationally reputable universities that are ranked in the World’s Top 200 Universities in the US News are imported to universities in Vietnam.
- Development of strategy for teaching and learning foreign languages in the education system:
This initiative is implemented at all levels of education. Improvement of English ability is focused upon.
- Accreditation for all universities in Vietnam:
MOET issues guidance for accreditation to ensure the teaching and learning quality of universities.
- Development of Vietnam Higher Education Law:
Vietnam’s National Assembly approved the new Higher Education Law in 2012.

2.4. Legal Framework for Higher Education

There are two laws directly related to higher education, which are the Education Law and the Higher Education Law.

2.4.1. Education Law

The Education Law, Law No. 38/2005/QH11, was approved in June 2005 and came into effect in January 2006. The law was the replacement of the 1998 Education Law. The law regulates the national educational system. According to the law, the national educational system consists of formal education and continuing education, and educational levels include “early childhood education”, “general education”, “professional education”, and “higher education”.

The Education Law consists of nine chapters and 120 articles. Chapters and sections of the law are shown in the table below.

Table 2-2 Composition of Education Law

Chapter	Sections	Articles
1. General Regulation	-	1-20
2. National Educational System	1. Early Childhood Education 2. General Education 3. Professional Education 4. Higher Education 5. Continuing Education	21-47
3. Schools and Other Educational Institutions	1. School Organization and Activities 2. Functions and Rights of Schools 3. Types of Special Schools 4. Policies for People-Founded and Private Institutions 5. Organization and Operation of Other Educational Institutions	48-69
4. Teachers	1. Duties and Rights of Teachers 2. Education and Training for Teachers 3. Policies for Teachers	70-82
5. Learners	1. Duties and Rights of Learners 2. Policies for Learners	83-92
6. School, Family and Society	-	93-98
7. State Management of Education	1. Contents of State Management and State Agencies in Charge of Management of Education 2. Investment in Education 3. International Cooperation in Education 4. Educational Inspectorate	99-113
8. Awards and Handling of Violations	-	114-118
9. Implementing Provisions	-	119-120

Source: Made by JICA Study Team based on Education Law

Based on the Education Law, the goals of education are as follows:

- To educate the Vietnamese into comprehensively developed persons who possess ethics, knowledge, physical health, aesthetic sense and profession, loyal to the ideology of national independence and socialism
- To shape and cultivate one's dignity, civil qualifications and competence, satisfying the demands of the construction and defense of the Fatherland

Descriptions specific to higher education are given below. The section is comprised of 6 articles, covering definitions, objectives, contents, institutions and degrees. It is mentioned that the objectives of higher education are to educate learners in acquiring political and moral qualities, endeavor to serve the people, professional knowledge and practical skills relevant to the educational levels, and physical health, meeting the needs of construction and defense of the Fatherland.

2.4.2. Higher Education Law

The Higher Education Law, Law No. 08/2012/QH13, was promulgated in June 2012 and enforced in January 2013. This is the first law on higher education in Vietnam. Characteristics of the law are as follows:

- It clarifies the classification of the higher education institutions, which are geared towards "research", "application", and "practice".
- It gives greater autonomy to each higher education institution in terms of curriculum, staffing and finance.
- It advises to increase the state budget for higher education, giving priority to development of research-oriented universities.
- It articulates objectives, principles and institutional framework for accreditation of higher education institutions.

The law consists of 12 chapters and 73 articles. Here are the 12 chapters:

- General provision
- Organizations of higher education institutions
- Duties and authority of higher education institutions
- Training activities
- Science and technology activities
- International cooperation
- Higher education quality assurance and assessment
- Lecturers
- Students
- Finance and property of higher education institutions
- State management of higher education
- Implementation provisions

One article of the law is devoted to the state policies on higher education development. It is mentioned that higher education development should be done for satisfying the demand for socioeconomic development and assuring national defense and security. Based on this, the following are the policies written in the law:

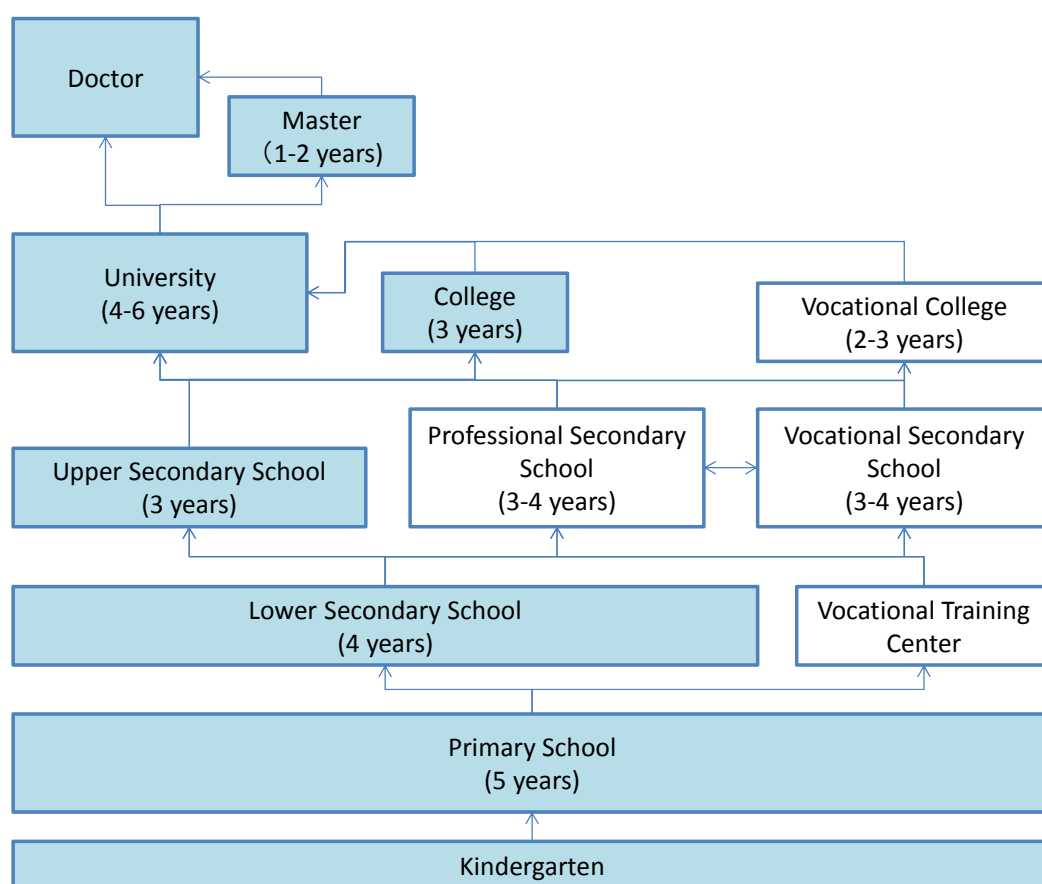
- Increasing the budget for higher education / concentrating the investment in high quality higher education institutions
- Socializing higher education / prioritizing the establishment of private higher education institutions
- Combining training with research and application of science and technology
- The foreign higher education institutions shall place orders and assure the budget for the fulfillment of scientific and technological duties of higher education institutions
- Agencies, organizations and enterprises are entitled and responsible for receiving and facilitating the lecturers' and students' study, practice, scientific research and technology transfers
- Formulating appropriate attraction and benefit policies to build and improve teaching staff's quality
- Implementing preferential policies on subjects of social policies, ethnic areas, areas with poor socioeconomic conditions and special professions satisfying the workforce demand for socioeconomic development

Based on the enforcement of the Higher Education Law, MOET is currently working on development of detailed rules for the items newly required by the law.

2.5. Higher Education System in Vietnam

2.5.1. Education System in Vietnam

The education system in Vietnam is shown in the figure below. Among the educational institutions, educational institutions shown in the white boxes are categorized as vocational training and are administered by the Ministry of Labor, Invalids and Social Affairs (MOLISA). Other educational institutions are administered by the Ministry of Education and Training (MOET). Regarding universities and colleges, although the majority of them are under MOET, some of them are under certain ministries that are related to the academic fields the higher institutions provide.



Source: JICA Study Team

Figure 2-1 Education System of Vietnam

According to the Education Law, higher education is provided by universities and colleges and higher education includes “university”, “college”, “master”, and “doctor” in the figure. Duration of college education is two to three years, depending on the discipline. Duration of university education is four to six years, depending on the discipline. Basically, medicine and pharmacy is for six years, engineering for 5 years, and others for 4 years. Master degree education is conducted for one to two years. Regarding doctoral education, it takes more than four years for those who have university degrees and two to three years for those who have master degrees.

Enrolment rates for each education level are shown in the table below. As it is shown, enrolment rates are comparatively good throughout all education levels. The gross enrolment rate of tertiary education is 24%.

Table 2-3 Enrolment Rate by Education Level, 2011

Education Level	Gross Enrolment Rate	Net Enrolment Rate
Pre-primary	73%	72%
Primary	106%	99%
Lower Secondary	90%	N/A
Upper Secondary	N/A	N/A
Higher	24%	N/A

Source: Made by JICA Study Team based on data of UNESCO Institute of Statistics

The next table shows numbers of schools, students and teachers for each education level.

Table 2-4 Statistical Data by Education Level, 2011-2012

Education Level	Number of Schools	Number of Students	Number of Teachers
Pre-primary	13,172	3,873,445	229,724
Primary	15,337	7,100,950	366,045
Lower Secondary	10,243	4,926,401	311,970
Upper Secondary	2,350	2,755,210	150,133
Higher	419	2,204,313	84,109

Source: Made by JICA Study Team based on data of MOET

2.5.2. Expenditure on Education

State expenditures on education and training⁸ from 2007 to 2011 are shown in the table below. The state expenditure on education and training increased year by year as the total expenditure increased. The proportions of expenditure on education and training are not changed a lot over years and it keeps around 6% of GDP and 15% of total State expenditure. In terms of the balance of current and capital expenditures for education and training, around 82% is spent as current expenditure in each year.

Table 2-5 Expenditure on Education, 2007-2011 (billion VND)

Item	2007	2008	2009	2010	2011
GDP (Current Price)*	1,143,715	1,477,717	1,658,389	1,980,914	2,535,008
Total Expenditure of State Budget**	425,133	549,784	661,972	788,358	953,118
Expenditure of State Budget on Education and Training***	66,770	74,017	94,635	120,785	151,200
Percentage of Expenditure on Education and Training of GDP	5.8%	5.0%	5.7%	6.1%	6.0%
Percentage of Expenditure on Education and Training of Total Expenditure of State Budget	15.7%	13.5%	14.3%	15.3%	15.9%
Current Expenditure of State Budget on Education and Training***	55,240	61,517	78,475	98,560	124,039
Capital Expenditure of State Budget on Education and Training***	11,530	12,500	16,160	22,225	27,161
Percentage of Current Expenditure on Education and Training	82.7%	83.1%	82.9%	81.6%	82.0%

Source: Made by JICA Study Team based on data of GSO, MOF, and MOET

* Final Accounts for the years 2007 & 2008, MOF and GDP at Current Prices for the years 2009-2011, GSO

** Final Accounts for each year, MOF

*** Education Statistics from 1999 to 2012, MOET

The table below shows state expenditures on science and technology since 2007. The expenditures only include current expenditures. The expenditures for science and technology are less than 1% of the total state budget each year.

⁸ Education and Training includes education from pre-primary level to higher level and vocational training.

Table 2-6 Expenditure on Science and Technology, 2007-2011 (billion VND)

Item	2007	2008	2009	2010	2011
GDP (Current Price)*	1,143,715	1,477,717	1,658,389	1,980,914	2,535,008
Total Expenditure of State Budget**	425,133	549,784	661,972	788,358	953,118
Current Expenditure of State Budget on Science and Technology**	2,933	3,191	3,811	4,144	6,483
Percentage of Expenditure on Science and Technology of GDP	0.3%	0.2%	0.2%	0.2%	0.3%
Percentage of Expenditure on Science and Technology of Total Expenditure of State Budget	0.7%	0.6%	0.6%	0.5%	0.7%

Source: Made by JICA Study Team based on data of GSO and MOF

* Final Accounts for the years 2007 & 2008, MOF and GDP at Current Prices for the years 2009-2011, GSO

** Final Accounts for each year, MOF

2.6. Higher Education Institutions in Vietnam

2.6.1. Overview of Higher Education Situations in Vietnam

The table below shows the number of schools, number of students and number of teachers of college and university in 2011-2012. As it is shown, there are 215 colleges and 204 universities. Both public and non-public schools are available and public schools are the majority.

Table 2-7 Statistical Data of Higher Education, 2011-2012

Level	Type	Number of Schools	Number of Students	Number of Teachers
College	Public	187	613,933	20,690
	Non-Public	28	142,359	3,747
	Sub-Total	215	756,292	24,437
University	Public	150	1,258,785	49,742
	Non-Public	54	189,236	9,930
	Sub-Total	204	1,448,021	59,672
Total		419	2,204,313	84,109

Source: Made by JICA Study Team based on data of MOET

It should be noted that there are a lot of in-service or part-time students in colleges and universities in Vietnam. As it is shown in the table below, 7% of college students and 28% of university students are in-service students.

Table 2-8 Composition of Students, 2011-2012

Level	Total Number of Students	Composition
College	756,292 (Female: 393,771)	Full-Time Training
		Students Receiving Tied Grant
		In-Service Training
University	1,448,021 (Female: 698,662)	Full-Time Training
		Students Receiving Tied Grant
		In-Service Training

Source: Made by JICA Study Team based on data of MOET

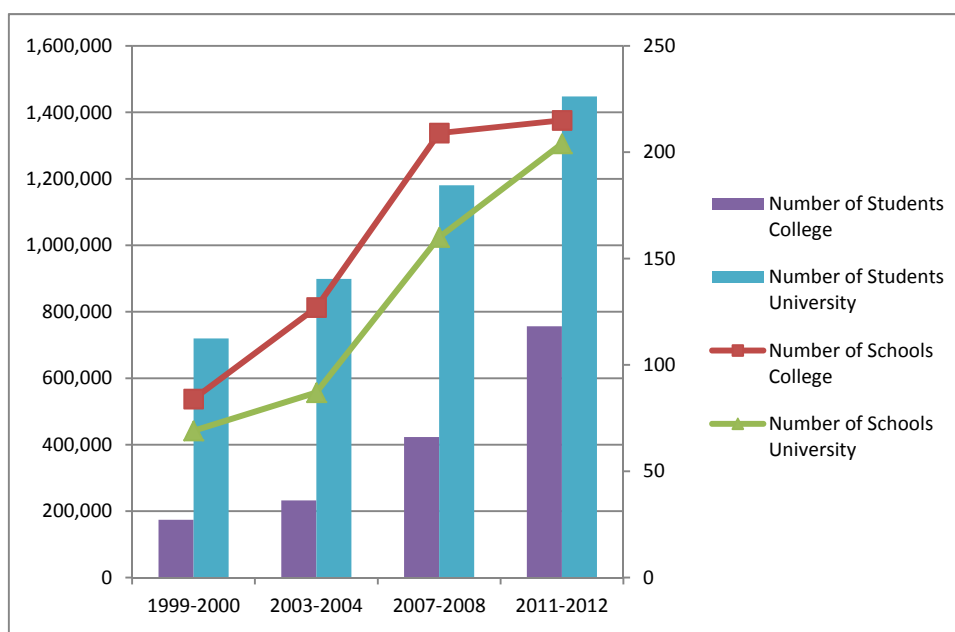
Also, it should be mentioned that students in higher education are concentrated in two big cities, that is, Hanoi and Ho Chi Minh City. About one million students, which are about 54% of the total number of students, are in these cities.

Higher education is continuously expanding in Vietnam. As it is shown in the table below, the number of schools increased 2.7 times from 153 in 1999-2000 to 419 in 2011-2012. The number of students increased 2.5 times from 893,754 to 2,204,313.

Table 2-9 Expansion of Higher Education since 1999

Level		1999-2000	2003-2004	2007-2008	2011-2012
Number of Schools	College	84	127	209	215
	University	69	87	160	204
	Total	153	214	369	419
Number of Students	College	173,912	232,263	422,937	756,292
	University	719,842	898,767	1,180,547	1,448,021
	Total	893,754	1,131,030	1,603,484	2,204,313

Source: Made by JICA Study Team based on data of MOET



Source: Made by JICA Study Team based on data of MOET

Figure 2-2 Expansion of Higher Education since 1999

2.6.2. Universities in Vietnam

(1) Types of Higher Education Institutions

According to the Higher Education Law, the following are higher education institutions:

- Colleges (3-year specialized higher education institutions awarding college diploma)
- Universities, academies (4-6-year specialized higher education institutions under MOET or related ministries or provincial governments, able to have master and doctoral courses)
- Local universities, national universities (4-6-year multi-disciplinary higher education institutions, able to have master and doctoral courses)
- Scientific research institutions eligible to give doctorate training

In addition, higher education institutions are categorized into either state-owned or private. Regarding the higher education institutions invested in by foreigners, two types are identified, which are “higher education institutions 100% invested by foreigners” and “joint higher education institutions invested by foreigners and domestic investors”.

(2) Admission

In order to enter public universities, students have to take two steps. First of all, students have to pass the National High School Graduation Examination administered by MOET, which takes place around May every year. Students have to take exams of 6 subjects (mathematics,

Vietnamese literature, foreign language, and three subjects determined by MOET). Each subject has 10 points (60 points in total) and students have to achieve at least 30 points in total without any subjects below 4 points for graduation from upper secondary school. If students do not pass the exam, they are not qualified for the National University Entrance Examination.

The second step is to take the National University Entrance Examination administered by MOET in July. University entrance is decided by the result of the exam. The exam is grouped into five groups (A, A1, B, C and D). Each group consists of exams of three subjects, basically. Required subjects for each group are as follows:

- Group A: Mathematics, Physics and Chemistry
- Group A1: Mathematics, Physics and English
- Group B: Mathematics, Biology and Chemistry
- Group C: Literature, History and Geography
- Group D⁹: Literature, Foreign Language and Mathematics

Each university requires the results of certain groups and therefore, students take the exams of the groups required by the universities they wish to enter.

Students who pass the National University Entrance Examination start their student lives at universities in September. The school year in Vietnam is basically from September to August.

Students' selections for private universities depend on each university's requirements. Many of them utilize the results of the National University Entrance Examination.

(3) Educational Programs

According to the Higher Education Law, the curricula of educational programs of each university are developed by each university, following the standards¹⁰ that MOET specifies. According to the Education Law, "the contents of higher education must have modern and developmental characteristics, ensuring a rational balance between basic knowledge, foreign languages and information technology, professional knowledge and subjects in Marxism-Leninism and Ho Chi Minh Thoughts".¹¹ This means that these subjects should be taught at any higher education institution, in addition to other subjects related to the specific majors.

The official language in higher education institutions is Vietnamese. However, higher education institutions can also use foreign languages if the prime minister prescribes so.

The organization and management of training can be done either by year or by credit. Traditionally, educational programs were provided by year in higher education institutions in Vietnam. However, the credit-based system has been introduced and many higher education institutions changed their system to credit-based. By introducing the credit-based system, it makes it easier for students to take subjects that are not directly related to their majors and to transfer credits that they take from other universities. One credit means one-hour lecture and one-hour self-study for 15 weeks. Based on the MOET regulation, the minimum required credits are as follows: for 6-year universities, 180 credits; for 5-year universities, 150; for 4-

⁹ Group D is divided into several sub-groups based on tested foreign languages such as English, Russian and French.

¹⁰ Based on the Higher Education Law, the standards are currently under development at MOET.

¹¹ Quoted from the Education Law (Article 40)

year universities, 120; for 3-year colleges, 90; and for 2-year colleges, 60. The required number of credits for master programs is 53. These are just minimum requirements and actual requirements are different from program to program.

(4) Research Activities

Research activities are also major activities at universities. However, historically, they were not conducted as much as educational activities were. Therefore, promotion of research activities and a combination of research results with training at universities are clearly identified policies for higher education development in the Higher Education Law.

Currently, MOET and the Ministry of Science and Technology (MOST) have budgets for scientific and technological research, which amount to 2% of the total state budget. Universities utilize the budgets for their research. Especially, NAFOSTED (National Foundation for Science and Technology Development) under MOST is the major funding agency for scientific research and has about USD 20 million per year as its budget. Utilizing its budget, NAFOSTED supports basic research, sending researchers abroad for research and international conferences, and so on.

They also try to get funds from the provincial governments as well as the private sectors, which are still limited though. Universities themselves also have budgets for research. It should be mentioned that collaborative research among universities, research institutions and private companies are conducted, but are very limited.

(5) Management

The Higher Education Law gives higher education institutions a lot of autonomy and “higher education institutions are independent in the primary activities such as organization, personnel, finance, property, training, science and technology, international cooperation, assuring the higher education quality”.¹²

According to the Higher Education Law¹³, the organizations of universities (specialized) consist of the following:

- School council
- Principal and deputy principal of the university
- Functional departments
- Faculty, academic departments, science and technology organizations
- Other organizations serving the training and scientific and technological research; production, training and service facilities
- Other campuses (if any)
- Science and training council, advisory councils

On the other hand, the organizational structure of universities (local and national universities) is as follows:

- University council
- Director, deputy director
- Offices, functional departments

¹² Quoted from the Higher Education Law (Article 32)

¹³ Article 14 of the Higher Education Law

- Affiliated universities, affiliated scientific research institutes
- Affiliated colleges, scientific and technological research faculties and centers
- Other organizations serving the training and scientific research; production, trading and service facilities
- Other campuses (if any)
- Science and training council, advisory councils

As for private colleges and universities, the Board of Directors is established as a representative organization of the school ownership.

Financial sources of higher education institutions are 1) the state budget, 2) tuition fees and enrolment charges, 3) revenues from activities of associate training and research, and 4) financial support and investment from domestic and foreign partners. The major financial sources for public universities are the state budget and tuition fees, and the major source for private universities is tuition fees. The ranges of tuition fees for public universities are set by the government, and public universities decide their tuition fees within the ranges, although tuition fees for private universities can be set by each private university.

2.6.3. History of Accreditation System in Vietnam

In 2002, a new office for quality assurance called the Accreditation Division was established in MOET. This division in 2003 was renamed the General Directorate for Educational Testing and Accreditation (GDETA) with the responsibility of not only establishing an accreditation system but coordinating examinations used for student entrance examinations to universities. Subsequently, GDETA was also given responsibility for the administration of testing across all education sectors.

Unfortunately, GDETA was under-resourced for its wide-ranging responsibilities, which in turn had an adverse impact on the speed of development of the accreditation system for higher education in Vietnam.

Lively discussion followed the announcement in 2004 of MOET's intention to establish a modern quality assurance system for higher education. Debate focused particularly on what kind of an approach should be used and whether the agency to coordinate quality assurance should be located within MOET or whether it should follow models in a number of overseas countries where quality assurance agencies were separate from the ministry of education.

In the end, MOET confirmed that the quality assurance agency would be coordinated from within MOET and that Vietnam would develop an American-style accreditation model. GDETA went on to establish contacts in the United States with experts on university accreditation, resulting in the formulation of ten quality standards as the core of a provisional regulation on the accreditation of higher education institutions that was published at the end of 2004.

This laid the basis for pilot testing of the quality standards in 20 Vietnamese universities, with assistance from donor organizations, particularly the Dutch Government. The Dutch Government funding assisted in developing QACs (Quality Assurance Controls) in five regional universities and also provided assistance at the national level with the accreditation pilot project.

When Vietnam decided to adopt an American-style accreditation model, a decision was made to employ both the processes of institutional self-study and national external evaluation. Recent studies have shown the self-study process was well accepted in Vietnam, although some local concerns were that the purpose of the self-studies needed more

clarification and that the external evaluation does not fit so readily within Vietnam's historical and socio-cultural context.

With the help of international and national experts, documentation was created to provide advice to the higher education institutions for providing evidence to external evaluators. After two years of piloting and review, in 2007 a final revised set of 10 standards and 61 criteria (53 previously defined criteria plus eight added criteria) was accepted and issued as a revised 'Regulations for Higher Education Accreditation', setting out the standards to assist universities to conduct self-studies. The purpose of self-studies was stated to be to maintain and continuously improve educational quality (accountability), recognize universities that achieve the training objectives (recognition), and assist students and educational clients to obtain basic information for selecting universities (transparency).

Since the beginning of 2008, the processes of accreditation have been speeded up with the use of independent consultants to comprise external review panels. Many of these consultants are university academics or retired MOET staff. GDETA is gaining greater confidence in the accreditation processes and is working cooperatively with institutions. Institutions are advised to gain greater experience in review processes by completing internal reviews each year. When they submit their initial external review documentation, GDETA works closely with them and does not appoint review panels until the self-study documentation is judged to adequately address the standards and criteria.

Experience points to the value of the institutional QACs that were initially established at the national universities in Hanoi and Ho Chi Minh. Additional QACs were established at five more universities (Thai Nguyen, Hue, Vinh, Da Nang and Can Tho) as part of the Dutch ProfQim (Professionalising Quality Improvement) Project. At each of these universities, quality assurance teams were appointed at lower levels within institutions, including within academic units. All these QACs developed their own regulations relating to quality assurance and annual work plans.

More recently, with the encouragement of DGETA and with support for the second World Bank Higher Education project for a QAC network, many other universities have established QACs. While involvement of 'normal' academic staff is essential for a quality culture to take root, a specialized support unit can play a vital role in assisting a university to develop an effective internal quality assurance program and contribute to self-studies as part of the MOET accreditation program.

A National Accreditation Council (NAC) was established on 23 October 2008 within MOET. The Council now makes all accreditation decisions and provides advice to MOET on outcomes. It consists of six members, with four drawn from MOET and two external members, while the secretariat for the council is provided by GDETA. Creation of a council as a separate entity within MOET confirms more strongly the anchoring of quality assurance as an integral part of the Vietnamese higher education system. The council has already approved accreditation for 20 universities.

2.6.4. Constraints on Quality of Higher Education (HE) Sector

Central control of the operation of public universities is pervasive. The government regulates intake numbers for regular students and staff numbers through the budget process. University staff are public servants and are remunerated under public service salary law, though above-scale payments are permitted.

The government maintains some control over the appointment of rectors, and over staff promotions. For example, the rectors are appointed or accredited by competent state

agencies. The head of the directly-managing state agency (i.e. MOET or other Ministries) is entitled to appoint and dismiss the rector of a public HEI. The rector of a private HEI shall be accredited by decision of the people's committee of the province the HEI is located in.

The presence of all these controls over a long period of time has reduced the capacity to innovate and to respond to change in many universities. A few universities that no longer rely on regular state subsidies because of their own resources have more freedom.

In terms of HE human resources, the proportion of faculty members with doctoral degrees is generally used as an indicator of the quality of a HE institution, especially in the case of international rankings. In Vietnam, the proportion of faculty having a doctoral degree remains relatively low (average of 11.5% in 2010) and the large (30:1) number of students for each faculty member has negative consequences on the learning environment.

Table 2-10 Staff Qualifications in HE Institutions (%)

Years	04-05	05-06	06-07	07-08	08-09	09-10
Doctorate	10.5	10.2	10.1	10.6	10.9	11.5
Master	36.1	37.3	38.6	40.7	42.8	46.2
University Qualifications	51.7	51.2	50	47.5	45.3	40.3
Professor Qualifications	0.8	0.6	0.6	0.6	0.5	0.5
Others	0.9	0.7	0.7	0.6	0.5	0.5
Total	100	100	100	100	100	100

Source: MOET

University lecturers are underqualified. In 2007–2008 about 10% of them held a doctorate degree, about the same percent as in 1987, though the number of doctors had risen considerably. About 36% of the lecturers had a master's degree. There is an urgent need to increase the number of academics with research training, from both domestic and foreign sources.

The increase in the student–staff ratio has increased the burden on lecturers. Basic pay is low, and the incentive to increase it by teaching extra hours is strong. The time for scholarship, teaching preparation, and research is squeezed. The shortages of laboratory facilities and funding for supplies in science and technology constrain the ability to offer fresh and relevant curricula. The teaching is also too theoretical.

In terms of relevance and learning outcomes, it is widely accepted that there is a pressing need to raise the quality of the inputs, processes and outcomes of the HE sector. There is particular concern about the quality of teaching and curricula across the system.

Academics are generally not well recompensed for their services, and the technological and administrative infrastructure supporting them is generally regarded as being inadequate. There is an urgent need to increase the extent to which teaching is underpinned by research. There is also a need to develop curricular frameworks that relate better to industry needs, and to implement programs of study that will develop generic academic competencies as well as basic disciplinary understanding.

A critical consideration is the need to develop internationally significant scientific research in niche areas of comparative advantage. The need to create opportunities for gifted younger academic staff to achieve more rapid career advancement in the system is a further matter for attention. These quality enhancements are fundamental to achieving international standards in HE teaching and research.

The quality of outputs from Vietnam universities is seen to be low when measured against the needs of industry and society for skills and capabilities that meet continually changing

needs, especially for well-rounded graduates who have skills in critical thinking, and adaptability to fit into new environments and apply their skills to the needs of the workplace.

However it is not a universally poor picture. Vietnam universities do produce graduates with strong theoretical knowledge based on universal knowledge content. There are very strong performances in mathematics, physics, chemistry, the natural sciences, languages and cultural studies.

Thus, it is important for introduction and/or reinforcement of research in universities in order to better train future teachers, to enrich and upgrade present teachers' teaching abilities and to upgrade the quality level and international visibility of Vietnamese universities.

2.6.5. Tuition Fees

In regard to student tuition, public HEIs have to follow government regulation on the maximum level while private HEIs are free in deciding their own tuition policies. The low tuition set by regulations in combination with strong government subsidy make public HEI an ideal destination for students, especially for those from ordinary-income families all over Vietnam, and at the same time create a complete contrast to private HEIs.

With STATE budget and subsidies, public HEIs can enjoy just "half-autonomy" in financial matters, meaning the university is allowed to decide at its own risk all expenses and costs for current operation while the key source of revenue from students' tuition is limited by the quotation and the tuition level. In other words, public HEIs are autonomous in cash-out and are not in cash-in.

Private HEIs, in contrast, can enjoy full autonomy in financial matters, in both cash-in and – out. However they may suffer from a shortage of revenue from student fee revenues as that depends on the quotation set by MOET.

Specifically to the issue of tuition, under Article 65 of HE Law 2012, public HEIs are entitled to independently determine tuition fees within the bracket of tuition fees specified by the government.

The highest tuition fees for each group of majors at public HEIs that provide common programs are set under Decree 49/2010/ND-CP on reduction and exemption of tuition fees, support for learning costs, as well as bill collection and use of tuition applicable to educational institutions belonging to the national education system from school years 2010-2011 to 2014-2015. :

Table 2-11 Tuition Fees for Group of Majors at Public HEIs

Unit: 1,000 VND/month/student

Group of Majors	2010 -	2011 -	2012 -	2013 -	2014 -
	2011	2012	2013	2014	2015
1. Social sciences, economics, law, agriculture, fisheries, forestry	290	355	420	485	550
2. Natural sciences, technology, sports, arts, hotel management, tourism	310	395	480	565	650
3. Medicine and pharmacy	340	455	570	685	800

Source: MOET (1 USD = ± 21,000VND)

The coefficient of highest tuition fees for vocational high schools, colleges, master's and doctoral training from the school year 2010 – 2011 to 2014 – 2015 are provided below:

Table 2-12 Coefficient in Comparison to Higher Education

Level	Coefficient
1. Vocational high school	0.7
2. College	0.8
3. Higher education	1
4. Master's training	1.5
5. Doctoral training	2.5

Source: MOET

Tuition fees for credit-based training: the price of one credit shall be determined based on the total tuition fee for the whole course of one's major. The credit price is calculated as follows:

$$\text{Credit price} = \frac{\text{Fee for the whole course}}{\text{Number of credits in the whole course}}$$

The fee for the whole course = the fee for 1 student per month x 10 months x number of school years.

Public institutions of vocational education and higher education that provide high-quality programs need to keep tuition fees at a reasonable level to defray the training cost, request the permission of MOET and MOLISA, and announce the tuition fees before enrolment.

(1) International Students

Tuition fees for foreigners at Vietnamese educational institutions should be decided by the educational institutions themselves.

Currently, the state is providing 55% of public HEIs' budgets while tuition fees provide 45%. Given that this policy could have strained some students and their families' capacity to pay, an expansion of student loan schemes and other aid mechanisms was introduced. In this funding context and to support further expansion, the main options include a further increase in public spending, diversification of resources and further expansion of the private sector.

A note to make here is the fact that there are a number of foreign students attending Vietnamese universities. The subjects of their studies include, foremost, Vietnamese language and literature, then other professions such as English language, foreign policy, economics, business, engineering, medicine and so on.

This fact indicates the increase in quality combined with low tuition of Vietnam higher education. The nationalities of foreign students in Vietnamese universities are also very diverse; they come from not only neighboring countries like Laos, Cambodia and China, but also from all over the world, countries like Lebanon, Korea, Russia, Japan, Thailand, Australia, Brazil, and many more.

There is no exact number of International students in Vietnam available; however, Vietnam has set a target to attract them at an amount of 3% over the total number of students in Vietnam in 2020.

As for VJU, there will be expected some Japanese students living in Vietnam with their parents, as well as coming from Japan to study in Vietnam.

2.7. Donors' Support of Higher Education in Vietnam

2.7.1. World Bank

The World Bank has been the major donor for supporting higher education in Vietnam. At present, the World Bank is implementing the "Higher Education Development Policy Program: Third Operation" and the "New Model University Project".

The Higher Education Development Policy Operations are the programmatic series of three single-tranche operations and are designed to support the implementation of the Socioeconomic Development Strategy 2011-2020 and the Higher Education Reform Agenda in particular. The implementing agency is MOET. The first operation started in 2009. The current operation is the third and final operation, which is from February 2013 to June 2014. The loan amount for the third operation is approximately USD 50 million (USD 150 million for three operations in total). The objectives of the operations are to strengthen governance, financing and quality of higher education through 1) improving the responsiveness of higher education and research and increasing the quantitative capacity of the system, 2) enhancing fiscal transparency, sustainability and effectiveness of the higher education sector and 3) improving the quality of higher education institutions. Throughout the operations, the following are expected to be increased:

- Higher education institutions with university councils
- Revenue from tuition fees at higher education institutions
- Budget allocation for higher education within educational budget
- Students who receive loans
- Accreditation agencies
- Higher education institutions that have autonomy to decide overall student numbers and content of programs
- Joint training programs with foreign higher education institutions
- Higher education institutions that have annual financial reports
- Students in credit-based programs
- Higher education institutions with internal quality assurance systems

The "New Model University Project" also supports the implementation of HERA. The project started in 2010 and will continue until 2017. Among the four new model universities proposed at the time of project formulation, the World Bank supports Vietnamese-German University (VGU). The project objective is to develop an autonomous research-based university to demonstrate a new policy framework for governance, financing and quality in Vietnam's higher education system. The project consists of four components, which are 1) Policy and Regulatory Framework, 2) Academic and Research Development, 3) New Campus Development and 4) Project Management, Monitoring and Evaluation. Total project cost would be USD 180 million: USD 6.2 million for component 1, USD 36.1 million for component 2, USD 108.6 million for component 3, and USD 5.3 million for component 4. It should be noted that VGU is also supported by the German government, especially the technical/educational aspects of the university.

2.7.2. Asian Development Bank

The Asian Development Bank has mainly supported secondary education and vocational training in Vietnam and the first support for higher education is the New Model University Project.

The New Model University Project of the Asian Development Bank supports the University of Science and Technology of Hanoi (USTH), which is supported by the French government and universities on academic aspects. The project duration is from 2011 to 2018. The expected impact of the project is that the contribution of higher education to innovation in Vietnam will be increased and the expected outcome is a high-quality New Model University that generates industry-relevant science and technology teaching and research. There are four outputs as follows:

- An effective management and governance system for the USTH will be developed and implemented. (Output 1)
- Systems to promote high-quality and relevant academic programs at the USTH will be developed and implemented. (Output 2)
- Physical facilities at the USTH will be constructed and outfitted. (Output 3)
- Effective project management and implementation (Output 4)

The financing amount is USD 190 million in total, USD 170 million of which is allocated for construction of the new campus. It is planned that the new campus of the USTH would be established at Hoa Lac High-tech Park. The resettlement of the site and architectural design competition were planned in 2012-2013. However, the resettlement is behind schedule and therefore the construction will be delayed.

2.8. Issues of Higher Education in Vietnam

As shown that the higher education reform is under implementation, it is widely recognized that higher education in Vietnam has various types of weakness.

First of all, the quality of education at universities needs much improvement. A large portion of university lecturers do not possess postgraduate qualifications (World Bank 2008¹⁴; K. Harman and N.T.N. Bich 2010¹⁵). In addition, most lecturers have not been trained to teach and, therefore, their teaching skills are very limited and their teaching methods are teacher-directed and do not encourage deep learning through interactive modes. It is widely common that teachers are expected to provide students all answers and students memorize what they are told. Moreover, due to heavy teaching loads and lack of proper office space, lecturers do not have sufficient time and space for preparation and update of teaching materials (K. Harman and N.T.N Bich 2010). Low salaries for teaching staff impede the self-improvement of teachers.

Also, it has been said that university curricula are sometimes outdated and do not meet the demands of the society. Curriculum used to be decided centrally and, therefore, could not be easily changed by each university based on the needs of students and markets as well as the advancement of scientific research. The current education reform tackles the issue and the Higher Education Law, enforced in January 2013, gives each university a lot of autonomy for development of its curriculum.

Moreover, the teaching and learning environments of universities are not at the required level. For example, the number of computers with access to the Internet for students at

¹⁴ Vietnam: Higher Education and Skills for Growth, The World Bank, 2008

¹⁵ Reforming Teaching and Learning in Vietnam's Higher Education System, Kay Harman and Nguyen Thi Ngoc Bich, "Reforming Higher Education in Vietnam – Challenges and Priorities-", Springer, 2010

universities is relatively low and internal computer management systems are not established at many universities (World Bank 2008). Laboratories, workshops and equipment are very poor and sometimes outdated and there are 14 laboratories, 4 experiment workshops and 10 pieces of equipment valued at more than USD 5,000 per university on average (World Bank 2008; K. Harman and N.T.N. Bich 2010).

Related to education quality, there is the issue that research at universities is historically not paid much attention. Following a Soviet-style model, which separates research functions from universities, universities have focused on teaching. As a result, university research capacity is severely limited (G. Harman and L.T.B. Ngoc 2010¹⁶). In fact, a majority of teaching staff at universities are not engaged in research activities and, therefore, the number of published academic articles by Vietnamese universities is much lower than that by other countries' universities (World Bank 2008). The research environment at universities is poor. Research infrastructure is not built well. Teachers do not allocate a lot of time to research due to high teaching loads and a lack of financial incentives. The number of postgraduate students, which are needed to conduct research, is limited (World Bank 2008). There is a lot to be done to increase research capacity at universities. One of the major initiatives of the current higher education reform is to promote research at universities.

Universities do not respond well to what industries expect at present. As higher education expands, the role of higher education in the society would alter and it is expected that universities would produce human resources for various industries and advanced research results that contribute to development of industries. In the case of Vietnam, the expansion of higher education is very rapid and therefore, university-industry linkages are still very limited and such expected roles are not played well yet by universities. For example, some firms feel that it is difficult to recruit skilled labor, middle-management-level staff, and engineers, which is partly due to the fact that universities do not produce these human resources (World Bank 2008). Also, there is little collaborative research between universities and industries (M. Fatseas 2010¹⁷), which means that the research results of universities do not contribute to industrial development and vice versa. As a result, support from industries to universities, which are vital for further expansion of higher education, are still limited. It is expected that universities would have much more interaction with industries for further development.

2.9. Vocational Training in Vietnam

2.9.1. Overall Framework of Vocational Training in Vietnam

(1) Vocational Training Law

The Vocational Training Law, Law No. 76/2006/QH11, was promulgated in November 2006 and came into effect in June 2007. The law consists of 11 chapters and 92 articles. The 11 chapters are as follows:

¹⁶ The Research Role of Vietnam's Universities, Grant Harman and Le Thi Bich Ngoc, "Reforming Higher Education in Vietnam – Challenges and Priorities-", Springer, 2010

¹⁷ Research-Industry Cooperation Supporting Development in Vietnam: The Challenge of Translating Policy into Practice, Marea Fatseas, "Reforming Higher Education in Vietnam – Challenges and Priorities-", Springer, 2010

- General provisions
- Vocational training degrees
- Enrolment of trainees, vocational training contracts, exams and tests
- Vocational training institutions
- Rights and obligations of enterprises in vocational training activities
- Vocational trainers and trainees
- Vocational training for disabled and handicapped persons
- Vocational training quality testing
- Assessment and granting of national certificates of vocational skills
- State management of vocational training
- Implementation provisions

According to the Vocational Training Law, the objectives of vocational training are “to train technical personnel directly involved in production or services to have professional-practice capabilities commensurate to the training degrees, to possess professional ethics and conscience, sense of discipline, industrial working style and good health with a view to creating conditions for trainees to find jobs after their graduation, to create jobs for themselves or to further their study, meeting the requirements of national industrialization and modernization”.

Some parts of the law are outdated and, therefore, the law is going to be amended in 2013.

(2) Vocational Training Development Strategy 2011-2020

The Vocational Training Development Strategy was approved in May 2012. General targets of the strategy by 2020 are as follows:

- Vocational training shall meet the needs of the labor market in terms of quantity, quality, job structure and training level
- Vocational training quality of some jobs is equivalent to that of developed countries in ASEAN and the world
- Form a contingent of skilled employees contributing to improve national competitiveness
- Universalize vocational training for employees, contributing to labor restructuring, income improvement, stable poverty reduction, and social security

Specific targets of the strategy are summarized in the table below.

Table 2-13 Specific Targets of Vocational Training Development Strategy

Item	Targets	
	2011-2015	2015-2020
Rate of trained employees	40% (equivalent to 23.5 million people)	55% (equivalent to 34.4 million people)
New training programs	<ul style="list-style-type: none"> ● About 2.1 million people receiving new program at collegial and intermediate vocational training ● About 7.5 million people receiving new programs at elementary vocational training and vocational training under 3 months 	<ul style="list-style-type: none"> ● About 2.9 million people receiving new programs at collegial and intermediate vocational training ● About 10 million people receiving new programs at elementary level and vocational training under 3 months
Networks of vocational institutions	<ul style="list-style-type: none"> ● Vocational College (VC): 190 (60 non-public, 26 high-quality) ● Vocational Secondary School (VSS): 300 (100 non-public) ● Vocational Training Center (VTC): 920 (320 non-public) 	<ul style="list-style-type: none"> ● VC: 230 (80 non-public, 40 high-quality) ● VSS: 310 (120 non-public) ● VTC: 1,050 (350 non-public)
The number of vocational teachers	<ul style="list-style-type: none"> ● VC: 13,000 ● VSS: 24,000 ● VTC: 14,000 	<ul style="list-style-type: none"> ● VC: 28,000 ● VSS: 31,000 ● VTC: 18,000
Upgrade or new development of programs and curriculum	<ul style="list-style-type: none"> ● International level: 26 ● Regional level: 49 ● National level: 130 ● Elementary level: 300 	<ul style="list-style-type: none"> ● International level: 35 ● Regional level: 70 ● National level: 150 ● Elementary level: 200
Verification of the quality of all key occupations	3 quality verification centers will be operated.	
Framework of national vocational qualification	<ul style="list-style-type: none"> ● Issuing 250 standards for national vocational skills ● 2 million people receiving certificates 	<ul style="list-style-type: none"> ● Issuing 400 standards for national vocational skills ● 6 million people receiving certificates
Improvement of the labor market system connecting vocational training with employment	N/A	

Source: Made by JICA Study Team based on Vocational Training Development Strategy 2011-2020

In order to achieve the targets, 9 solutions are identified, as below:

- Innovation of state management of vocational training
- Improving the lecturers, teachers and vocational training management staff
- Building a national vocational qualification framework
- Developing program, curriculum
- Enhancing the vocational training facilities and equipment
- Control, ensure the vocational training quality
- Connection of vocational training with labor market and participation of the enterprises
- To raise awareness of vocational training development
- To promote international cooperation on vocational training

Among them, “innovation of state management on vocational training” and “improving the lecturers, teachers and vocational training management staff” are breakthrough solutions, and “building a national vocational qualification framework” is a key solution.

2.9.2. Vocational Training Institutions

As shown in Figure 2-1, there are vocational training centers, vocational secondary schools, professional secondary schools, and vocational colleges. Most of them are administered by MOLISA, although some are administered by others, including the ones directly under other ministries such as the Ministry of Industry and Trade, the Ministry of Agriculture and Rural Development and the Ministry of National Defense.

As shown in the table below, there were 1,292 vocational training institutions in 2011, consisting of 835 public institutions (65%) and 457 private institutions (35%). The expansion of vocational colleges from 2007 to 2011 was huge and the number of vocational colleges in 2011 was more than double that of 2007.

Table 2-14 Number of Vocational Training Institutions, 2007-2011

Vocational Training Institution	2007	2008	2009	2010	2011
Vocational College	62	92	107	123	136
Vocational Secondary School	180	214	280	306	307
Vocational Training Center	656	684	777	802	849
Total	898	990	1,164	1,231	1,292

Source: Made by JICA Study Team based on Vietnam Vocational Training Report 2011 (Original data from GDVT, MOLISA)

In 2011, the number of occupations provided at vocational colleges was 159. Among the 159 occupations, some occupations and occupation groups were widely offered, such as the occupation group of Mechanical Engineering and Technologies, the occupation group of Electrical, Electronics and Telecommunication Engineering and Technologies, and the occupation group of Information Technology. The most popular occupation was corporate accounting, which had the largest number of trainees.¹⁸

2.9.3. Issues of Vocational Training in Vietnam

The following topics are pointed out as current issues of vocational training in Vietnam:

- Training programs are planned by occupation and not well matched with the needs of labor markets.
- Without solid accreditation and an assessment system, training quality differs from institute to institute.
- The number of vocational teachers is not sufficient, especially in rural areas.
- The quality of vocational teachers is limited in occupational skills, linkages with industries, foreign language, science research, and applied IT competences.
- Vocational managers are not professional and experienced enough.
- Linkages with industries are weak and collaboration with industries is very limited.
- Distribution of vocational training institutions is not appropriate among regions and the institutions are concentrated in urban areas.
- The facilities and equipment of vocational training institutes are still insufficient.

¹⁸ Vietnam Vocational Training Report 2011, National Institute for Vocational Training, Labour and Social Publishing House, 2012

3. VNU-Hanoi

3.1. Mission/Status

The origin of Vietnam National University, Hanoi (VNU) could be the establishment of the University of Indochina in 1906. VNU was developed over time and was reorganized as the first modern university in Vietnam in 1993 through the amalgamation of the University of Hanoi and other leading universities in Hanoi. Currently, VNU has four main campuses inside Hanoi.

VNU is operated based on a special regulation promulgated by the prime minister and, unlike other universities in Vietnam, is not under the Ministry of Education and Training but under the prime minister. VNU reports directly to the prime minister and has higher autonomy. There are two national universities in Vietnam and VNU is one of them.

3.1.1. Missions

The missions of VNU are as follows:

- To develop into the country's leading comprehensive and most prestigious training and research center of excellence, gradually achieving international standards
- To play a key and leading role in renovating the country's higher education system
- To serve as a focal point for international scientific, educational and cultural exchanges of the whole country

3.1.2. Statistics

The number of students at VNU in the year of 2012-2013 is shown in the table below.

Table 3-1 Number of Students

Course	Number of Students	Female
University	33,421	26,645 (80%)
Full-Time	21,701	17,444 (80%)
Part-Time	11,720	9,201 (79%)
Postgraduate	11,843	9,071 (77%)
Doctoral Course	1,149	623 (54%)
Master's Degree Course	10,694	8,448 (79%)

Source: Made by JICA Study Team based on "Statistical Report in the Year of 2012-2013 of VNU"

In order to capture the size of each university/school at the undergraduate level, the table below shows the number of graduated students by university/school in 2012. As shown, the largest universities are the University of Social Sciences and Humanities and the University of Languages and International Studies. On the other hand, the University of Education and the School of Law are relatively small.

Table 3-2 Number of Graduated Students by University/School (Undergraduate Level) in 2012

University/School	Number of Graduated Students
University of Economics and Business	340
University of Science	811
University of Languages and International Studies	1,024
University of Social Sciences and Humanities	1,200
University of Engineering and Technology	381
University of Education	258
School of Law	296
Total	4,310

Source: Made by JICA Study Team based on "Statistical Report in the Year of 2012-2013 of VNU"

In terms of the number of lecturers and staff at VNU, the following table shows the details.

Table 3-3 Number of Lecturers and Staff

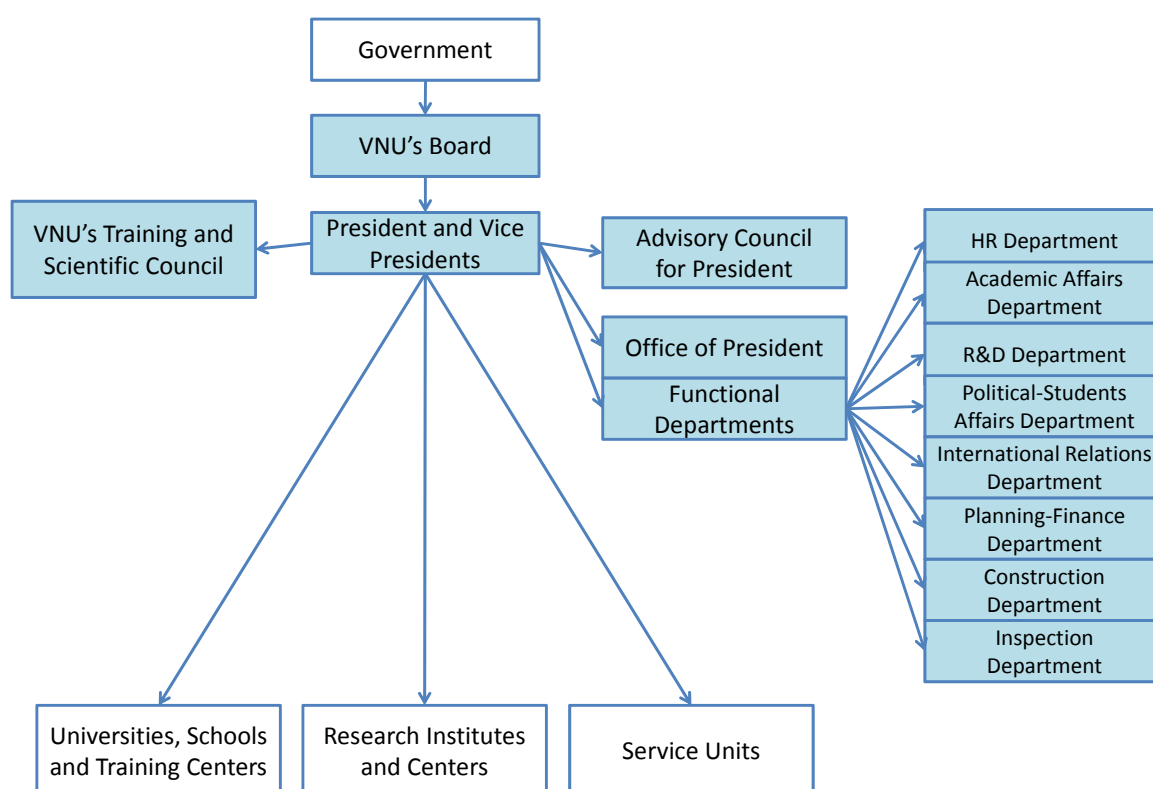
Type	Number	By Status		By Professional Qualification	
		Professor	Associate Professor	Doctoral Degree Holder	Master's Degree Holder
Staff	1,684	2	7	87	491
Management Staff	568	2	6	40	234
Administration Staff	1,052	-	1	47	257
Supporting Staff	64	-	-	-	-
Lecturer	1,767	40	251	706	708
Official Lecturer	1,738	40	251	704	698
Contractual Lecturer	29	-	-	2	10
Total	3,451	42	258	793	1,199

Source: Made by JICA Study Team based on "Statistical Report in the Year of 2012-2013 of VNU"

In addition to the official and contractual lecturers, VNU has a lot of visiting lecturers, which amounted to 1,890 people in the year of 2012-2013.

3.2. Organization and Operation

The figure below shows the management and administration structure of VNU.



Source: JICA Study Team

Figure 3-1 Organization Chart of VNU

VNU's Board, President and Vice Presidents, VNU's Training and Scientific Council, Advisory Council for President, Office of the President and Functional Departments conduct overall management and administrative matters of VNU. Members of VNU's board are as follows:

- VNU's President
- VNU's Vice Presidents
- Rectors/ Directors of Universities and Institutes under VNU
- Deputy Prime Minister
- Chairman of the Hanoi People's Committee
- Chairman of the Committee on Culture, Education, Youth and Teenager of the National Assembly
- Minister of Ministry of Science and Technology

Under the VNU's overall management, universities, schools and other organizations that provide actual services exist. Especially, 6 universities and 5 schools are the major body of VNU and each university/school has its own rector and management structure.

The following universities, schools and training centers are at VNU:

- University of Economics and Business
- University of Science
- University of Languages and International Studies
- University of Social Sciences and Humanities
- University of Engineering and Technology
- University of Education
- School of Law
- School of Business
- International School
- School of Medicine and Pharmacy
- School of Graduate Studies
- Training Center for Teachers of Political Theory
- Physical Education and Sports Center
- Center for National Defense and Security Education
- National Defense and Security Training Center

In addition, research institutes and centers listed below are there:

- Information Technology Institute
- Institute of Vietnamese Studies and development Sciences
- Institute of Education Quality Assurance
- Institute of Microbiology and Biotechnology
- Francophone Institute for Informatics
- Center for Natural Resources and Environmental Studies
- Center for Urban Studies
- International Center for Advanced Research on Global Change
- Center for Women's Studies
- Sea and Island Research Center

Moreover, there are the following service units at VNU:

- Center for Applied Information Technology
- Asia Research Center
- Library and Information Center
- Journal of Science
- Center for Student Services
- Publishing House
- Printing House
- Center for Training Services and University City Development

- Center of International Manpower
- Center for Mass Communication and Public Relations
- Project Management and Development Unit
- Vietnam National University – Kyoto University Collaboration Office
- Center of Systems Development
- Center for Educational Technology and Career Development

In addition to these organizations listed above, VNU has two specialized high schools, which are the “HUS High School for Gifted Students” and the “ULIS Foreign Language Specialized School”. The total enrolments of these schools are around 2,500.

3.3. Financial Status

The following basic information related to the financial status of VNU is from the VNU website.

Table 3-4 Financial Status of VNU

No.	Content	Unit	Number
1	Number of majors	major	98
2	Majors that already have graduates with adequate quality	-	-
3	VNU's area	ha	-
3.1	In Hanoi	ha	15.64
3.2	In Ba Vi (for practical studies and field trips)	ha	16.6
3.3	In Hoa Lac	ha	1,000
4	Buildings	m ²	186,098
4.1	Classroom	-	41,074
4.2	Library	-	6,001
4.3	Laboratories	-	5,494
4.4	Area for experimental manufacturing	-	50
5	Dormitories	-	28,200
6	Permanent staff	people	1,975
6.1	Professor	-	44
6.2	Associate Professor	-	243
6.3	Master of Science, Doctor	-	775
6.4	Master	-	1,189
6.5	Bachelor	-	1,031
7	Number of students / Number of lecturers	people	15.5/1
8	Rate of lecturers who qualified for master's degree and above	%	94
9	Tuition fee 2012-2013	Million VND/ year	-
9.1	Doctoral program	-	10.5-14.25
9.2	Master's program	-	6.3 – 8.55
9.3	Bachelor's program	-	4.2-5.7
10	Total revenue in 2011	Billion VND	968.149
10.1	From state budget	-	460.837
-	Expense for construction	-	90.000
-	Expense for education and training activities	-	311.567
-	Expense for scientific research and technological development	-	57.570
-	Expense for environmental protection	-	1.300

No.	Content	Unit	Number
-	Expense for investment	-	400
-	Expenses for price subsidies	-	130
10.2	From tuition fees and other services for students	-	474.510
10.3	From scientific research and technology transfer	-	22.131
10.4	From grants and aids	-	0
10.5	From other sources	-	10.671

Source: <http://vnu.edu.vn/eng/>

The total amount of VNU's income in 2011 was approximately 1,000 billion VND. Incomes from the state budget and from tuition fees are the main income and the share of these income sources is more than 45%. There are no other major income sources for VNU.

Table 3-5 shows the situation of universities/schools under VNU, and they vary. In particular, the fact that the tuition fees of the International School, which has autonomy to decide their own tuition fees, covers almost 90% of its income is noteworthy.

Table 3-5 Income Source of VNU and Universities under VNU (Unit: %)

Type	Government Subsidy	Tuition Fee	Others
VNU as a whole	47.6	49.0	3.4
University of Science	53.7	20.2	26.1
University of Language and International Studies	50.0	44.3	5.7
University of Education	44.5	19.4	36.1
University of Economics and Business	41.1	50.4	8.5
School of Law	38.0	53.2	8.8
International School	3.4	86.5	10.1

Source: <http://vnu.edu.vn/eng/>

Note : This table shows only data of universities/schools that publicize their financial status.
Data of whole VNU is for 2011, and data of universities under VNU is for 2010.

3.4. Academic Programs

Universities and schools under VNU provide various academic programs for the undergraduate level as well as the postgraduate (master and doctoral courses) level, as mentioned below.

3.4.1. Undergraduate Programs

All 6 universities and 3 schools ("School of Law", "International School", and "School of Medicine and Pharmacy") provided undergraduate programs in 2013 and there are 107 programs in total. Most full-time undergraduate programs are for four years and require about 120-140 credits (40 credits for general knowledge and 80-100 credits for specialized knowledge) for graduation.

Table 3-6 Undergraduate Programs of VNU in 2013

University/ School	Programs	Available Programs	Number of Programs
University of Economics and Business	Economics	Standard	8
	Development Economics	Standard	
	International Economics	Standard, High quality	
	Business Administration	International	
	Finance - Banking	Standard, High quality	
	Accounting	Standard	

University/ School	Programs	Available Programs	Number of Programs
University of Science	Biology	Talented, International	35
	Biotechnology	Standard	
	Physics	Talented, International, Advanced	
	Chemistry	Standard, Talented, Advanced	
	Materials Science	Standard	
	Geology	International	
	Physical Geography	Standard, High quality	
	Meteorology	Standard, High quality	
	Hydrology	Standard, High quality	
	Oceanography	Standard, High quality	
	Environmental Sciences	Standard, High quality, Advanced	
	Soil Science	Standard	
	Mathematics	Standard, Talented, Advanced	
	Computer and Information Science	Standard	
	Chemical Engineering and Technology	Standard	
	Environmental Engineering	Standard	
	Nuclear Technology	Standard	
	Marine Engineering	Standard	
	Geological Engineering	Standard	
	Pharmaceutical Chemistry	Standard	
	Management of Natural Resources and Environment	Standard	
	Land Management	Standard	
University of Languages and International Studies	English Language Teacher Education	Standard, High quality	18
	Russian Language Teacher Education	Standard	
	French Language Teacher Education	Standard, High quality	
	Chinese Language Teacher Education	Standard, High quality	
	German Language Teacher Education	Standard	
	Japanese Language Teacher Education	Standard	
	English	Standard, High quality	
	Russian	Standard	
	French	Standard	
	Chinese	Standard	
	German	Standard	
	Japanese	Standard	
	Korean	Standard	
	Arabic	Standard	
University of Social Sciences and Humanities	Vietnamese Language and Culture	Standard	24
	Sino-Nom	Standard	
	Vietnamese Studies	Standard	
	International Studies	Standard	
	Oriental Studies	Standard	
	Philosophy	Standard, High quality	
	History	Standard, High quality	
	Linguistics	International	
	Literature	Standard, High quality	
	Politics	Standard	
	Sociology	Standard	
	Anthropology	Standard	
	Psychology	Standard	
	Journalism	Standard	
	Public Communications	Standard	
	Information Study	Standard	
	Archival Science	Standard	
	Tourism and Travel Management	Standard	
	Management Science	Standard, High quality	
	Social Work	Standard	

University/ School	Programs	Available Programs	Number of Programs
University of Engineering and Technology	Computer Science	International	9
	Communications and Computer Networks	Standard	
	Information Systems	Standard	
	Information Technology	Standard, High quality	
	Mechatronics Engineering	Standard	
	Electronics and Communications Engineering	International	
	Engineering Mechanics	Standard	
	Engineering Physics	Standard	
University of Education	Mathematics Teacher Education	Standard	6
	Physics Education	Standard	
	Chemistry Education	Standard	
	Biology Teacher Education	Standard	
	Linguistics and Literature Teacher Education	Standard	
	History Teacher Education	Standard	
School of Law	Law	Standard, High quality	3
	Business Law	Standard	
International School	International Business	Standard	2
	Accounting, Analyzing and Auditing	Standard	
School of Medicine and Pharmacy	Medicine	Standard	2
	Pharmacy	Standard	
Total Number of Program			107

Source: JICA Study Team

Student selection for each program except for International School¹⁹ is done through the National Entrance Examination. Students apply for the program they want to join and take the required group of National Entrance Examination.

3.4.2. Postgraduate Programs

In addition to undergraduate programs, VNU provides postgraduate programs (both master and doctoral programs), as listed in the table below. There were 123 master's degree programs and 101 doctoral degree programs in 2012. Most full-time master's degree programs are for 2 years and doctoral degree programs are for 3-5 years.

Table 3-7 Postgraduate Programs of VNU in 2012

		Programs	Master	Doctor
Education Science and Teacher Training	Education Science	Education Management	X	X
		Educational Assessment and Measurement	X	X
		Teaching and Learning Methodology in Mathematics	X	
		Teaching and Learning Methodology in Physics	X	
		Teaching and Learning Methodology in Chemistry	X	
		Biology Education (Master)	X	
		History Education (Master)	X	
		Teaching and Learning Methodology in Linguistics and Literature	X	
		Russian Teaching Methodology	X	X
		Chinese Teaching Methodology	X	X
		English Teaching Methodology	X	X
		French Teaching Methodology	X	X
		Sino – Nom	X	X
Human Sciences and Linguistics	Vietnamese Language and Culture	Vietnamese Studies	X	
		Vietnamese Linguistics		X
		Vietnamese Ethnic Languages		X
		Literary Theories	X	X

¹⁹ Selection process for International School is described at 3.6.4.

Programs			Master	Doctor
		Vietnamese Literature	X	X
		Folk Literature	X	X
	Foreign Languages and Culture	English Linguistics	X	X
		Russian Linguistics	X	X
		French Linguistics	X	X
		Chinese Linguistics	X	X
		Japanese Linguistics	X	
		Linguistics	X	X
		Contrastive – Comparative Linguistics		X
		Foreign Literature		X
	Others	Philosophy	X	
		Dialectical Materialism and Historical Materialism		X
		Scientific Socialism	X	X
		Religious Studies	X	
		World History	X	X
		National History of Vietnam	X	X
		History of Communist Party of Vietnam	X	X
		Historiography and Historical Documents	X	X
		Archaeology	X	X
		Tourism Studies	X	
Social Science and Behaviors	Economic Study	Political Economy	X	X
		International Economics	X	X
	Political Science	Politics	X	X
		Ho Chi Minh Ideology	X	X
		International Relations	X	
	Sociology and Ethnology	Sociology	X	X
		Ethnology	X	X
	Psychology	Psychology	X	X
		Child and Adolescent Clinical Psychology	X	
	Geography	Geography	X	
		Asian Studies	X	
Journalism and Information	Journalism and Communication	Journalism	X	X
		Library and Information Science	X	
	Documentary – Archives - Museum	Archeology	X	X
		Business Administration	X	X
	Business	Management of Technology and Business Development	X	
		Finance – Banking	X	
	Finance – Banking - Insurance	Science and Technology Management	X	X
		Science and Technology Policy	X	
		Economic Management	X	
		Management Science	X	
Legislation	Law	Theory and History of State and Law	X	X
		Civil Law and Civil Procedure Law	X	
		Criminal Law and Criminal Procedure Law	X	X
		Economic Law	X	X
		International Law	X	X
		Human Rights Law	X	
		Law of the Sea – Marine Management	X	
Life Science	Biology	Biological Anthropology	X	X
		Zoology	X	X
		Botany	X	
		Human and Animal Physiology		X
		Experimental Biology	X	
		Ecology	X	
		Genetics	X	
		Microbiology	X	X
		Hydrobiology	X	X
		Botany		X
		Plant Physiology		X
		Biophysics		X
		Biochemistry	X	X
		Embryology– Histology and Cytology		X

Programs			Master	Doctor
		Ecology		X
		Genetics		X
	Applied Biology	Biotechnology	X	
		Nano-biotechnology	X	
Natural Science	Physical Science	Theoretical and Mathematical Physics	X	X
		Solid State Physics	X	X
		Radio Physics and Electronics Engineering	X	X
		Optics	X	X
		Physics of the Earth	X	X
		Inorganic Chemistry	X	X
		Organic Chemistry	X	X
		Analytical Chemistry	X	X
		Theoretical and Physical Chemistry	X	X
		Environmental Chemistry	X	X
		Atomic-Nuclear Physics & Nuclear Energy	X	X
		Thermal Physics	X	X
		Nano Materials and Devices	X	X
		Petro Chemistry	X	X
	Earth Science	Geology	X	X
		Geophysics	X	X
		Physical Geography	X	X
		Geomorphology and Paleogeography	X	X
		Mineralogy and Geochemistry	X	X
		Environmental Geology	X	X
		Geotechnical	X	X
		Petroleum Geology	X	X
		Cartography, Remote Sensing and GIS	X	X
		Meteorology and Climatology	X	X
		Hydrology	X	X
		Oceanography	X	X
	Environmental Science	Environmental Science	X	X
		Soil and Water Environment		X
Mathematics and Statistics	Mathematics	Mathematical Analysis	X	X
		Differential and Integral Equations		X
		Algebra and Number Theory	X	X
		Geometry and Topology	X	X
		Theory of Probability and Mathematical Statistics	X	
		Applied Mathematics		X
		Mathematical Foundation for Computers	X	X
		Computational Mathematics	X	X
		Elementary Mathematics Methods	X	
	Mechanics	Solid Mechanics	X	X
		Fluid Mechanics	X	X
		Computer Science	X	X
Computers and Information Technology	Computers	Software Engineering	X	X
		Information Systems	X	X
		Data Communication and Computer Networks	X	X
		Systems Management	X	
	Information Technology	Intelligent Systems and Multimedia	X	
Engineering	Mechanical Engineering	Engineering Mechanics	X	
	Electrical Engineering, Electronics and Telecommunications	Electronic Engineering	X	X
		Communications Engineering		X
	Chemical Engineering, Materials, Metallurgy and Environment	Chemical Engineering	X	
Agriculture, Forestry and Fisheries	Agriculture	Soil Science	X	X
Environment	Environmental Management	Management of Resources and Environment	X	X
		Land Administration	X	
		Waste Management and Handling of Contaminated Sites	X	
		Environment and Sustainable Development	X	X
Others	-	Social Work	X	
Total			123	101

Source: JICA Study Team

Student selections for the postgraduate programs are done by university entrance examinations.

3.5. Research Activity

VNU promotes research activities inside the university and a lot of achievements have been attained. In the year of 2011-2012, 196 papers were published in international magazines, a 10% increase from the previous year. Also, 121 books were published and 5 items were certified as intellectual properties. In the year, VNU got 9 state-level projects, 63 new NAFOSTED projects from outside and supported hundreds of VNU-level projects.

VNU also has implemented international joint research; for example, the “Microbial Diversity Research Project” with the National Institute of Technology and Evaluation (NITE) (Japan), “Research on New Active Compounds of Microbes” with Osaka University (Japan), “Solution for Settling Wastewater in Industrial Parks” with German Institutes of Technology (TU9) (Germany), and “Strengthening the Application of Sensing and GIS” with the University of Sherbrooke (Canada). However, VNU has very limited collaborative research with the private sector.

In addition, VNU hosts various international/national scientific conferences and seminars. For example, in the year of 2011-2012, VNU hosted 60 international seminars, 18 national seminars and 14 scientific discussions, such as the Climate Change Conference with United Nations University and the Vietnamese Study Conference with Vietnam Social Sciences Institute.

3.6. International School under VNU-Hanoi

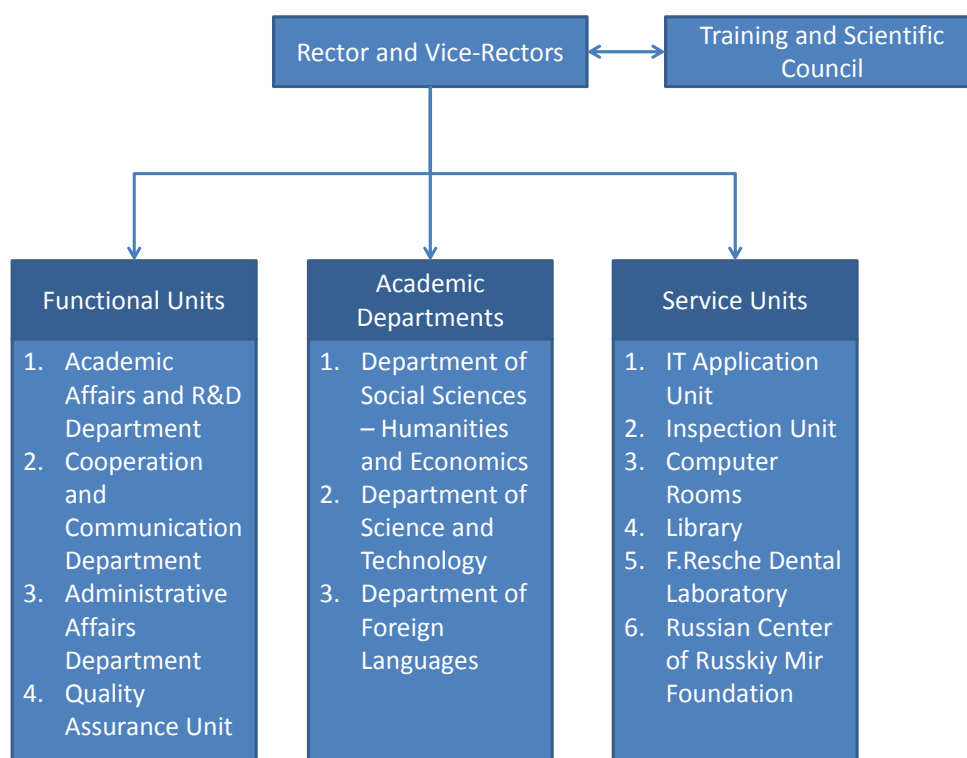
International School-Vietnam National University, Hanoi (VNU-IS) was founded in July 2002 as one of the first higher education institutions to offer joint international training programs. It is one of the schools under VNU and is located at two different campuses of VNU inside Hanoi.

The mission of VNU-IS is “to conduct training and research activities in foreign languages according to international standards on the basis of science and technology, thus contributing to advanced technology transfer and offering scientific services, producing highly qualified human resources for the country’s socio-economic development, meeting the requirements of international integration”.

Educational programs of VNU-IS are provided basically in foreign languages. Programs in English, Russian, French and Chinese are currently offered.

3.6.1. Organization

The organizational structure of VNU-IS is shown in the figure below.



Source: Brochure of VNU-IS 2012/2013

Figure 3-2 Organization Chart of VNU-IS

3.6.2. Statistics

The number of enrolled students is about 1,800, which consists of 1,400 for pre-university and undergraduate level and 400 for graduate level. Among the 1,400 students at the undergraduate level, around half of them are studying in programs for foreign partner universities' degrees and the rest are studying in programs for VNU degrees.

The number of full-time staff and teaching faculty is 108, around half of whom (around 50) are teaching faculty. Teaching faculty consist of both Vietnamese and international teachers. In addition to the full-time staff, VNU-IS has more than 100 Vietnamese and foreign visiting professors and guest lecturers. For example, in 2011, VNU-IS signed cooperative agreements with 197 visiting lecturers, which includes 58 from VNU, 77 from other Vietnamese universities, and 62 from foreign countries.

3.6.3. Programs

There are three categories of educational program VNU-IS offers: Pre-University Programs, Undergraduate Programs and Graduate Programs.

Pre-University Programs are foreign language preparatory programs for students without sufficient foreign language proficiency. Students who receive acceptance letters from VNU-IS but do not meet the requirements of language proficiency start in foreign language preparatory programs before entering undergraduate programs. There are four foreign language preparatory programs, which are English, Russian, French and Chinese. These programs teach not only languages but also some basic knowledge and skills that could be a foundation for undergraduate programs so that students become fully prepared for studying at the undergraduate level.

There are various programs at the undergraduate level, as shown in the table below. Programs with degrees awarded by foreign partner universities apply the partner universities'

curriculum. On the other hand, programs with a VNU degree apply the mixed curricula of partner universities and VNU.

Table 3-8 Undergraduate Programs Offered at VNU-IS

Program			Accreditation	Duration	Degree
Programs in English	International Business	-	-	4 years in Vietnam	Bachelor of International Business from VNU
	Accounting; Accounting and Finance	<ul style="list-style-type: none"> ■ Joint training program with HELP University College, Malaysia ■ Joint training program with University of East London (UEL), UK 	<ul style="list-style-type: none"> ■ Malaysian Qualification Agency- MQA (Ministry of Higher Education, Malaysia) ■ Quality Assurance Agency – QAA (UK) 	4 years in Vietnam	<ul style="list-style-type: none"> ■ Bachelor of Accounting from HELP University College ■ Bachelor of Accounting and Finance from University of East London
	Management	Joint training program with Keuka College, USA	Middle States Commission on Higher Education- MSCHE (Middle States association of Colleges and Schools, USA)	4 years in Vietnam	Bachelor of Science in Management from Keuka College
	Accounting, Analyzing and Auditing	-	-	4 years in Vietnam	Bachelor of Accounting, Analyzing and Auditing from VNU
Program in Russian	Accounting, Analyzing and Auditing	Joint training program with Russian universities	-	4.5 years in Vietnam	Bachelor of Accounting, Analyzing and Auditing from VNU
Program in French	Economics and Management	Joint training program with the University of Paris Sud, France	-	3 years (2 years in Vietnam and 1 year in France)	Bachelor of Economics and Management, majoring in Applied Economics or Enterprise Management from the University of Paris Sud
Program in Chinese	Chinese Language	Joint training program with Normal University of Nanjing and Normal University of Guangxi, China	-	4 years (1 year in Vietnam and 3 years in China)	Graduation Certificate and Bachelor's Degree from Normal University of Nanjing or Normal University of Guangxi

Source: Brochure of VNU-IS, JICA Study Team

As for joint training programs, VNU-IS establishes joint coordinator committees with each partner university. These committees develop operation plans as well as update the curriculum in June (three months before the start of the school year) every year. In addition to these committees, a coordinator from Keuka College is stationed at VNU for its program.

There are five master programs offered by VNU-IS. These master programs are supported by three foreign universities, and degrees are awarded by these universities. All programs are conducted in Vietnam.

Table 3-9 Master Programs Offered at VNU-IS

Program		Instruction Language	Duration	Degree
Master of Business Administration	Joint training program with HELP University College, Malaysia	English	1.5 years in Vietnam	Master in Business Administration from HELP University College
Master of Finance, Banking, Insurance	Joint training program with the University of Nantes, France	French	1.5 years in Vietnam	Master of Finance, Banking, Insurance (Vietnam & South East Asia) from the University of Nantes
Master of Market Research and Marketing Decision Making	Joint training program with the University of Nantes, France	French	1.5 years in Vietnam	Master of Market Research and Marketing Decision Making from the University of Nantes
Executive Master of Business Administration (EMBA)	Joint training program with Lunghwa University of Science and Technology, Taiwan	English	2 years in Vietnam	Master of Business Administration from Lunghwa University of Science and Technology
Master of Science in Information Management	Joint training program with Lunghwa University of Science and Technology, Taiwan	English	2 years in Vietnam	Master of Science in Information Management from Lunghwa University of Science and Technology

Source: Brochure of 2012/2013 VNU-IS, JICA Study Team

3.6.4. Entrance System

Selection of students for VNU-IS at the undergraduate level is based on high school academic records and National Entrance Examination results. Applicants have to satisfy the flooring scores set by VNU for VNU degree courses and the flooring scores set by MOET for foreign universities' courses. In addition to National Entrance Examination results, applicants need to show their language proficiency for the specific language (results of designated language tests or result of VNU-IS's exam for English) required for the programs that the applicants are applying for. If applicants do not meet the requirements of language proficiency, they at first join language preparatory programs for one year.

The selection for graduate programs is based on application documents and interviews. The qualification for applying for the programs is that applicants should have bachelor degrees for the designated areas and 1-2 years of working experience.

3.6.5. Lecturers and Staff

VNU-IS hires both Vietnamese and international teaching staff. Most of the teaching staff have degrees from foreign universities. When recruiting the staff, VNU-IS selects short-listed candidates first and sends candidates' CVs to partner universities for consensus on final decisions. After VNU-IS and partner universities decide on final candidates, VNU-IS reports the candidates to VNU for approval.

VNU-IS can set the salary range of its teaching staff and it tries to give salaries equivalent to international standards. As a result, the salary for teachers at VNU-IS is about 5 times more than the salary for teachers at other public universities.

In addition to the teaching staff hired directly by VNU-IS, VNU-IS has visiting lecturers. Foreign partner universities send their professors to VNU-IS for a short period, for example. VNU-IS receives lecturers from VNU as well as other Vietnamese universities, too.

3.6.6. Financial Matters

VNU-IS is a self-financed organization and does not receive funds from VNU or the government. The major income source is tuition fees. The tuition fees are around USD 1,800 per year per student for VNU degree courses and USD 2,800 per year per student for British, American and Malaysian universities' degree courses, which are about 10 times higher than these for other government universities. Another source of income is support from its foreign partner universities.

VNU-IS offers several types (long-term, short-term, full support, partial support, etc.) of scholarship to students who show excellent academic results, and around 15% of students of VNU-IS receive some form of scholarship annually. Besides, several partner universities award scholarships to outstanding students if they transfer to these universities.

3.7. New Campus Master Plan

3.7.1. Basis of the Master Plan

Aiming to develop into a prominent university among universities in the area as well as in the world, VNU plans to enlarge by integrating the currently scattered Hanoi Campus and move to the Hoa Lac area. This plan is included in the 2030 Hanoi Master Plan and 2050 Vision

The relocation of the VNU campus to the Hoa Lac area from the city center is based on the policy by the Government of Vietnam and Hanoi People's Committee, which is to move campuses to suburbs, with a goal to help develop infrastructure and public facilities as well as the necessary infrastructure for future urban development.

The master plan was developed based on the following decrees, decisions and other official documents:

- Government Decree No. 07/2001/ND-CP, dated February 1st, 2001, on Vietnam National University
- Decision No. 72/TTg by the prime minister, dated January 27th, 1995, on the location and scale of land for VNU
- Decision No. 16/2001/QĐ-TTg by the prime minister, dated February 12th, 2001, on the organization and operation of the National University
- Document No. 181/CP-KG by Vietnamese Government, dated February 21st, 2003, on

approval of the pre-feasible proposal of construction investment for VNU's new campus in Hoa Lac

3.7.2. Location and Scale

(1) Location of New Campus

- 30 km from the center of Hanoi (refer to the figure at the beginning of this report)
- East: 150 m from Highway No. 21
- West: near Than Lan Mountain
- South: 150 m from Lang-Hoa Lac Highway
- North: 1000 m from Hoa Lac Airport

Location map and pictures are shown in the beginning of the report.

(2) Scale

<u>Area</u>	- VNU campus: 1,000 ha - Resettlement required area: 113.7 ha
<u>Number of students (by 2020)</u>	- 60,000 university students - 3,500 high school students
<u>Planned schedule of construction</u>	-The basic facilities will be completed in 2020. -The construction will be totally completed in 2025.

3.7.3. Resources for the New Campus

(1) The Property of VNU Hanoi

<u>Campus in Hanoi</u>	15.64 ha
- 144 Xuan Thuy, Cau Giay district	9.02 ha
- 334-336 Nguyen Trai, Thanh Xuan district	3.10 ha
- 182 Luong The Vinh, Me Tri district	2.62 ha
- 19 Le Thanh Tong and 16 Hang Chuoi area	0.90 ha

Campus in Hoa Lac **1000 ha**

Campus in Ba Vi **16.6 ha**

(2) Human Resources

The details are shown in the table below.

Table 3-10 Number of Staff and Students in VNU

Type	Title	Number
Number of staff	Administrative staff	775 people
	Supporting staff	919 people
	Academic staff	1,708 people
	Temporary staff	145 people
	Total	3,547 people
Number of students	Undergraduate students	2,512 people
	Post-graduate students	876 people
	Total	3,388 people

Source: VNU New Campus Master Plan

(3) Facilities

Table 3-11 Outline Plan of the New Campus

Site	Total		185,789.76 m ²
	Construction areas		61,238.71 m ²
	Field areas		124,542.05 m ²
Buildings	Total	129 bldgs.	152,934.72 m ²
	Offices	685 rooms	25,289.07 m ²
	Libraries	46 rooms	5,135 m ²
	Laboratories	269 rooms	8,346.22 m ²
	Classrooms	564 rooms	34,866.40 m ²
	Meeting rooms/Halls/Student club	38 rooms	5,941.88 m ²
Area per person	Staff		7.55 m ² /person
	Student		1.12 m ² /person

Source: VNU New Campus Master Plan

3.7.4. Content, investment Scale and Division of the Project

(1) Organization Structure by 2020

Members of VNU

- University of Science - VNU
- University of Social Sciences and Humanities - VNU
- University of Languages and International Studies - VNU
- University of Engineering and Technology - VNU
- University of Economics and Business - VNU
- University of Education - VNU
- International School - VNU
- University of Law – VNU

Faculties

- School of Medicine-Pharmacy and University Hospital
- School of Culture-Art
- School of Urban Studies
- School of Public Policy
- School of Graduate Studies

Scientific Research Institutes

- Institute of Information Technology
- Institute of Vietnamese Studies and Development
- Institute of Microbial Research and Biotechnology
- Institute of Education Quality and University Administration
- Institute of Environment and Resources Research

Research Centers

- Center for Employment System and Technology
- Center for Sport and Bodybuilding
- Center for Political Training
- Center for Defense Education
- Center for Marine Dynamics & Environmental Research
- Center for Women's Research
- Center for Climate Change and Technology
- Center for Nanoscience and Nanotechnology

- Center of Tropical Agriculture Science
- Center for Biodiversity & Sustainable Development
- Vietnam-Japan Center for Science and Technology
- Other Centers for Applied Sciences collaborating with enterprises

Supporting Agencies

- Center for Media and Public Relationship
- Printing House
- Scientific Journal Publisher
- Student Service
- Library
- Training and University Development Center
- System Development
- Asian Research Support Center
- Conference and Guest House
- Others

(2) Estimated Scale of Education and Staff

Estimated Rate

- Students / Academic staff 15/1
- Academic staff / Research staff 1/4
- Academic staff + Research staff/Supporting staff 1/4
- Total staff of High School for the Gifted / Class / Total Staff 35/1/3

Scale of staff until 2020 6,550 people

Table 3-12 Scale of Students, Academic Staff, Officers by 2020

No	Total number of	Statistics in 2009	Estimated Statistics in 2020
1	University Students	50,463	60,000
2	High school students	2,620	3,500
3	VNU staff	2,951	6,550
3.1	Administrators and Officers	107	180
3.2	Academic Staff	2,368	4,320
3.3	Staff in Scientific Research Institutes	68	356
3.4	Staff in Research Center	123	982
3.5	Supporting Staff	285	712
	Total	56,034	70,050

Source: JICA Study Team

Table 3-13 Scale of Education by 2020

No	Sub-Projects	2009		2020	
		Total Scale	High School	Total Scale	High School
1	University of Science	10,534	1480	12,800	2,000
2	University of Social Sciences and Humanities	10,425		11,500	
3	University of Languages and International Studies	10,730	1140	11,500	1,500
4	University of Engineering and Technology	4,690		5,500	
5	University of Economics and Business	6,075		6,200	
6	University of Education	3,668		2,600	
7	University of Law	3,265		2,900	
8	International School	554		2,100	
9	Faculty of Graduate Studies	522		2,500	
10	Faculty of Medicine-Pharmacy			1,100	
11	Faculty of Culture-Art			400	
12	Faculty of Urban Studies			500	
13	Faculty of Public Policy			400	
	Total	50,463	2,620	60,000	3,500

Source: JICA Study Team

3.7.5. Scale of the Master Plan Project

(1) Structure of Land Used for Functional Areas

Table 3-14 Land Classification and Its Area

Classification	Area
Central area	62.8 ha (6.3%)
Schools and Faculties	345.5 ha (34.6%)
Dormitories	101.32 ha (10.1%)
Area for Staff and Guest house	26.7 ha (2.7%)
Institutes and Research center	147.3 ha (14.7%)
Green areas	140.6 ha (14.1%)
Sport center	40.6 ha (4.1%)
Infrastructure for transportation	129.1 ha (12.9%)
Infrastructure for utility	6 ha (0.6%)

Source: JICA Study Team

(2) Overall Organization of Space

To link every functional areas in Hoa Lac towards the center

(3) Infrastructure and Technological System

The technological solutions have been approved by the Ministry of Construction.

3.7.6. Standard of Construction

(1) Reference to the Standard of Floor Area Applied in Vietnam and Other Countries

Below is the scale reference for each facility at universities in the United States. There is a variety regarding the value of average space per student. However, as shown in Table 3-12, these values have approximately the same standard with what VNU is currently planning.

Table 3-15 Reference to 80 Universities in America with 1,393,516 Students

Function	Area (m ²)	% of Total Area	Average space (m ²)/student
Classrooms	1,298,977	5.26%	0.90
Laboratories	4,706,449	19.06%	3.3
Office	6,364,714	25.78%	4.6
Libraries	1,765,003	7.15%	1.2
Special	3,207,714	12.99%	2.3
Public use	2,553,831	10.34%	1.9
Supporting area	4,071,997	16.49%	2.9
Inactive	718,277	2.91%	0.6
Total	24,686,982	100%	17.7

Source: JICA Study Team

Table 3-16 Reference to Universities in America, Canada, China and Singapore

No	Nation	University	Area (ha)	Number of Students	Total Floor Area/ Student (m ²)
1	America / Canada	Alberta		32,413	30.11
2		British Colombia	402	38,509	39.00
3		Calgary	413	26,100	24.00
4		Western Ontario	455	21,583	26.00
5		Toronto	71	35,864	32.00
6		McMaster	152	25,312	32.00
7		Queens	67	20,992	35.00
8		McGill	682	27,714	32.00
9		Minnesota	1100	60,754	55.75
10		Michigan	8484	30,468	81.30
11	China	Beihua University – Jilin city	126	22,650	36.64
12		Guangzhou	131	23,636	25.23
13		Jiamusi	149	24,264	34.48
14		Zhejiang Tianjin	450	44,680	43.61
15		Shanghai	200	41,620	19.22
16		Wuhan - Hubei	550	54,600	44.34
17		Nankai - Tianjin	148	28,993	34.49
18		Hunan	199	42,600	38.21
19		Guangzhou University	131.7	23,000	25.91
20	Singapore	National University of Singapore	150	23,292	35.83
21		Nanyang Technology University	200	25,742	42.05
22		Singapore Management University	4.5	7,669	15.65

Source: JICA Study Team

(2) Design Standard

Table 3-17 Architectural Areas Comparison

N o	Items	Pre-Feasible Proposal Approved by the Prime Minister in 2003	Reference to General Plan Conducted by HOK in 2004	Detailed 1/2000 Plan Approved by Ministry of Construction in 2011	Standard
I	Space standards by overall floor space	30 m ² /student	30 m ² /student		30.6 m ² /student
1	Standard of study space	15 m ² /student	15 m ² /student	18-25 m ² /student	18 m ² /student
2	Standard of Research Area	1.8 m ² /student and 33 m ² /staff	1.8 m ² /student and 33 m ² /staff	33-65 m ² /staff	1.8 m ² /student and 33 m ² /staff
3	Standard of Sport Center	0.5 m ² /student	0.5 m ² /student	1 m ² /student	1 m ² /student
4	Standard of Technological Supporting Center	0.2 m ² /student	0.2 m ² /student	0.2 m ² /student	0.2 m ² /student
5	Standard of Public Facilities and Urban Services	1 m ² /student	1 m ² /student	Administrative procedure: 0.35 m ² /student; Library: 0.25 m ² /student; Other public service equal to level 3 of urban standard	1 m ² /student
6	Standard of Dormitories	11.5 m ² /student*	11.5 m ² /student	11.5 m ² /student	8.6 m ² /student**
II	Standard of Area for Staff	1.2 m ² /student	0.7 m ² /student	30 m ² /person	0.7 m ² /student***

Source: JICA Study Team

Note: *It assumes that scale of dormitory is enough for all students (100%)

**It assumes that 70% of domestic students and 100% of international students stay in the dorms, 30% of domestic students stay outside the university. If the total number of students is 60,000, the real statistic is 8.6 m²/student.

*** According to Decision No. 63/XDCB of VNU in May 24th, 2004

HOK, which is a global design, architecture, engineering and planning firm, has been hired to conduct the general plan.

According to Decree No. 72/2001/NĐ-CP by the government, dated October 5th, 2001, on classification of city and urban management. Level 3 of the urban standard is functional urban area as the center of politics, economy, culture, science and technical services, transport hubs and exchange between provinces and other regions. Its role is to promote the economic and social development of a province or a number of provincial areas.

- The proportion of non-agricultural workers in the total workforce is 75% or more
- Infrastructures are completed synchronously
- The population is 10 thousand people or more
- The average population density is 8,000 people per km² or more.

3.7.7. Implementation Plan

(1) Preparation

- | | |
|--|-------------------|
| - The plan for overall construction | completed in 2012 |
| - Compensation, site clearance and resettlement | completed in 2014 |
| - Set-up and adjustment of 1/500 detailed construction plan and sub-projects | 2012 – 2014 |

(2) Implementation

Stage 1 (2013-2015)

Site clearance and resettlement, technical infrastructures and other projects in the South of Vietnam will be given priority.

The scale of floor areas in stage 1 will be completed in 2015: 434.084 m², which is equal to 22.58% of total investment, includes the following:

- Complete the resettlement
- Complete the compensation and site clearance
- The sub-project of construction of public technological infrastructures
- The sub-project of construction of central area of VNU
- The sub-project of construction of defense education center
- The sub-project of construction of dormitory no. 4
- The sub-project of construction of staff areas (70%)
- The sub-project of construction of University of Science
- The sub-project of construction of University of Engineering and Technology

Stage 2 (2016-2020)

Complete sub-projects in stage 1. Scale of floor areas in stage 2 will be 1060.238 m², which equals 77.72% of total investment, including:

- The sub-project of construction of public technological infrastructures
- The sub-project of construction of central area of VNU
- The sub-project of construction of Dormitories No. 1, 3 and 5
- The sub-project of construction of University of Science
- The sub-project of construction of University of Social Sciences and Humanities
- The sub-project of construction of University of Languages and International Studies
- The sub-project of construction of University of Economics and Business
- The sub-project of construction of institutes and research centers
- The sub-project of construction of International school and Dormitory No. 6*
- The sub-project of construction of University of Education
- The sub-project of construction of University of Law
- The sub-project of construction of Department of Graduate Studies

*The sub-project of construction of International School and Dormitory No. 6 is estimated to be funded by social capital.

Stage 3 (2021-2025)

Complete sub-projects in stage 1 and 2. Scale of floor areas in stage 3 will be 428.428 m², which equals 100% of total investment, including:

- The sub-project of construction of public infrastructures (includes green areas)
- The sub-project of construction of Dormitory No. 2
- The sub-project of construction of staff areas

- The sub-project of construction of institutes and research centers
- The sub-project of construction of sport centers
- The sub-project of construction of Department of Medicine-Pharmacy and University Hospital
- The sub-project of construction of Department of Culture-Art
- The sub-project of construction of Urban Studies
- The sub-project of construction of Public Policy

3.7.8. Overview of the Total Investment and Estimated Capital

**Table 3-18 Estimated Total Investment
(In the first quarter of 2012, not including interest)**

No.	Name of Expenses	Value (VND)
I	Construction cost	18,780,092,112,302
II	Equipment cost	2,592,581,911,908
III	Site clearance cost	909,669,659,850
IV	Management costs, consulting costs and other expenses	2,564,720,882,905
V	Provision for arising volumes	1,242,353,228,348
VI	Total (cutoff 100,000 VND or lower)	26,089,418,000,000
VII	Average investment norm (2012)	
	Per 1m ²	13.928.482
	Per student	410,856,973

Source: JICA Study Team

Table 3-19 Estimated Total Investment (Considering Slippage in Prices and Interest)

No.	Indicator	Value (VND)	Note
1	Provision for slippage in prices	17,616,985,000,000	rounded
	Stage I (until 2015)	1,824,400,000,000	
	Stage II (2016-2020)	8,823,890,000,000	
	Stage III (2021-2025)	6,968,695,000,000	
2	Interest	1,412,511,000,000	rounded
	Stage I (until 2015)	11,399,000,000	
	Stage II (2016-2020)	360,407,000,000	
	Stage III (2021-2025)	1,140,705,000,000	
3	Estimated total investment	45,118,915,000,000	rounded

Source: JICA Study Team

3.7.9. Capital Structure

The government's capital is estimated to be 80.166% of total investment. It includes:

- State capital 53.405%
- Capital gained from land auctions 7.387%
- ODA and other loans 19.374%

Other legal sources: 16.703%

Interest: 3.131%

Table 3-20 Estimated Proportion of Social Capital

(unit: billion VND)

No	Name of Project	Total Investment (Including Slippage in Prices, Not Including Interest)	Social Capital		Note
			Proportion	Value	
I	Sub-projects	43,706		5,115	
1	Site clearance	1,068.7		-	
2	Project QG-HN01 – Resettlement	600.6		-	
3	Project QG-HN02 – General Infrastructure	6,611.9		-	
4	Project QG-HN03 – The central area of VNU	1,134.1		-	
5	Project QG-HN04 – Defence education centre	462.6		-	
6	Project QG-HN05 – Dormitories No. 1-5	9,130.5	30%	2,739.1	
7	Project QG-HN06 – Staff areas	904.0	30%	271.2	
8	Project QG-HN07 – University of Science	3,721.8		-	
9	Project QG-HN08 – University of Engineering and Technology	1,418.1		-	
10	Project QG-HN09 – University of Social Sciences and Humanities	3,834.7		-	
11	Project QG-HN10 – University of Languages and International Studies	4,009.4		-	
12	Project QG-HN11 – University of Economics and Business	2,134.6	30%	640.4	
13	Project QG-HN12 – Institutes and research centres	2,591.0		-	
14	Project QG-HN13 – International School	1,504.7	100%	1,504.7	
15	Project QG-HN14 – University of Education	1,049.7		-	
16	Project QG-HN15 – University of Law	1,079.4		-	
17	Project QG-HN16 – Faculty of Graduate Studies	954.0		-	
18	Project QG-HN18 – Faculty of Medicine-Pharmacy and University Hospital	633.1		-	University Hospital is funded by social capital
19	Project QG-HN19 – Faculty of Culture-Art	253.5		-	
20	Project QG-HN20 – Faculty of Urban Studies	299.0		-	
21	Project QG-HN21 – Faculty of Public Policy	310.9		-	
II	Capital from Secondary Investors			2,381	
1	Shopping mall and hotel (QG-HN03)	26.3 ha		1,310	Estimate of 5 million/1 m ²
2	Sport centre (QG-HN17)	40.6 ha		609	Estimate of 1.5 million/1 m ²
3	University Hospital (QG-HN18)	18.5 ha		462	Estimate of 2.5 million/1 m ²
	Total			7,536	

Source: JICA Study Team

3.7.10. Proposed Mechanism for Implementation of the Project

(1) Governmental Capital

The government will provide sufficient capital in the first 5 years for the following projects and works:

- Site clearance
- Resettlement
- The construction of a general and technological system (including green areas)
- The construction investment for the central area of VNU
- The construction investment for the Defense Education Center
- Priority construction for the schools to be relocated first

(2) Capital Gained From Existing Land Auctions

VNU is seeking permission from the government regarding transfer of rights for 3 pieces of land outside the existing campus. The land was auctioned, and the profit is expected to fund the project (the details will be described more in 3.7.12).

The relocation of the university is expected to happen from 2016 to 2025.

VNU proposed that the government support in advance the estimated funds raised from the auction from 2018 to 2020. It will be refunded after the funds raised from the auction are collected.

(3) Social Capital

Projects that can be funded by social capital:

- International School and Dormitory No. 6
- Shopping center, convention center, hotels, etc.
- Some parts of staff area
- Some parts of dormitory
- University Hospital, 1000 hospital cots
- Sport center

The owner of the project will propose to the government the specific lists of sub-projects that will be mobilized by social capital, for approval and legal procedures.

3.7.11. Mechanism for Converting Three Former Bases in the City Center

(1) Plan

VNU proposed that the government give permission to transfer the right to use the 3 old bases and auction to raise funds for the project. These 3 old bases are:

- | | |
|-------------------------------|--------|
| - 144 Xuan Thuy | 9.2 ha |
| - 334-336 Nguyen Trai | 3.1 ha |
| - 182 Luong The Vinh – Me Tri | 2.6 ha |

(2) Implementation

The Ministry of Construction and VNU will reach an agreement on the relocation progress. The Ministry of Finance and Hanoi People's Committee will collaborate to hold the auction.

4. Lessons from Similar Universities

4.1. International Universities in Vietnam

The higher education reform since 1993 has introduced various new systems such as the approval of establishment of private universities, the introduction of New Model Universities and the import of advanced international curricula. These new systems promote the establishment of new universities that provide foreign universities'. Educational programs or receive at least educational support from foreign universities. Especially after the success of RMIT, the establishments have accelerated. The table below shows several examples of such universities.

Table 4-1 Universities supported by Foreign Universities

University	Location	Establishment and Size	Features
RMIT University	Ho Chi Minh, Hanoi	<ul style="list-style-type: none"> 2001 6,000 students 	<ul style="list-style-type: none"> Private University (In fact, not established as a university, but as a company) Branch / Asian campus of RMIT (Royal Melbourne Institute of Technology, Australian national university) First foreign-owned university in Vietnam Teaching language: English Degrees from RMIT (Australian degree)
International School, VNU-Hanoi	Hanoi	<ul style="list-style-type: none"> 2002 1,800 students 	<ul style="list-style-type: none"> Public University Member of VNU-Hanoi Joint training programs with foreign universities (American, Russian, French, Malaysian, Chinese, Taiwanese) Teaching language: English, Russian, French, Chinese Degrees from VNU-Hanoi or foreign partner universities (up to program)
International University, VNU-HCM	Ho Chi Minh	<ul style="list-style-type: none"> 2003 4,300 students 	<ul style="list-style-type: none"> Public University Member of VNU-HCM Partnership with foreign universities (US, UK, New Zealand, Australia, Thai) Teaching language: English Vietnamese degrees or degrees from foreign partner universities
Vietnamese-German University (VGU)	Ho Chi Minh, Binh Duong	<ul style="list-style-type: none"> 2008 12,000 students (planned) 	<ul style="list-style-type: none"> New Model University Public university under MOET Supported by German universities through German government Teaching language: English Degrees from German universities
University of Science and Technology of Hanoi (USTH)	Hanoi (inside VAST, Hoa Lac High Tech Park in the future)	<ul style="list-style-type: none"> 2009 3,000 students (planned) 	<ul style="list-style-type: none"> New Model University Public university under MOET Supported by French universities through French government Teaching language: English French accredited degrees

British University Vietnam (BUV)	Hanoi	<ul style="list-style-type: none"> 2009 10,000 students (planned) 	<ul style="list-style-type: none"> Private University (100% owned by British) Partnership with British universities (Staffordshire University and University of London) Teaching language: English British degrees
Tan Tao University (TTU)	Long An	<ul style="list-style-type: none"> 2010 	<ul style="list-style-type: none"> Private University Established by Tan Tao Group Partnership with American universities Teaching language: English Vietnamese degrees
Eastern International University (E.I.U.)	Binh Duong	<ul style="list-style-type: none"> 2011 24,000 students (planned) 	<ul style="list-style-type: none"> Private University Member of VNU-HCM Established under the cooperation of Becamex IDC Corporation (State-owned) and VNU-HCM Teaching language: English and Vietnamese Partnership with foreign universities in U.S., U.K. and others

Source: Website of Each University

Among these universities, three universities, which give various implications to examine the framework of VJU, are selected and described in detail in the next sections.

4.1.1. International University - Vietnam National University Ho Chi Minh City

(1) Overview

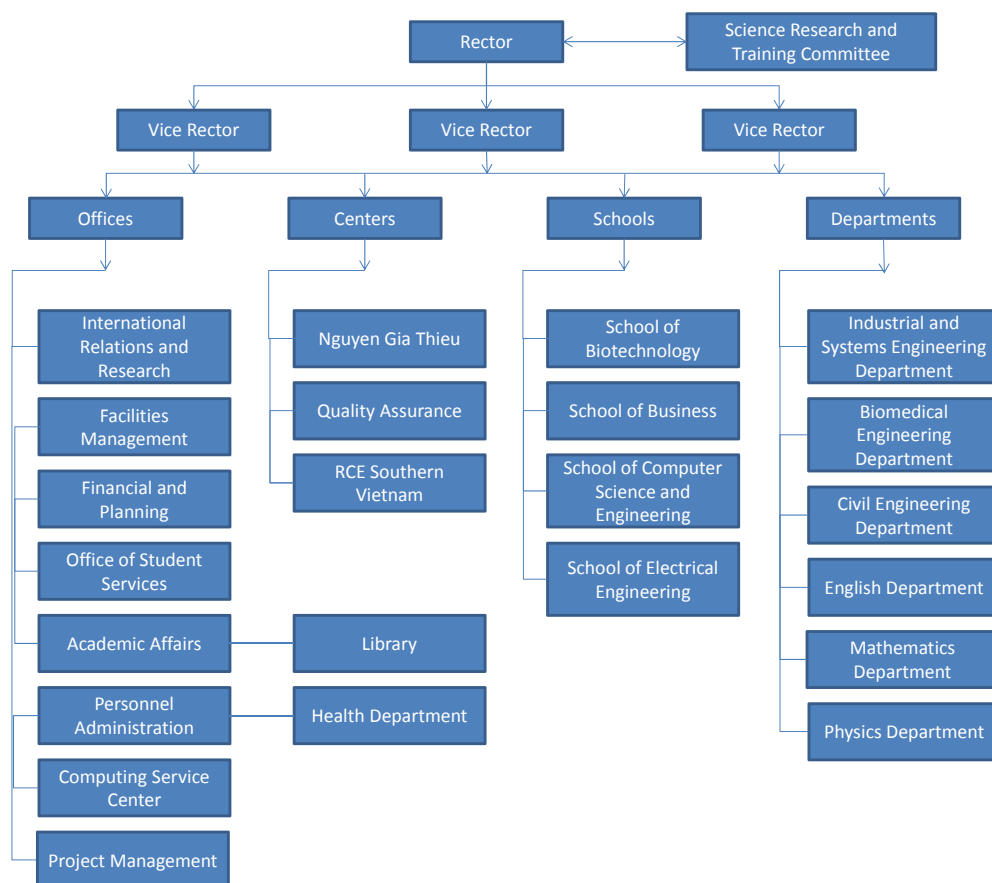
Vietnam National University-Ho Chi Minh (VNU-HCM) International University (IU) was established in December 2003. It is one of six universities²⁰ under VNU-HCM and is located on the VNU-HCM campus in Thu Duc District, Ho Chi Minh City. It was the first public university in Vietnam that taught its curriculum in English.

The mission of IU is “to be recognized as one of the top research-oriented universities in Vietnam and in Asia” and its objectives are “to provide an international quality education”, “to conduct and apply innovative research”, and “to play a key role in the sustainable development of our society and country”²¹.

The organization structure of IU is shown in the figure below.

²⁰ The six universities under VNU-HCM other than International University are “University of Technology”, “University of Science”, “University of Social Sciences and Humanities”, “University of Information Technology”, and “University of Economics and Law”.

²¹ Brochure of HCM-IU



Source: JICA Study Team

Figure 4-1 Organization Chart of UNV-HCM

(2) University Statistics

The total number of enrolled students (undergraduate and graduate) was 4,279 in 2012. The number of students by school/department is shown in the table below.

Table 4-2 Number of Enrolled Students

School/ Department	# of Student (2012)
School of Biotechnology	866
School of Business	2,440
School of Computer Science and Engineering	400
School of Electrical Engineering	217
Industrial and Systems Engineering Department	132
Biomedical Engineering Department	139
Civil Engineering Department	85
Total	4,279

Source: JICA Study Team

The number of teaching staff at IU is 243, thirteen percent of which are foreign lecturers. Eight of them are professors and 16 of them are associate professors. Also, 117 of them (48%) are Ph.D. holders and 96 of them (40%) are master degree holders.

The number of university staff is 148, one of which holds a Ph.D. and 38 of which hold master's degrees. The summary of university statistics is shown in the table below.

Table 4-3 Summary of University Statistics

Item	Number
Student (Undergraduate and Graduate)	4,279
Teaching Staff	243
University Staff	148
# of student/ lecturer	17.6

Source: JICA Study Team

(3) Programs

The following schools and departments of IU are currently offering academic courses. All courses are taught in English.

- School of Biotechnology
- School of Business
- School of Computer Science and Engineering
- School of Electrical Engineering
- Industrial and Systems Engineering Department
- Biomedical Engineering Department
- Civil Engineering Department

At the undergraduate level, IU offers the following two programs: IU program and Twinning program.

● IU program

Students in the program study 4 years at IU in Vietnam. The curriculum of the program is designed by IU and approved by MOET. When completing the program, students receive IU degrees.

● Twinning program

Students in the program study their first 2 years at IU in Vietnam and their latter 2 years at partner universities abroad (USA, UK, New Zealand, Australia and Thailand). The first 2-year curriculum is designed by IU and approved by VNU-HCM. Besides, IU and partner universities agree upon the curriculum. The latter 2-year curriculum is based on the curriculum of the partner universities. When completing the program, students receive degrees from the partner universities.

Partner universities are as follows:

- Rutgers University (USA)
- Binghamton University – SUNY (USA)
- University of Illinois at Urbana-Champaign (USA)
- The University of Houston (USA)
- The University of Nottingham (UK)
- University of the West of England (UK)
- Auckland University of Technology (New Zealand)
- The University of Auckland (New Zealand)
- The University of New South Wales (Australia)
- Asian Institute of Technology (AIT)

Each partner university offers certain degree programs.

IU also has student exchange programs with several universities abroad such as University of Applied Science Munich (Germany) and Otaru University of Commerce (Japan).

All the curricula of the undergraduate programs are administered through the credit-based system. The average number of credits per semester is about 18 (12 credits minimum and 24 credits maximum), except for the final semester which is for final thesis. There are three semesters per year: Semester 1 (fall) starts at the beginning of an academic year in September, Semester 2 (spring) starts in February, and Semester 3 (summer, optional) starts in June. One semester is for 18 weeks, which consists of 15 weeks of lecture, 1 week of mid-term exams, and 2 weeks of final exams. Basically, students in the undergraduate programs study for four years.

Internship is required before final thesis registration. Students have to work at their selected company for 8 weeks, at least, to get practical experience in the industrial labor market.

In addition to the undergraduate programs, some schools offer master and doctoral courses.

Offered courses by each school/department are shown in the table below.

Table 4-4 Courses by Each School/Department

School/Department	IU Program (offering degrees)	Twinning Program	Master Course	Doctoral Course
School of Biotechnology	<ul style="list-style-type: none"> ▪ Aquatic Resource Management ▪ Biotechnology ▪ Food Technology 	✓	✓	✓
School of Business	<ul style="list-style-type: none"> ▪ Business Administration ▪ Finance & Banking 	✓	✓	-
School of Computer Science and Engineering	<ul style="list-style-type: none"> ▪ Computer Engineering ▪ Computer Science 	✓	-	-
School of Electrical Engineering	<ul style="list-style-type: none"> ▪ Electrical Engineering 	✓	✓	-
Industrial and Systems Engineering Department	<ul style="list-style-type: none"> ▪ Industrial and Systems Engineering 	✓	-	-
Biomedical Engineering Department	<ul style="list-style-type: none"> ▪ Biomedical Engineering 	-	-	-
Civil Engineering Department	<ul style="list-style-type: none"> ▪ Civil Engineering 	-	-	-

Source: JICA Study Team

All IU programs follow the recommended curriculum of MOET. In addition, all schools have been accredited by AUN (ASEAN University Network) and the Industrial and Systems Engineering Department, Biomedical Engineering Department and Civil Engineering Department will be accredited for 2013-2015. Besides, the School of Business is trying to get accredited by AACSB (Association to Advanced Collegiate School of Business) and all schools and departments are trying to get accredited by ABET (Accreditation Board for Engineering and Technology).

(4) University Entrance System at Undergraduate Level

There are two ways for selection of students. The first one is for Vietnamese students with domestic high school background. Applicants have to take the National Entrance Examination and satisfy the flooring scores set by MOET. In addition, they are required to submit their scores from English tests (TOEFL or IELTS), which should be over the passing scores set by IU, or they have to take an English placement test conducted by IU.

The second one is for international applicants and Vietnamese students who have studied abroad or followed international high school programs in Vietnam. These applicants just need to submit application documents that include the academic results of their high schools

as well as scores of English tests (those who study in English-speaking countries do not need to submit scores of English tests) and take interviews done by IU.

(5) Research Activities

IU places importance on research activities. In order to promote research activities, IU provides competitive salaries to their teaching staff, reduces required teaching time, and awards small grants to lecturers for additional papers.

Annual research requirements for lecturers are as follows.

- Professors: 2 papers in international scientific journal(s)
- Associate Professors: 1 paper in international scientific journal and 1 paper in domestic scientific journal
- Ph.D. holders: 1 paper in international scientific journal or 2 papers in domestic scientific journal
- Master's degree holders: 1 paper in domestic scientific journal

If lecturers publish papers beyond the requirements above, they will receive USD 1,500 for internationally published papers and USD 750 for nationally published papers. As a result, the annual average ratio of internationally published papers to lecturers is 0.77.

The main sponsors for the research activities of IU are governmental organizations: such as NAFOSTED, VNU-HCM, and Department of Science and Technology of Ho Chi Minh City. For example, IU received about 3.2 billion VND for their research from NAFOSTED in 2010.

Joint research with other organizations (public and private, national and international) have been conducted. The following are examples of the research partner organizations of IU.

- Department of Transportation of Ho Chi Minh City
- World Aquaculture Society
- Saigon Hi-tech Park
- University of Nottingham
- Oxford University Clinical Research Unit Vietnam
- Shimadzu Inc. (Japan)
- National Instruments (USA)

(6) University Staff

When recruiting lecturers, IU evaluates candidates based on the following six components: 1) academic qualification, 2) place of training, 3) teaching experience, 4) teaching methodology, 5) English ability and 6) professional experience. Recruitment processes include document review, direct interview and teaching demonstration. IU tries to recruit Vietnamese with foreign Ph.D.s as well as international lecturers. Vacancy announcements are regularly posted on the IU website, in newspapers and on recruiting websites.

If newly recruited lecturers do not have teaching experience, they will have a chance to be trained on how to teach for 1-2 semesters. After the training, they have to pass an exam to be official lecturers.

There are staff upgrading programs at IU. Annually, IU sends 4-6 teaching staff and administrative staff to partner universities for 1-2 semesters. Teaching staff will learn teaching methods through the training, and administrative staff will learn English and management. In addition, airfares to participate in international conferences will be covered one time per lecturer per year.

(7) Financial Matters

The major income sources of IU are tuition fees and the government. Tuition fees are for salaries, operational costs and maintenance/upgrading of facilities. The government funds only building construction and establishment of laboratories. Tuition fees are set by IU and get approved by VNU-HCM.

The tuition fees of IU are much higher than those of other public universities. Tuition fees for IU program are USD 1,700 per year per student. On the other hand, tuition fees for the twinning program are around USD 2,500. Several types of scholarships are available for academically outstanding students. For example, IU reserves about USD 450,000 for the National Entrance Examination Scholarship in 2011, which will be provided to students who show outstanding results at the National Entrance Examination. Full scholarship is USD 6,000 and half scholarship is USD 3,000.

4.1.2. University of Science and Technology of Hanoi (USTH)

(1) Overview

The University of Science and Technology of Hanoi (USTH) started its academic year in October 2010, one year after an intergovernmental agreement in 2009 between the Ministry of Research and Higher Education of France and the Ministry of Education and Training of Vietnam. It is a Vietnamese public university and was established as a New Model University. USTH is located inside Vietnam Academy of Science and Technology (VAST) in Hanoi at present, but it is going to move to Hoa Lac High-Tech Park when its new campus is established there (planned for 2018).

The goal of USTH is “to develop a center of research and teaching excellence that creates dynamic synergies between research and teaching by strengthening university-industry linkages in science and technology fields and be a model of private-public cooperation in higher education/research institutions”.

USTH is gradually expanding. In 2010, eighteen students were admitted to bachelor courses and 21 students to master courses. In 2011, 74 students were admitted to bachelor courses and 76 students to master course. Then, in 2012, one-hundred-and-five students were admitted to bachelor courses and 113 students to master courses. It is planned to have around 2,000 students for bachelor courses and 1,000 students for master courses by 2020.

(2) Programs

USTH follows the so-called Bologna process, which consists of a 3-year bachelor course, 2-year master course, and 3-year doctoral course and is associated with the European Credit Transfer System. USTH is the first university in Asia to adopt the Bologna process. USTH offers bachelor and master programs in Hanoi. In terms of doctoral programs, USTH has a scheme to send students to Ph. D. programs of French universities in France.

The following six academic fields are offered at bachelor and master levels. All programs are taught in English.

- Biotechnology, Pharmacology
- Water Environment Oceanography
- Materials Science and Nanotechnology
- Information and Communication Technology
- Renewable Energies
- Space and Applications

The first year of bachelor programs is a common, foundation year and all students study natural sciences (mathematics, physics, biology and chemistry), ICT, management sciences and languages (English and French). In the second and third years, students study in one of six specific programs. In addition to the specific courses for each program, students have to take management sciences and languages (English and French). Also, a 10-week internship in public/private sectors is included. Each program is closely coordinated with and supported by the corresponding master's program of USTH. However, there is no direct support by members of the French university consortium for USTH. At the completion, students are awarded a Bachelor in Science and Technology (6 specialties) by USTH, which is accredited by Vietnam and France.

There are 6 master programs at present at USTH, as mentioned above. These master programs started step by step; that is, "Biotechnology, Pharmacology" and "Materials Science and Nanotechnology" started their programs in 2010, "Water Environment Oceanography" and "Information and Communication Technology" in 2011, and "Renewable Energies" and "Space and Applications" in 2012.

These 6 master programs are supported by the consortium of French universities, as shown below. All master programs are full-time.

Table 4-5 Six Master Programs Supported by the Consortium of French Universities

Program	Supporting Universities	
Biotechnology, Pharmacology	<ul style="list-style-type: none"> ▪ University Montpellier 2 ▪ University Lyon 1 Claude Bernard 	<ul style="list-style-type: none"> ▪ University Aix Marseille
Water Environment Oceanography	<ul style="list-style-type: none"> ▪ University Poitier ▪ University Montpellier 2 ▪ University Paul Sabatier 	<ul style="list-style-type: none"> ▪ INP Toulouse ▪ INSA Toulouse
Materials Science and Nanotechnology	<ul style="list-style-type: none"> ▪ University Paris Sud 11 ▪ University Paris Diderot 7 ▪ University du Maine 	<ul style="list-style-type: none"> ▪ University Aix Marseille 2 ▪ Consortium Toulouse
Information and Communication Technology	<ul style="list-style-type: none"> ▪ University Paris 13 ▪ University Montpellier II ▪ Toulouse INP ▪ University Poitiers ▪ University Metz 	<ul style="list-style-type: none"> ▪ University Limoges ▪ University Brest ▪ University Rennes I ▪ University Aix Marseilles II ▪ University La Rochelle
Renewable Energies	<ul style="list-style-type: none"> ▪ University Toulouse 3 ▪ INP Toulouse 	<ul style="list-style-type: none"> ▪ INSA Toulouse
Space and Applications	<ul style="list-style-type: none"> ▪ University of Paris Diderot ▪ Observatory of Paris 	<ul style="list-style-type: none"> ▪ University of Montpellier 2

Source: Made by JICA Study Team based on "Progress Report 2010-2013 to the First Meeting of the University Council", USTH, 2013

These French universities support the design and operation of each program. These universities send their lecturers to USTH from France. Besides, these universities receive academically excellent students of USTH as interns for 6-7 weeks, too.

Students in master programs take courses designated for each program. In addition, all students take management sciences and language classes (English and French). Moreover, 6-7 weeks of internship in public or private sectors in Vietnam or France is required in the second year.

When students finish their studies, they will be awarded one of the following degrees by USTH, which are co-accredited by Vietnam and France.

- Master in Biotechnology – Pharmacology

- Master in Water – Environment – Oceanography
- Master in Materials Science – Nanotechnology
- Master in Information and Communication Technology
- Master in Renewable Energies
- Master in Space and Applications

Although it has a plan to establish doctoral programs, USTH does not offer doctoral programs at the moment. Instead, utilizing project 322 (from 2010 to 2011) and project 911 (from 2012 onward) of the Vietnamese government, USTH sends students who pass the selections to get their Ph.D.s from French universities. It is planned that USTH will send 400 students (equivalent to 400 scholarships) to France in 10 years from 2010 to 2020 and has sent 68 students so far.

(3) University Entrance System

For bachelor programs there are three student selection times per year, in January, March and September. The student selections in January and March are conducted using submitted required documents and interviews. Those who would like to enter USTH should submit the required documents, including academic records of high school and English certificates and, if they are shortlisted after the screening of the documents, they are interviewed in English. For the September selections, results of the National Entrance Examination are utilized. If students earn good scores on the National Entrance Examination and have sufficient English proficiency they are directly invited to interviews. USTH accepts only qualified students. As a result, the acceptance rates (percentage of accepted applicants out of total applicants) for bachelor programs are 25% in 2010, 37% in 2011 and 33% in 2012.

Student selections for master's programs are conducted twice a year, in May and August. The selection is done through the combination of evaluation of documents and interviews. Those who would join USTH send application documents, including undergraduate level academic results and letters of recommendation, and if they pass the selection, they are interviewed in English. The acceptance rates for master programs are 45% in 2010, 65% in 2011 and 62% in 2012.

Although USTH does not have its own doctoral courses, it sends students to get Ph.D.s from French universities, as part of the Vietnamese government's project. The selection is done one time per year. Those who pass the submitted documents phase of the selection are interviewed by juries consisting of Vietnamese from MOET and French from USTH.

(4) Research Activities

Located on the campus of VAST, USTH has had strategic partnerships with various institutes of VAST for scientific areas of USTH's 6 master programs. Each master program department is headed by both French and Vietnamese and the Vietnamese head is from associated Vietnamese institutes. Besides, each master program department has developed a joint laboratory with the associated Vietnamese institutes as well as French research institutes/universities, as in the following table.

Table 4-6 Master Programs and Joint Laboratories

Master Program	Themes/Names of Joint Laboratory	Partners for Joint Laboratory
Biotechnology, Pharmacology	LMI Rice (International Mix Laboratory Rice)	<ul style="list-style-type: none"> ▪ Institut de Recherche pour le Développement (IRD), Université Montpellier 2 ▪ Agronomical Genetics Institute (AGI), Vietnam Academy of Agricultural Science (VAAS)
Water Environment Oceanography	Water, Environment, Oceanography	<ul style="list-style-type: none"> ▪ Institute of Environmental Technology (IET), VAST
Materials Science and Nanotechnology	Joint Laboratory on Nano-Engineering Science (JLNES)	<ul style="list-style-type: none"> ▪ Institute of Materials Science (IMS), VAST
	LIA in Nanosciences (MASENO)	<ul style="list-style-type: none"> ▪ Institute of Materials Science (IMS), VAST ▪ VNU ▪ Institut Neel of SNRS ▪ Institut National Polytechnique de Toulouse ▪ University of Aix – Marseille ▪ University of Paris-Sud
Information and Communication Technology	ICT	<ul style="list-style-type: none"> ▪ Institute of Information Technology (IOIT), VAST ▪ Institut de Recherche pour le Développement (IRD), Université Montpellier 2 ▪ University of La Rochelle
Renewable Energies	Not yet	<ul style="list-style-type: none"> ▪ Planned partners ▪ Institute of Energy, VAST
Space and Applications	Not yet	<ul style="list-style-type: none"> ▪ Planned partners ▪ Vietnam National Satellite Center (VNSC) ▪ Space Technology Institute (STI), VAST

Source: Made by JICA Study Team based on “Progress Report 2010-2013 to the First Meeting of the University Council”, USTH, 2013

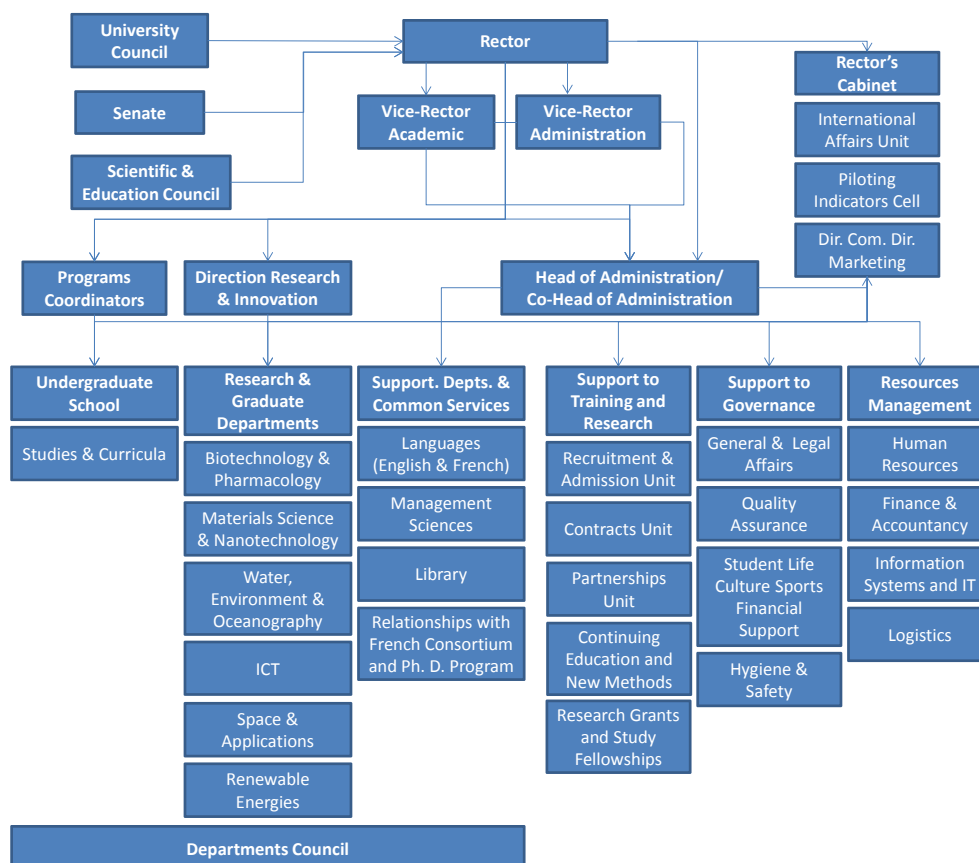
Through these joint laboratories, USTH and partners not only share laboratories but also start joint research. In addition to the joint laboratories, financial support from the French Ministry of Foreign Affairs, which is mainly used for laboratory equipment, contributes to the initial implementation of research at USTH. Thanks to the laboratories, students of master programs of USTH have chances to do laboratory work through their courses of study.

When those who went to France to get Ph.D.s return to Vietnam (planned for 2013), it is expected that more research will be conducted at USTH.

(5) Management of the University

USTH has been established based on a special charter²². Therefore, it has great autonomy in terms of educational programs and management even though it is still a public university of Vietnam.

The organizational chart is shown below.



Source: Made by JICA Study Team based on “Progress Report 2010-2013 to the First Meeting of the University Council”, USTH, 2013

Figure 4-2 Organization Chart of USTH

The management of USTH is conducted by the combination of French and Vietnamese. For example, the Rector is French and the two Vice-Rectors are Vietnamese, nominated by MOET. Also, each academic department is headed by a French Director and Vietnamese Co-Director. In terms of French staff, in addition to the Rector, the Director of Research and Innovation and the Head of Administration are French and based in Hanoi. Moreover, among the French directors of academic departments, the Directors of Biotechnology & Pharmacology and Water, Environment & Oceanography are permanent and based in Hanoi, too.

The University Council and the Senate are in charge of the governance of USTH. The University Council is the highest political governance body and is composed of 20 members from 2 countries (10 for each). The Senate, on the other hand, is composed of 12 members.

²² Prime Minister's Decision No. 1126/OD-TTg dated on August 23, 2012 (should be checked)

(Rector and 2 Vice-Rectors), representatives of scientific departments, staff, students and external scientists.

In order to support USTH academically, 43 universities, engineering schools and research organizations in France form a consortium. The consortium's responsibilities are to organize to send French professors to Hanoi, to arrange and support the lives of Ph.D. students from Vietnam in France, and so on.

The French consortium sends professors to USTH's master programs and around 200 lecturers visited USTH for teaching in 2013. On average, these visiting lecturers stay 10 days at USTH and teach 23 hours. Around 80% of the classes in the master programs are taught by these French lecturers. In addition, there are 61 Vietnamese lecturers, who are locally hired. Regarding bachelor programs, all lecturers are currently hired temporarily (on contract) and 76 Vietnamese lecturers and 30 lecturers from universities in France, UK, USA, Canada, Australia, India, Korea, Thailand and so on.

Major income sources of USTH are funding from the French government as well as the Vietnamese government and tuition fees. Funding from the French government will be around 100 million Euros over 10 years to ensure a major part of the training at the graduate level and to build research capacity. Funding from the Vietnamese government, on the other hand, covers operating costs of the university, including salaries and wages, consumables and services, etc. Tuition fees at present are USD 1,000 for bachelor programs and USD 1,500 for master programs per year. Annually, 20% of tuition fees income is allocated as student scholarships, and excellent students can receive full scholarships (covering tuition fees and living expenses) or tuition fees scholarships or partial scholarships based on their academic results.

4.1.3. Vietnamese-German University (VGU)

(1) Overview

The Vietnamese-German University (VGU) was founded in 2008 as a government university in close cooperation with the German government and universities. It was established as the first New Model University under the Ministry of Education and Training of Vietnam, which aims to have international standards with support from foreign countries. Currently, it is located on three different campuses: one is in Binh Duong (utilizing a building of Eastern International University) and the other two are in Ho Chi Minh City (one is located in Thu Duc District, next to VNU-HCM, and the other is located in the center of Ho Chi Minh City). VGU will have its own campus in Binh Duong in the future (scheduled for 2017).

The mission of VGU is "offering excellent study programs to students", "providing students with best opportunities on the job-market", "training young Vietnamese academics for Vietnam's economy", "becoming the leading research university in Vietnam and the region", and "establishing an outstanding research culture right in Vietnam".

At present, around 500 students are studying at VGU: 300 at the undergraduate level and 200 at the graduate level. It is planned that VGU will have 1,000 students by 2014, 5,000 students by 2020, and 12,000 students by 2030.

(2) Programs

VGU offers 9 study programs—3 bachelor programs and 6 master programs—in 2013. All programs are taught in English.

The following programs are offered at the undergraduate level.

- Computer Science (Software Engineering and Information Technologies) in cooperation with the University of Applied Sciences Frankfurt/Main, the University of Applied Sciences Cologne, and the University of Applied Sciences Bonn Rhine/Sieg
- Electrical Engineering and Information Technology (focus on Electronics and Telecommunication) in cooperation with the University of Applied Sciences, Frankfurt/Main
- Finance and Accounting, in cooperation with the Goethe University Frankfurt

These bachelor programs are for four years and the first year of the programs is a foundation year. The foundation year is a preparation course and students study English and review and enhance high school knowledge of mathematics and physics in English so that they are able to study successfully in their bachelor programs in English from the second year. Students with sufficient English proficiency study German in their foundation year.

After students successfully finish the foundation year, they start studying in each program from the second year. The curriculum of each program is developed by VGU and partner German universities and follows German standards. Upon completing all the requirements, students receive bachelor degrees from the German university that offers the program. Besides, students will be awarded VGU degrees²³.

There are 6 master programs (4 full-time programs and 2 part-time programs) at VGU, as follows:

- Mechatronics and Sensor Systems Technology in cooperation with the Hochschule Karlsruhe – University of Applied Science
- Computational Engineering in cooperation with the Ruhr-University Bochum
- Sustainable Urban Development in cooperation with the Technical University Darmstadt
- Traffic and Transport in cooperation with the Darmstadt University of Technology
- Business Information Systems (part-time program) in cooperation with the University of Applied Sciences Heilbronn and the University of Applied Sciences Furtwangen
- MBA in Small- and Medium-Sized Enterprise Development (part-time program) in cooperation with Leipzig University

The curricula of the programs are developed by VGU and partner German universities and meet the standards of Germany. Upon completing the programs, students are awarded master's degrees by the German partner universities that offer the programs, as well as VGU degrees.

(3) University Entrance System

Student selection for undergraduate programs is conducted in two ways. The first selection takes place around June before the National Entrance Examination. VGU utilizes the examination conducted by the German Academic Exchange Service (DAAD), which is a problem-solving type, as an entrance examination. Another selection uses the results of the National Entrance Examination. Students who do not take part or do not succeed in the exam

²³ A VGU degree is not like a degree for other public universities by MOET, but like a certificate of four-year study at VGU.

at the first selection but wish to study at VGU can still apply for VGU around August if they pass the flooring scores set by VGU for the National Entrance Examination. Students at the second selection need to take VGU's English test as well. About 80% of entering students take the first selection.

Student selection for graduate programs is done by an entrance test or an interview specified for each master's program, and an English test. Scores of IELTS or TOEFL are not required at the time of application, but students should prove their proficiency through these tests within the first semester of the program.

(4) Research Activities

The major mission of VGU is to be a research-oriented engineering university. Therefore, VGU is planning to have an interdisciplinary research center focused on high-tech engineering and sustainable development and on conducting a lot of research in the future. However, being at the initial stage of development and not having its own complete campus, research activities at VGU are very limited at the moment. In 2010, the Vietnamese-German Transport Research Center was opened in Ho Chi Minh City and started its research activities. In addition, there are doctor candidates at the center.

Although VGU has a small budget for research activities from the World Bank loan, researchers at VGU mainly should find financial sources by themselves. VGU seeks to collaborate with private sectors for research, but the collaboration has not materialized so far.

(5) Management of the University

Although VGU is a Vietnamese governmental university, it has a special charter and it is managed and operated under the special charter. The charter gives VGU much more autonomy in its educational programs as well as its management compared to other public universities. For management and administration purposes, the following sections are there at VGU:

- Presidential Board
- Strategic University Development and Administration Office
- Academic Affairs Office
- Marketing Department
- Finance and Accounting Department
- Student Affairs
- HR Department
- IT Department
- Procurement and Facility Department
- VGU Project Management Unit

In addition, VGU has its University Council, which consists of 10 Vietnamese and 10 Germans. The council meets twice a year, once in Vietnam and the other time in Germany, and discusses the overall management including the approval of VGU's annual plan. Council members from Vietnam are appointed by MOET and members include the Minister and Vice-Minister of MOET and the Vice Minister of the Ministry of Science and Technology.

German universities form a consortium to support VGU in terms of academic expertise, curriculum, teaching staff and researchers. Currently, there are 37 universities in the consortium and 8 universities out of 37 are actually involved in VGU's educational programs. These universities develop programs for VGU, send their professors to VGU, and award degrees to VGU students.

Most of the lecturers at VGU are German professors, called "Flying Faculty", who have travelled from Germany for a short period. They stay at VGU for about 3 weeks and provide intensive lectures for two weeks. Their salaries, travel costs and allowances are paid by the German government. Besides, VGU hires resident academic coordinators for each program and a few Vietnamese lecturers. VGU is trying to increase the number of Vietnamese lecturers in the next five years, but it faces difficulties in recruiting them because Binh Duong is far away from the center of Ho Chi Minh City.

Currently, the income sources for VGU are the Vietnamese government, a WB loan (for New Model University Project) and tuition fees. In addition, the German government pays for the costs of professors from German universities that provide educational programs. Tuition fees started at USD 1,500 per year in the beginning. However, has increased up to about USD 3,000 per year these days, which includes fees for dormitories or shuttle bus transportation from Ho Chi Minh City. Tuition fees cover only 10% of operation costs. VGU offers merit-based scholarships to its students, which are paid based on students' academic results.

4.2. Benchmarks in Overseas Universities

Several key factors for assessing the quality and management of education in the university should be considered for VJU planning. Some benchmarks of the key factors are shown in this chapter.

4.2.1. University Finance

Figure 4.2.1 compares income sources of well-known universities in the world and Japan, and some examples in Vietnam.

Income

Compared to the universities in Vietnam, the world's well-known universities have several income sources so that they do not rely on the students' income or government support only.

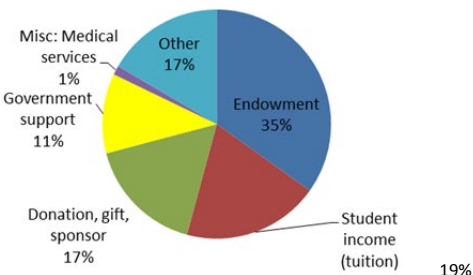
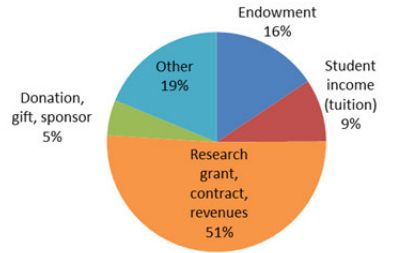
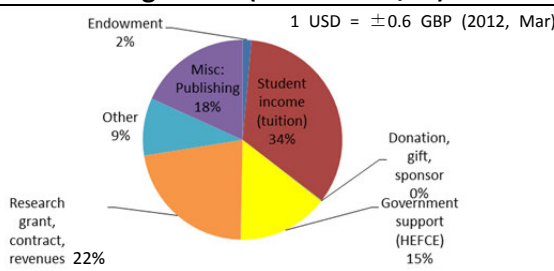
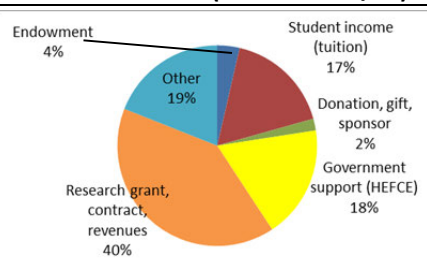
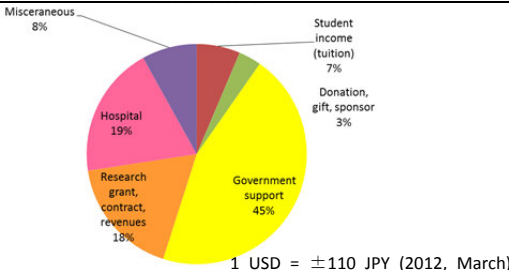
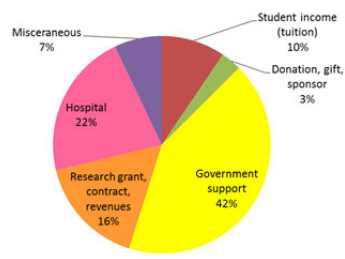
Some of the important income sources for these universities are research grants and contract revenues, which can be from forums, associations, government budget or private companies, etc. In other words, research is the major activity of these universities.

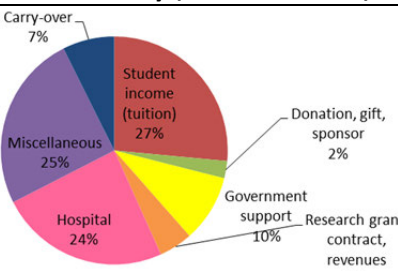
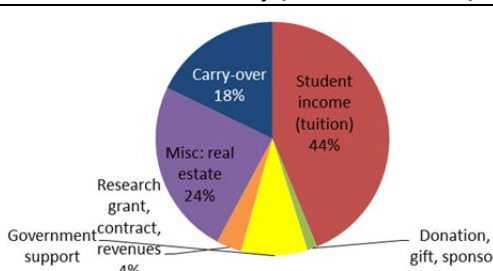
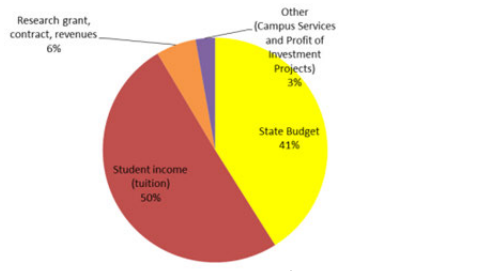
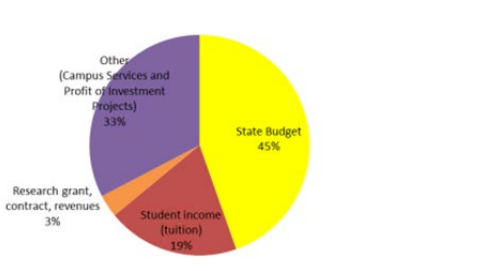
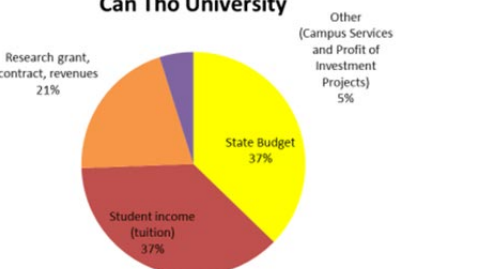
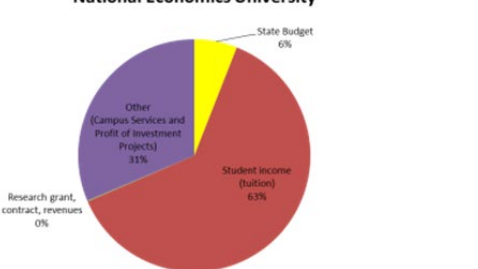
On the other hand in Japan, among 4 Japanese universities, the difference between public universities (the University Tokyo and Kyoto University) and private ones is obvious, which is of having University Hospital as an income source or not.

Expenditure

In most of the universities, almost half of the expenditure is used for salaries and employees' benefits. MIT spent a large portion of its budget for supplies and services, which may be related to their research activities.

Table 4-7 Income Sources of Universities

Harvard Univ. (Income 2011/12)			MIT (Income 2011/12)		
					
Classification	Million \$		Classification	Million \$	
Endowment	1,400		Endowment	469	
Student income (tuition)	777		Student income (tuition)	276	
Donation, gift, sponsor	670		Research grants, contracts, revenues	1,528	
Government support	452		Donation, gift, sponsor	156	
Misc: Medical services	52		Other	562	
Other	665				
TOTAL	4,016		TOTAL	2,991	
Cambridge Univ. (Income 2011/12)			Oxford Univ. (Income 2011/12)		
					
Classification	Million £	Million \$	Classification	Million £	Million \$
Endowment	19	29.4	Endowment	36.7	56.9
Student income (tuition)	449	695.7	Student income (tuition)	173.3	268.5
Donation, gift, sponsor	2	3.1	Donation, gift, sponsor	19.3	30
Government support (HEFCE)	195	302.1	Government support (HEFCE)	184.6	286
Research grants, contracts, revenues	293	454	Research grants, contracts, revenues	409	633.7
Other	123	190.6	Other	193.2	299.3
Misc: Publishing	241	373.4			
TOTAL	1,322	2,048.3	TOTAL	1,016.1	1574.4
The University of Tokyo (Income 2011/12)			Kyoto University (Income 2011/12)		
					
Classification	Million ¥	Million \$	Classification	Million ¥	Million \$
Student income (tuition)	13,860	126.1	Student income (tuition)	13,733	125
Donation, gift, sponsor	7,229	65.8	Donation, gift, sponsor	4,402	40.1
Government support	98,253	894.1	Government support	61,400	558.7
Research grants, contract, revenues	38,346	348.9	Research grants, contract, revenues	23,658	215.3
Hospital	42,004	382.2	Hospital	31,466	286.3
Misc: real estate	17,553	159.7	Misc: real estate	10,294	93.7
TOTAL	217,245	1976.8	TOTAL	144,953	1319.1

Keio University (Income 2011/12)			Waseda University (Income 2011/12)		
					
Classification	Million ¥	Million \$	Classification	Million ¥	Million \$
Student income (tuition)	52,776	480.3	Student income (tuition)	68,769	625.8
Donation, gift, sponsor	4,882	44.4	Donation, gift, sponsor	2,174	19.8
Government support	19,012	173	Government support	14,415	131.2
Research grants, contract, revenues	9,539	86.8	Research grants, contract, revenues	5,510	50.1
Hospital	48,363	440.1	Misc: real estate	38,204	347.7
Misc: real estate	50,018	455.2			
Carry-over	14,747	134.2	Carry-over	28,024	255
TOTAL	199,337	1814	TOTAL	157,096	1429.6
VNU-Hanoi: University of Economics and Business (Income 2011/12)			VNU-Hanoi: University Education (Income 2011/12)		
 <p>1 USD = ±21,000 VND (2012, March)</p>					
Classification	Million VND	Million \$	Classification	Million VND	Million \$
National budget	16,949	0.81	National budget	7,275	0.35
Tuition fees	20,810	0.99	Tuition fees	3,169	0.15
Research grants	2,380	0.11	Research grants	545	0.03
Others (Campus service, Investment income)	1,157	0.06	Others (Campus service, Investment income)	5,323	0.25
TOTAL	41,296	1.97	TOTAL	16,312	0.78
Can Tho University (Income 2011/12)			National Economics University (Income 2011/12)		
					
Classification	Million VND	Million \$	Classification	Million VND	Million \$
National budget	136,443	6.50	National budget	27,028	1.29
Tuition fees	136,234	6.49	Tuition fees	282,903	13.47
Research grants	75,881	3.61	Research grants	648	0.03
Others (Campus service, Investment income)	17,886	0.85	Others (Campus service, Investment income)	141,787	6.75
TOTAL	366,443	17.45	TOTAL	452,366	21.54

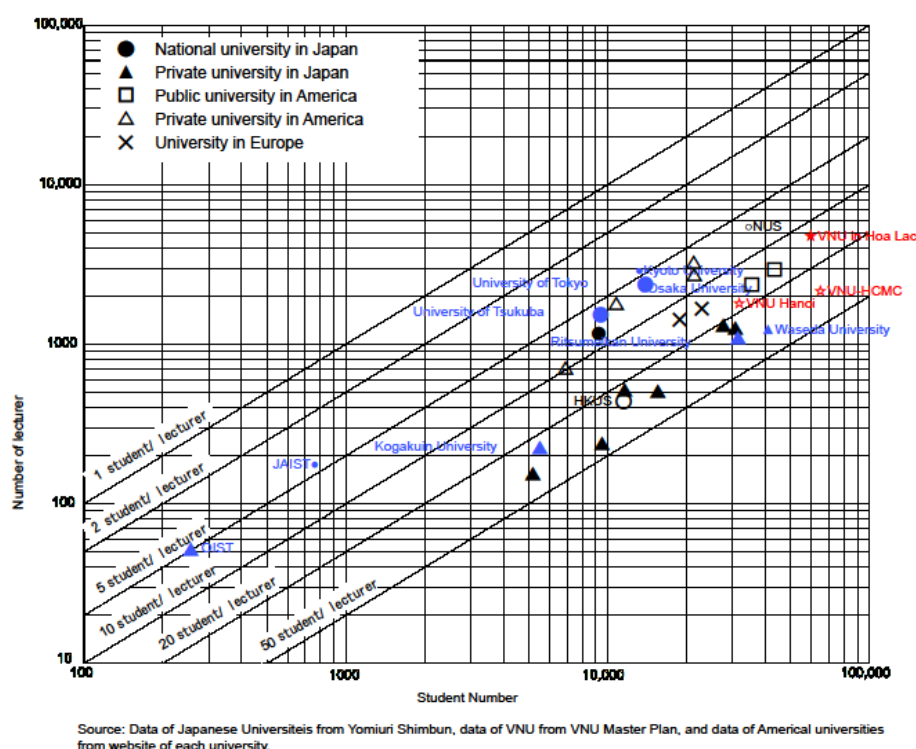
Source: Harvard University: Financial Report Fiscal Year 2012
MIT: Report of Treasurer for the year ended June 30, 2012
Cambridge University: Reporter 2012-2013
Oxford University:
http://www.ox.ac.uk/about_the_university/facts_and_figures/financial_statements.html
The University of Tokyo: Financial Report 2011
Kyoto University: Financial Report 2011
Keio University: http://www.keio.ac.jp/ja/about_keio/data/kr7a430000035fgk-att/2011_kessan.pdf
Waseda University: Financial Report FACT 2011
<http://websrv.ctu.edu.vn/upload/notice/2011/tc1.xls>
<http://www.ueb.edu.vn/Sub/21/categoryparent/254/congkhai.htm>
http://www.education.vnu.edu.vn/index.php?option=com_content&task=view&id=1212&Itemid=807
<http://www.neu.edu.vn/ViewBaCongKhai.aspx?ID=95>

4.2.2. Lecturer to Student Ratio

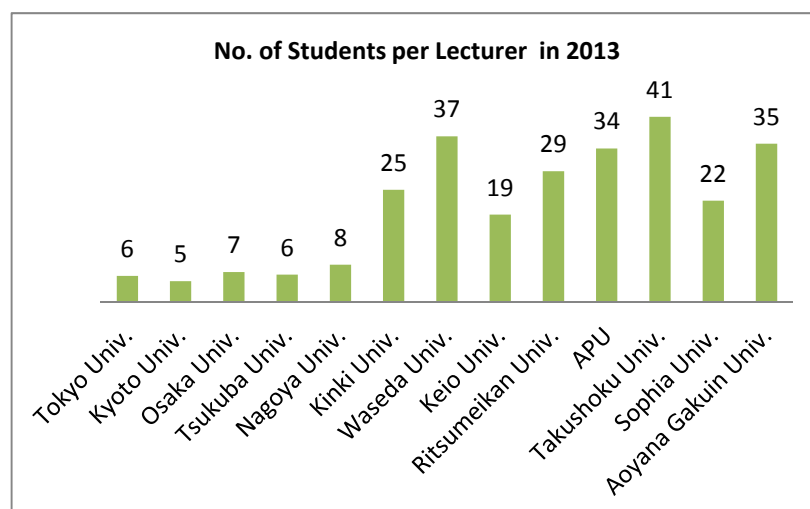
The ratio of the number of lecturers to the number of students is also a key factor to assess the quality of education in each university.

Figure 4.3 indicates the ratio of the number of students and lecturers in the major universities in the world, and Figure 4.4 shows a comparison of the number of students per lecturer in Japanese universities (2013/14). Significant differences on number of students per lecturer are seen between public universities (the Tokyo University, Kyoto University, Osaka University, Tsukuba University, and Nagoya University) and private universities. These are related to the above-mentioned financial situation, but more to their activities, how much emphasis is put on research activities.

Comparing to these benchmarks, the current situation of VNU-Hanoi is better than that of private universities in Japan, and the target ratio of lecturers to students in VJU, 12 students per lecturer in the future seems reasonable as a research-oriented university.



Source: Data of Japanese Universities from Yomiuri News (8th and 9th July 2013).
Data of VNU is from VNU Master Plan.
Data of American Universities is from the website of each university.



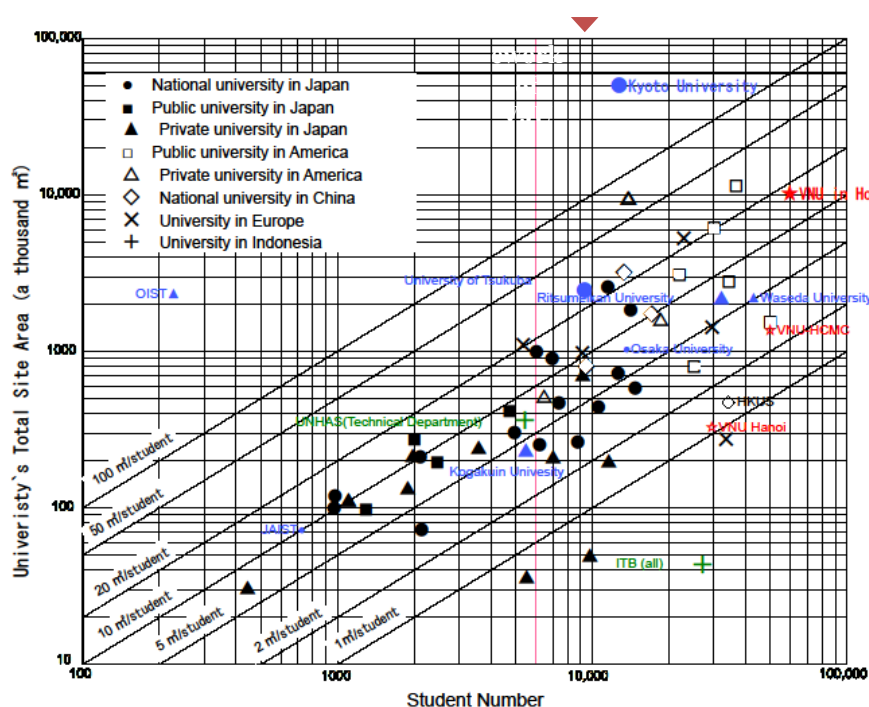
Source: Yomiuri News (8th and 9th July 2013)

Figure 4-4 Number of Students per Lecturer in 2013 (Japanese Universities)

4.2.3. Campus Area per Student

The sizes of campuses per students of benchmark universities are shown in Figure 4.3.1. The size of campus is related to the location of the campus (urban campus or suburban campus) and the types of activities. However, the research and education environment will be one of the essential factors to attract top-class researchers and lecturers to VJU.

The situation of VNU-Hanoi is expected to be improved significantly by moving to the Hoa Lac campus.



Source : Data of Japanese Universities from each university's HP. Data of VNU from Master Plan for VNU.
The graph and data in black is taken from Handbook of Environmental Design.

Source: Data of Japanese Universities is from the website of each university.
Data of VNU is from VNU Master Plan.
The graph and data in black is taken from Handbook of Environmental Design

5. Vietnam-Japan University's Human Resources Needs

In this chapter, needs for Vietnamese human resources, which will inform the idea of VJU, are summarized.

5.1. Japanese Firms' Needs of Vietnamese Human Resources Based on Existing Surveys

With the purpose of creating a roadmap relating to medium- and long-term human resource development and to review the supporting policy for the human resource development sector by JICA's assistance scheme, JICA conducted the "Vietnam Human Resource Development Field Information Collection and Verification Survey (September 2012)". This study summarizes an evaluation of the research superiority of Japanese universities, the needs of Japanese companies, and the Vietnamese government's need of assistance for human resource development in the medium to long term. The details are as described below.

(1) The Issues of Higher Education in Vietnam

Even though the Vietnamese government is promoting economic reform, the development of human resources has not kept pace with this economic innovation. The fact that the Vietnamese government system does not meet the requirements needed to integrate with the global society and local community was pointed out, such as the low quality and low efficiency of education, the low quality of elite education and research capacity, funding sources, impractical curricula, quality of teachers and centralized management.

(2) The Need of Japanese Companies for Vietnamese Human Resources

Japanese companies' needs for Vietnamese staff are summarized as follows. It should be noted that many Japanese companies provide in-house training in order to improve the skills required below.

Table 5-1 The Need of Japanese Companies for Vietnamese Human Resources

Work-type-based skill requirements	<ul style="list-style-type: none"> - Worker: Work attitude and basic ethics - Skilled worker: hard skills and communication skills - Engineer: advance hard and soft skills - General staff: soft skills - Manager: all skills
Evaluation point when hiring	<ul style="list-style-type: none"> - Manner/communication skill - Adaptability to the corporate culture - The will to work in the company for a long period of time
Human resources evaluation point	<ul style="list-style-type: none"> - Basic ethics and attitude - Soft skills, including communication skills and logical thinking ability - Hard skills - Management skills

Source: Study on Human Resource Development In Vietnam (September 2012)

(3) Recommendations to Higher Education

Regarding the demands and expectations from Japanese companies toward higher education in Vietnam, the areas in which education improvement is needed for engineers and general staff were pointed out as follows.

Table 5-2 Expected Education Area for Engineers and General Staff

Engineers:	General Staffs:
<ul style="list-style-type: none"> - Math, physics - Communication - Planning and management - Quality control and production management - Product design 	<ul style="list-style-type: none"> - Communication - Teamwork - Report writing - Leadership - Logical thinking

Source: Study on Human Resource Development In Vietnam (September 2012)

(4) The Examples of Cooperation Between Japanese Companies and Vietnamese Universities

Examples of cooperation between Vietnamese universities and Japanese companies, such as internships, scholarships, joint research and development, intellectual property rights and technology transfer, ventures/entrepreneurship, endowed courses, dispatch of instructors and donations of equipment, etc.

5.2. Japan-Vietnam Joint Initiatives (Phase 5)

"Japan-Vietnam Joint Initiatives (Phase 5) 2013-2014" is targeting to improve the environment for investment in Vietnam, and its 3 pillars are "emphasizing issues of the on-going projects", "improvement of legal systems for the service industries such as retail and financial services" and "strengthening of infrastructure for economic development in relation to industrialization strategy". Working team 4 (WT4) handles the field of "human resources and labor", as follows:"

5.2.1. Problem Recognition Regarding Human Resources

- (i) Manufacturing workers remain at 13.8 %
- (ii) It is not an environment where workers can be employed once they have finished job training.
- (iii) The human resource development of Japanese companies is to provide an in-house training, and dispatch the talented ones to Japan to be in charge of an important position.
- (iv) WT4 is to plan and execute the part in which Japan-Vietnam cooperation is possible.

5.2.2. Action Plan

Below is the summary of accumulation and results up to Japan-Vietnam Joint Initiative Phase 4

(1) School Stage

- (i) Vietnam: to expand Japanese language education in secondary education
- (ii) Vietnam: to strengthen the function of the vocational training center in the Hanoi University of Technology

- (iii) Japan: to implement the scholarship program for talented college students
- (iv) Vietnam: to try the education system of Japanese Technical College (Kosen)
- (v) Vietnam and Japan: to exchange views on the nature of education and production engineering training

(2) Matching

Vietnam and Japan are to hold a job fair for university students who wish to work in Japanese companies and for Japanese companies that wish to employ VJ human resources (VJCC, MOIT, MOET).

(3) Employment Stage (Technician)

- (i) Vietnam is to implement a national test for the manufacturing job field.
- (ii) Vietnam and Japan are to encourage both Japanese and Vietnamese enterprises to participate actively in the skill test system.

(4) Employment Stage (Manager)

Vietnam and Japan are to promote the efforts of manager training (other than VJCC).

5.2.3. Relationship with VJU Concept

Basically, the main purpose of the Japan-Vietnam Joint Initiative seems to be the development of the site worker class.

However, one can say that action plans such as “expansion of Japanese language education in secondary schools”, “exchange of opinions on education and training for industrial engineering”, etc. will lead to broadening of horizons for supporting the idea of VJU.

Also, action plans such as the “implementation of the scholarship program for talented university students”, “holding a job fair”, or “promoting efforts to train managers” are thought to have a high possibility of cooperation with VJU.

Even though vocational-training-level action plans are not within the direct scope of VJU, indirectly, it seems possible to be involved through instructor training for Hanoi University of Technology.

5.3. Japanese Companies’ Demand for University Education and VJU (Hearing): Survey of Japanese Companies

For the “Data Collection Survey for VJU”, basic research is required to show a long-term vision. Therefore, it is necessary to conduct the “Human Resource Need Survey” in order to analyze the current and future need at the same time and indicate them in a vision that meets the need.

For that reason, in order to analyze the current need as objectively as possible, a questionnaire survey intended for all Japanese companies that were members of the Japan Chamber of Commerce & Industry was conducted.

Please note that the survey results in 5.3 are for understanding qualitative needs, whereas 5.4 is for the quantitative ones.

5.3.1. Interview Outline

In order to understand the future need, with the help and advice of the Japan Chamber of Commerce & Industry, as well as The 2nd Thang Long Industrial Park, interview surveys were carried out.

(1) The Survey Method

The Preparatory Survey (April 2013): Interviews were conducted with 11 companies, including the Japan Chamber of Commerce & Industry and The 2nd Thang Long Industrial Park, in order to prepare for the main questionnaire/interview survey. Human resource needs, as well as new tendencies, were collected, especially during the interview.

The Main Survey (July 2013): Based upon the results from the Preparatory Survey, interviews mainly aimed to confirm new needs and a cooperation request for a questionnaire survey was made.

(2) The Interview

During the survey in April, while putting into account the existing survey, it was confirmed that the need from the industrial sector (the assembly industry, in particular) which number of Japanese companies as well as employees are overwhelmingly large, has not changed much from the existing one.

*There is no statistical data of the employees' number. However, many are large-scale companies with several thousand employees, such as: Canon (24,000 employees), Yamaha (9000 employees), Brother (6,800 employees), Toyota (1,700 employees), as well as Honda, Panasonic, etc. On the other hand, the number of employees of trading companies and banks is less than 100.

In other words, the practice in Vietnam referred to as "slash-and-burn", collectively employing "unskilled workers"—low-wage workers—without much consideration regarding added value, is still mainstream. Thus, the condition of not needing or not expecting high-quality human resources or research development was confirmed.

On the other hand, even in such a condition, a new movement of companies that see Vietnam as a base for research and development was confirmed. The 2nd Thang Long Industrial Park, in particular, has been actively attracting R&D-oriented companies, such as the target companies for this survey (SOC, Shin-Etsu Chemical, HOYA, Panasonic etc.). The situation in which R&D of the assembly industry can be diversified was understood.

Currently in Hanoi, there are cases referred to as "R&D-oriented" as well as cases in which Vietnam is seen as a production area and as a consumption area. Nissan Techno, SOC and HOYA are suspected to be representative of the former, whereas Panasonic is for the latter (however, interviews were not conducted).

In the manufacturing industry, there is a tendency to divide the levels of R&D: sophisticated to Japan and the rest to local companies. Seeing Vietnam as a production area, there is a possibility to gradually transfer the R&D function to the production area starting from the low-level field.

Furthermore, when seeing Vietnam as a consumption area, there is a possibility to develop a base for R&D in Vietnam in developing products at a level that meets the needs of customers in Vietnam and Southeast Asia. There was one opinion from a company whose name cannot be mentioned (a well-known manufacturer with wide-spread products), that when products

level 4 out of 4 level (the most basic one) cannot be produced, “you will not win the price competition”.

(3) Selection Criteria of the Targeted Companies

Regarding the selection criteria, priority is given to companies that understand new trends that can help the “Study of Vietnam-Japan University”, that are capable of collecting a wide range of opinion and understand the importance of cultivating human resources in Vietnam.

When selecting companies for the survey, while putting emphasis on understanding new trends, priorities are given to the following:

- Companies that are interested in social contribution (the will to actively contribute to Vietnam’s society is considered to be the core of interest toward “Study of Vietnam-Japan University”).
- Companies that are likely to be a partner (Companies with high potential of involvement, including critical comments toward the “Study of Vietnam-Japan University”).
- Companies that are likely to demand high-quality human resources (including the advice from the 2nd Thang Long Industrial Park) (Companies with high-quality human resources, as the foundation of the “Study of Vietnam-Japan University”)
- Companies that are likely to demand advanced Japanese-speaking human resources (Companies that treat local staff as executive trainees and not as “interpreters”).
- Companies that have high expectations toward Vietnam-Japan University

Moreover, in order to get a wide range of opinions, both the executive and former executive of the Japan Chamber of Commerce and Industry were prioritized, because not only are/were they in charge of Vietnam-Japan Joint Initiative, but they were also in a position by which Japanese companies can be seen in a cross-sectoral manner, regardless of the company’s sector of industry.

In a limited time, with consideration on understanding the importance of cultivating human resources in Vietnam from the viewpoint of companies that put importance on the development of the Japan-Vietnam relationship, support experience toward VJCC was also put into consideration for selection of companies to be interviewed.

Since the number of member companies as well as employees is predominantly from the industrial field, it is determined that it is necessary to give priority to companies in the industrial sector regarding human resource development. Thus, many of the survey’s correspondents are from companies in the industrial sector.

Excluding the Japan Chamber of Commerce and Industry as well as industrial parks, the individual companies that we interviewed were 3 companies in trading, 1 company in construction, 13 companies in industry, 2 companies in finance and insurance, 3 companies in service and 1 company in transportation. In addition, we managed to carry out interviews with 4 out of 7 executive member of the Japan Chamber of Commerce and Industry.

5.3.2. The Need for Persistent Workers

The 14 companies in the industrial field are divided into two groups: the so-called assembly/labour-intensive companies and companies that are actively involved in technology development.

The human resources need for the former is vocational training for workers, as highlighted in the Japan-Vietnam Joint Initiative (see above).

Regarding the former human resource needs, as highlighted in the Japan-Vietnam Joint Initiative, the need for vocational training workers is high. Although it is not possible to ignore the basic need, making VJU as the main pillar is considered not pertinent. However, VJU is expected to contribute to improving the quality of vocational training schools whereas Hanoi University of Technology plays a central role in the vocational training field.

5.3.3. The Need for the “Japanese Way of Working”

From Japanese companies’ side, while there are many voices that criticize the university education of Vietnam, the “Japanese way of working” is commonly needed by Japanese companies that emphasize vocational training.

What can be done in the field of university education is to experience and learn the corresponding Japanese approaches to things; for example, “through education” in Japan is to offer a wide range of knowledge, to think by yourself, to think with others, and to summarize all the opinions.

These experience of Japanese-style working cannot be taught only by instructor, thus the participation of business people is essential.

From this point of view, there is a need for VJU to respond to Japanese companies’ need of “Japanese style way of working” and accordingly build a system with Japanese companies.

5.3.4. The Need for a Wide Range of Science-Related Education

The need for a wide range of education was pointed out by several companies in this survey.

Conventionally, as seen in the dominant assembly industry, the need for the mechanical and electrical fields was high. However, it can be said that in non-assembly industries, even in the manufacturing sector, particularly the ones working on research and development, the need for basic subjects such as chemistry has risen.

From this point of view, there is a need for VJU to enable taking a wide range of education courses, just like in university education in Japan.

5.3.5. The Need for Skilled Human Resources in Charge of Research and Development

One of the remarkable facts found in this survey was a new type of need for high-level human resources from companies seeking an R&D base.

In the survey in April, only Nissan Techno Co LTD moved a part of its R&D from Japan and from the Hanoi Office to Hoa Lac Hi Tech Park. However, in the last survey that needs come from several companies.

In this survey, a new need of companies located in Thang Long Industrial Park II (TLIPII) seeking a base for R&D was observed in companies such as HOYA GLASS DISK VIETNAM and SOC (Sumitomo Osaka Cement Co Ltd). Particularly in HOYA Corporation, there was an issue of considering transferring the R&D department to Hoa Lac Hi-Tech Park.

From this point of view, there is a need to respond to the research of VJU with companies working on R&D and VJU’s special lectures.

5.3.6. The Need for Advanced Japanese Language Study

What can be regarded as one of the changes in the environment in this survey is the changing need of advanced Japanese learning.

First of all, there is a demand of not only enhancing the expertise of students majoring in science but also of having advanced Japanese language proficiency.

Second of all, even in the non-manufacturing sectors, in addition to advanced English language proficiency, advanced Japanese language skill has also been demanded lately. In the past, since the transactions were conducted in English, many companies did not require Japanese language skill. Also, it seems like the idea of hiring Vietnamese staff in Japanese companies is still in the distant future. However, since there were more expansion cases of small- and medium-sized enterprises recently, and business transactions and support conducted in Japanese have been increasing, it was indicated that there is a demand for advanced Japanese language proficiency. Also, the fact that the possibility of recruiting trained professionals has been increasing might be an underlying reason for the high demand of advanced Japanese language proficiency. At some companies that were surveyed, localization of the company president with an advanced level of Japanese proficiency has been conducted.

From this point of view, there is a need for VJU to train human resources—not only those with a high level of expertise but also those with advanced Japanese language proficiency.

5.3.7. The Need for Advanced Global Human Resources

What can be confirmed as a new tendency in this survey is the need for global human resources to be hired at the headquarters, beyond Vietnam.

The training for global human resources shall include high language skills (Japanese and English), a high level of expertise and necessary skills to respond to global business expansion.

Japanese alumni have been the target for this need so far. Thus it is necessary for VJU to work as one pillar of educating global human resources.

5.3.8. The Needs for Cooperation with Universities

Companies have been cooperating with Vietnamese universities, but it seems to be a mere social contribution. For example, although many Japanese companies provide scholarships (some also provide special lectures), most companies did not mandate employment.

However, since there is a new trend of commitment to research and development, some see the possibility of aspiring toward mutual benefit from special lectures and joint research.

From this point of view, there is a need for VJU to cooperate with not only Japanese companies but also Vietnamese and foreign companies.

5.3.9. The Need for Matching Service Between Japanese Companies and Students

Because the universities in Vietnam don't even provide much information for job hunting, efforts to approach universities by the Japanese companies to acquire talented human resources were uncommon.

However, in this survey, the need to participate in matching was confirmed. Moreover, matching was also raised to the action plan in the aforementioned "Japan-Vietnam Joint Initiative". From this point of view, in accord with the concept of the Japan-Vietnam Joint Initiative, there is a need for VJU to actively make effort for matching.

5.3.10. The Expectations for VJU Were Confirmed Through Interviews with Japanese Companies

(1) The Expectations of Geopolitical Importance and a 100-year Outlook of "Japanophile" Training in Vietnam

The importance of Vietnam's geopolitics is what everyone has pointed out and, since the 2000s, the political and economic relations of Vietnam and Japan have been deepened.

The expectation to aim for "Japanophile" training at VJU is very high even for those who emphasize the vocational training needs.

On the other hand, there was also a comment on the need to build a "Japan Pavilion" as an environment to foster "Japanophile" attitudes, where one could argue that VJU is expected to be the "place" for Japanese and Vietnamese who have an interest in interacting with Japan.

(2) Expectations for Efforts to Meet the Needs of Japanese Companies in Vietnam

Responding to Japanese companies' needs means improving the investment environment, further deepening the Japan-Vietnam relationship, and developing the industrialization of Vietnam.

On the other hand, because the result of Japanese ODA is not shown as something visible to Japanese companies, there is a high expectation to establish VJU from the perspective of enterprise and Japanese ODA collaboration.

(3) Expectations of a Model that Will Change the Structure of Vietnamese Society

One of the things that seems to be what Japanese companies are most concerned with according to this survey is the structure of "governance" in Vietnam.

On the other hand, it was indicated that the solution to the problem is passing along "patriot" as what the Japanese culture has been nurturing and "governance improvement" as what Japanese history has been working on.

Rather than in developed Western countries or China as the world economic powers, Japan received Vietnam's trust and felt the high expectation toward passing along "person-making" as the base for "country-making".

(4) Expectations of a Model that Will Change the Educational Structure of Vietnam

There seems to be some deep-rooted disbelief from Japanese companies and Vietnamese people toward the current university education in Vietnam. It can be said that as long as this problem is not solved, the trust toward the nation might collapse.

Although it is not an issue one university can solve, it can make a big impact if it is possible to realize university education like never before. The expectation toward VJU as this kind of Model University is considered high.

(5) Expectations of a Model that Fosters the Excellent Human Resources of Vietnam

Even among Japanese companies that sharply criticized the structure of Vietnam and presented candid advice about the work ethic of Vietnamese people, it is a common understanding that Vietnamese human resources are excellent. Why can't we cooperate to "gather" all the excellent human resources as one and sacrifice in order to realize it?

With Vietnamese as the main subject, there is high expectation towards fostering "great potential" Vietnamese human resources with support from Japan.

5.4. Enterprises Survey

5.4.1. Summary

In parallel with the outline of the above survey, this "Corporate Survey" study was conducted to target Japanese companies that expand their business to Vietnam.

The survey content includes challenges of undergraduate employment and training, the current state of support activities and contacts with local universities and also concerns and expectations of VJU.

With the full cooperation of The Japan Business Association in Vietnam (JBA), this survey was conducted between the end of July and mid-August and obtained valid responses from 120 companies. The collection rate was 23.1%. The preview of the survey is as follows.

(1) Target

Japanese member companies of The Japan Business Association in Vietnam (Hanoi)
(520 companies as of July 2013)

(2) Method

Internet survey. The method used was by sending request emails to member companies of the JBA that have direct access to the questionnaire from the banner attached.

(3) Period

July 26th to August 16th, 2013

(4) Collected data

Number of valid responses: 120 companies

Percentage of valid collection: 23.1%

5.4.2. Results Summary

(1) Outline of the respondent companies

The companies covered in this study are members of The Japan Business Association in Vietnam (JBA) that are centered in Hanoi and are located in the northern area.

Looking at the affiliations of the group of companies that answered the questionnaire, more than half belong to the industry group (56.7%), followed by the service group (20.0%) and construction group (10.0%). Overall, non-industrial and industrial had a ratio of 6:4. (Table 5-1)

The number of employees here refer to the the total number of Vietnamese employees, from a company of 10 people or less to a company with more than 20,000 people. Between industrial and non-industrial companies there is a big difference. For industrial companies, more than half (66.1%) have 100 employees or more, whereas for non-industrial companies, more than half (88.5%) have 100 employees or less. However, the employee numbers are widely dispersed, thus careful consideration is needed. (Table 5-2)

Looking at when businesses expanded to Vietnam, the largest number did so in "2005-2009", which accounted for 45.0%, followed by "after 2010" (26.7%). Thus, new companies with short histories accounted for more than half. However, companies with more than 10 years of history and that were established before 2004 added up to nearly one-third and 28.3% in total.

Table 5-3 Affiliation Groups of The Japan Business Association in Vietnam

	Industry Group	Construction Group	Trade Group	Finance & Insurance Group	Service Group	Transportation Group
Companies (Number)	68	12	10	4	24	2
Ratio (%)	56.7	10.0	8.3	3.3	20.0	1.7

Source: JICA Study Team

Table 5-4 Number of Employees (%)

	1-10	11-100	101-1000	More than 1001	Average (people)
All n = 120	23.3	34.2	26.7	15.8	810.2
Industrial n = 68	8.8	25.0	38.2	27.9	1382.0
Non-industrial n = 52	42.3	46.2	11.5	0	62.4

Source: JICA Study Team

Table 5-5 Year Starting Business in Vietnam (%)

	In 2010 or later	2005-2009	2000-2004	1995-1999	In 1994 or earlier
All	26.7	45.0	7.5	13.3	7.5
Industrial	26.5	45.6	13.2	14.7	0
Non-industrial	26.9	44.2	0	11.5	17.3

Source: JICA Study Team

(2) University Graduate Employment Status

1) Undergraduate, Graduate Students' Employment

Among the companies that answered, the majority (98.3%) hired undergraduates. The average college graduate employment (including masters) is 68.0 people per company, with an 8.4% ratio to the number of all employees. However, there is a large gap between the ratio of industrial (5.9%) and non-industrial (76.6%).

However, the ratio of companies that employ master's graduates is 24.2% in total, which equals 4.8 people per company. The ratio to total employees is 0.5%. Just like master's graduates, there is a considerable gap between industrial (0.3%) and non-industrial (3.7%) in undergraduate employment. Furthermore, employment percentage of graduate students compared to undergraduates (industry 1.2%, non-industrial 2.9%) is 1.7%.

**Table 5-6 Employment Situation of Undergraduates:
Companies that Employed Undergraduates**

	Number of companies	Composition ratio	University undergraduates (people)	Employee ratio
All	118	98.3%	8,029	8.4%
Industrial	67	98.5%	5,552	5.9%
Non-industrial	51	98.1%	2,477	76.6%

Source: JICA Study Team

**Table 5-7 Employment Situation of Undergraduates:
Companies that Employed Master Graduates**

	Number of companies	Composition ratio	Master graduates (people)	Employee ratio	University undergraduates
All	29	24.2%	139	0.5%	1.7%
Industrial	14	20.6%	67	0.3%	1.2%
Non-industrial	15	28.8%	72	3.7%	2.9%

Source: JICA Study Team

2) Students with Study in Japan Experience

According to the survey of Japanese companies, university graduate employees (including master graduates) with experience studying in Japan is still low at 2.2%. However, when limited only to master graduates, the number becomes 15.1%.

Table 5-8 People with Experience Studying in Japan

	① Number of employees (people)	② People with experience studying in Japan (people)	②/① %
Total	8,168	180	2.2%
1. Master graduates	139	21	15.1%
2. Undergraduates	8,029	159	2.0%

Source: JICA Study Team

3) The Purpose of University Graduates Employment

The major purpose of employing university graduates were “Mid Administrative Executive Training” (70.3%) and “Future Manager Training” (50.0%) is quite noteworthy, as it reaches more than half.

As for the corresponding data of industrial companies, “Mid Administrative Executive Training” reaches more than 80%, with a high ratio of “Future Manager Training” (58.2%) and “Training for Advanced Engineer & Expert” (59.7%). Whereas, in the data of non-industrial companies, “Because it is necessary in order to work” is a lot (56.9%). It seems there is active employment of university graduates.

Table 5-9 The Purpose of University Graduates' Employment (%)

Purposes	All	Industrial	Non-industrial
1. Future manager training	50.0	58.2	39.2
2. Training for advanced engineer & expert	45.8	59.7	27.5
3. Training of R&D Staff	7.6	13.4	0
4. Mid administrative executive training	70.3	83.6	52.9
5. Because it is necessary in order to work	47.5	40.3	56.9
6. Others	5.9	1.5	11.8
7. No answer	3.4	1.5	5.9

Source: JICA Study Team

4) Requirement to Focus During Employment

Regarding the employment of university graduates, the majority of companies put emphasis on “Communication skills” (78.0%), followed by “Character” (71.2%) and “Linguistic ability” (71.2%), whereas “Imagination, applied skills, flexibility” (53.4%) and “Basic academic skills”

(53.4%) were also emphasized as their ratios reached more than half. Compared to these, companies that put emphasis on “Academic results” (10.2%) or “Results of (written) entrance examination” (17.8%) are few.

When comparing industrial to non-industrial, there is no significant difference in the survey answers. The distinctive feature was that industrial companies emphasize "Basic academic skills" (62.1%) and "Qualification (certificate)" (28.4%), whereas non-industrial companies focus on "Linguistic ability" (82.4%).

Table 5-10 Emphasized Points when Employing University Graduates

(unit: %)

Emphasized points	All	Industrial	Non-industrial
1. Academic result	10.2	11.9	7.8
2. Imagination, applied skills, flexibility	53.4	53.7	52.9
3. Results of (written) entrance examination	17.8	22.4	11.8
4. Basic academic skills	53.4	61.2	43.1
5. Alma mater, faculty	30.5	34.3	25.5
6. Qualification (certificate)	20.3	28.4	9.8
7. Introducer	2.5	1.5	3.9
8. Personality	71.2	73.1	68.6
9. Linguistic ability	71.2	62.7	82.4
10. Communication skills	78.0	76.1	80.4
11. Others	7.6	9.0	5.9
12. No answer	1.7	0	3.9

Source: JICA Study Team

5) The Standard of Linguistic Ability During Employment

Most companies (82.2%) make linguistic ability a condition when employing university graduates. This trend is more evident in the non-industrial companies (90.2%) than in the industrial ones (76.1%).

Regarding English, the companies that make “Qualification (certificate)” an eligibility criterion are not many (12.4%), within which, there are plenty of companies that apply "more than 500" TOEIC score (41.7%). However, the majority of the companies hold the recruitment interview in English, thus it is possible to directly determine the English language proficiency during the interview.

As for Japanese language, there are more companies (30.9%) setting it as the eligibility criteria compared to those of English, with the number of companies that set a quite high standard—N1 & N2 together reach 63.3%.

When comparing the industrial to the non-industrial, the first tends to emphasize qualification whereas the latter seems to focus more on linguistic ability as the employment condition.

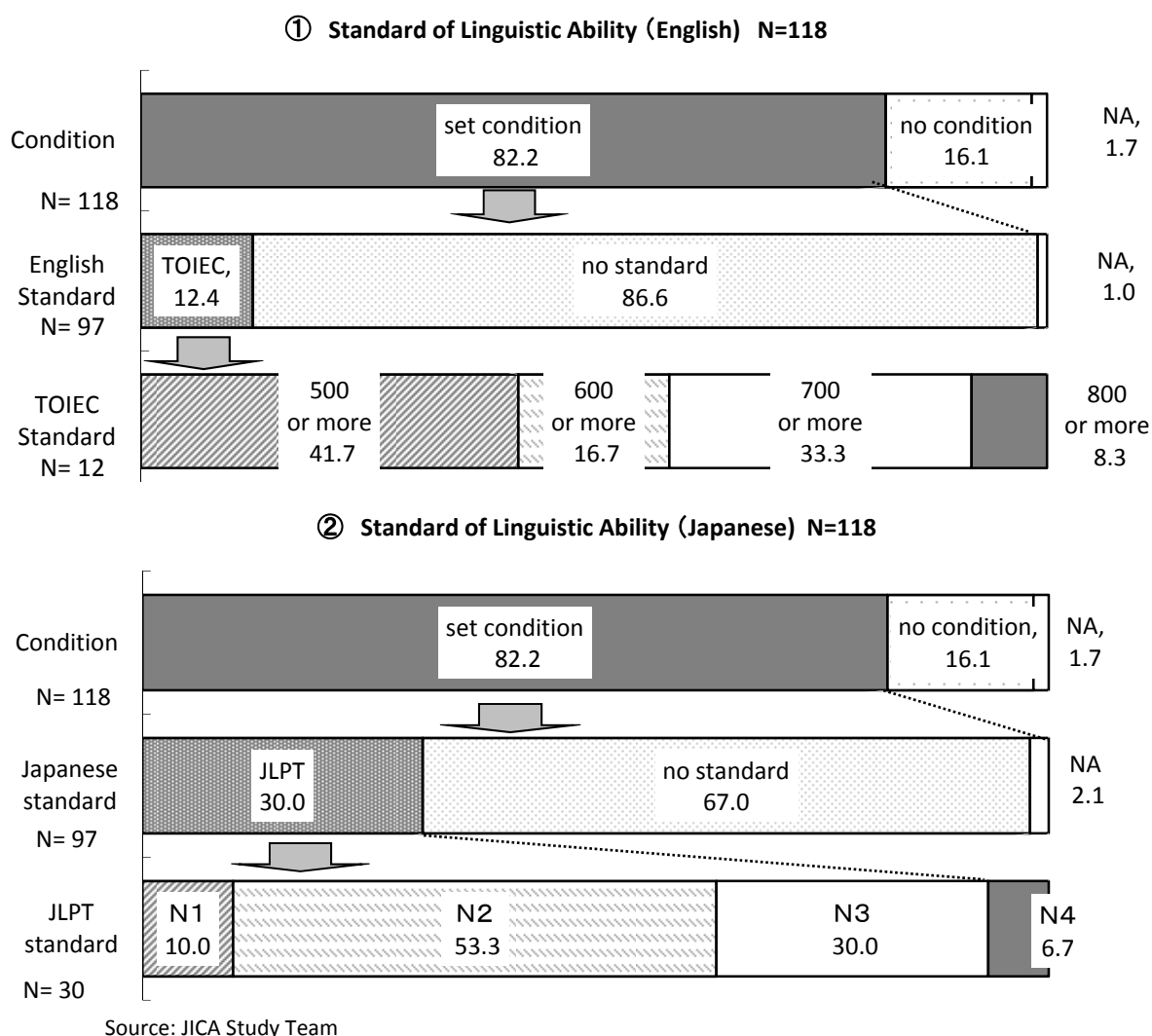


Figure 5-1 The Standard of Linguistic Ability

Table 5-11 Comparison Table Between Industrial and Non-industrial

	Make linguistic ability as university graduates' employment condition (%)	Set a standard for English proficiency (%)	Set a standard for Japanese proficiency (%)
All	82.2	12.4	30.9
Industrial	76.1	13.7	33.3
Non-industrial	90.2	10.9	28.3

Source: JICA Study Team

6) Need for Japanese Speakers

Concerning the answers to the questions about the needs of Japanese-speakers in the future, "I think it will increase" (63.6%) is significantly higher than "I do not think it will increase" (18.6%). In particular, there is a strong demand from non-industrial companies, but even for industrial, the fact that the need grows close to 60% is noteworthy.

Table 5-12 Future Need for Japanese Speakers

(unit: %)

Opinions	All	Industrial	Non-industrial
1. I think it will increase	63.6	57.6	72.5
2. I do not think it will increase	18.6	19.4	17.6
3. I don't know	4.2	6.0	2.0
4. No answer	13.6	17.9	7.8

Source: JICA Study Team

7) Challenges of University Graduates

For the challenges of university graduates, the majority, which is more than half, answered “Basic discipline of orderliness, tidiness, and information transmission is insufficient” (55.1%). Following that are “There is expertise, but not applicable in some cases” (40.7%) and “Things learned in university are not practical” (31.4%), showing challenges regarding the practical skills of university graduates. All in all, due to the insufficiency of university education, many companies have pointed out the lack of basic common sense as a corporate man.

The major answers were: For industrial, the lack of discipline and the tendency to avoid the worksite; for the non-industrial, the inadequacy of university education or, conversely, the high level of ability - showing no significance between the two.

Table 5-13 Challenges of University Graduates

(unit: %)

Challenges	All	Industrial	Non-industrial
1. Basic academic skills is insufficient	25.4	26.9	23.5
2. Things learned in university are not in line with the current situation (old)	13.6	10.4	17.6
3. Things learned in university are not practical	31.4	29.9	33.3
4. Not willing to go to the worksite	22.9	28.4	15.7
5. Basic discipline of orderliness, tidiness, and information transmission is insufficient	55.1	59.7	49.0
6. Compared to non-university graduates, the retention rate is low	11.0	11.9	9.8
7. There is expertise, but not applicable in some cases	40.7	40.3	41.2
8. Not good at teamwork	27.1	26.9	27.5
9. Too dependent on the instruction from the many highly skilled people	28.0	23.9	33.3
10. Others	15.3	14.9	15.7
11. No answer	2.5	1.5	3.9

Source: JICA Study Team

(3) Training and Securement of Staff

1) Staff Training Method

Next, most of the employees in general asked about the training method and contents. Ninety percent of the companies have conducted some kind of training, and most (77.5%) were conducted at the local office. In parallel, there are also over 40% (43.3%) of the companies that have training by dispatching human resources to the offices in Japan (Head Office, etc.), that shows the cost for human resources development is obviously not small.

In industrial, the number for "Dispatch to Japan (headquarters, etc) for training" (50.0%), or "Outsource to professional local companies" (29.4%) is large, but it is seen because a large number of employees are targeted for training and because of the importance of technical training.

In addition, answers such as "Executive training abroad among subsidiaries" (industrial group), "Group in-house training in the local subsidiaries in other countries" (construction group), "Training at bases in Singapore, etc." (finance & insurance group) in "Others" (15.8%) were mainly about dispatching to subsidiaries or bases in Southeast Asian countries. Business trip training is becoming not necessarily limited to Japan only.

Table 5-14 Training Method

(unit: %)

Method	All	Industrial	Non-industrial
1. Conduct the training at local offices	77.5	77.9	76.9
2. Outsource to professional local companies	20.0	29.4	7.7
3. Dispatch to Japan (headquarters, etc.) for training	43.3	50.0	34.6
4. Study training at technical colleges or universities in Japan	0.8	0	1.9
5. Others	15.8	7.4	26.9
6. There is no training	8.3	7.4	9.6
7. No answer	1.7	0	3.8

Source: JICA Study Team

2) Contents of Training

"Machine operation, work skill" (50.0%) was the majority answer regarding the contents of the training, followed by "Japanese" (41.7%) and "Manners, customer service, etc." (38.1%). The implementation rate for "Teamwork" (33.3%) was also high, showing various efforts have been made.

Of course, different types of industry require different types of skills. In industrial, the majority was "Machine operation, work skill" (76.2%) followed by "Japanese" (57.1%). Conducting Japanese language training after being employed was often seen in industries with few university graduates.

In non-industrial, answers such as "Manners, customer service, etc." (48.9%) and "Accounting" (26.7%) were many, as well as "Others" (42.2%). The concrete answers show practical work training, such as "product knowledge" (construction group), "work knowledge" (finance & insurance group) and "training of skills necessary for work" (service group), have been conducted. In addition, there were other answers such as "Company orientation" (trade group), "Moral and way of thinking" and "Management philosophy, compliance, information security, etc." (service group).

For industrial, the concrete answers in "Other" (25.4%) were corporate philosophy, internal policies, 5S (seiri = organize, seiton = tidy, seisou = clean, seiketsu = cleanliness, sitsuke = discipline), QC & site improvement, and executive training (commission).

Table 5-15 The Training Content

(unit: %)

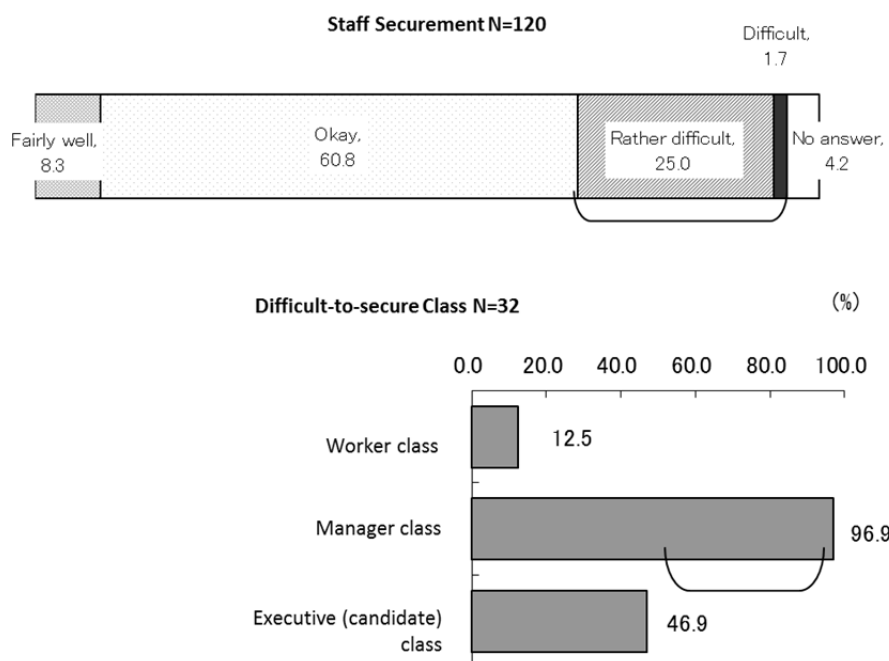
Content	All	Industrial	Non-industrial
1. Japanese	41.7	57.1	20.0
2. English or other languages	17.6	19.0	15.6
3. Manners, customer service, etc.	38.0	30.2	48.9
4. Accounting	20.4	15.9	26.7
5. Machine operation, work skills	50.0	76.2	13.3
6. IT skills	9.3	7.9	11.1
7. Teamwork	33.3	31.7	35.6
8. Others	32.4	25.4	42.2
9. No answer	1.9	1.6	2.2

Source: JICA Study Team

3) The Securement Status of Staff

The difficulty of getting an employee really depends on the economic condition of Vietnam. It is said that when the condition is not really good, like now, staffing is relatively easy. Even in the survey, 70% of the companies answered "Fairly well" (8.3%) and "Okay" (60.8%).

When asking companies that answer "difficult" (total 26.7%) regarding the difficult-to-secure class, the majority answer was "manager class" (96.9%), followed by "executives (candidates)" (46.9%), suggesting the companies' need of excellent human resources. In a comparison between industrial and non-industrial, the answers of the non-industrial were somewhat dispersed.



Source: JICA Study Team

Figure 5-2 The Securement Status of Staff

Table 5-16 Staff Securement: Industrial and Non-Industrial

(unit: %)

	Fairly well	Okay	Rather difficult	Difficult	No answer
Industrial	4.4	69.1	25.0	0	1.5
Non-industrial	13.5	50.0	25.0	3.8	7.7

Source: JICA Study Team

4) Hiring Human Resources for the Next Fiscal Year (Education Background)

Instead of hiring on a regular basis, Japanese companies tend to recruit appropriately when necessary, thus recruiting fresh graduates regularly does not appear to be common. In this study, the questions asked concern the next recruitment plan without a specific time. Ninety percent of the companies plan to employ undergraduates, but there were 15.8% of companies that plan to employ master's graduates. In industrial, many are thinking of adopting high school or vocational college graduates, whereas non-industrial companies hire undergraduates or master's graduates.

Table 5-17 Human Resources for the Next Fiscal Year Recruitment Plan

(unit: %)

Recruitment plan	All	Industrial	Non-industrial
1. Master graduates	15.8	10.3	23.1
2. Undergraduates	90.8	89.7	92.3
3. Junior college graduates	22.5	30.9	11.5
4. Vocational college graduates	28.3	42.6	9.6
5. High school graduates	34.2	50.0	13.5
6. No answer	3.3	1.5	5.8

Source: JICA Study Team

(4) Executive Training and Business Development in the Future

1) Future Business Development

Regarding future business development, about three-quarters of the companies answered "Consider the expansion of current business" (74.2%), but those who answered "Consider the sophistication of business" (37.5%) or "Consider diversifying the current business" (28.3%) were considered more than a few. Companies that answered "Maintain the current condition" (12.5%) were a little over 10% and companies that considered reduction or withdrawal were nil.

The majority of both industrial and non-industrial companies are looking proactively to develop their business in the future. In industrial, companies that answered "Consider the establishment/strengthening of R&D" (13.2%) were a little beyond 10%, whereas in non-industrial, the number of companies that were considering diversifying or sophisticating their business exceeds that of industrial.

Table 5-18 Future Business Development

(unit: %)

Business development	All	Industrial	Non-industrial
1. Consider the expansion of current business	74.2	77.9	69.2
2. Consider diversifying the current business	28.3	25.0	32.7
3. Consider the sophistication of business (products and services)	37.5	33.8	42.3
4. Consider the establishment/strengthening of R&D	10.0	13.2	5.8
5. Maintain the current condition	12.5	10.3	15.4
6. Consider shrinking business, withdrawal	0	0	0
7. No answer	2.5	1.5	3.8

Source: JICA Study Team

2) Vietnamese Executive Training

In response to a question of what kind of human resources development your company put emphasis on, under the condition in which the majority of companies are proactively expanding their business, most answers were in the fields of "Sales and Marketing" (59.2%), "Technical jobs, engineer" (59.2%) and "Person in charge for factory or site" (52.5%). The former was for non-industrial and the latter two were particularly important for industrial. Furthermore, "Administration (Accounting, personnel affairs)" (54.2%) was commonly emphasized in both.

The fact that there were many companies that emphasize "Management department" (45.0%) gained attention, especially in non-industrial, the number reached more than half.

In addition, the companies that emphasize "R&D, product development" (20.6%) in industrial were about 20%.

Table 5-19 Main Emphasis of Executive Training

(unit: %)

Main emphasis	All	Industrial	Non-industrial
1. Management department	45.0	39.7	51.9
2. Administration (Accounting, personnel affairs)	54.2	57.4	50.0
3. R&D, product development	15.0	20.6	7.7
4. Sales and Marketing	59.2	52.9	67.3
5. Technical jobs, engineer	59.2	70.6	44.2
6. Person in charge for factory or site	52.5	76.5	21.2
7. Others	2.5	1.5	3.8
8. No answer	2.5	1.5	3.8

Source: JICA Study Team

(5) Contact and Future Plans with Universities

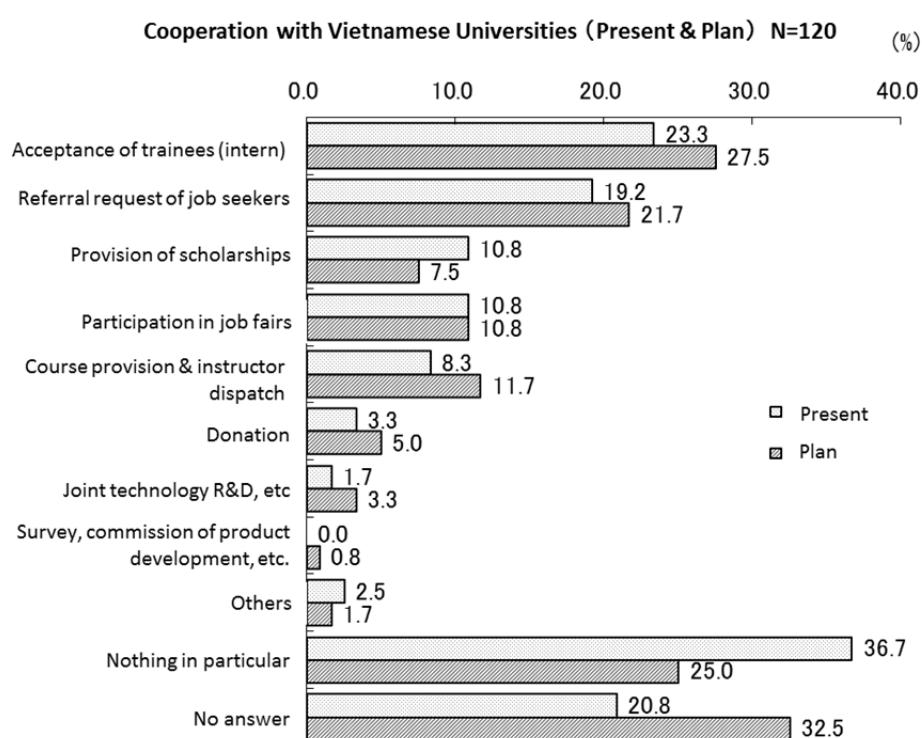
1) Contact with Universities

When asked about cooperation with local universities, approximately 20% of the companies conduct "Acceptance of trainees (interns)" (23.3%) and "Introduction request of job seekers" (19.2%), about 10% conduct "Provision of scholarships" (10.8%) and "Participation in job fairs" (10.8%) and generally about 40% of the companies have some kind of cooperation with universities.

On the other hand, there were close to 60% of the companies that have no cooperation, and keeping in mind that the majority of these were big companies, one can say that the cooperation between Japanese companies and universities in Vietnam is still quiet sparse.

Regarding future plans, a slight increase can be seen in many things such as acceptance of trainees and referral requests of job seekers, but scholarship offers have decreased. In addition, currently 60% of the companies that do not have a partnership, same as before, still do not have a cooperation plan for the future.

As a whole, there was no significant difference between industrial and non-industrial, but regarding the plans for the future, focusing on employment-related matters, industrial companies were working somewhat more proactively.



Source: JICA Study Team

Figure 5-3 Cooperation with Universities

Table 5-20 Cooperation with Universities: Industrial and Non-industrial

(unit: %)

Cooperation with Universities	①Currently in operation		②Future plan	
	Industrial	Non-industrial	Industrial	Non-industrial
1. Provision of scholarships	11.8	9.6	5.9	9.6
2. Donation (including equipment and facilities)	4.4	1.9	4.4	5.8
3. Course provision and instructor dispatch	5.9	11.5	7.4	17.3
4. Participation in job fairs	10.3	11.5	13.2	7.7
5. Acceptance of trainees (interns)	22.1	25.0	30.9	23.1
6. Referral requests of job seekers	16.2	23.1	27.9	13.5
7. Joint technology R&D, etc.	1.5	1.9	4.4	1.9
8. Survey, commission of product development, etc.	0	0	1.5	0
9. Others	2.9	1.9	2.9	0
10. Nothing in particular	38.2	34.6	27.9	21.2
11. No answer	20.6	21.2	25.0	42.3

Source: JICA Study Team

(6) Expectations Towards VJU

1) The Expected Human Resource Development Areas of VJU

The majority answer regarding expectations towards VJU was “Education to deepen the understanding of business practices and culture of Japan” (65%). Together with understanding Japanese culture, as shown in the previous Table 5-13, regarding the challenges for undergraduates, education about the discipline in corporate society or common knowledge is expected.

Furthermore, the expectation towards “Strengthening of transversal basic knowledge learning” (50%) and “Enhancement of hands-on education in conjunction with companies” (45.8%) was fairly high, thus it was estimated that there was dissatisfaction toward the existing university education (professional education overemphasis, desk-centered learning) as the background.

However, in industrial, “Training of advanced technicians (the current training in vocational college is insufficient)” (36.8%) or “Level improvement of basic research such as science, etc.” (25.0%) was relatively many, whereas in non-industrial “HR development of the social infrastructure in medicine, nursing, and law” (17.3%) was quite common, showing interest in different fields for both.

Table 5-21 The Expected Human Resource Development Areas

(unit: %)

Development area	All	Industrial	Non-industrial
1. Strengthening of transversal basic knowledge learning	50.8	48.5	53.8
2. Enhancement of hands-on education in conjunction with companies	45.8	42.6	50.0
3. Level improvement of basic research such as science, etc.	20.0	25.0	13.5
4. HR development of the social infrastructure in medicine, nursing and law	10.8	5.9	17.3
5. Training of advanced technicians (the current training in vocational college is insufficient)	34.2	36.8	30.8
6. Education to deepen the understanding of business practices and culture of Japan	65.0	63.2	67.3
7. Others	15.0	11.8	19.2
8. No answer	5.8	4.4	7.7

Source: JICA Study Team

2) The Significance of Establishing VJU

The establishment of VJU is expected to bring a wide range of advantages. Most expected to “Strengthen human network between Vietnam & Japan” (65%), followed by “Easier for Japanese companies to ensure excellent HR” (59.2%) and “To contribute to the spreading of Japanese culture & language” (55.0%), for which more than half of the companies thought it effective.

When comparing industrial to the non-industrial, there were some differences regarding the perspective, but there was no change in terms of positive evaluation regarding the establishment of VJU.

Table 5-22 The Significance of Establishing VJU

(unit: %)

Significance	All	Industrial	Non-industrial
1. Easier for Japanese companies to ensure excellent HR	59.2	60.3	57.7
2. Strengthen human network between Vietnam & Japan	65.0	60.3	71.2
3. To improve the evaluation of Japan (visible ODA)	42.5	36.8	50.0
4. To contribute to the spreading of Japanese culture & language	55.0	51.5	59.6
5. To contribute to the reformation of Vietnam's university education	41.7	44.1	38.5
6. Big social impacts due to advanced urban development	10.8	8.8	13.5
7. Others	4.2	4.4	3.8
8. No answer	5.8	4.4	7.7

Source: JICA Study Team

3) The Interest in VJU's Initiative

The interest in the initiative of VJU from leading Japanese companies is extremely high. Combining “Strongly interested” (14.2%) with “interested” (59.2%) shows that close to 75% of the companies were interested.

Compared to industrial, the non-industrial showed strong interest not only towards undergraduate HR, but also as towards large-scale development projects and reflected strong interest in terms of business.

4) **Open Questions Regarding VJU's Initiative**

There were various responses received in the open question regarding the VJU initiative, but in general, most were positive opinions on improvement of Vietnamese understanding towards Japan, along with diplomatic achievements and expectation of cooperation between industry & academia thus leading to advancement of practical education.

Since this study is in the initial stage of formulating the VJU framework, it is considered that respondents also showed deepening understanding of interest in the relation of Japanese morality to business practices. There were also some negative answers regarding the establishment of a new university, which said: improvement in basic learning and moral education should be made in earlier stages of education such as primary/junior/high school, not at the university level.

6. Expectations from Students and Academics toward VJU

This chapter surveys the important issues of the current situation of Vietnamese students and their expectations upon the study of VJU's concept.

6.1. Analysis Based on Existing Material

6.1.1. "Survey of Students' Awareness on Employment"

In Vietnam, there has been no comprehensive survey of students concerning the establishment of a university (graduate school) but, in March 2010, The Japan Business Association in Vietnam (Hanoi) conducted a "Survey of Students' Awareness on Employment." This was a survey that aimed to clarify (a) students' values and awareness concerning employment, (b) impressions of Japanese companies and (c) needs concerning support for job hunting. Although it is not a survey on the establishment of a university, the part about human resources that Japanese companies are looking for or matching needs can be a reference for the VJU Concept Study, as mentioned below.

6.1.2. The Result of "Survey of Students' Awareness on Employment"

(1) Target Students

Questionnaires were distributed to a total of 300 students, 50 students from each university: Hanoi University, National Economics University, National University, Hanoi University of Technology, University of Technology and Foreign Trade University. Of those, 275 students answered. The majors of the 275 students were: Economics and Management, 111 students; Foreign Language, 91 students; and Human Engineering, 66 students. In addition, the number of Japanese language students was 107, and other foreign language students, 168.

(2) Career Options after Graduation

While "employment" accounts for 84%, 68.4% answered "yes" to the question "it's better to continue to university or to study abroad in order to enhance their own ability". This result indicates the Vietnamese students' ambition to study, and may also be interpreted as a potential for graduates to continue their study at VJU.

(3) Specialist vs Generalist

While Vietnamese students are generally known to be Specialists, the survey results show that only 39.6% answered "specialist-oriented", and 60.4% answered "generalist-oriented". From this result, it is possible to conclude that there is a need for not only narrow expertise, but also a broad range of education.

(4) Wishes Concerning Job Hunting

For this question, which allowed multiple answers, 153 students (55.6%) answered "Information given out by companies", 120 students (43.6%) answered "Job fairs by companies", 93 people (33.8%) answered "Job fairs by universities" and 75 students (27.3%) answered "Company visit". All these answers indicate a strong hope for the cooperation of universities and companies.

(5) Reasons for the Intention to Work in a Japanese Company

For this question, which allowed multiple answers, 150 students (54.5%) answered "Compensation package", 133 students (48.4%) answered "Evaluation in Vietnam", 118 students (42.9%) answered "Japan-Vietnam economic relationship in the future", 97 students

(35.3%) answered "The ability to learn the corporate culture", and 81 students (29.5%) answered "Opportunity to go to Japan".

Because there was no question of "whether or not you want to work for a Japanese company", from 275 students the number of students that answered "in all sincerity" could not be confirmed. However, for questions that allowed multiple answers, there were 769 responses (2.8 answers per person), showing very high interest.

(6) Impressions of Japanese Companies as well as Japanese Employees Working in Japanese Companies

For this question, which allowed multiple answers, 187 students (68%) answered "Punctuality", 144 students (52.6%) answered "Hard work", 111 students (40.4%) answered "Hard work leads to pay rise", 101 students (36.7%) answered "Sense of responsibility". However, these were impressions of Japanese companies from Vietnamese students' points of view, whereas the impression of Vietnamese employees from Japanese points of view were: no punctuality, no hard work and no sense of responsibility. They may be vague images of Vietnamese students and not represented in concrete actions, but it is also possible recognize these as challenges of university education that Japanese companies feel.

(7) Things Expected by Japanese Companies

For this question, which allowed multiple answers, 201 people (73.1%) answered "Creativity", which is higher than the 127 people (46.2%) that answered "Activeness". Although it is understood that what Japanese companies are seeking are things such as "Hard work" (116 people, 42.3%), "Ambition" (98 people, 35.8%) or "Teamwork" (95 people, 34.5%), as mentioned in the previous section, these things were not reflected in their actions.

From the above results, (a) from the high ambition for the education of Vietnamese students, there is a need for a high-quality education institution for those who want to continue their studies, even for university graduates, (b) even though the interest in Japanese companies is high and the impressions of Japanese company culture and working value are vague, it also means that learning opportunities have not yet been obtained (a potential of high learning needs) and (c) it also points out the fact that this result is not limited to students majoring in Japanese language only. Also, it can be confirmed that there is high need to provide information about Japanese companies or about the job itself generally, and for matching of students and companies.

6.2. The Expectations of University (Undergraduate & Graduate) Students

6.2.1. An Overview of the Survey's Implementation

In order to understand the awareness of the employment and education environments of current Vietnamese college students, a questionnaire survey was conducted. Below are the outlines:

(1) Objectives

- 1) To understand Vietnamese university students' interest and concern regarding higher education, including undergraduate and graduate levels
- 2) To understand Vietnamese university students' interest and concerns regarding career development

(2) Target

This questionnaire survey will be conducted for students (undergraduate & graduate) attending the following universities:

- 1) Vietnam National University Hanoi (VNU-HN)
- 2) Foreign Trade University (FTU)
- 3) Hanoi University (HNU)
- 4) Hanoi University of Science and Technology (HUST)
- 5) Graduate School of VNU-HN

(3) Sampling Design

The questionnaire survey will cover 2,000 samples, 400 of which are students whose major is Japanese language.

- 1) Undergraduate (4th Year) : 1400 students
- 2) Graduate (Master Course) : 600 students

(4) Questionnaire

The questionnaire contains the following 5 topics:

- 1) Basic Information
- 2) Reasons for choosing university/graduate school
- 3) Plan/intention for future job / after graduation
- 4) Impression of Japanese Companies
- 5) Interests and expectations regarding Vietnam-Japan University

(5) Questionnaire Survey Schedule

Early – mid September 2013

6.2.2. Survey Results (Overview)

With currently enrolled students in Vietnam as the targets, the objective of this survey is to study Vietnamese students' campus life as well as their interest in the VJU project, and apply it to this study. The survey covered the conditions of current campus life, experiences of studying abroad, plans after graduation, as well as interest and expectations regarding the VJU project.

(1) Targets

The 7 universities under VNU, Foreign Trade University (FTU), undergraduate students at Hanoi University (HNU) and graduate students (master students) at VNU

(2) Method

Self-administered survey

(3) Time Period

September, 2013

(4) Number of Respondents:

1,692 students (undergraduate: 1,214, graduate: 478)

Table 6-1 Number of Respondents

(unit: students)

University	Total	Undergraduate	Graduate
1. University of Science (VNU-HUS)	294	186	108
2. University of Social Science and Humanities (VNU-USSH)	273	130	143
3. University of Language and International Studies (VNU-ULIS)	321	222	99
4. University of Engineering and Technology (VNU-UET)	241	147	94
5. University of Economics and Business (VNU-UEB)	79	51	28
6. University of Education	180	180	—
7. University of Law	99	99	—
8. Foreign Trade University (FTU)	64	64	—
9. Hanoi University	132	132	—
N/A	9	3	6
Total	1,692	1,214	478

Source: JICA Study Team

(5) Respondents Profiles (undergraduate)

The total number of respondents was 1,214. Even though the number differs among universities, altogether 75% of them are female and in their early twenties, most of which were 21 years old. Twenty-four percent of them have some form of experience studying Japanese, including Japanese majors at FTU and Hanoi University, as well as Japanese minors at other universities.

Table 6-2 Respondents' Genders

(unit: students)

University	Total	Male	Female	NA
1. VNU-HUS	186	51	133	2
2. VNU-USSH	130	9	119	2
3. VNU-ULIS	222	14	206	2
4. VNU-UET	147	129	13	5
5. VNU-UEB	51	14	37	0
6. University of Education	180	15	161	4
7. University of Law	99	26	73	0
8. FTU	64	11	52	1
9. Hanoi University	132	7	125	0
N/A	3	1	1	1
Total	1,214	277	920	17
%		22.8%	75.8%	1.4%

Source: JICA Study Team

Table 6-3 Respondents' Ages

(unit: students)

University	~20	21	22	23	24~	NA
1. VNU-HUS	93	59	29	5	0	0
2. VNU-USSH	59	41	10	6	12	2
3. VNU-ULIS	16	101	85	12	2	6
4. VNU-UET	43	67	30	5	2	0
5. VNU-UEB	46	3	1	0	0	1
6. University of Education	76	43	44	11	3	3
7. University of Law	0	48	40	10	0	1
8. FTU	17	26	17	4	0	0
9. Hanoi University	44	64	20	2	2	0
N/A	1	0	1	0	0	1
Total	395	452	277	55	21	14
%	32.5%	37.2%	22.8%	4.5%	1.7%	1.2%

Source: JICA Study Team

Table 6-4 Japanese Study Experience

(unit: students)

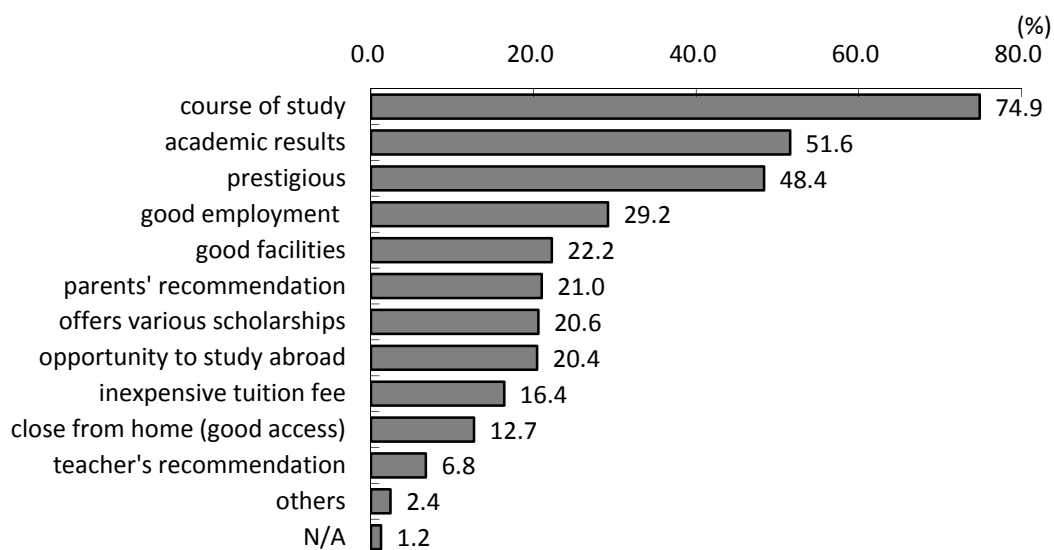
University	No	N/A	Yes	⇒	As major
1. VNU-HUS	177	7	2		0
2. VNU-USSH	71	4	55		47
3. VNU-ULIS	213	3	6		1
4. VNU-UET	119	8	20		3
5. VNU-UEB	43	3	5		1
6. University of Education	169	5	6		1
7. University of Law	99	0	0		0
8. FTU	0	0	64		53
9. Hanoi University	0	0	132		132
N/A	2	0	1		1
Total	893	30	291	⇒	(239)
%	73.6%	2.5%	24.0%		(82.1%)

Source: JICA Study Team

6.2.3. Survey Results (Regarding Currently Attended Universities, Campus Life)

(1) Reasons for Selecting Current University

Among the reasons given, “the university provides the major I want to study” (74.9%) has the highest rate, followed by “my academic results seem good enough to enter the university” (51.6%) and “the university is a prestigious one” (45.4%). On the other hand, economic reasons such as “inexpensive tuition fee” and “the university offers various scholarships” were comparatively minor.



Source: JICA Study Team

Figure 6-1 Reasons for Selecting Current University

Based on the university, the noticeable result was the fact that the majority of students in FTU answer “the university is a prestigious one” (84.4%) and students in FTU, Hanoi University and VNU-UET answer “good employment”, which were more common than the other answers.

Table 6-5 Reasons of Selecting the Current University

(unit: %)

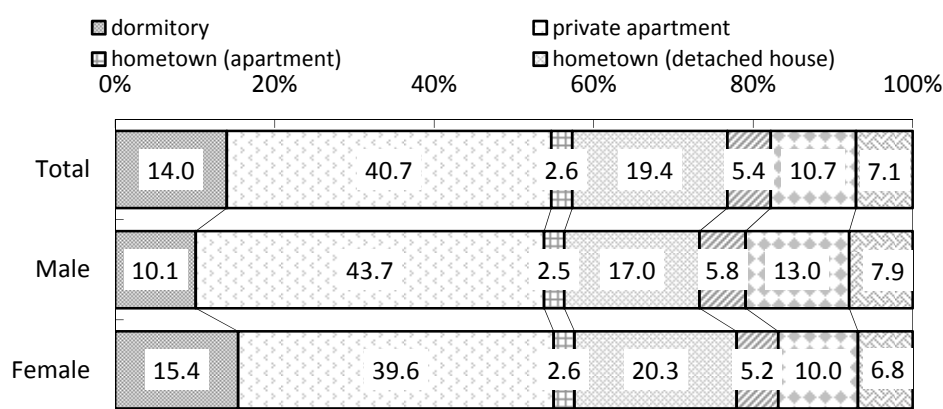
Reasons (Multiple choice, descending order)	VNU- HUS	VNU- USSH	VNU -ULIS	VNU -UET	VNU -UEB	Univ. Educ	Univ. Law	FTU	Hanoi Univ
Course of study	62.9	81.5	70.7	85.7	70.6	74.4	75.8	59.4	89.4
Academic results	46.2	41.5	50.9	58.5	49.0	56.1	48.5	64.1	53.0
Prestigious university	34.9	36.9	60.8	60.5	37.3	28.9	47.5	84.4	57.6
Good employment	10.2	13.8	30.6	50.3	31.4	9.4	15.2	68.8	61.4
Good facilities and equipment	17.2	16.9	20.3	25.2	37.3	29.4	8.1	26.6	28.0
Parents' recommendation	16.7	14.6	18.9	17.7	31.4	30.0	17.2	39.1	18.2
Various scholarships	19.4	26.9	17.6	26.5	37.3	17.2	5.1	17.2	26.5
Opportunity to study abroad	10.2	24.6	21.2	23.1	19.6	10.6	7.1	34.4	43.9
Inexpensive tuition fees	8.6	15.4	24.8	12.2	15.7	24.4	11.1	4.7	16.7
Close to home (good access)	5.4	6.9	17.1	14.3	17.6	7.8	13.1	15.6	22.7
Teacher's recommendation	4.8	9.2	8.1	4.1	7.8	8.3	5.1	4.7	7.6
Others	1.6	6.9	1.8	2.0	2.0	2.8	1.0	4.7	0.0
N/A	3.2	0.8	0.9	0.7	0.0	1.7	2.0	0.0	0.0

Source: JICA Study Team

(2) Housing, Commuting Time

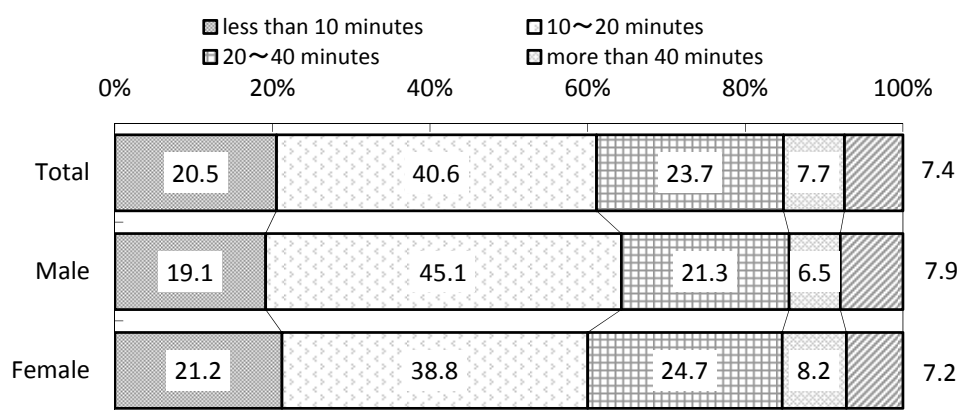
Regarding housing, “private-owned apartment” has the highest number (40.7%), followed by “live with family” (22.0%) and “dormitory” (14.0%). However, male students are more likely to live in private-owned apartments; female students, with their family.

Most students need 20 minutes or less to commute to the university (more than 60%), while “10-20 minutes” accounts for 40.6%. Only a small fraction of students (7.7%) need “more than 40 minutes”.



Source: JICA Study Team

Figure 6-2 Housing (by Gender)



Source: JICA Study Team

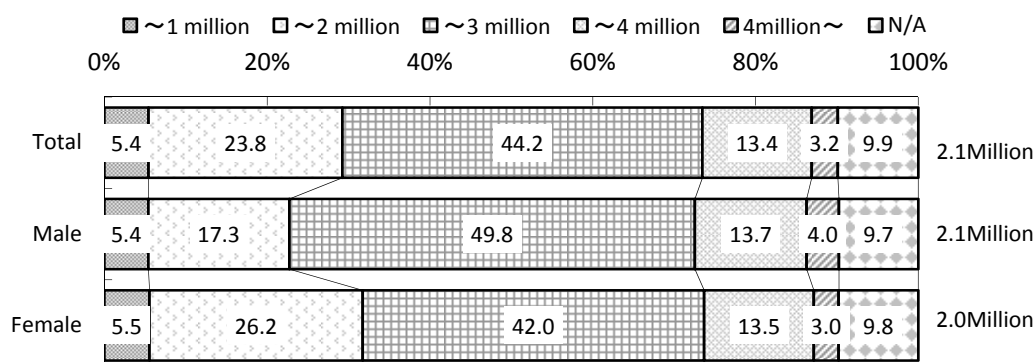
Figure 6-3 Commuting Time

(3) Living Expenses

Concerning monthly living expenses, “2-3 million VND” is the most common (44.2%), with an average of 2.1 million VND (equivalent to 10 thousand JPY).

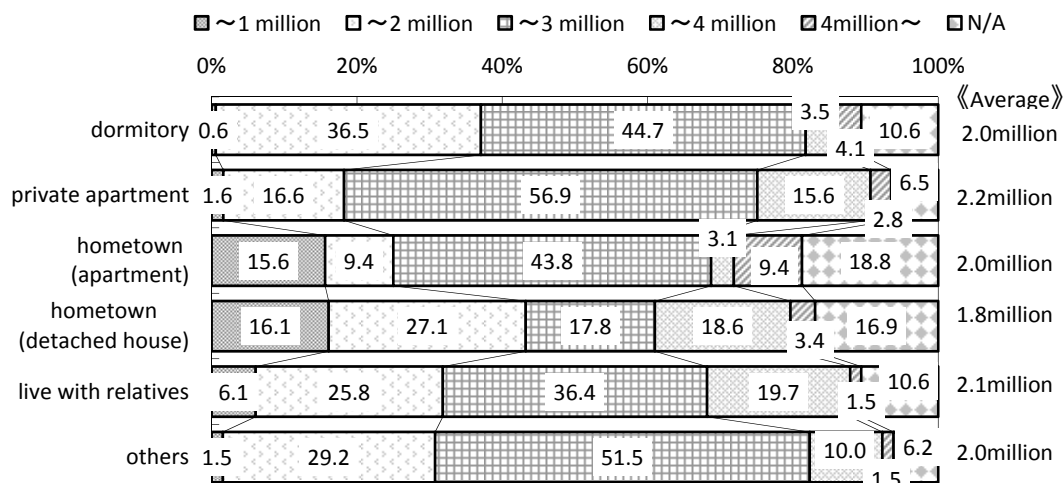
The living expenses of female students (2 million VND), most of whom stay in dormitories or with their families, is slightly lower than that of male students (2.1 million VND).

Distinguishing between types of residency, the average living expenses in private-owned apartment is the highest (2.2 million VND), followed closely by family, relatives, or acquaintance homes.



Source: JICA Study Team

Figure 6-4 Monthly Living Expenses (unit: VND/month)



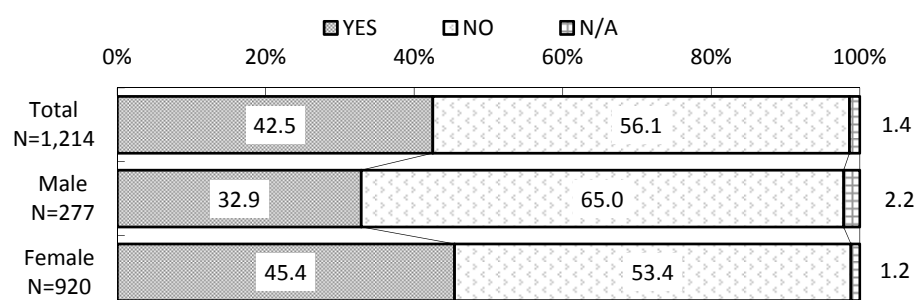
Source: JICA Study Team

Figure 6-5 Living Expenses by Housing (unit: VND/month)

(4) Part-Time Job Experience

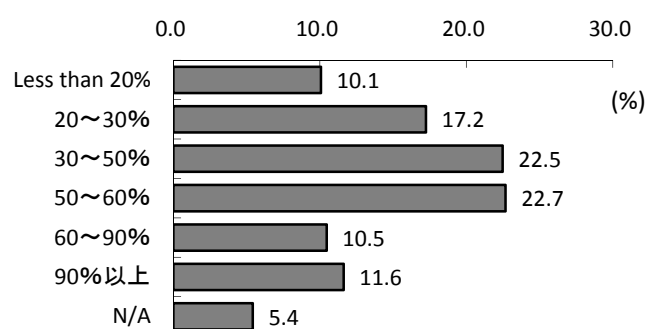
Over 40% of students currently have part-time jobs. Male students with part-time jobs (32.9%) are fewer than the female ones (43.4%). The fact that most male students are in Science with not much extra time is believed to be the reason.

Despite its great variance, the average ratio of income from part-time job to living expenses is 44.5%.



Source: JICA Study Team

Figure 6-6 Part-Time Job

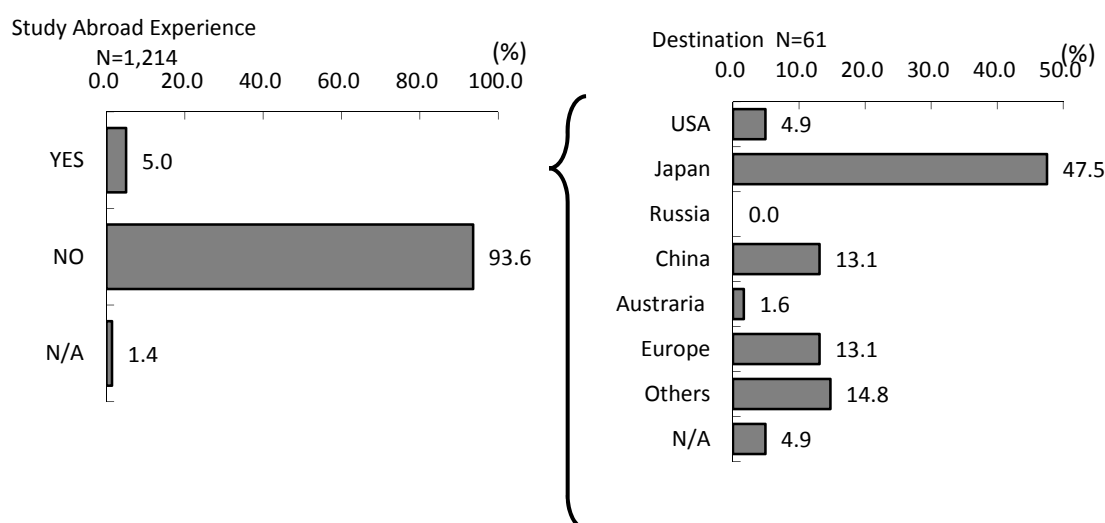


Source: JICA Study Team

Figure 6-7 Living Expenses Coverage Ratio from Part-time Job Income

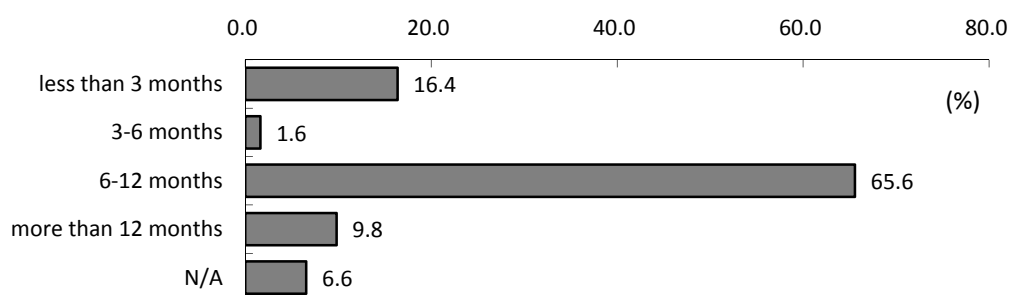
(5) Study Abroad Experience

Students who have experience studying abroad are only 5%. The most popular destination is “Japan” (47.5%), followed by “China” and “Europe” (13.1% each). The common term of study is “6-12 months” (65.6%). Note that students with experience studying in Japan are mostly from FTU, Hanoi University and VNU-USSH, majoring in Japanese language



Source: JICA Study Team

Figure 6-8 Study Abroad Experience



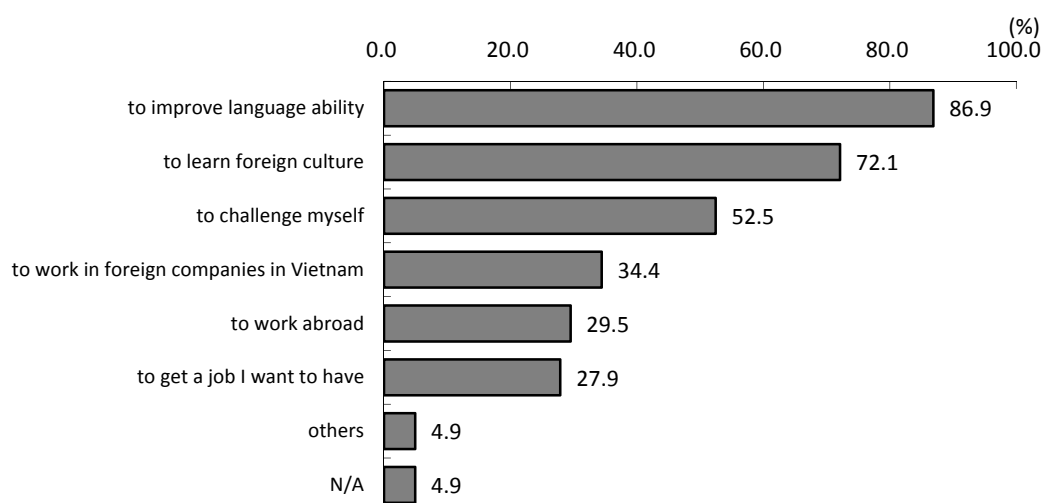
Source: JICA Study Team

Figure 6-9 Study Abroad Term

(6) Study Abroad Purpose

The major purpose of studying abroad is “to improve foreign language ability” (85.9%), followed by “to learn foreign culture” and “to challenge oneself” (52.5%).

Answers such as “to work in foreign companies in Vietnam” (34.4%) or “to work abroad” (29.5%) from students who think of studying abroad as a way to get good employment is also not negligible.



Source: JICA Study Team

Figure 6-10 Study Abroad Purpose

6.2.4. Survey Results (About Impressions of Japanese Universities)

Targeting as respondents students with and without experience studying in Japan, the most common response was “have good learning environment, facilities & equipment” (70.2%), followed by “offer opportunities to study the most recent, cutting edge academic fields” (58.6%), “provide high-quality programs that meet international standards” and “internationally reputable degrees” (49.2%), showing good academic reputation of Japanese universities.

Table 6-6 Impressions of Japanese Universities

(unit: %)

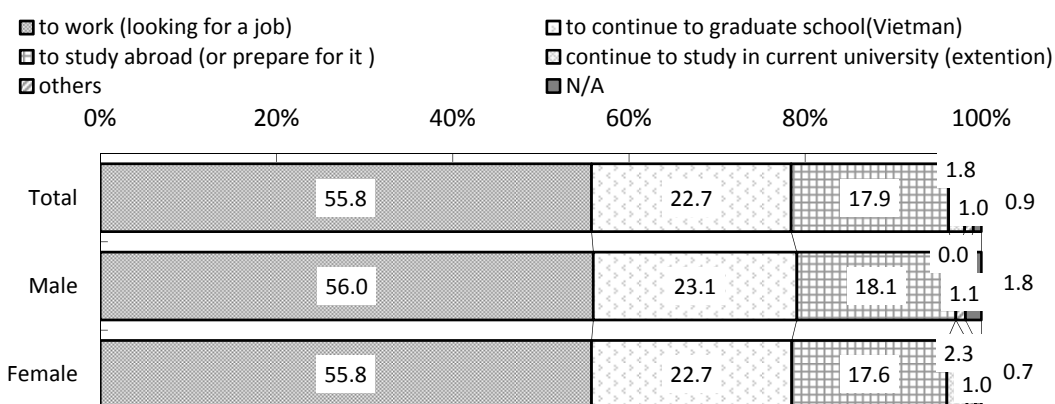
Impression of Japanese Universities (Multiple Answer, Descending order)	Total	Male	Female
Have good learning environment, facilities & equipment	70.2	66.1	71.2
Offer opportunities to study advanced academic areas	58.6	65.0	56.5
Provide high-quality programs that meet international standards	49.5	53.4	48.3
Internationally reputable degrees	49.2	52.3	48.0
Have access to after-school activities	38.8	31.4	41.3
Require student to study in high intensity and under high pressure	32.5	32.1	32.4
Expensive tuition fees	29.5	23.1	31.5
A lot of assignments	8.1	9.4	7.7
Others	3.6	5.8	2.9
N/A	7.2	5.8	7.6

Source: JICA Study Team

6.2.5. Survey Results (Regarding Post-Graduation Plan)

When asked about career options after graduation, the majority of students answered “to work or to job-hunt” (55.8%). On the other hand, answers such as “to continue to graduate school in Vietnam” (22.7%) or “to study abroad, or prepare for it” (17.9%) altogether accounts for nearly 40%, a condition very different from Japan.

However, there is no significant difference between genders regarding plans after graduation.



Source: JICA Study Team

Figure 6-11 Post-Graduation Plan

(1) Purpose of Continuing to Graduate School

Students who answered “to improve employment” (74.2%) as a purpose of going to graduate school is incomparably high. Other purposes are “to be a university lecturer” (27.6%), “to get a Ph.D.” (18.5%), “to study abroad” (17.5%) and so on.

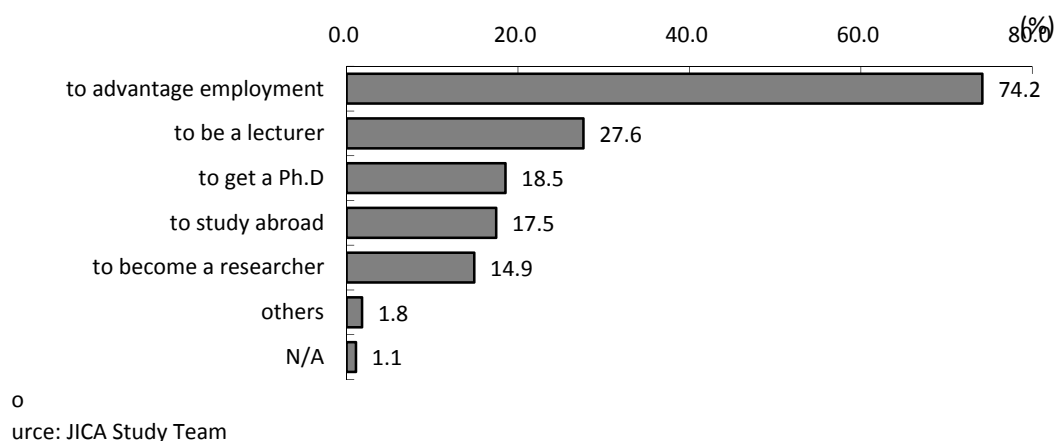
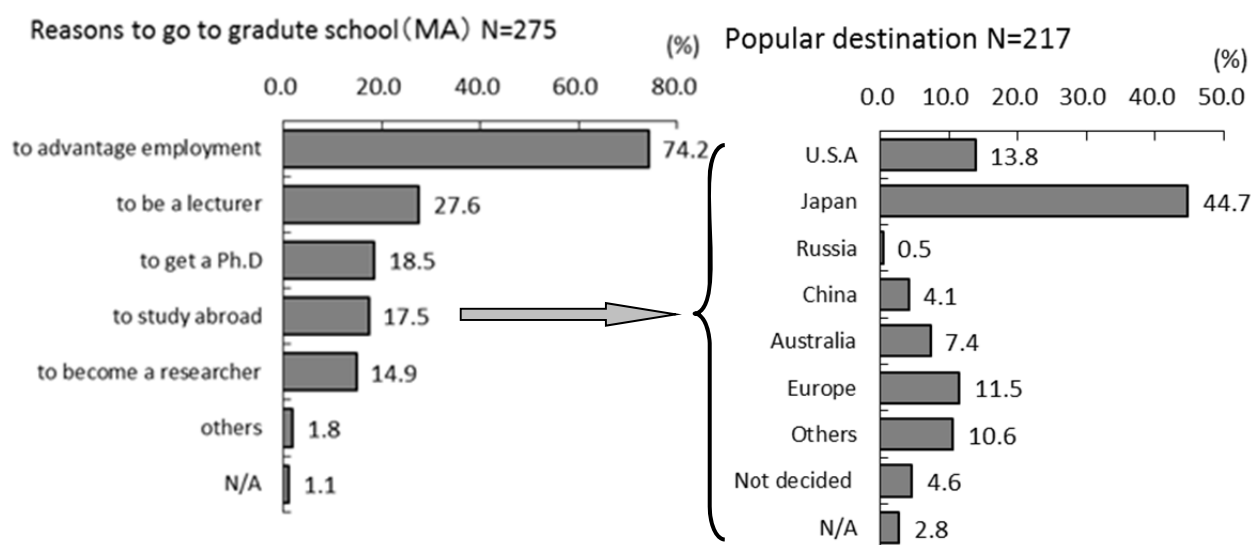


Figure 6-12 Purpose of Continuing to Graduate School

(2) Desired Study Abroad Destinations and Purposes

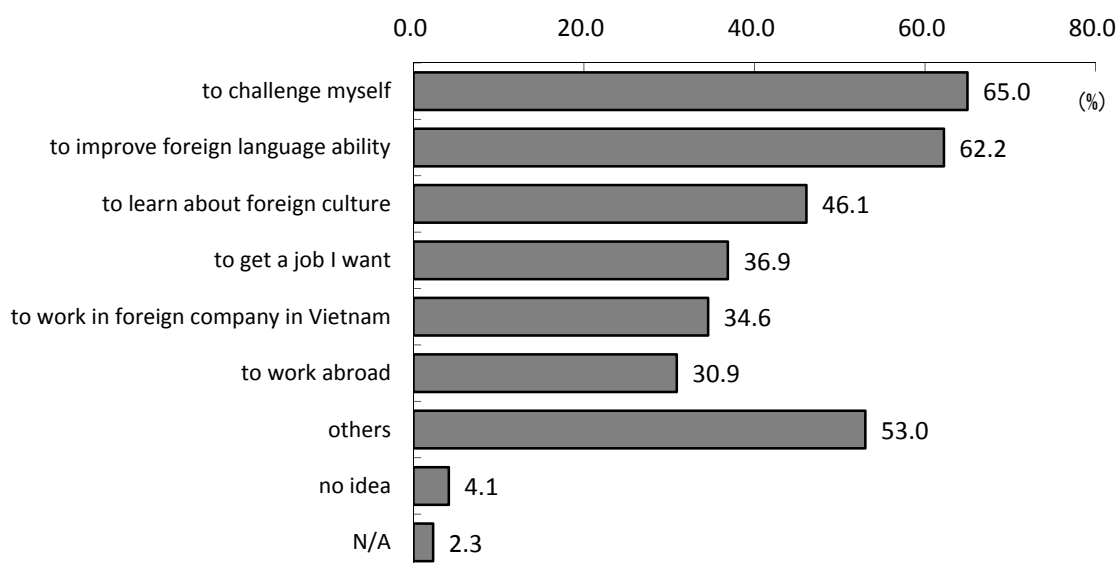
Students who wish to study abroad after graduation are quite many, 17.5%. The most popular destination is “Japan” (44.7%), followed by “USA” (13.8%) and “Europe” (11.5%).

The major purposes of studying abroad are “to challenge myself” (65.0%) and “to improve language ability” (62.2%). A certain number of students gave employment-related reasons, such as “to apply to the job I want” (36.9%).



Source: JICA Study Team

Figure 6-13 Desired Study Abroad Destination



Source: JICA Study Team

Figure 6-14 Study Abroad Purpose

(3) Desired Work Fields

There was no prominent result regarding desired work fields. The most common answer was “teacher” (22.0%), followed by “public servant” (19.3%). As for the private sector, “software development / information-communication related” (16.9%) and “trading, distribution” (11.2%) are quite popular. Although industries such as manufacturing, construction and transportation are predicted to grow in the near future, only a few wish to work in these industries.

Comparing between genders, the most popular industry for male students is “software development / information-communication related” (44.4%) while females prefer “teacher” (26.1%).

Table 6-7 Desired Work Fields

(unit: %)

Work fields	Total	Male	Female
1. Manufacturing	1.4	2.5	1.1
2. Trading, Distribution, Retail	11.2	10.1	11.5
3. Construction	1.1	2.2	0.8
4. Transportation	0.4	0.7	0.3
5. Software development / IT, Communications, Information services	16.9	44.0	8.6
6. Other services (incl. Medical services)	6.2	1.8	7.5
7. Finance, Real estate	7.7	0.9	8.0
8. Public servant	19.3	12.6	12.3
9. Teacher	22.0	7.6	26.1
10. Others	10.9	9.4	11.5
11. N/A	3.0	2.2	3.3

Source: JICA Study Team

Table 6-8 Desired Work Fields (by University)

University	Industry
1. VNU-HUS	Public servant (25.8%), finance/real estate (14.5%), others (13.4%)
2. VNU-USSH	Teacher (27.7%), public servant (24.6%), others (1.0%)
3. VNU-ULIS	Teacher (21.2%), public servant (18.5%), trading (15.3%)
4. VNU-UET	Software development (85.0%), others (4.1%), teacher (3.4%)
5. VNU-UEB	Finance, real estate (33.3%), public servant (25.5%), trading (19.6%)
6. University of Education	Teacher (66.1%), public servant (21.7%), trading (2.8%)
7. University of Law	Public servant (43.4%), others (14.1%), trading (10.1%)
8. FTU	Trading (39.1%), finance (17.2%), others services (12.5%)
9. Hanoi University	Others (26.5%), teacher (18.9%), software development (15.2%)

Source: JICA Study Team

(4) Job hunting

The most common way of job-hunting is through the “Internet” (72.1%). The second most common is “recommendation from parents/relatives” (64.4%), followed by “job fair” (38.6%) and “recommendation from university’s lecturer” (32.9%).

Comparing between genders, male students are more likely to try various methods, while female students seem to count on private networks.

Table 6-9 Job-Hunting Method

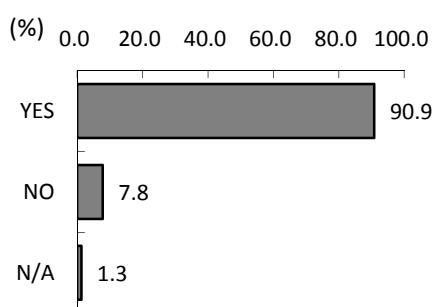
(unit: %)

Means of Job-Hunting (Multiple Answers, Descending Order)	Total	Male	Female
Internet	72.1	74.4	71.5
Recommendation from parents/relatives	61.4	49.8	65.2
Job fair	38.6	41.9	37.4
University staff	32.9	35.7	32.3
Private recruiting agent	20.1	22.4	19.6
Others	4.1	5.4	3.8
N/A	1.2	1.1	1.1

Source: JICA Study Team

(5) Impressions and Interest in Working at Japanese Companies

In general, interest in Japanese companies is quite high. In fact, 90% wish to work in Japanese companies. When asked about their impressions of Japanese companies, the answers are generally positive: “good salary” (75.9%), “stable management” (69.3%), and “good working environment” (59.9%).



Source: JICA Study Team

Figure 6-15 Interest in Working at Japanese Companies

Table 6-10 Impressions of Japanese Companies

(unit: %)

Impressions of Japanese Companies (Multiple Answer, Descending order)	Total	Male	Female
Good salary	75.8	74.7	76.5
Stable management	69.3	68.2	69.8
Good working environment	59.9	62.5	59.1
Good quality assurance system	58.1	56.3	58.7
Strict supervision	44.6	40.1	46.1
Evaluate work performance properly	38.2	34.7	39.2
Difficulties in communication	19.5	22.4	18.7
Require much overtime work	18.3	16.2	18.9
Others	1.7	2.5	1.5
N/A	1.6	2.2	1.4

Source: JICA Study Team

6.2.6. Expectations Regarding VJU

(1) VJU's Appeal

According to the survey, the most appealing factor of VJU is that it “provides internationally high-level of education program just as leading Japanese universities do” (75.0%), followed by “the opportunity to transfer credit to Japanese partner universities” (61.8%), “advanced facilities and equipment for research and education” (60.6%) and “the opportunity to learn both Japanese language and culture” (60.0%).

Table 6-11 VJU's Appeal

(unit: %)

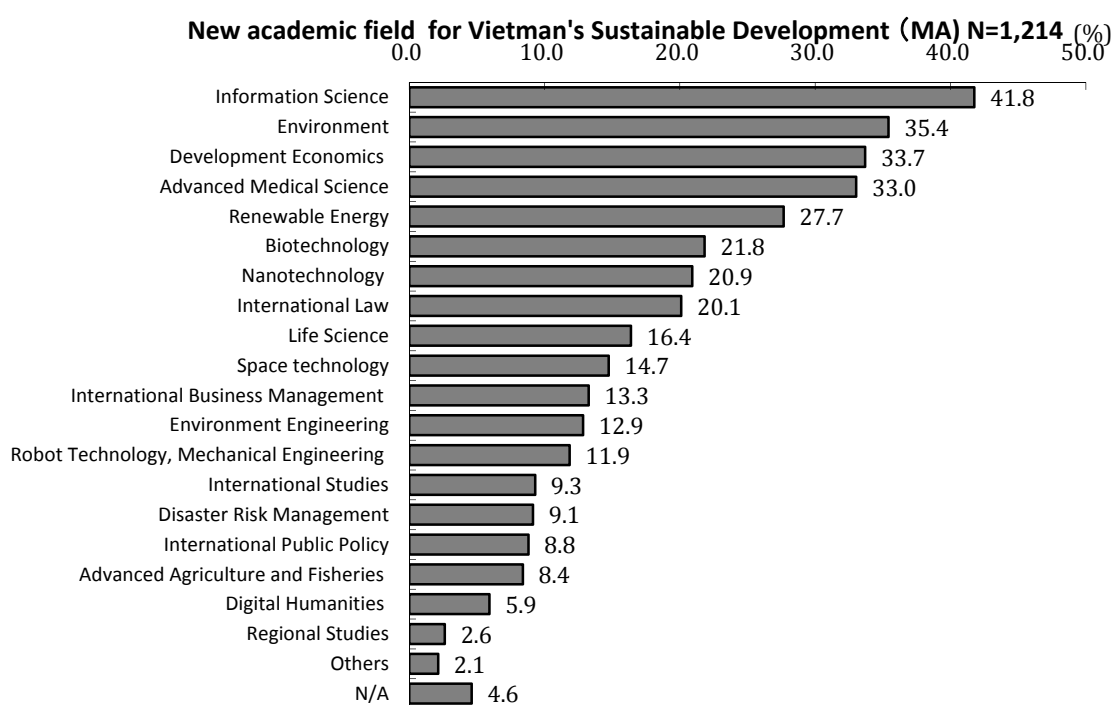
VJU's Appeal (Multiple answers, Descending order)	Total	Male	Female
Provides internationally high-level of education program just as leading Japanese universities do	75.0	75.5	74.8
The opportunity to transfer credit or continue studies in Japan	61.8	54.2	64.0
Advanced facilities and equipment for research and education	60.6	63.5	59.7
The opportunity to learn both Japanese language and culture	60.0	54.5	61.5
High-quality lecturers, including those who have experience of studying in Japan	52.3	51.6	52.3
The ability to select a variety of liberal arts courses other than the major	46.9	47.3	46.5
The opportunity to get a degree from prestigious universities in Japan	45.9	44.8	46.5
Advanced information environment including e-library	43.9	50.5	41.8
Lectures by Japanese companies	40.7	42.6	40.1
The opportunity to work in Japan	38.9	32.9	40.8
Collaborations with companies in research	37.1	40.8	36.0
Urban development of the surrounding area such as residential, commercial, public, and recreational facilities are well developed	32.0	28.5	32.9
Others	46.2	43.0	47.2
N/A	2.6	4.3	2.1

Source: JICA Study Team

(2) Academic Fields to Emphasize

In order to know the students' expectations toward academic fields offered at VJU, the question asked was: "Aiming for a sustainable development in Vietnam, what kind of new academic fields should be developed?"

Despite its variances, "Information Science" (41.8%) gives the highest proportion, followed by "Environmental Science" (35.4%), "Development Economics" (33.7%), "Advanced Medical Science" (33.0%) and "Renewable Energy" (30.8%).



Source: JICA Study Team

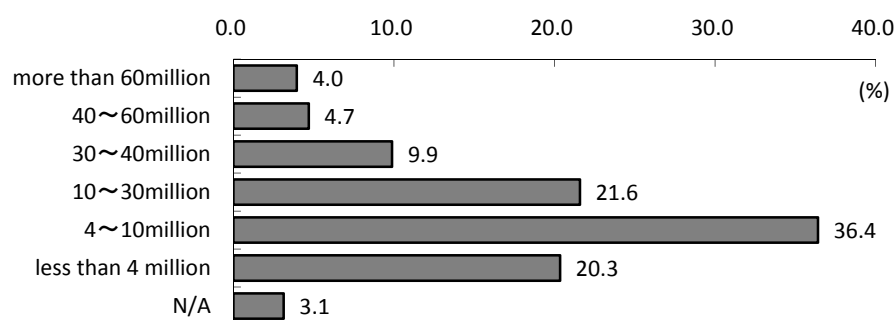
Figure 6-16 New Academic Fields for a Sustainable Development in Vietnam

(3) Assumptions Regarding VJU Student Life

Hypothetical questions regarding tuition fees and housing were asked, given he/she were to study at VJU. Regarding tuition fees, "4-10 million VND/Year" (36.4%) (equivalent to 20,000 to 150,000 JPY) is the most preferable range as it coincides with the tuition fees of the existing public universities in Vietnam. That is followed by "10-30 million VND/Year" (21.3%), which shows that, on average, students' assumptions are slightly higher than that of the existing public universities.

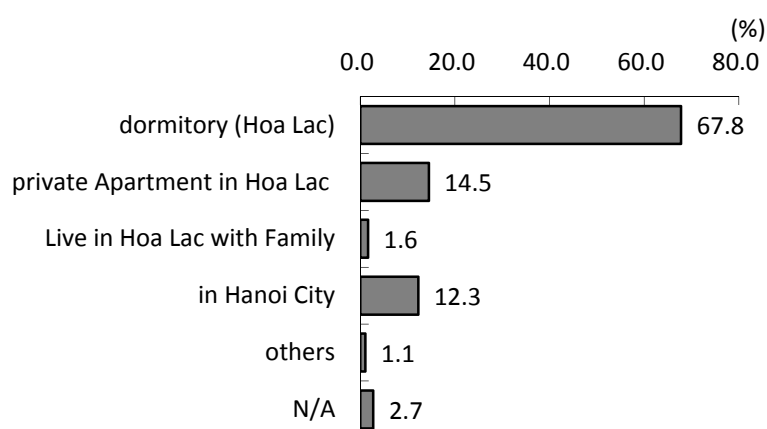
Regarding resident location, the majority prefer to live in Hoa Lac (83.8%), including in dormitories (67.8%). Considering the fact that over 40% of students have a part-time job, careful planning of urban development is necessary.

The most common rent for a dormitory is "less than 500,000 VND/month" (equivalent to 2,500 Yen). The current monthly living expense (excluding utilities and meals) of around ¥10,000 is considered quite low.



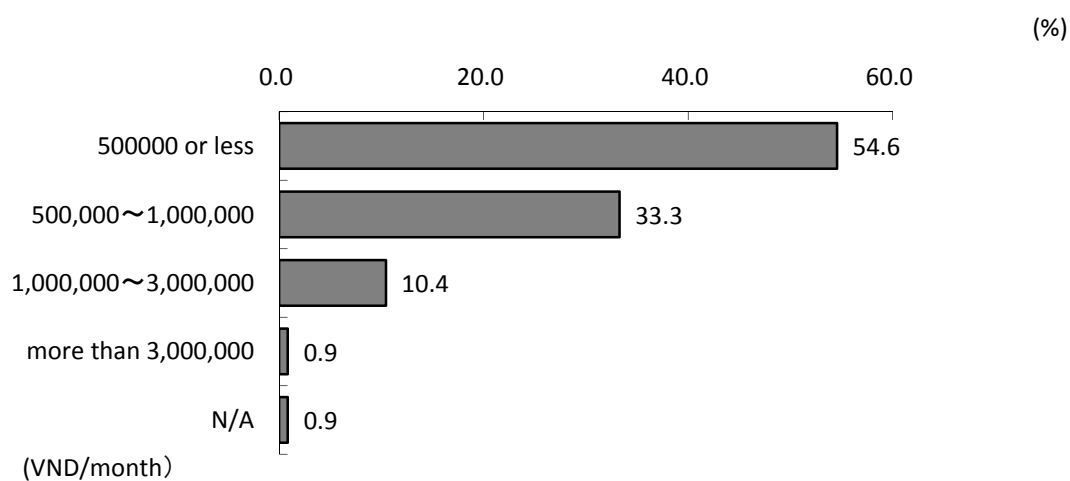
Source: JICA Study Team

Figure 6-17 Tuition Fee Assumption



Source: JICA Study Team

Figure 6-18 Housing Assumption

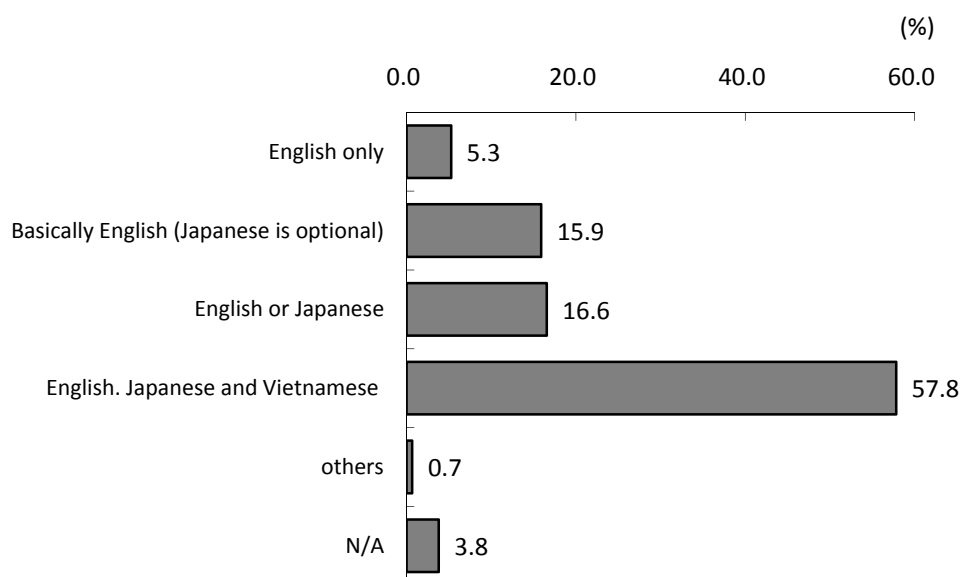


Source: JICA Study Team

Figure 6-19 Dormitory Rent

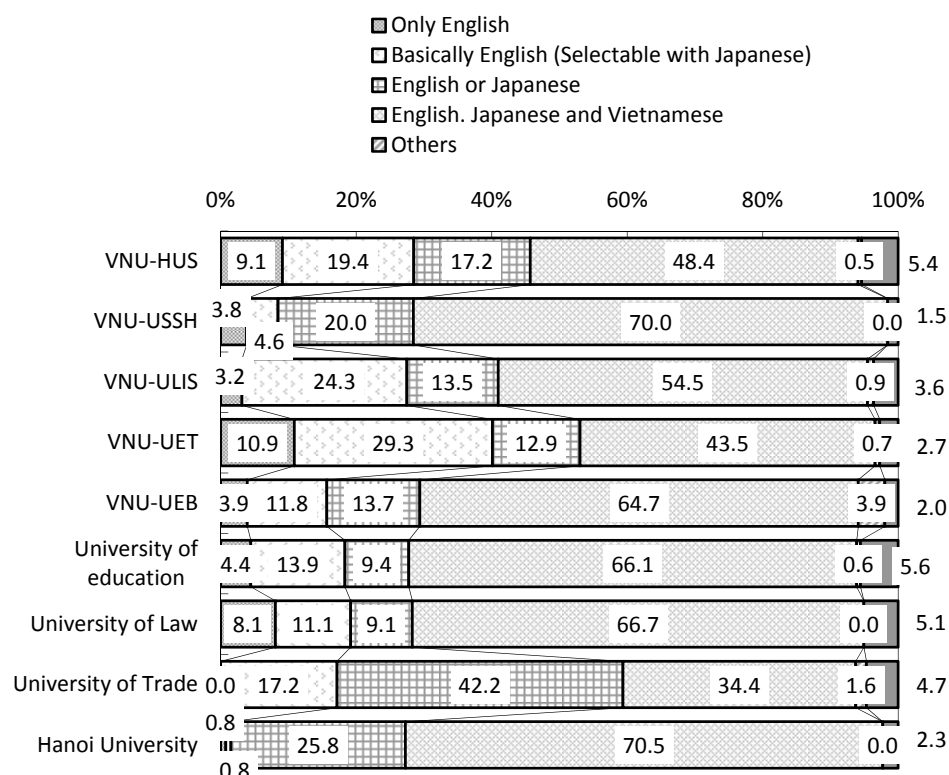
(4) Language Use

More than half of the students support education in the multiple languages of “English, Japanese and Vietnamese” (57.8%). However, it should also be noted that the number of students who answered “both English and Japanese (selection)”, and thus prefer not to use Vietnamese, is 37.8% in total. There are relatively more students majoring in language and engineering who support not using Vietnamese language.



Source: JICA Study Team

Figure 6-20 Language Use

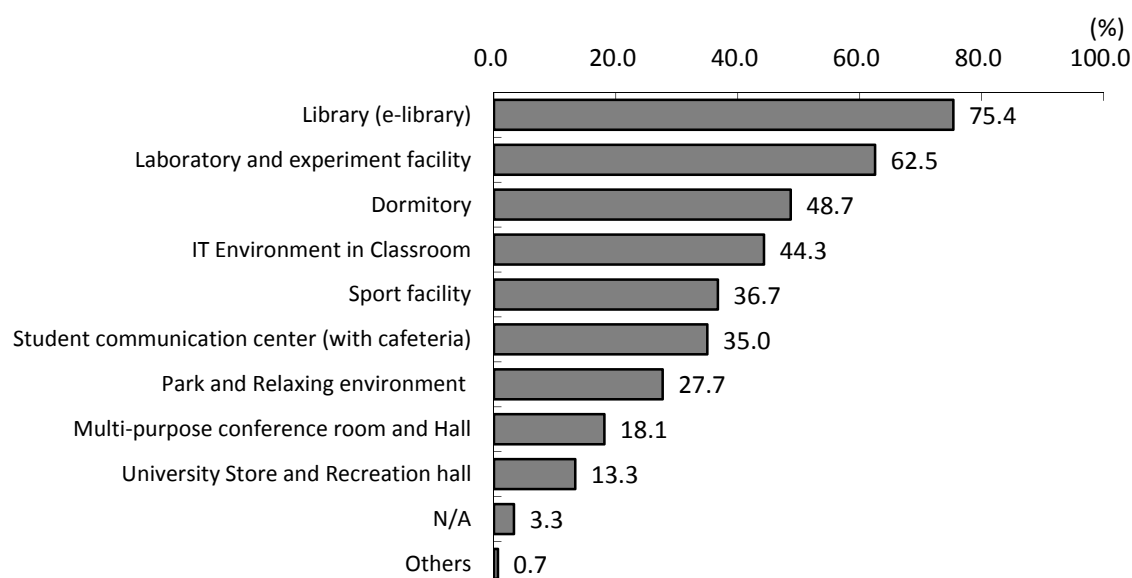


Source: JICA Study Team

Figure 6-21 Language Use by University

(5) Facility Needs

One can say that the facility needs of VJU reflect the facility needs of current universities. “Library (e-library)” takes the highest rate of 75.4% and “Laboratory and experiment facilities” comes next, followed by “Dormitory” (48.7%) and “IT environment in classrooms” (44.3%). It shows their greater concern for a better studying environment over other miscellaneous facilities such as sports and social activities.

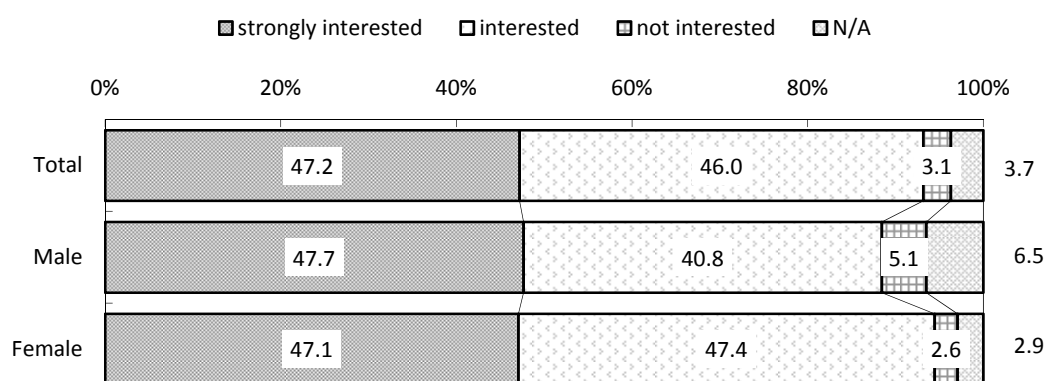


Source: JICA Study Team

Figure 6-22 Needs of Facilities

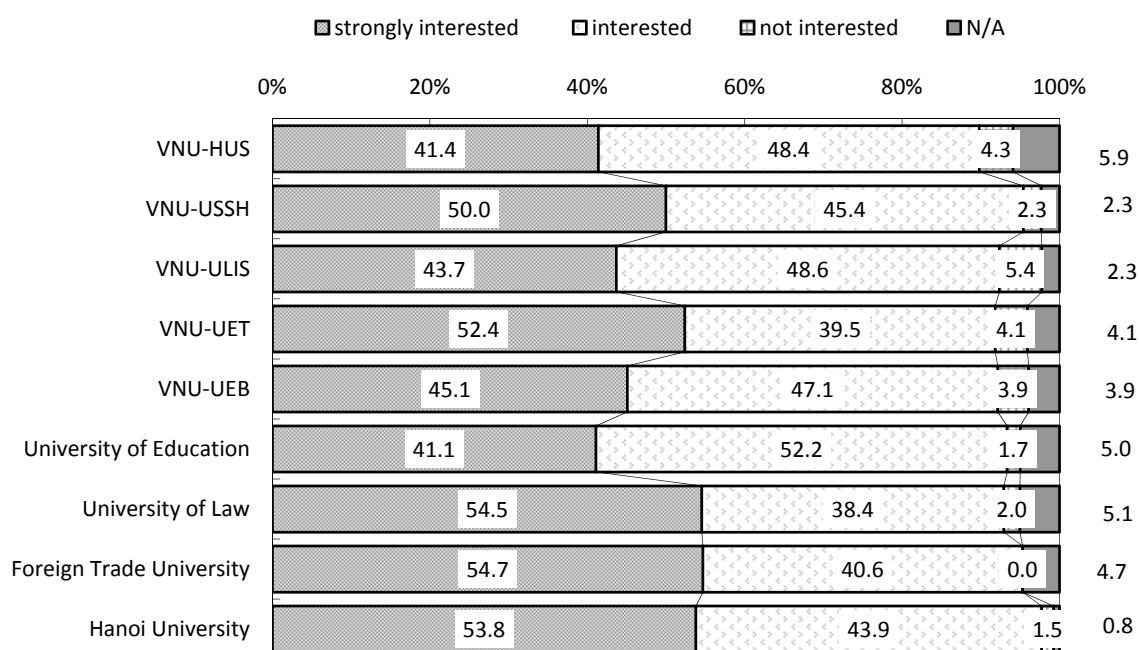
(6) Interest in VJU

In general, Vietnamese undergraduates show great interest in VJU (more than 90%, consists of “strongly interested” (47.6%) and “interested” (46.0%)). There is no significant difference between genders. Note that in addition to students who major in Japanese at FTU and Hanoi University, students with irrelevant majors also have strong interest.



Source: JICA Study Team

Figure 6-23 Interest in VJU (by Gender)



Source: JICA Study Team

Figure 6-24 Interest in VJU (by University)

6.3. Expectations from Graduate Students

6.3.1. Graduate Student Survey

(1) Respondents Profile

The total number of respondents was 478 students. While the number of male students is slightly higher than female in University of Engineering and Technology, more than 70% of the total respondents are female. Most of the students are 24-25 years old (34.7%), representing more than half of the total students when joined with the 26- to 27-year-old students. Students over 28 years old account for close to 30%, while the oldest one was 40. The number of master students is by far equivalent, with more first-year master students in VNU-HUS, and mainly second-year master students in VNU-ULIS and VNU-UET.

Table 6-12 Gender

(unit: students)

University	Total	Male	Female	N/A
1. University of Science (VNU-HUS)	108	28	77	3
2. University of Social Science and Humanities (VNU-USSH)	143	19	113	11
3. University of Foreign Languages and International Studies (VNU-ULIS)	99	5	89	5
4. University of Engineering and Technology (VNU-UET)	94	50	41	3
5. University of Economics and Business (VNU-UEB)	28	11	16	1
N/A	6	1	4	1
Total	478	114	340	24
	100.0%	23.8%	71.1%	5.0%

Source: JICA Study Team

Table 6-13 Distribution of Age

(unit: students)

University	~23	24-25	26-27	28~	NA
1. VNU-HUS	26	32	13	36	1
2. VNU-USSH	38	52	19	32	2
3. VNU-ULIS	16	40	16	26	1
4. VNU-UET	8	35	22	28	1
5. VNU-UEB	0	6	8	14	0
NA	1	1	3	1	0
Total	89 18.6%	166 34.7%	81 16.9%	137 28.7%	5 1.0%

Source: JICA Study Team

Table 6-14 Academic Year

(unit: students)

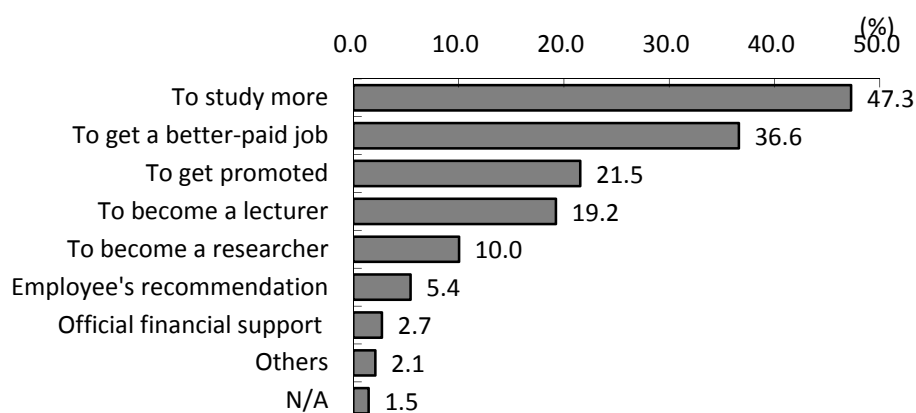
University	M1	M2	NA
1. VNU-HUS	103	1	4
2. VNU-USSH	61	69	13
3. VNU-ULIS	9	82	8
4. VNU-UET	26	65	3
5. VNU-UEB	14	14	0
NA	4	2	0
Total	217 45.4%	233 48.7%	28 5.9%

Source: JICA Study Team

6.3.2. Arguments for Proceeding to Graduate School

(1) Reasons

The most common reason for students to continue to graduate school is “to study more” (47.3%), reaching almost half of the total number of students. The second reason is “to get a better-paid job” (36.6%), followed by “to get promoted” (21.5%) and “to become a lecturer at university” (19.2%), showing that many students continue to graduate school as a mean of getting better jobs.

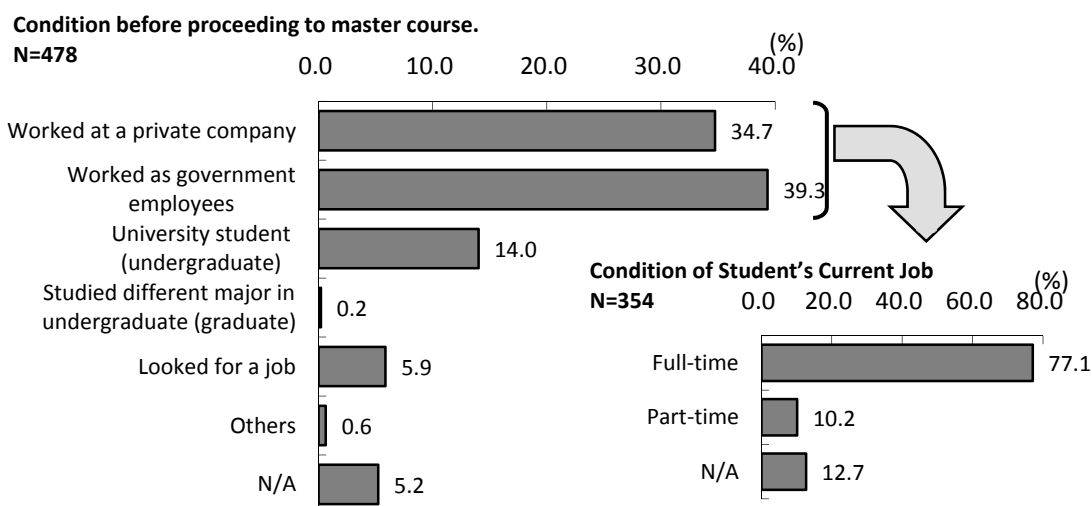


Source: JICA Study Team

Figure 6-25 Reasons for Proceeding to Graduate School

(2) Condition Before Proceeding to Master Course

More than 70% of students have experience working before continuing to a master program, with 39.3% working as government employees and 34.7% at private companies. The majority worked as “Full-time” (77.1%) rather than “Part-time” (10.2%).

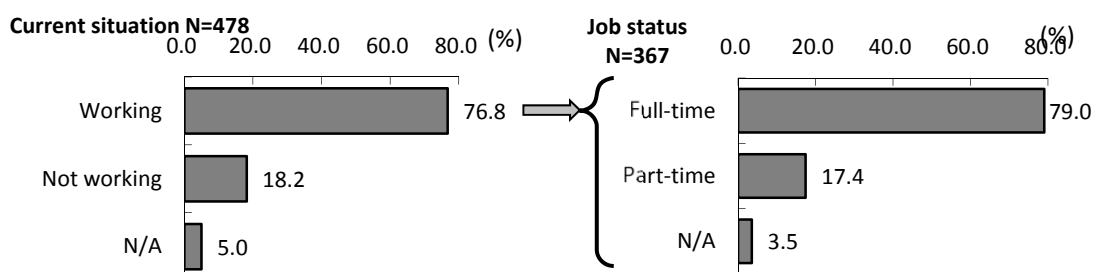


Source: JICA Study Team

Figure 6-26 Condition before Proceeding to Master Course

(3) Condition of Student's Current Job

Greatly surpassing those who are “not working” (18.2%), 3 out of 4 students are currently working (76.8). In addition, 79.0% of “working” students are full-time employees.



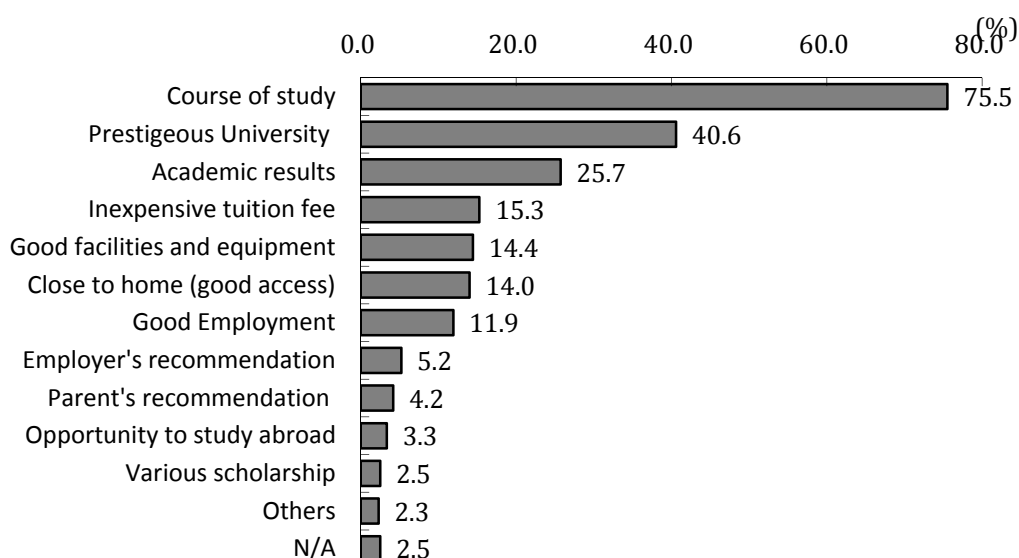
Source: JICA Study Team

Figure 6-27 Conditions of Students' Current Jobs

(4) Reasons for Selecting Current University

Regarding the reasons, “the university provides the major I want to study” (75.5%) gives the highest rate, followed by “the university is a prestigious one” (40.6%), “my academic results seem good enough to enter the university” (25.7%). Next is “inexpensive tuition fees” (15.3%), followed by “good facilities” (14.4%) and “close to home (good access)”, each of which is about 15%.

It is worth noting that more than 80% of students in VNU-UEB and VNU-HUS answer “the university provides the major I want to study” (80%) and more than 70% of students in VNU-ULIS answer “the university is a prestigious one” (73.7%).



Source: JICA Study Team

Figure 6-28 Reasons for Selecting Current University

Table 6-15 Reasons for Selecting Current University

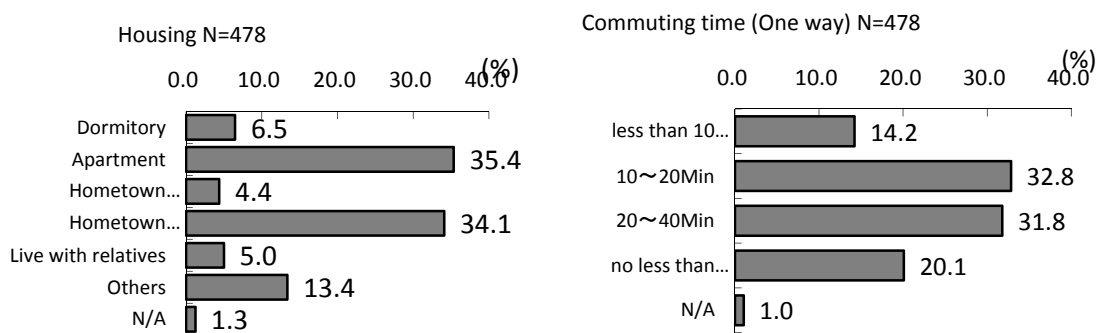
(unit: %)

Reasons (Multiple answer, Descending order)	VNU-HUS	VNU-USSH	VNU-ULIS	VNU-UET	VNU-UEB
Course of study	84.3	71.3	75.8	66.0	89.3
Prestigious university	38.0	22.4	73.7	45.7	10.7
Academic results	18.5	31.5	37.4	16.0	17.9
Inexpensive tuition fees	9.3	15.4	31.3	6.4	10.7
Good facilities and equipment	14.8	7.7	23.2	11.7	25.0
Close to home (good access)	6.5	11.9	21.2	20.2	10.7
Good employment	8.3	7.0	22.2	14.9	7.1
Employer's recommendation	6.5	2.1	10.1	4.3	3.6
Parents' recommendation	1.9	8.4	2.0	2.1	3.6
Opportunity to study abroad	5.6	0.7	2.0	6.4	3.6
Various scholarship	6.5	0.7	2.0	2.1	0.0
Others	4.6	0.0	1.0	4.3	3.6
N/A	2.8	4.9	0.0	2.1	0.0

Source: JICA Study Team

(5) Housing, Commuting Time

The percentages of students who live in apartments (35.4%) and those in their hometown in both apartments and detached houses (38.5%) are about the same. In comparison with undergraduate students, fewer students live in dormitories, but more in their hometown. Regarding commuting time, "10-20 minutes" is the most common (32.8%) and, if joined with "less than 10 min" (14.2%), it represents that almost half the students commute for 20 minutes or less. Note that 20.1% commute for "more than 40 minutes", which is quite high compared to that of undergraduates.



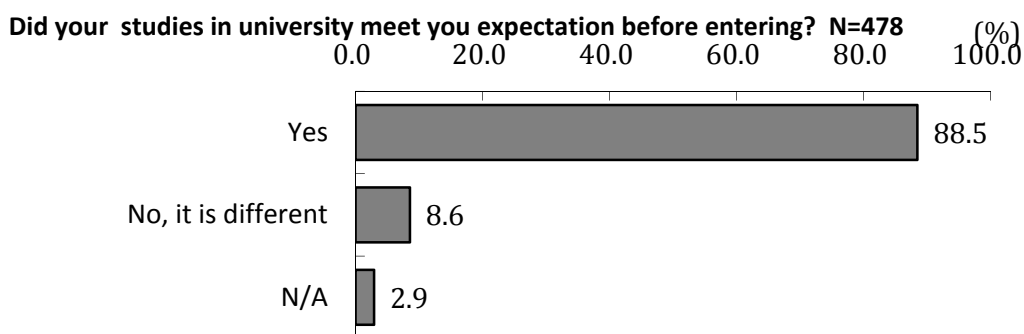
Source: JICA Study Team

Figure 6-29 Housing and Commuting Time

6.3.3. Graduate Student Life

(1) Assessment of Study

When asked whether his/her study in graduate school meets the expectation before entering, the majority answer “yes” (88.5%) which greatly exceeds “no, it is different” (8.6%).

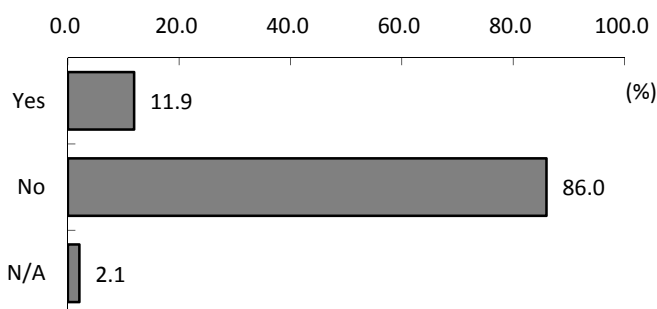


Source: JICA Study Team

Figure 6-30 Assessment of Study

(2) Research Paper Record

There are about 11.9% who have experience writing research papers published in academic journals. However, the majority still have no experience (86.0%).



Source: JICA Study Team

Figure 6-31 Research Paper Record

(3) Scholarship

16.1% of the students receive some form of scholarship from various donors, but mostly from “Vietnam’s Government” (18.2%) and “the current university” (14.3%). More than 40% of the students say the scholarship covers “more than 90%” of total tuition fees, while the average rate is 74.2%.

Source: JICA Study Team

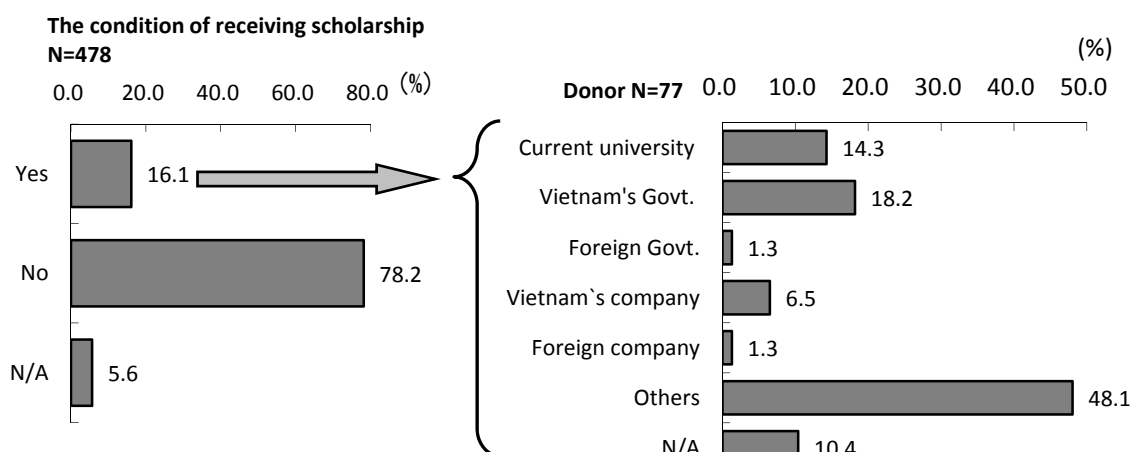
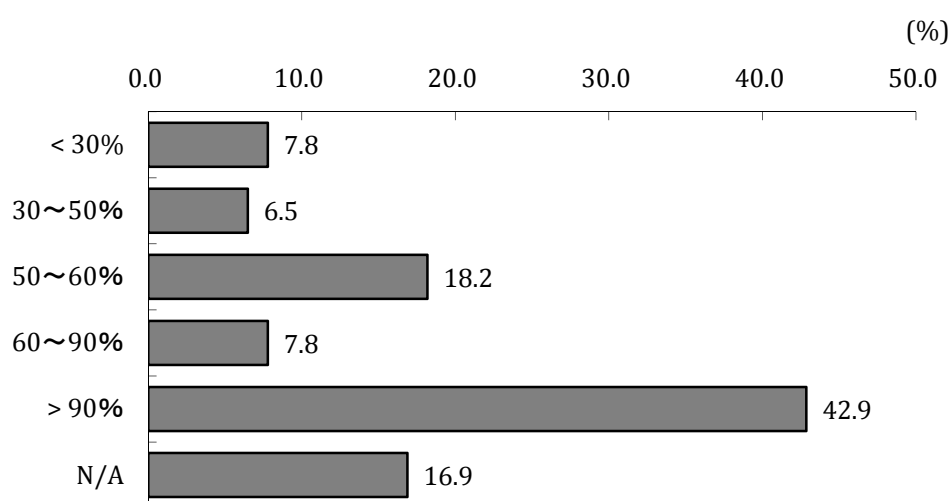


Figure 6-32 Scholarship



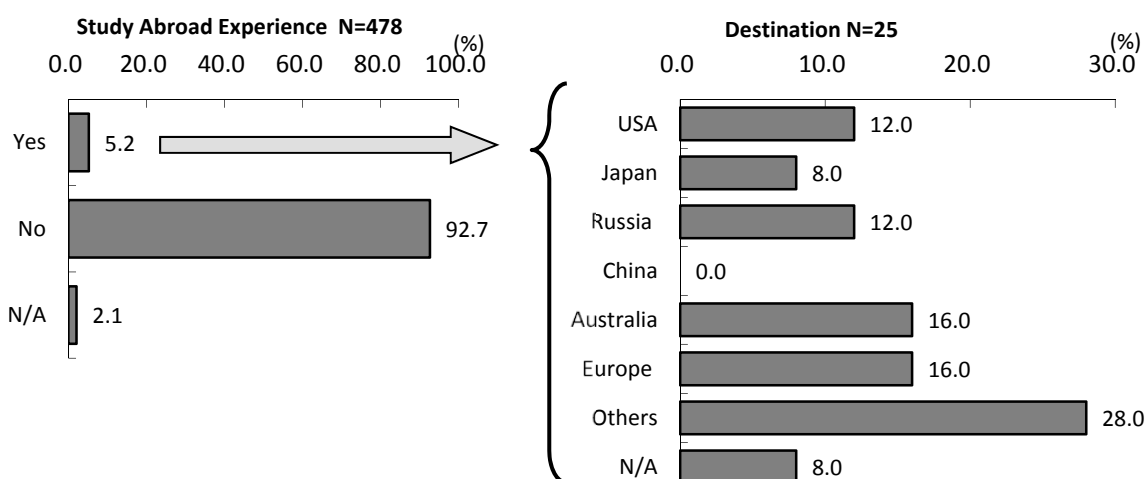
Source: JICA Study Team

Figure 6-33 Tuition Fee Coverage Ratio from Scholarships

6.3.4. Study Abroad Experience

(1) Study Abroad Experience and Destination

Only 5.2% of the students have experience studying abroad, which is approximately the same with undergraduate students. Regarding place, “Australia” and “Europe” (16% each) were the most popular, followed by “U.S.A.”, “Russia” (12% each) and “Japan” (8.0%).

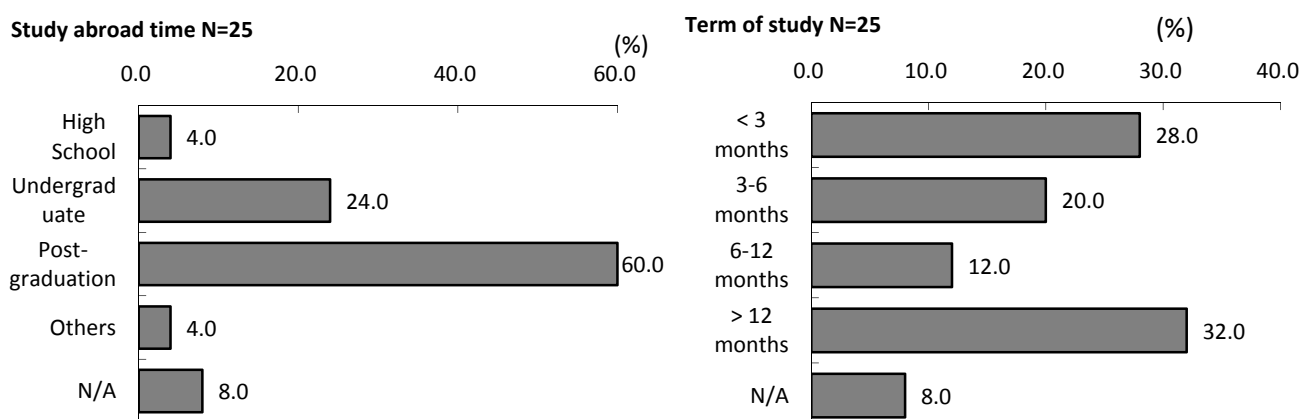


Source: JICA Study Team

Figure 6-34 Study Abroad Experience and Destination

(2) Study Abroad Time, Terms Of Study (For Those with Experience)

Regarding the time, most of them go “post-graduation (undergraduate)” (60%), with the common terms of study varying from long, with “more than 12 months” (32.0%), to short, with “less than 3 months” (28.0%).

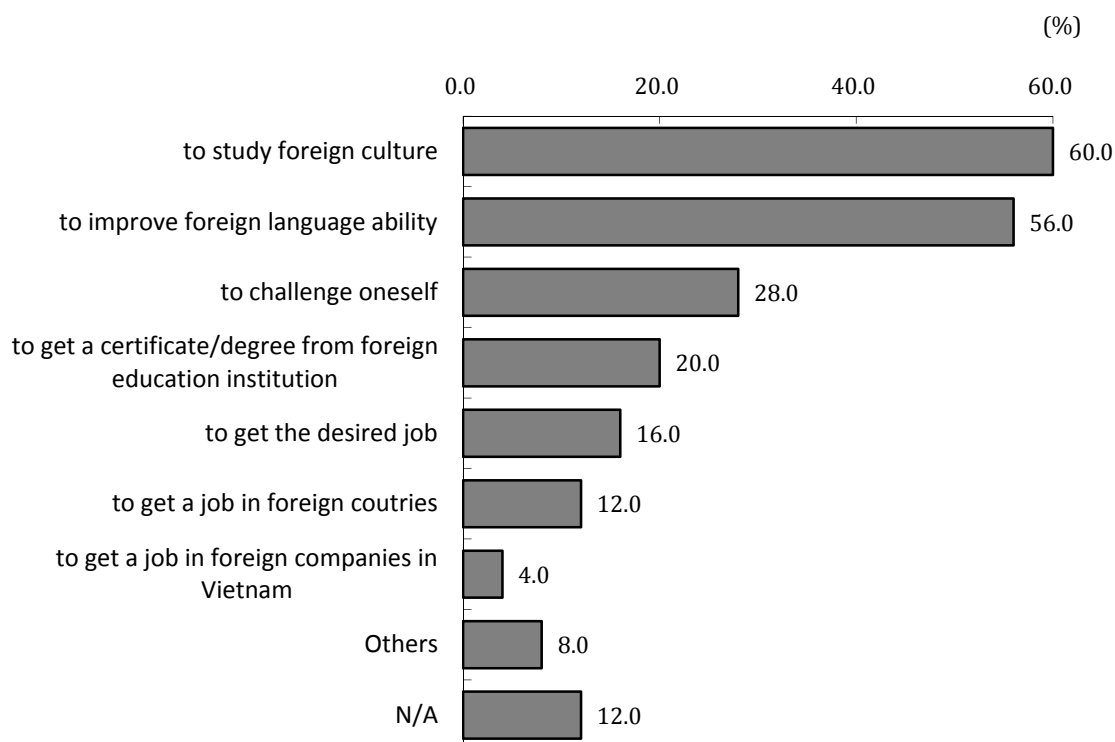


Source: JICA Study Team

Figure 6-35 Study Abroad Time, Terms of Study (For Those with Experience)

(3) Study Abroad purposes

The major purposes of studying abroad are “to study foreign culture” (60.0%) and “to improve foreign language ability” (56.0%), followed by “to challenge oneself” (28.0%) and “to get a certificate or degree issued by foreign education institution” (20.0%).



Source: JICA Study Team

Figure 6-36 Study Abroad Purposes

(4) Impressions of Japanese universities

This question is asked to all the students. The strongest impression is “have good learning environment, facilities, & equipment” (60.7%), followed by “offer opportunities to study advanced academic areas” (57.7%) and “provide high-quality programs that meet international standards” (41.0%), which all show a common tendency among undergraduate students. However, some impressions attract more female students than male ones, such as “require student to study in high intensity and under high pressure.”

Table 6-16 Impressions of Japanese Universities

(unit:%)

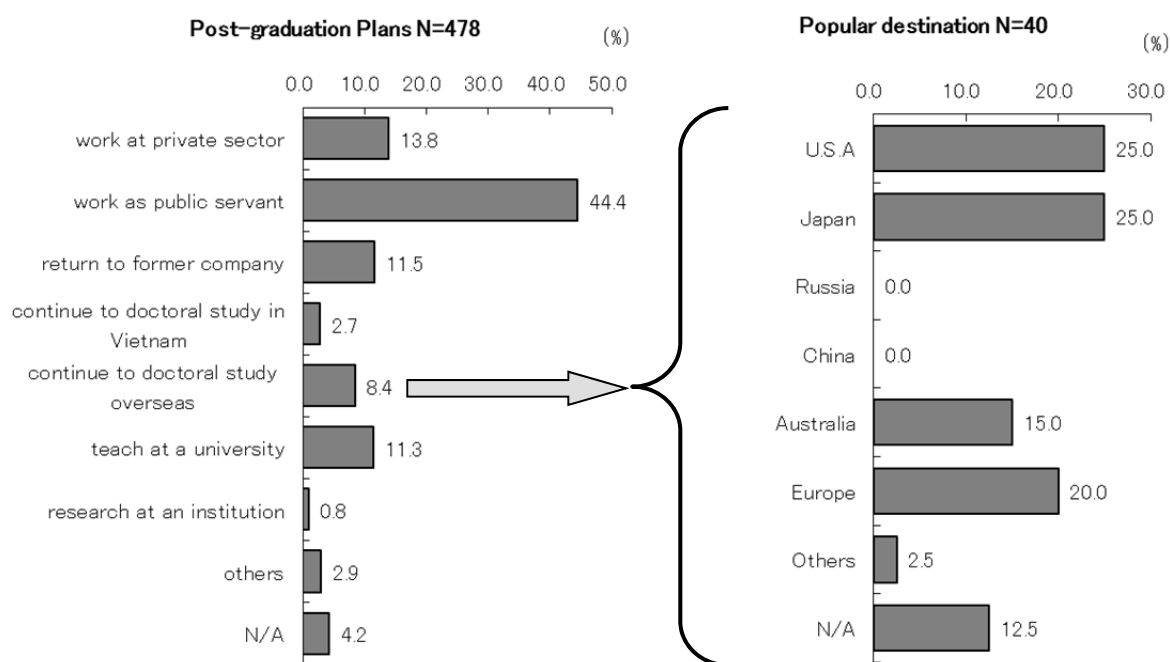
Impressions of Japanese Universities (Multiple answers, descending order)	Total	Male	Female
Have good learning environment, facilities & equipment	60.7	57.9	62.4
Offer opportunities to study advanced academic areas	57.7	58.8	58.8
Provide high-quality programs that meet international standards	41.6	42.1	42.1
Internationally reputable degrees	41.0	39.5	41.5
Have various opportunities for after-school activities	26.6	21.9	28.5
Require student to study in high intensity and under high pressure	24.7	16.7	27.6
Expensive tuition fees	16.5	12.3	17.4
A lot of assignments	10.7	7.9	10.6
Others	2.9	2.6	2.9
N/A	7.1	5.3	7.6

Source: JICA Study Team

6.3.5. Post-Graduation Plan

(1) Post-Graduation Plan

More than half of the students plan to go to work, either as a “public servant” (44.4%) or in the “private sector” (13.8%). Also, some answer “return to former company” (11.5%) or “teach at university” (11.3%), about 10% each, which results in a condition in which the majority plan to work after graduation. The rest of the students plan to continue to doctoral studies, whether at “universities in Vietnam” (2.7%) or at “universities abroad” (8.4%), with U.S.A. and Japan as the popular destinations (25% each)



.Source: JICA Study Team

Figure 6-37 Post-Graduation Plans

(2) Impressions of Japanese companies

More than half of the students answered “good salary” (57.3%), “stable management” (56.9%), “good quality assurance system” (53.3%) and “good working environment” (46.2%) as impressions of Japanese companies.

These answers share a common trend with those of undergraduate students.

There are more male students who are concerned with “difficulties in communication” than the female ones, who have rather positive impressions including “good salary” or “good working environment”.

Table 6-17 Impressions of Japanese Company

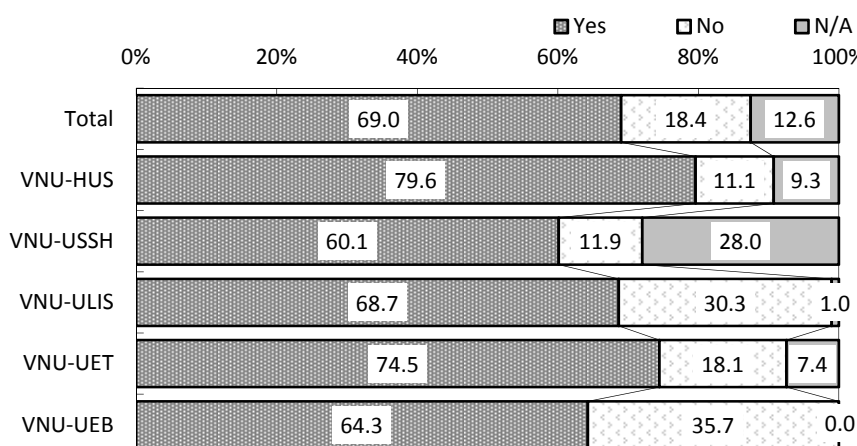
(unit: %)

Images (Multiple answers , descending order)	Total	Male	Female
Good salary	57.3	50.0	60.6
Stable management	56.9	56.1	58.2
Good working environment	53.3	56.1	52.9
Good quality assurance system	46.2	39.5	49.4
Strict supervision	37.4	38.6	37.6
Evaluate work performance properly	29.5	28.1	30.3
Difficulties in communication	12.3	17.5	10.6
Require much overtime work	11.9	8.8	12.6
Others	1.3	0.9	1.2
N/A	2.5	1.8	2.6

Source: JICA Study Team

(3) Interest in Working at Japanese Companies

The rate of students who are interested in working at a Japanese company is quite high (69%) which is well above those who are not (18.4%). However, this number is somehow low if compared to the undergraduate one, which is almost 90%. Comparing between universities, more than 70% of students from VNU-HUS and VNU-UET are interested in working at Japanese companies.



Source: JICA Study Team

Figure 6-38 Interest in Working at Japanese Companies

6.3.6. Expectation Towards VJU

(1) VJU's Appeal

Questions regarding the characteristics expected from VJU allowed multiple answers. "Internationally provide high level of education as leading Japanese Universities do" was the highest answer (70.1%), the same result as the survey of undergraduate students, followed by "have advanced facilities and equipment for research and education," (54.0%), and "able to transfer credit to cooperating Japanese universities" (50.4%).

Comparing between genders, there are more female students who consider "the chance to transfer credit to cooperating Japanese universities", "have high-quality lecturers, including those who have experience studying in Japan", and "the chance to learn both Japanese

language and culture”, while male students answer relatively more on “collaboration with companies in research”.

Table 6-18 Attractiveness of VJU

(unit: %)

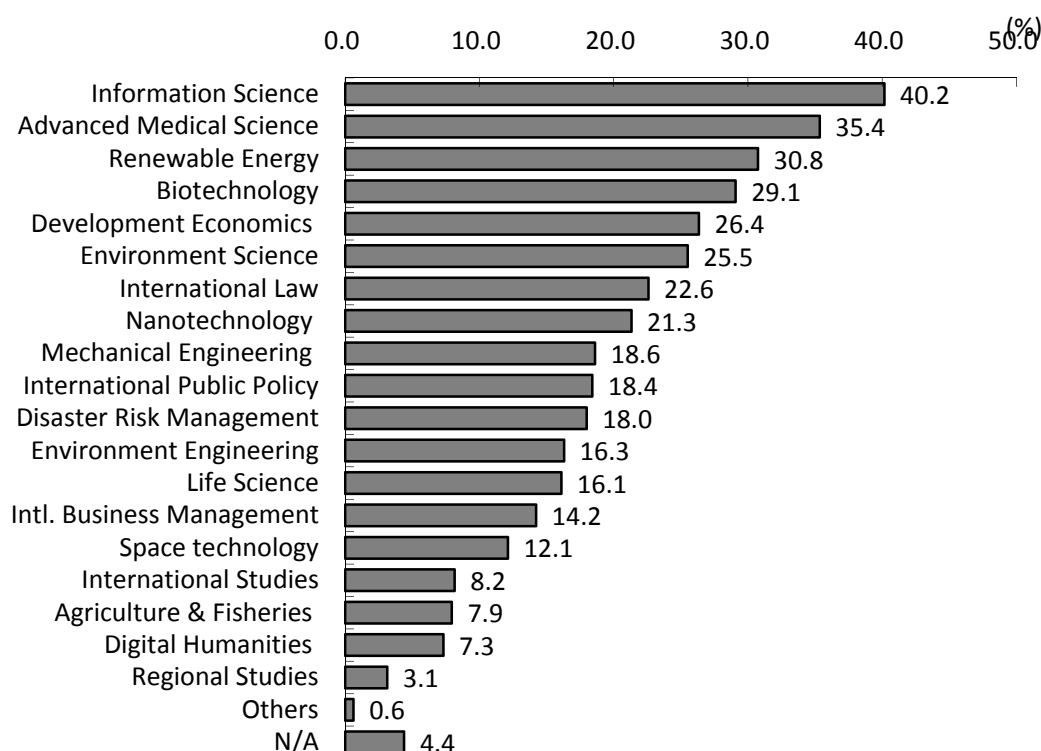
Attractiveness of VJU (Multiple answers, descending order)	Total	Male	Female
Internationally provide high level of education as leading Japanese universities do	70.1	71.9	70.6
Have advanced facilities and equipment for research and education	54.0	52.6	54.7
The chance to transfer credit to cooperating Japanese universities	50.4	36.0	55.6
Have high-quality lecturers, including those who have experience studying in Japan	46.4	41.2	49.4
The chance to learn both Japanese language and culture	40.8	33.3	44.4
The chance to take classes that differ from the major, such as liberal arts classes	39.7	35.1	41.5
Practical-minded lectures by Japanese companies	34.5	35.1	34.7
Collaboration with companies in research	33.9	38.6	32.9
Advanced IT environment including e-library	31.6	33.3	31.8
The chance to get a degree from Japanese leading universities	24.5	21.1	26.8
Urban developments such as residential, commercial facilities, public facilities and recreational facilities are built around the university.	22.2	19.3	23.5
Opportunity to work at Japanese or other foreign companies in Japan, Vietnam or other countries.	21.3	22.8	21.2
Others	29.7	20.2	33.5
N/A	4.4	5.3	4.1

Source: JICA Study Team

(2) Academic Fields that Should be Emphasized

The question “Aiming for Vietnam’s sustainable development, what academic field should be developed?” was asked in order to know students’ expectations regarding academic fields at VJU.

“Information Science” (40.2%) comes first, which is the same result as the undergraduate survey, followed by “advanced medical science” (35.4%), “renewable energy” (30.8%), “biotechnology” (29.1%) and “development economics” (26.4%), which is about the same as undergraduates, in general.



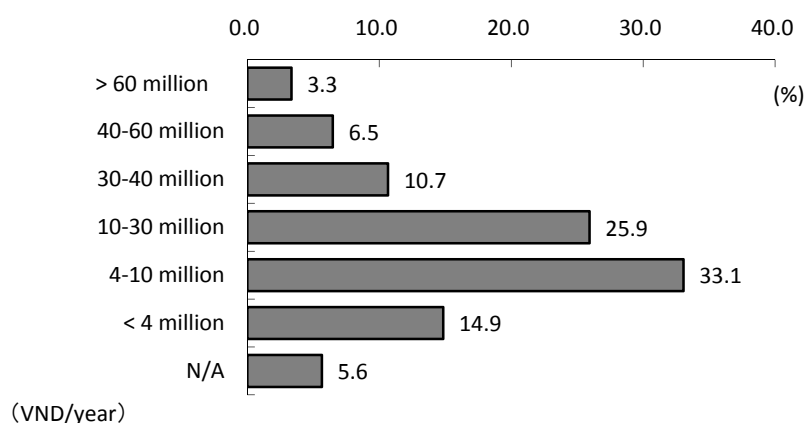
Source: JICA Study Team

Figure 6-39 Academic Fields that should be Emphasized

(3) Student Life Assumptions

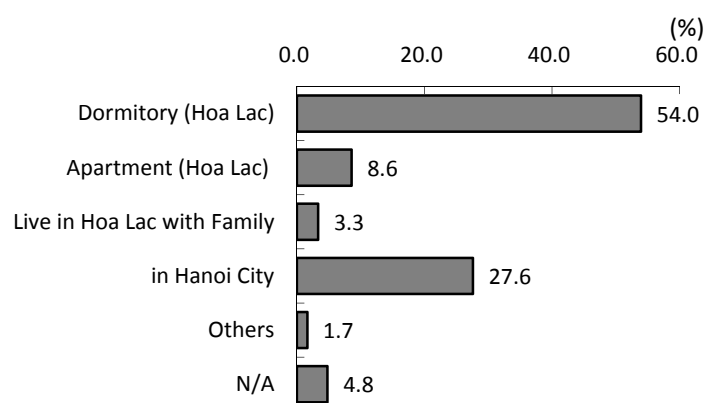
The question asked was hypothetical, given the students study at VJU, about their assumptions regarding tuition fees and housing location. Regarding tuition fees, “4 - 10 million VND/Year” (33.1%) was the most preferable range as it coincides with the tuition fees of the existing public universities in Vietnam. That is followed by “10 – 30 million VND/Year” (25.9%). On average, students expect around 18 million VND/year (equivalent to 850,000 JPY), which is slightly above that of the existing public universities.

Regarding housing location, just like undergraduate students, most graduate students also wish to live in the dormitory on Hoa Lac campus (54.0%). However, the number of graduate students that wish to stay in Hanoi City (27.6%) is double than that of the undergraduate ones (12.3%).



Source: JICA Study Team

Figure 6-40 Tuition Fee Assumption



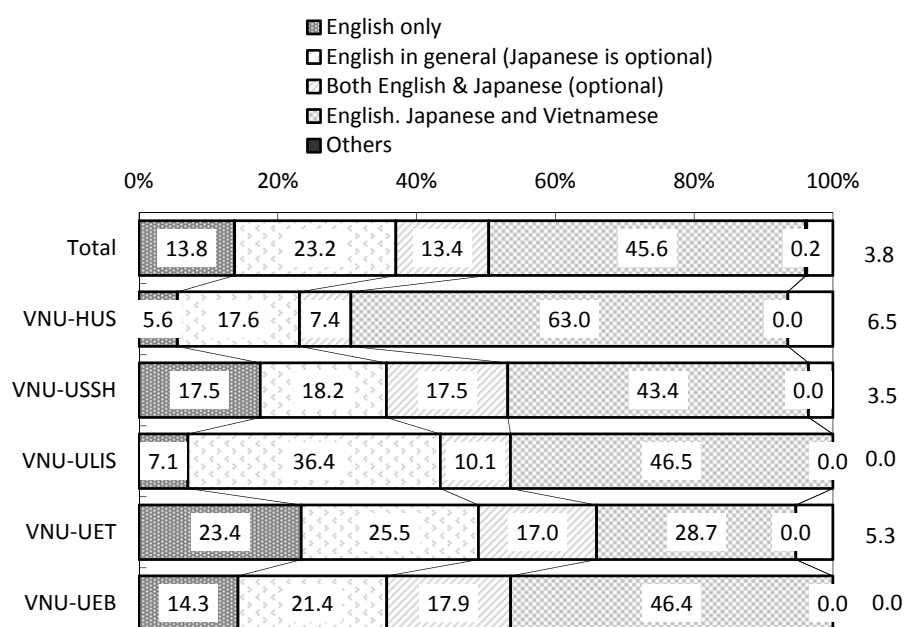
Source: JICA Study Team

Figure 6-41 Housing Location Assumptions

(4) Languages

The majority of graduate students think VJU should teach in “English, Vietnamese and Japanese (depending on lectures)” (45.6%), which is the same result as the undergraduate survey. However, the number of students who prefer to not use Vietnamese language, such as those who answered “English in general (Japanese is optional)” (45.6%), “English Only” (13.8%), and “Both English and Japanese (optional)” (13.4%) add up to 50.4%, which fairly exceeds the undergraduate survey results.

Comparing between universities, their preferences are not homogeneous. For example, students in VNU-UET prefer “English Only” (23.4%), students in VNU-ULIS prefer “English in general” (36.4%), while students in VNU-HUS prefer “English, Vietnamese and Japanese (depending on lectures)” (63%).

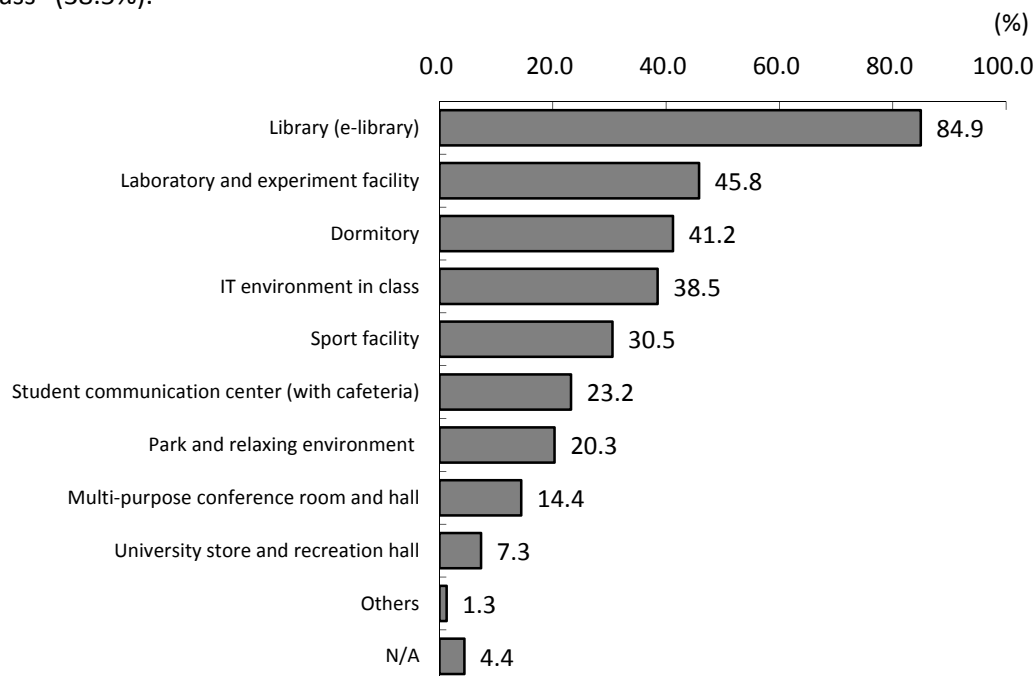


Source: JICA Study Team

Figure 6-42 Instructional Language Preferences

(5) Facilities Needs

Graduate students indicate that a “Library (e-Library)” (84.9%) is their highest need, higher than that of undergraduates (75.4%). Other common needs of undergraduates are: “laboratory and experiment facility” (45.8%), “dormitory” (41.2%), and “IT environment in class” (38.5%).



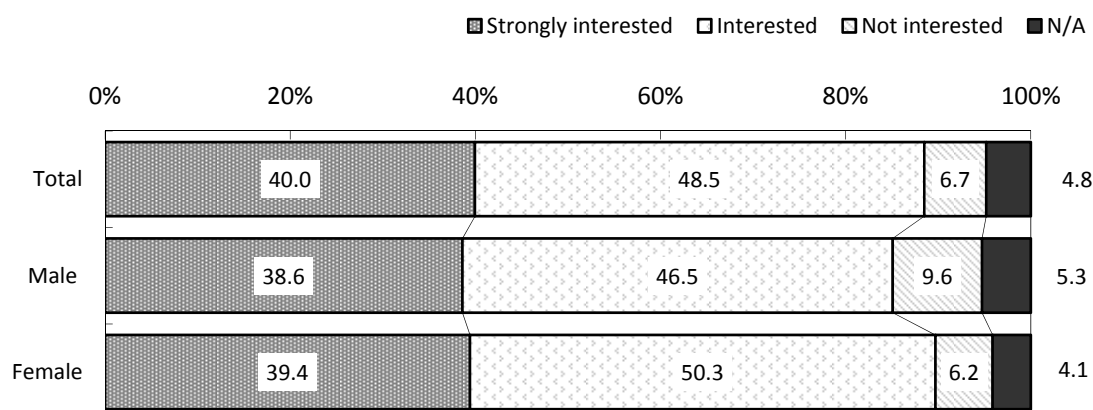
Source: JICA Study Team

Figure 6-43 Facility Needs in VJU

(6) Interest in VJU

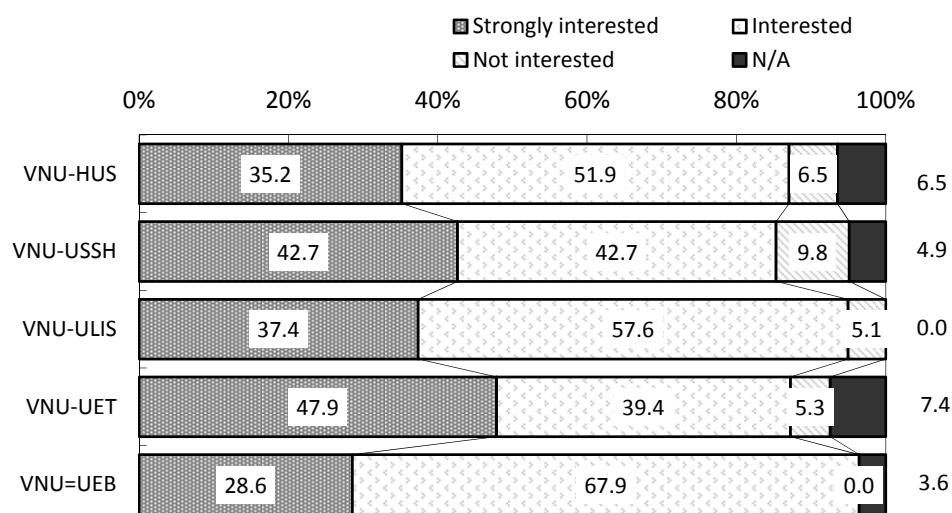
A little less than 90% of graduate students have interest in VJU, consisting of “strongly interested” (40.0%) and “interested” (48.5%), which is about the same as for undergraduates.

Looking at the genders, the interest from female students is higher than from male ones. Moreover, looking at universities, there are relatively more students from VNU-UET and VNU-USSH who answered “strongly interested”.



Source: JICA Study Team

Figure 6-44 Interest in VJU



Source: JICA Study Team

Figure 6-45 Interest in VJU by University

6.4. Expectations from Researchers, Teachers & Students Who Studied in Japan

(1) Evaluation of University Education in Vietnam (in General)

An interview was conducted with university teachers in Vietnam who have experience studying in Japan. In Vietnam, a vote to evaluate the performance of government agencies was taken in the National Assembly at the beginning of 2013. As a result, the education sector was evaluated as the lowest, along with the health sector. Impact of this has been observed during surveys in Vietnam. Preference for studying abroad has been strengthened among Vietnamese, and Japanese companies' expectations for the universities in Vietnam have not been growing much.

(2) The Challenges of University Education in Vietnam (Based on the Interview)

1) Opinions from University Teachers who Continued Graduate Studies in Japan After Finishing Graduate School in Vietnam

In Vietnam, even for the master's thesis, the guidance given to students is much less or very little compared to what is given in Japan. When writing a thesis in Vietnam, the common process is to copy-paste from other papers then add one's own "idea" (which is "what's ought to be written"). The methods to develop logic that starts from one fact have not been applied to master's theses in Vietnam. On the other hand, the guidance given by Japanese teachers is not limited to one's expertise, but also other things raised from a variety of points of view. Careful guidance is also given sequentially as the thesis-writing advances. Therefore, the fact that human resource development in Japan is brought about by examining one's idea from various angles and developing a better idea of one's own was pointed out as the big difference between university education in Vietnam and in Japan

2) Opinions from Teachers who Studied in University and Graduate School in Japan after Graduating from High School in Vietnam

In addition to the difference between the education in Vietnam and in Japan as introduced in the previous section, another main difference between educational and institutional

environments was pointed out. That is, for the autonomy of the students, a "credit system" is advantageous.

Therefore, it is still hard for students to further their own thinking. In other words, it can be said that the education style of "memorization" in high school is continued even in university, thus there is no environment that cultivates creative ideas.

In addition, the correspondents were also amazed by the enhancement of the infrastructure of the universities in Japan. They emphasized that the learning environments for students to be able to learn in a better condition were in place: library, classrooms (white board, lighting, air conditioning, etc.), computer room, etc.

3) Opinions from Those Who Learned in University and Graduate School in Japan and are Now Working in Vietnam (Human Resources Development and Mediation)

The consultant who implemented the above-mentioned "Student Employment Awareness Survey" (transferred from a university in Vietnam in the second year to study at Hitotsubashi University, continued to graduate school and acquired MBA), pointed out the difference regarding career guidance between Vietnam and Japan (provision of employment information).

Course consultations, which cannot be expected at universities in Vietnam, have been implemented carefully in Japanese Universities. At the same time, for international students, even such course consultations are insufficient since there is no "common knowledge" of job-hunting during university/high school. The fact that "a natural thing" for Japanese students is not equivalent to "a natural thing" for foreigners was emphasized.

(3) Challenges in Research and Education Environment of Vietnamese Universities

1) Challenges in Research Environment

The financial assistance and development of the research environment is essential to promote the research activities of teachers. However, in order to obtain funds for research in Vietnam, the competition is quite high and the procedure takes a long time. Moreover, the funding for a group of 5 people and for a year and a half of activity is roughly \$1,000. This is not a support that can ensure research activities with high quality and originality.

The book stock of a university library is too small to be compared to that of Japan. In addition, there is no room for teachers and a dean having his/her own room is exceptional. Anyone that can secure his/her own desk in a teachers' room (large room) has to be a dean or higher.

2) Challenges in Education Environment

Although it becomes a dual issue with the above-described "Challenges of university education in Vietnam", for those intent to do something by receiving education in Japan, there is very little chance to provide guidance regarding essays and education that cultivates creativity.

Theses are usually only undertaken by some of the excellent students, but even in such cases, time for advice and guidance of the thesis is almost never given. Therefore, there was almost no cases in which a student was able to expand one's own ideas for the theme of the paper, resulting in similar theses for everyone.

On the other hand, it is already difficult enough for teachers to "keep on top of a large amount of lectures", from early morning until early evening (an instructor's obligation is between 240 and 360 hours per year). This condition leaves no more time or will to do preparation or lecture to teachers.

The salaries of lecturers are divided into two categories: salary for civil servants and salary for university instructors (for the lectures given). Even a Dean's salary is said to be around \$500 - \$600 a month.

It is said that roughly \$1,000 is required for a family to live for 1 month in Hanoi, which means, in the case of two civil servants incomes, a part-time job is also necessary. Responding to the request from students to be able to focus on education instead of a part-time job, it is inevitable to say "in order to live, a part-time job is more important than teaching in the university".

3) **Challenges of the University Reformation Transition Period**

MOET has been working to improve the situation. From the second half of the 2000s, young people have been appointed as vice presidents (3 vice presidents in their 30s came out of the Foreign Trade University, whose students are said to be at the highest level in Vietnam), showing a generational change has started. Teachers who have study experiences in western countries and Japan have been given more opportunities to become deans or even higher. Now some new young associate professors can be seen, but still very few professors.

There is also a case where incentives are given to English papers, and there is no doubt that the condition is moving gradually in a better direction, but the progress is not firm yet and is still "in transition".

In addition, a teacher evaluation system has been attempted since the late 2000s, but even now it is still in the "trial" phase and the results have not been announced yet.

Excellent young teachers have confidence in their own ability as teachers, but there is another challenge that is caused by the transition of generations. Under these circumstances, even if teachers who studied in Japan would like to establish a new graduate school, it would be difficult to be "an ideal university/graduate school" as long as the overall system of research and education in Vietnam is not reformed accordingly.

(4) **The Expected Potential of VJU**

1) **Provision of Education that Cultivates Creativity**

For students who have not had any education experience in a foreign country, it is difficult to know what exactly the problem is for universities in Vietnam. Therefore, it would be more realistic if the expectations for improvement in the education system by VJU were based on the opinions of teachers who have received education in Japan.

It can be said that the first expected potential of VJU is the provision of education that promotes "learning to select and to think independently". The provision of education that offers a wide range of knowledge and enables one to think independently is the foundation. It is necessary for VJU to respond to the need to provide education that cultivates creativity. For this purpose, the training of high-quality Vietnamese teachers through quality education by Japanese teachers is the greatly expected potential of VJU.

2) **Improvement of Research Environment, Which is the Basis of Education that Cultivates Creativity**

Second, improvement of the research environment, which will ensure quality education, is essential. Not only intellectual aid for research activities, but also support for the establishment of a system that leads to research improvement is necessary. It is important for VJU to answer these expectations.

3) **Provision of Education to Meet the Needs of Industry**

It was pointed out that university education in Vietnam is missing the perspectives of industry needs. It is still about "education for education" rather than considering human resource development.

It was pointed out by a VNU teacher that "in many cases, graduates of VNU will be able to find jobs after one year if they receive special training, not immediately after the graduation".

As mentioned before, Japanese companies have strong expectations to educate high-quality human resources. Establishing a new education system that will respond to perspectives of industrial needs will be one of the expected roles of VJU. For this purpose, VJU should cooperate with Japanese firms that can provide lectures and training equipment, accept internships and participate in job matching.

7. Future Urban Development Plan and Campus Location Plan

7.1. Future Development Plan of Hanoi

(1) Current Situation

Hanoi is the capital of Vietnam, located on the right bank of the Red River, 1,760 km north of Ho Chi Minh City and 120 km west of Haiphong.

The area of Hanoi used to be about 920 km² and its population was 3.5 million in 2008.

But in May 2008 it was decided that Ha Tay Province, Vinh Phuc 's Me Linh district and 4 communes of Hoa Binh's Luong Son District would be merged into the metropolitan area of Hanoi from August 2008. Thus, Hanoi's total area increased to 3,344 km² with 29 subdivisions and its new population is 6.2 million, effectively tripling its size. The Hanoi Capital Region, a metropolitan area covering Hanoi and 6 surrounding provinces under its administration, will have an area of 13,436 km², with a population of 15 million by 2020.

In parallel with the expansion of Hanoi, its Master Plan was developed in April 2010 – “**The Hanoi Capital Construction Master Plan to 2030 and Vision to 2050**” (hereinafter referred to as “Hanoi Master Plan”).

(2) The Hanoi Capital Construction Master Plan to 2030 and Vision to 2050

1) Outline

Vision

As defined in the Hanoi Master Plan, sustainability is essential for Hanoi's further development in synchronizing with the expansion of the city as proposed in 2008, as below.

Since Hanoi is the capital of Vietnam, it is necessary to expand the ideas of sustainability to embody all 4 pillars of sustainability: economic, environmental, social and cultural sustainability. This will strengthen Hanoi as a capital city, where administration, culture and higher education should be promoted. Hanoi will be the National Center of Politics – Economics – Culture – Science – Tourism – International interaction – Education – Healthcare. The capital city has high-quality of living environment and entertainment as well as convenient destinations for investment. (Quoted from Hanoi Master Plan)

Planning Direction

The five directions of the Hanoi Master Plan and Hanoi's features are summarized as follows.

Table 7-1 Planning Direction

Direction	Features
1. National political administration center	As the capital of Vietnam, Hanoi is expected to ensure the stable national political base and be the national administration center that guides, instructs and manages national administration activities.
2. Socio-cultural center	Hanoi has a history of thousands of years that illustrates most of the historical development of Vietnam. <ul style="list-style-type: none"> - Thang Long culture: tangible and intangible culture, habits and lifestyle - Doai area culture: in the West of Hanoi illustrates the culture of the Northern Delta

Direction	Features
3. Economy, trade and service center	Hanoi is located at a distance of about 120 km from CaiLan-Lach Huyen Port, and is expected to play the following roles in order to revitalize economy, trade and service. <ul style="list-style-type: none"> - International relations: Ocean gate, Airline gate, Economic corridors - Regional relations: Belt road highways, Centripetal highways, Regional economic clusters
4. Conservation, tourism and environment	Ponds and lakes are the main factors that create the landscape of Hanoi. Existing green areas are in old areas. <ul style="list-style-type: none"> - Natural landscape: diversified flora in Ba Vi Huong Tich and Soc Son mountains
5. Center for scientific and technological research, education and health care	Hanoi is a center for education and training high quality human resources to speed up the industrialization process of Vietnam. Hanoi also has the capacity to invest and develop in high technology in agriculture industries, healthcare and sports.

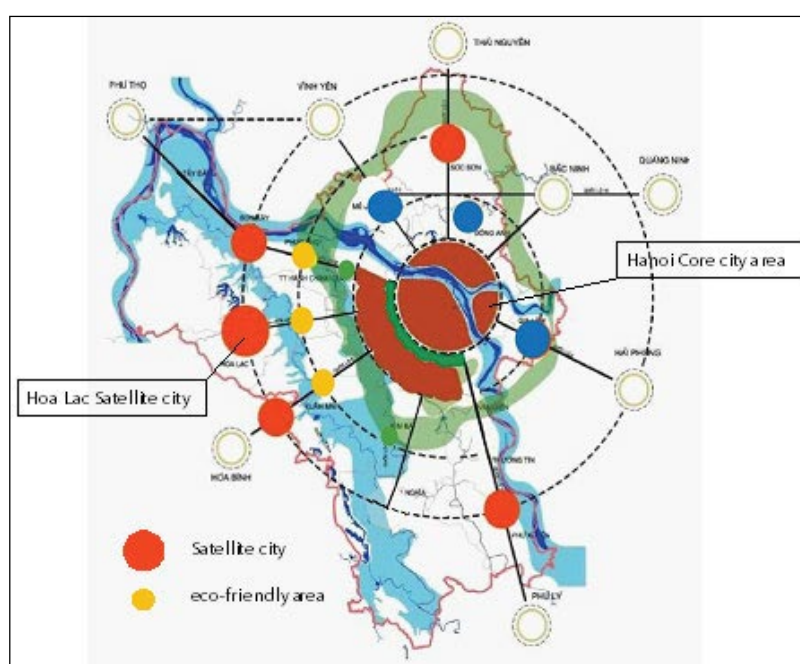
Source: developed by JST based on the information stated in the Hanoi Capital Construction Master Plan to 2030 and Vision to 2050

Planning Strategies

Hanoi is planned to consist of one core city and five satellite cities, based on the following strategies.

Planning Strategies

1. To conserve and upgrade the historical and unique characteristics of the core city
2. To expand the core city to outside belt route 4
3. To provide a large green corridor that will preserve highly productive farms, natural areas, traditional handicraft villages and historical heritages
4. To constitute five satellite cities and three eco-friendly areas
5. To synchronize traffic systems

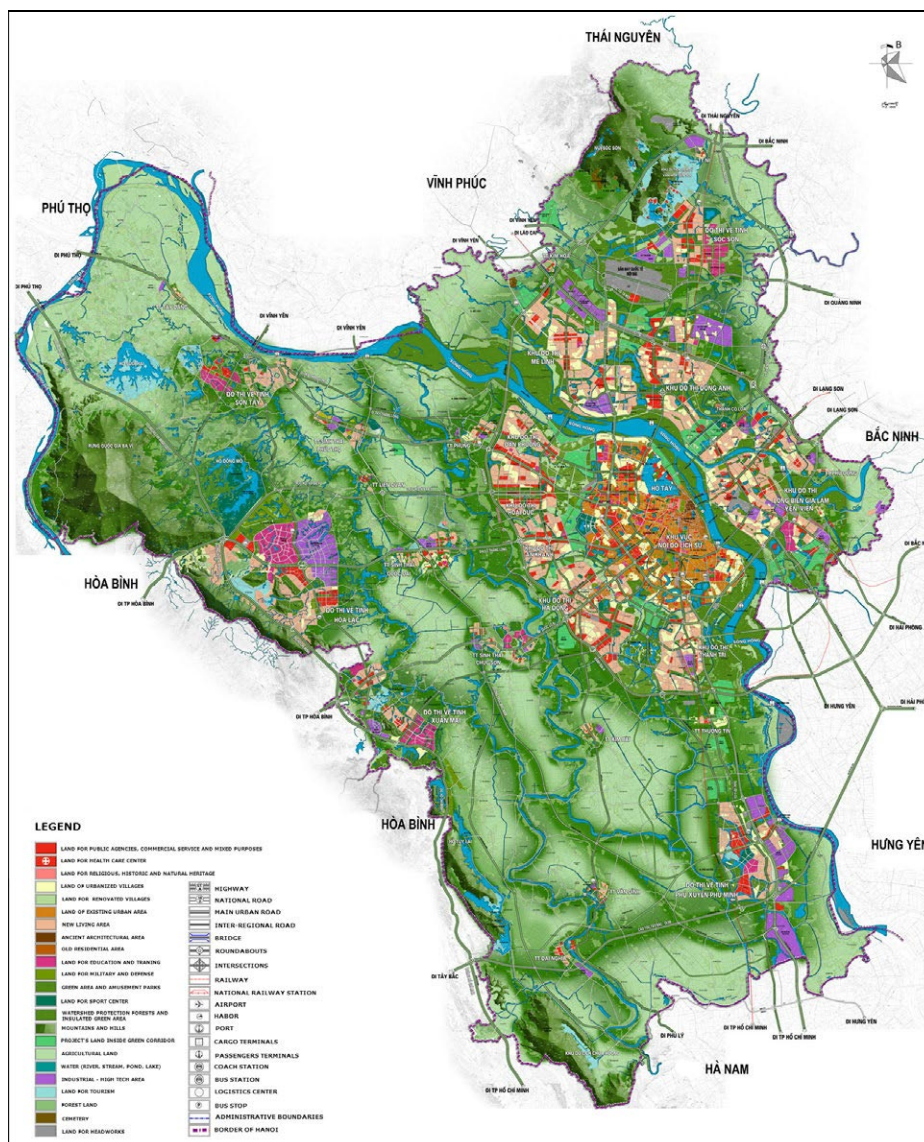


Source: The Hanoi Capital Construction Master Plan to 2030 and Vision to 2050

Figure 7-1 Strategies of Hanoi Master Plan

Land Use

The land use plan is shown next.



Source: The Hanoi Capital Construction Master Plan to 2030 and Vision to 2050

Figure 7-2 Land-Use Map (plan)

2) Parts of the Hanoi Master Plan related to the VJU project – Planned sites for VJU and surroundings in the Hanoi Master Plan

There are three sites for VJU's campuses: (1) the satellite campuses (existing campuses of VNU), (2) the new campus area of VNU in Hoa Lac and (3) Hoa Lac High-Tech Park (HHTP). The first site is located in the central city of Hanoi and the others are in the Hoa Lac area. The following descriptions about the central city area and Hoa Lac area are available in the Master Plan.

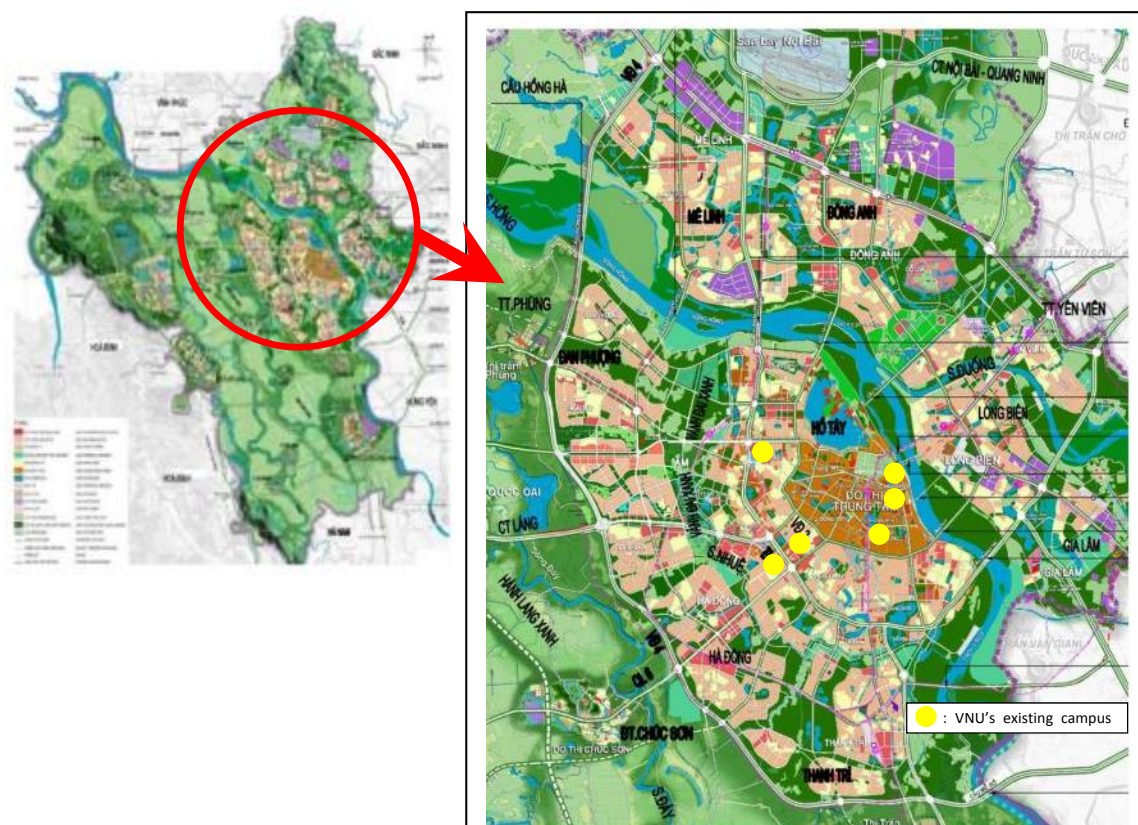
Central City (Including the Satellite Campuses of VNU (Existing Campus))

The central area of Hanoi is planned to have the following functions:

- National center of politics, economics, culture, science, tourism, international relations, education and medical treatment
- Public service provision
- Living area
- Conservation of historical and cultural areas

Currently VNU has six campuses in Hanoi central city: the main campus, Xuan Thuy, Luong The Vinh, Le Thanh Tong, Nguyen Trai and Ba Vi (refer to the figure at the beginning of this report). However, in order to reduce congestion in the city, the Vietnamese Government decided to move some university campuses outside the city. According to Document No. 181/CP-KG, VNU campuses are also planned to move to Hoa Lac.

In accordance with the functions expected of the central city, these six areas, according to the land-use plan, are planned to be used for the following purposes: (1) public agencies, commercial services and their mixed purposes; (2) religious, historic and natural heritage; (3) existing urban area and (4) new living area. In order to build research and/or educational facilities on the existing campus, the necessity to adjust to the Hanoi Master Plan was understood. (Alternatively, since the existing campus will be designated as an educational facility, it is believed that using it as a satellite campus should be no problem). The locations of the six existing campuses are shown in the next figure.



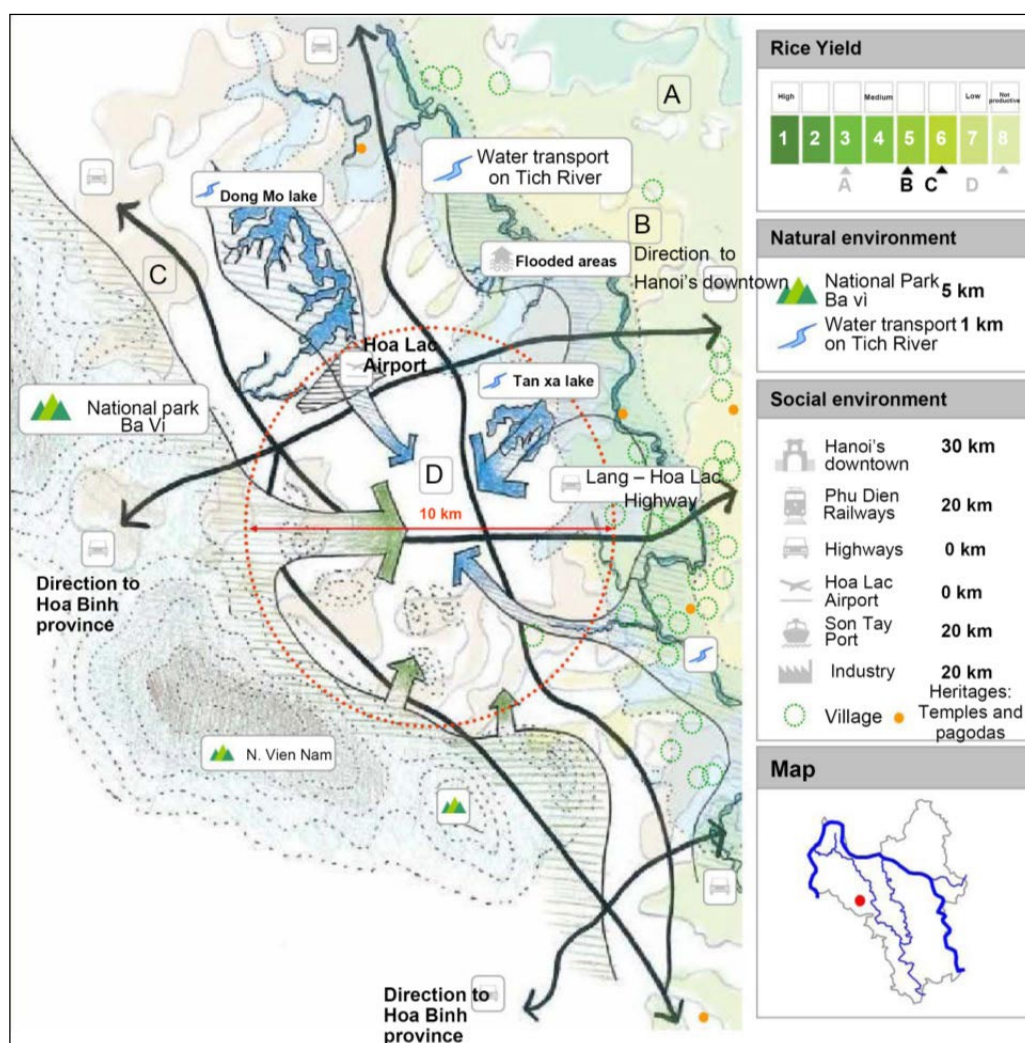
Source: JICA Study Team based on "The Hanoi Capital Construction Master Plan to 2030 and Vision to 2050"

Figure 7-3 Locations of VNU's Existing Campuses in Hanoi

Hoa Lac (Including the VNU's New Campus and HHTP)

Hoa Lac, having 201 km² and whose population is projected to increase to around 600,000 to 700,000 people, is located in the western area of Hanoi, about 30 km from the central city.

In the Hanoi Master Plan, there are five satellite cities and three eco-friendly urban areas planned as shown in Figure 7-1. The “satellite city” in Vietnam is to be located in an urban area inside the regional urban area directly influenced by the city’s urban center, and independent from the central urban economy and society. In this sense, it has been found out that Hoa Lac area is also expected, as a satellite city, to reflect the city’s urban center and have an independent urbanization development area. In addition, as one of the satellite cities, Hoa Lac is planned to be a scientific city with high-tech centers, areas for higher education, tourism, resorts and one of the national administrative centers.



Source: The Hanoi Capital Construction Master Plan to 2030 and Vision to 2050

Figure 7-4 Conditions of Location and Orientations of Effective Land use

7.2. Future Development Plan of Hoa Lac Area

There are two potential sites for the VJU campus in the Hoa Lac area: one is VNU's new campus and the other is HHTP. It is predicted that the population of the Hoa Lac area will increase to 700,000 people, 229,000 of whom will occupy HHTP and 50,000 of whom will be

on VNU's new campus and around it. Two potential sites for the VJU campus and surrounding areas in Hoa Lac are shown in the figure below.

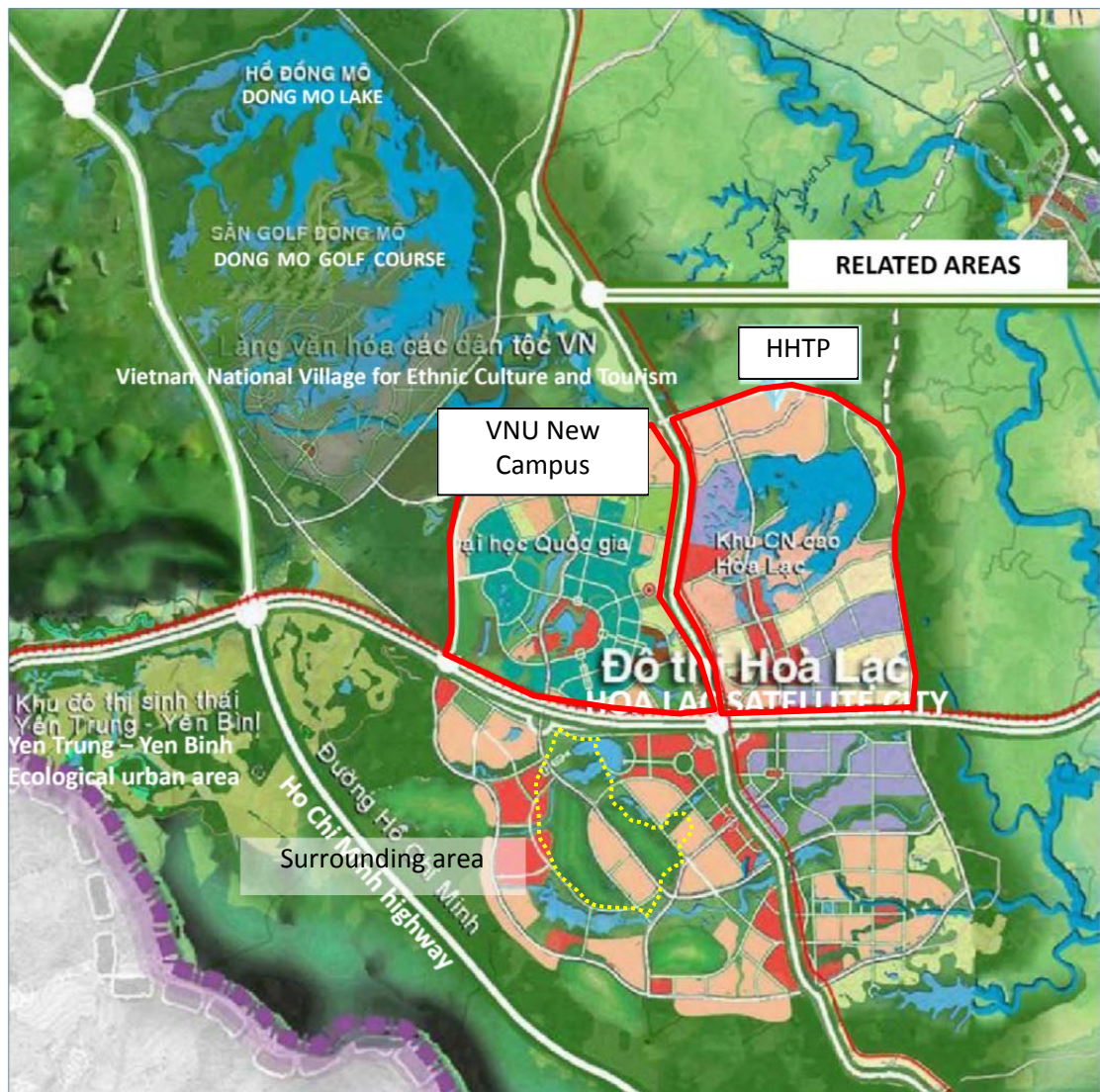


Figure 7-5 Map of Hoa Lac Area

7.2.1. VNU's new campus

As previously explained in the VNU New Campus Master Plan, the relocation of the VNU Campus to the Hoa Lac area (refer to 3.7) was approved by the Prime Minister in October 2012.

The relocation of VNU from the old buildings at the center of the city to Hoa Lac is implementing the policy of the Government and the People's Committee of Hanoi for the relocation of universities from the center of the city in order to reduce the pressure that loads on the technical infrastructure and public facilities, as well as to create better conditions for future urban development. The overall objective is to develop a prestigious university on par with other universities in the region and around the world. These concepts fit in the Hanoi Capital Construction Master Plan to 2030 and Vision to 2050. The outline and map of VNU's new campus is as below.

< Outline of VNU's New Campus >

Location

- 30 km from the center of Hanoi
- East: 150 m from Highway No. 21, West: near Than Lan Mountain, South: 150 m from Lang-Hoa Lac Highway, North: 1,000 m from Hoa Lac Airport

Area

- VNU campus: 1,000 ha, Resettlement: 113.7 ha

Scale of Education (by 2020)

- 60,000 university students, 3,500 high school students

Progress of Construction

- The basic facilities will be completed in 2020.
- The construction will be totally completed in 2025



Figure 7-6 Map of VNU's New Campus

VNU proposed that the Government give permission to transfer the right to use the three old bases and hold an auction to raise funds for the project. The relocation will happen from 2016 to 2025.

More information is given in Chapter 3.7 "New Campus Master Plan".

7.2.2. HHTP

(1) Background

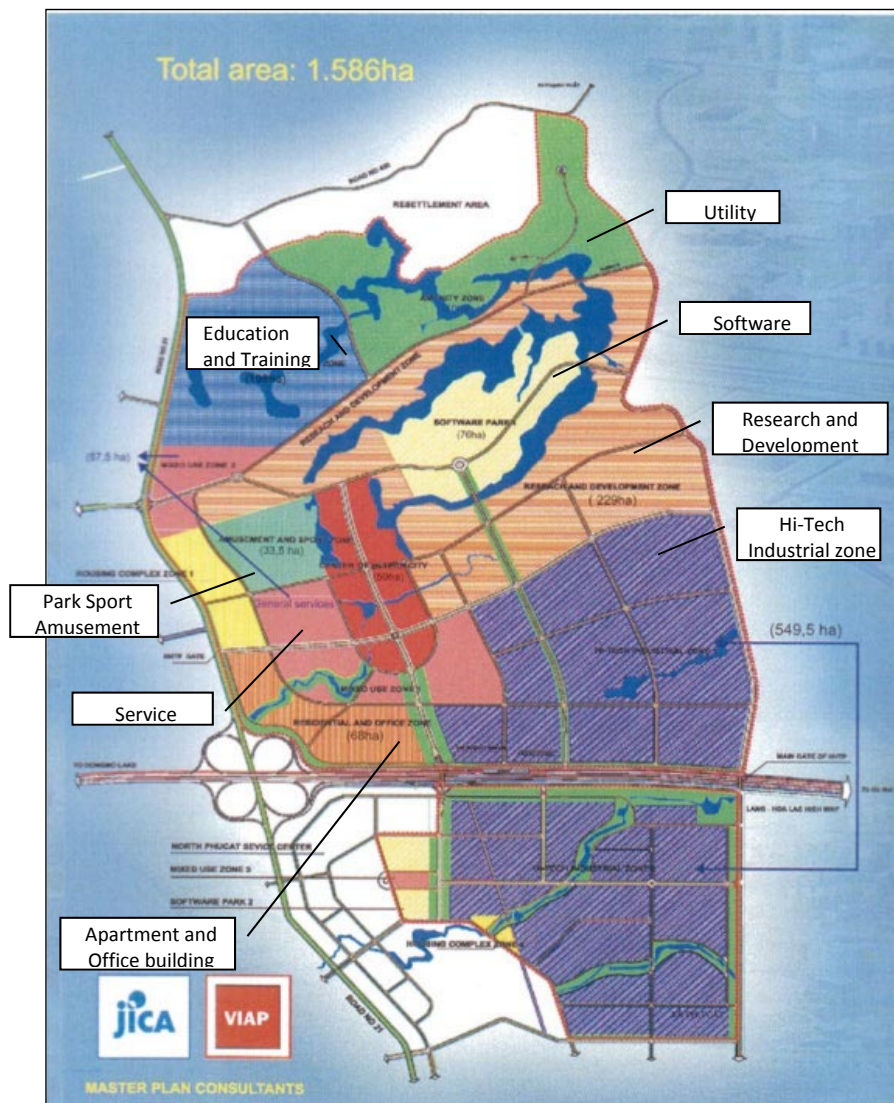
Hoa Lac Hi-Tech Park (hereinafter called "HHTP") was developed and designed based on the industrialization and modernization in Vietnam, which master plan was developed by Japan's support and approved in 1998.

Though it was initially planned to complete the development of about 810 ha by 2005 as the first phase, the progress of the development in the first phase got behind schedule due to the delay in expropriation of land and underdeveloped infrastructure. Under the circumstances, as requested by the Government of Vietnam, the study to review the master plan, accelerate and support the development was implemented by the Japanese support from April 2007. The development plan, through the study, was reviewed and changed as follows.

- Consisted of two phases total - the first phase: to 2012 and about 810 ha, the second phase: to 2020 and about 800 ha
- Total development area: about 1,610 ha

Thereafter, further review was conducted, which resulted in about 1,586 ha in total and was approved by the Prime Minister (ref. Decision No. 621/QĐ-TTg, dated May 23, 2008, of the Prime Minister approving the adjustment to the master plan on construction of Hoa Lac Hi-Tech Park of a 1/5000 scale).

The current master plan is shown below.



Source: Vietnam news (<http://viet-jo.com/news/enterprise/>)

Figure 7-7 Map of Updated Master Plan for HHTP

(2) Location

HHTP is located in Ha Tay province, Hoa-Lac, which is the western part of Hanoi and about 30 km from the center of it. The traffic system to HHTP has high convenience since there is (i) a new Lang Hoa Lac Highway between Hoa Lac and the center of Hanoi with six traffic lanes, 140 m of width of road and 30 km in length, (ii) about 47 km from Noibai International Airport and (iii) about 150 km from Hai Phong international Trading Port.

(3) Land Use

In Vietnam, as the land belongs to the nation, it is necessary for use of the land to obtain land-use rights. It is possible for foreign companies including joint ventures to rent land-use rights in order to launch a business. In addition to the favorable treatment, companies that work for incentive investment fields, shown in the table below, and areas including HHTP can receive another incentive that is stipulated in Decree No. 108 for the investment.

(4) Status of Development

The site of HHTP is divided into thirteen categories by type of land use. There are two entities to implement the development: HHTP Management Board and HHTP Development Company. The HHTP Management Board, which was established under the control of the Ministry of Science, Technology and Environment (the present Ministry of Science and Technology) in 2000, has responsibility for the development of core common infrastructure and the Research and Development zone by the governmental fund. Meanwhile, the HHTP Development Company, which was established under the control of the HHTP Management Board and currently consists of two companies, VINACONEX and FPT HHTP, has responsibility for the development of other areas. The 21.2% of total area, equivalent to 336.6 ha as of April 2013, was sold and worked on the development. The current statuses of development are shown below.

In addition, it is planned to develop infrastructure and transportation inside the site of HHTP through Japan's ODA. Soft opening was in December 2013 and the construction period is thirty seven months. Until completion of the infrastructure, owners of each zone should have their own septic tank or wastewater treatment plant, etc.

Table 7-2 Summary of Status of Development

Functional Zones	Area (ha)	Percentage of Total (%)	Current Status			
			Already Occupied*		# of Lot	Development Stage, Implementing Entity, etc.
			(ha)	(%)		
Software Park	76.0	4.79	20.04	26.4	7	Under development by HHTP-DC
Research and Development zone	229.0	14.44	52.35	22.9	8	Under development by HHTP-MB
Hi-Tech Industrial zone	549.5	34.65	108.6	19.8	34	Under development by HHTP-DC
Education and Training zone	108.0	6.81	98.34	91.1	3	Under development by HHTP-MB. FPT University was established with 30ha campus in 2006.
Central zone	50.0	3.15	10.225	20.5	10	In the planning stage
Service complex/ Mixed-Use zone	87.5	5.52	13.924	15.9	4	-
Apartment and Office Building area	42.0	2.65	-			In the planning stage

Functional Zones	Area (ha)	Percentage of Total (%)	Current Status			Development Stage, Implementing Entity, etc.
			Already Occupied* (ha)	(%)	# of Lot	
Residential building area	26.0	1.64	-			In the planning stage
Utility zone/ Park Sport Amusement zone	110.0	6.93	-			In the planning stage
Entertainment and Sports zone	33.5	2.11	33.12	98.9	1	In the planning stage
Land for Infrastructure	115.5	7.28	-			In the planning stage
Land for Reservoirs and Buffer Area	117.0	7.38	-			In the planning stage
Land for Greeneries	42.0	2.65	-			In the planning stage
Total	1,586.0	100.00	336.6	21.2		

Source*: provided by HHTP in April 2013

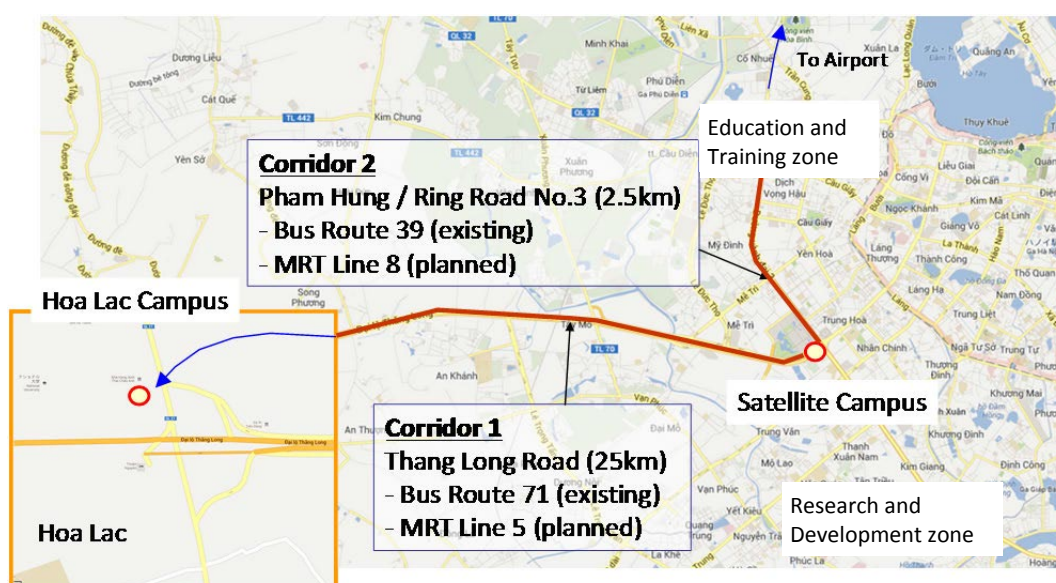
7.3. Transportation Plan

7.3.1. Background

VJU functions as the main campus, research center, information center and satellite campuses, some of which are far away from the main campus. To fulfill these functions, this study proposes to connect the following three areas:

1. VNU site: Satellite campus in VNU-HN
2. Hoa Lac development area: VNU new campus and campus in HHTP (henceforth, Hoa Lac campus)
3. Near Line 3 and the junction on Chan Duy Hung Road: as changing terminal

It is crucial to provide lecturers, students, visitors and personnel good access to each campus and efficient transportation between campuses



Source: JICA Study Team

Figure 7-8 Proposed Campus Locations

7.3.2. Review of Transport Sector Development in Hanoi

This section briefly describes the existing transport systems and transport development plans in and around Hanoi.

(1) General

Hanoi is at an early stage of motorization. Private vehicles dominate urban transportation, with motorcycles being the most prevalent means at about an 80% share. As the result of significant increase in the number of motorcycles (over 4 million in 2010) and car ownership (350,000 cars in 2010), congestion becomes severe during peak hours. The existing public transport system consists of a bus network that has an increasingly difficult time competing with private transport modes.

Table 7-3 Composition of Travel Demand by Purpose and Mode (2005)

Travel Mode		Composition of Mode (%)					
		To Work	To School	Private	At Work	To Home	TOTAL
Private	Bicycle	24.1	58.9	29.5	20.6	36.5	34.4
	M/C (driver)	65.7	16.0	54.5	58.0	48.8	50.1
	M/C (passenger)	3.8	13.4	8.1	3.1	7.1	7.0
	Car	1.4	0.2	2.1	6.5	0.9	1.4
	Truck	0.4	0.0	0.2	4.4	0.2	0.5
	Subtotal	95.4	88.6	94.4	92.6	93.5	93.4
Semi-public	Taxi	0.1	0.0	0.4	0.8	0.1	0.2
	Cyclo/M. Cyclo	0.1	0.0	0.0	0.1	0.0	0.0
	Xe Om	0.3	0.5	1.3	0.5	0.6	0.6
	Private Bus	0.9	0.4	1.0	2.0	0.7	0.8
	Subtotal	1.3	0.9	2.7	3.4	1.5	1.7
Public	Bus	2.9	9.2	2.6	2.9	4.5	4.3
	Rail	0.0	0.0	0.0	0.0	0.0	0.0
	Subtotal	3.0	9.2	2.6	2.9	4.5	4.3
Others		0.4	1.4	0.2	1.1	0.6	0.6
Total		100.0	100.0	100.0	100.0	100.0	100.0

Source: HAIDEP Study Team.

(2) Existing Transport Network

1) Road Network

- Hanoi has a road network consisting of a radial road network, ring road system and local road network. Some major corridors are still under development to accommodate the increasing traffic.
- As part of the radial road network, Lang-Hoa Lac Expressway serves traffic between the proposed Hoa Lac campus and the satellite campus with 3 lanes per direction.
- As part of the ring road system, elevated RR3 (2 lanes per direction) and at-grade Pham Hung Road (4 lanes per direction) provide linkage between the satellite campus and the VNU campus (hereinafter referred to as "Corridor 1").

2) Bus Network

- Buses form a significant part of public transportation in Hanoi, having over three million rides taken per day on average, with more than 70 routes and 300 scheduled bus services.

- Currently, the bus system is the backbone of public transport in Hanoi. Bus travel accounts for 60% of total public transport trips.
- The bus fare system is based on a single trip fare of VND 5,000 and a monthly pass for frequent travellers. An increased tariff is charged for suburban routes (VND 5,000 for route 35 and 57), and for running on Thang Long Road (VND 8,000 – 20,000 for route 71).
- Route 71 caters to Corridor 1, while Route 39 and some others run along the corridor between the satellite campus and the VJU campus (hereinafter referred to as “Corridor 2”).

3) Railway Network

- Vietnam National Railways (VNR) operates intercity passenger trains from Hanoi Station to HCMC (south), Lao Cai (northwest), Quan Treu (north), Dong Dang (northeast), Ha Long (east) and Hai Phong (east).
- The national railways, having a single track with a non-electrified system, are not suitable for commuting passengers given the frequency, speed, riding comfort and level of other services.
- The existing railway network does not serve any of the corridors between VJU campuses.



Figure 7-9 Road Network in Hanoi

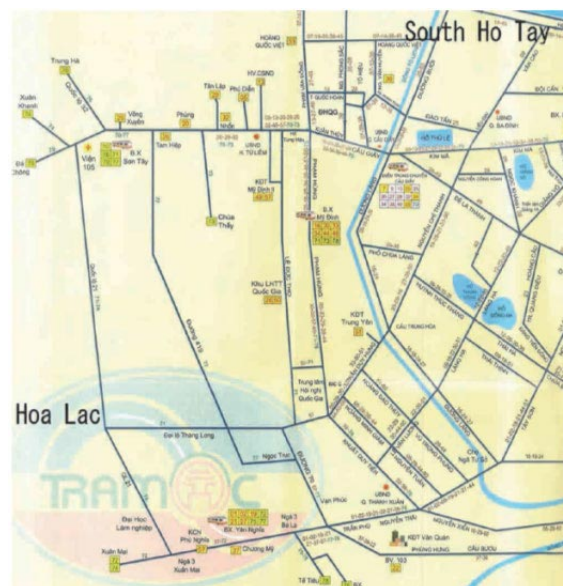


Figure 7-10 Ordinary Bus Network in Hanoi West

(3) Mass Transit Network

- In the Communications and Transport Development Plan for Metropolitan Hanoi 2020 (Decision No. 90/2008/QĐ-TTg, dated July 09, 2008, approved by the prime minister), 5 MRT lines including Line 1, 2, 3, 4 and 5 were approved.
- In July 2011, the General Construction Plan of Hanoi Capital City till 2030 with a Vision to 2050 was approved by the prime minister (Decision No. 1259/QĐ-TTg, July 26, 2011). It encompasses the policy to develop 8 MRT lines.
- Phase 2 sections of Line 5 cater to Corridor 1, whereas Line 8 alignment goes along Corridor 2.

Table 7-4 Proposed Mass Transit Network

Line	Route	Length (km)
Line 1	Ngoc Hoi – Ga Hanoi – Yen Vien, Nu Quynh	34.7
Line 2	Noi Bai – Trang Hung Dao – Thuong Dinh	50
Line 2A	Cat Linh – Hao Nam – La Then – Thai Ha – Lang – Nga Tu So – National Highway 6 – Thuong Dinh – Ha Dong	13.03
Line 3	Nhon – Ga Hanoi – Hoang Mai	26.0
Line 4 (BRT)	Me Linh – Dong Anh – Sai Dong – Vinh Tuy/ Hoang Mai – Than Xuan – Tu Liem – Thuong Cat – Co Nhue – Lien Ha	54
Line 5	Tay Ho – Ngoc Khanh – Lang – Hoa Lac	25.6
Line 6	Noi Bai – Phu Dien – Ha Dong – Ngoc Hoi	43.2
Line 7	Me Linh – An Khanh – Duong Noi	35.7
Line 8	Mai Dich – Yen So – Linh Nam – Duong Xa	36.4

Source: JICA Study Team

(4) Review of Public Transport Projects

1) Bus Road Transit (BRT) Project

- With the initiatives of the World Bank, the Hanoi Urban Transport Development Project Management Unit (HUTDPMU) plans to develop a BRT system as the project owner.
- The BRT route covers Kim Ma Station - Giang Vo - Lang Ha - Le Van Luong - Le Trong Tan - National Road 06 - Yen Nghia Station (outbound) and Yen Nghia Station - National Road 06 - Le Trong Tan - Le Van Luong - Lang Ha - Giang Vo - Giang Van Minh - Kim Ma - Kim Ma Station (inbound).
- Although, the route does not directly cover the corridors between the campuses, passengers of BRT can access the satellite campus from the nearest stop (about 1.5 km away).



Source: project website

Figure 7-11 BRT Route Corridor



Source: project website

Figure 7-12 Hanoi BRT

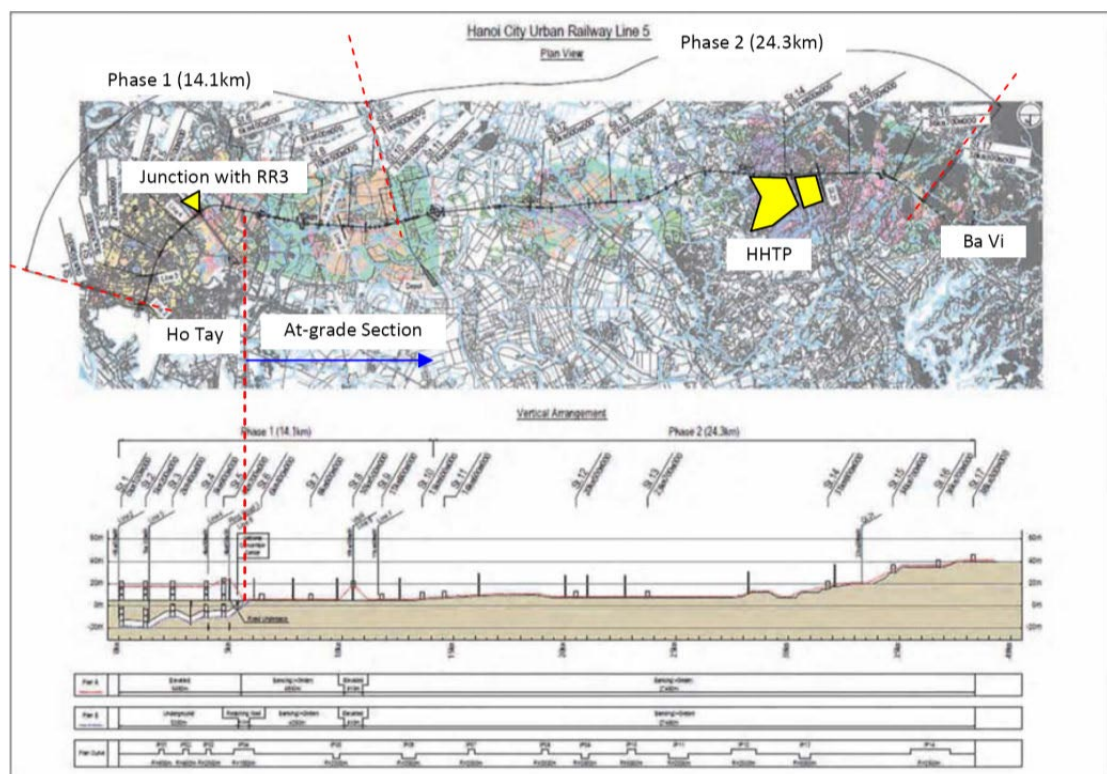
2) The Project for Improving Public Transportation in Hanoi

- This study aims to 1) improve the public transport system, 2) develop policy menus for prioritizing public transport and for effective management of transport demand forecast, 3) promote the use of public transport and 4) enhance the level of service (LOS) of the existing transport system. Started in June 2011, the study will be completed in July 2014.

- In the event of significant changes in LOS such as tariff, frequency, security, safety, riding comfort, rerouting, opening of new routes, etc, as the result of the above program, it may affect the choice of transport mode to move between the proposed campuses.

3) Mass Transit Lines

- Several mass transit projects are being carried out by the Vietnam National Railway Administration (VNRA: Line 1 and Line 2A) and the Hanoi Metropolitan Railway Management Board (MRB: Line 2 and Line 3).
- JICA conducted a feasibility study on MRT Line 5 as part of the mass transit network development in Hanoi. The corridor starts near the junction of Hoan Hoa Thanh Road and Bang Kao Road. The alignment moves toward Kin Ma Street. It further moves south via Nguyen Chi Thanh Road, Chan Duy Hung Road toward the junction with Ring Road No. 3. From RR No. 3 the alignment goes westward along Thang Long Road toward Hoa Lac.
- The project will be undertaken in a phased manner. According to the study, the Phase 1 section, from Ho Tay to An Khanh (14.1 km), will start commercial operation not later than in 2023, while the implementation of the Phase 2 section, from An Khanh to Ba Vi (24.3 km) will not take place until it becomes feasible due to regional growth along the corridor.
- When the full Line 5 becomes operational, the city center will have a linkage to the Hoa Lac urban center, satellite towns, Hoa Lac High Tech Park and three universities, providing safe and rapid transportation for commuters and students.



Source: JICA Study Team

Figure 7-13 MRT Line 5 Route Corridor

Table 7-5 Summary of Transport Development in Hanoi and Relevance to VJU Project

Road	Thang Long Expressway covers Corridor 1. Pham Hung and Ring Road No. 3 cover Corridor 2.
Ordinary Bus (existing)	Route No. 71 covers Corridor 1. Route No. 39 and some others cover Corridor 2.
BRT (planned)	Nearest stop will be located 1.5 km away from the Satellite campus
MRT (planned)	Line 5 will cover Corridor 1. Line 8 will cover Corridor 2.

Source: JICA Study Team

7.3.3. City-to-Campus and Campus-to Campus Transportation Plan

(1) Premise

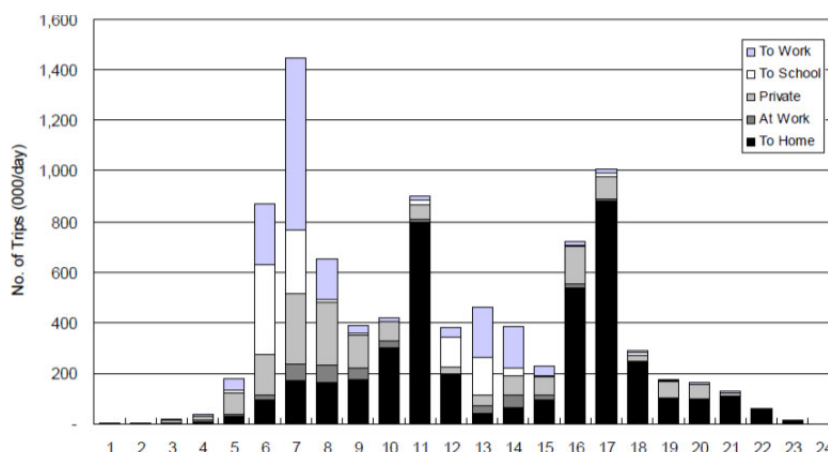
Universities, in general, have a significant interest in enhancing the accessibility of their facilities and services to students as part of the marketability of their institutions. Having good accessibility and a range of transport mode choices will be essential to secure the attractiveness of the institution and its connectivity with surrounding activities and places.

In this context, this section develops alternative transport measures for people to access from the city and move between the proposed campuses.

(2) Travel Behavior

1) Travel Mode

The majority of students and university staff in Hanoi are riding motorbikes, catching buses, cycling, and walking to and from their schools, according to the review of the JICA studies. With the economic growth, university students in Hanoi are having more diversity in transport modes, such as electric bikes and private cars.



Source: HAIDEP Study

Figure 7-14 Hourly Distribution of Trips by Purpose (2005)

2) Trip Pattern

It is anticipated that VJU will have a high proportion of its students living within the Hoa Lac area near the main campus. These students have the highest level of access to Hoa Lac facilities with options to walk or cycle, or take short bus trips to and from the main campus or neighboring facilities. In the meantime, a significant number of students reside in the city area within or near the 10 km radius from the heart of Hanoi. These trip patterns require public transport corridors as part of the mass transit network.

(3) Route Corridors

Given the wide and sufficient coverage of the existing ordinary buses and future BRT and MRT network, the VJU project should envisage the reinforcement of the following transport route corridors.

1) Hoa Lac Campus and Changing Terminal (Corridor 1)

Hoa Lac campus is accessible from the changing terminal via Thang Long Road. The distance is about 25 km.

2) Satellite Campus and Changing Terminal (Corridor 2)

The satellite campus and changing terminal are connected via Cau Giay Road and Pham Hung / Ring Road No. 3, having a distance of about 2.5 km.



Hoa Lac Campus and Satellite Campus (Corridor 1)

Source: JICA Study Team



VNU and Satellite Campus (Corridor 2)

Figure 7-15 Current Conditions of Identified Transport Route Corridors

(4) Need for Transport Reinforcement

At present, no published reports have estimated the number of school trips associated with the development of universities.

The JICA Study on MRT Line 5 reported that the line would carry 158,000 – 171,000 passengers per day in the opening year 2021 (elevated option) with Peak Hour Peak Direction Traffic (PHPDT) of 8,320. Applying the current share of school trips to one peak hour (14%), about 1,200 trips in the morning peak hour require an alternative mode of transport to access their schools/campuses if MRT Line 5 remains non-operational.






As the timing of Line 5 full opening is still unknown, the above makes clear that introducing additional means and/or enhancing the existing public transport system is necessary to offer good accessibility to VJU students.

(5) Transportation Mode

Currently, the ordinary bus service route No. 71 provides the transport link for Corridor 1, while the existing bus route No. 39 provides transport services for Corridor 2. In the future, each corridor will be served with MRT Line 5 and Line 8, respectively, according to the Prime Minister and HPC's decisions. The question is how to meet the requirement of providing attractive accessibility for these corridors in the early years of VJU until MRT Lines start commercial operation.

As the preliminary assessment, comparisons are made on alternatives of possible transportation modes, examining transport capacity, service quality, capital investment cost and consistency with government policy.

Table 7-6 Preliminary Assessment of Alternatives (1)

Capacity	Standard	Medium-Large	Mass
Mode (Capacity)	Ordinary Bus (2,000 pax/hr/dir)	BRT (5,000 pax/hr/dir)	MRT (40,000 pax/hr/dir)
			
Pros	Already operating, thus easily adjustable and the most affordable	Able to offer high level of service Costly but still less capital intensive than MRT	Consistent with HPC's decision High-quality, mass and rapid transport service
Cons	Low level of service and negative impression Not well appreciated by mid-high incomes Hard to skip intermediate stops, thus slower	Inconsistent with HPC's decision Absolutely insufficient transport capacity (in order to be replaced with MRT)	Timing of full commissioning and commercial operation still uncertain
Mode (Capacity)	Limousine Bus (200 - 500 pax/hr/dir)	Tramway (10,000 pax/hr/dir)	Notes: Bus route 71 covers Corridor 1 (existing). Bus route 39 covers Corridor 2 (existing). MRT Line 5 will cover Corridor 1. MRT Line 8 will cover Corridor 2. PM approved MRT network in 2007. Assumed headway (limousine bus): 6 – 15 mins. Limousine bus and BRT have bus options, while tramway has a battery tram option. These options can offer added values particularly related to environmental friendliness and high-tech image.
			
Pros	Offers high level of service Affordable capital investment cost Able to skip intermediate stops, thus speedy	Offers high level of service Costly but still less capital intensive than MRT	
Cons	Limited transport capacity	<i>Inconsistent with HPC's decision</i> Absolutely insufficient transport capacity (in order to be replaced with MRT)	

(6) Suggested Development Scenarios

1) Hoa Lac Campus to Changing Terminal (Corridor 1)

In the Short-Term

- The bus service of route No. 71 should be strengthened, perhaps as an additional assistance program to the ongoing JICA project.
- Additionally, an exclusive shuttle service with limited or no intermediate stops should be provided to cater to VJU students, staff and other visitors.
- By reducing or cutting out the need to change buses in the city to access the Hoa Lac campus, the VJU project should enhance public transport accessibility.

In the Mid-Term

- Phase 1 section of MRT Line 5 becomes operational not later than 2023. The remaining development section from the terminal station to the Hoa Lac campus should be provided with ordinary bus and/or exclusive shuttle service.
- To have a timely connection to Hoa Lac with MRT Line 5, one idea is to implement the Line 5 project from the suburban section between the satellite campus to Hoa Lac Campus (from St. 6: Me Tri Station to St. 15: Tien Xuan Station). As the entire suburban section is proposed at grade level, this alternative can make the capital investment cost at a reasonable level.
- With the MRT as the main mode of transport, it should be reinforced with ordinary bus service and the exclusive shuttle bus service.

In the Long-Term

- MRT Line 5 becomes fully operational, thus able to provide high quality, mass and rapid transit services.
- With the MRT as the main mode of transport, it should be reinforced with ordinary bus service and the exclusive shuttle bus service.

2) Satellite Campus to Changing Terminal (Corridor 2)

In the Short-Term

- The bus service of route No. 39 should be strengthened perhaps as an additional assistance program to the ongoing JICA project.
- Additionally, an exclusive shuttle service with no intermediate stops should be provided to cater to the VNU and VJU students, staff and other visitors between the satellite campus and changing terminal.

In the Mid-Term

- The existing bus route (as has been developed as explained above) shall be used continuously in conjunction with the exclusive shuttle bus services for VNU and VJU students.

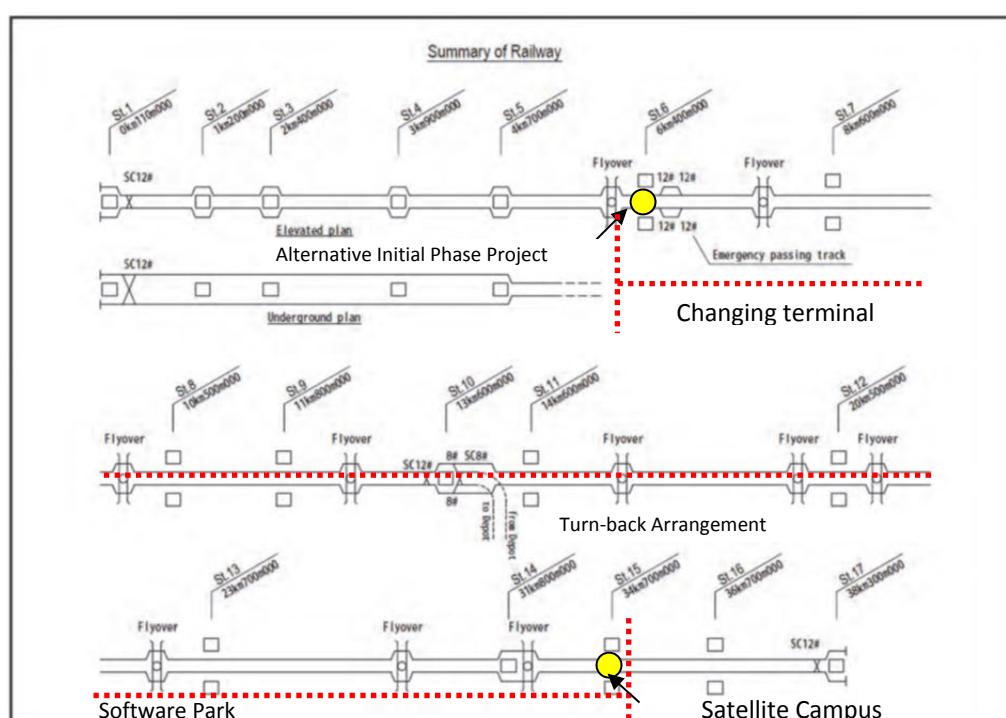
In the Long-Term

- MRT Line 8 will connect the two campuses according to the approved MRT master plan.
- With the MRT as the main mode of transport, it should be reinforced with ordinary bus service and the exclusive shuttle bus service.

Table 7-7 Preliminary Transport Development Scenario

Corridor	Function	Short-term (1 st Stage 2016 – 2019)	Mid-term (2 nd to 3 rd Stage 2019 - 2025)	Long-term (4 th Stage upward 2025 -)
Corridor 1 (Hoa Lac - Changing Terminal)	Main	Exclusive School Bus	MRT (Line 5)	MRT (Line 5)
	Sub	Ordinary Bus	Exclusive School Bus Ordinary Bus	Exclusive School Bus Ordinary Bus
Corridor 2 (Satellite - Changing Terminal)	Main	Exclusive School Bus	Exclusive School Bus	MRT (Line 8)
	Sub	Ordinary Bus	Exclusive School Bus Ordinary Bus	Exclusive School Bus Ordinary Bus

Source: JICA Study Team



Source: JICA Study Team

Figure 7-16 Alternative Phasing of MRT Line 5 Project

7.3.4. Campus Transport Plan

This section presents the transport plan to move in and around the proposed Hoa Lac campus.

The Hoa Lac development zone, located 30 km west of the intensively developed city of Hanoi, has an area of 1,000 ha with plenty of greenery areas. Given the size and ecology policy of this zone, a transport system on campus will be vital.

It requires a comprehensive program to develop campus transport systems. The Hoa Lac core campus itself should remain a pedestrian environment with minimal fuel consumption, ensuring safety and good accessibility to VJU students, staff and visitors.

(1) Development Policy

In order to promote sustainable solutions for campus transport, the following development policy is proposed.

- Introduce future-oriented transport systems in line with the development of HHTP
- Promote the use of environmentally friendly transport systems
- Achieve the optimum modal share in accordance with the zoning plan of the premises
- Develop a highly safe corridor that connects VNU's new campus, the campus in the Hoa Lac area as well as MRT Line 5 station
- Demonstrate festive and stately characteristics
- Ensure financial and economic feasibility in accordance with the phased development of functional zones

(2) Campus Layout and Transport Network

The general layout of the Hoa Lac development zone is illustrated in Figure 7.8.

The campus in Hoa Lac is planned to be in 2 different places: inside HHTP and inside VNU's new campus area. However, the exact location of the campus is still unknown, it is premature to draw a layout of the Hoa Lac campus and identify route corridors. Nevertheless, in order to enhance the accessibility and convenience, as well as the synergetic effect, of the surrounding area's development, it is vital to develop a public transport system connecting VNU's new campus, HHTP, MOC land, affiliated zones and the future MRT Station.

In addition to the main corridor that connects VNU's new campus and the HHTP campus to the station, a strategic, hierarchical transportation network structure, including feeders that support connection to the other facilities inside HHTP, should be built.

Furthermore, the core area of VNU's new campus and HHTP's campus is expected to become an intensively developed environment with efficient circulation systems. Design of a campus transport network requires clear understanding of its purpose, hierarchy and linkages.

(3) Transportation Mode

The VJU Project should have clear strategies to encourage a shift from private car/motorbike use to public transport, vehicle sharing and personal mobility or active modes (walking or cycling).

1) Public Transport

There are various ways to perform transport in and around the campus. Based on the above policies, the following alternatives have been identified.

- Ordinary bus / Electric Vehicle (EV) bus
- Ordinary tram / Battery tram

2) Vehicle Sharing and Personal Mobility

Vehicle sharing and personal mobility devices can be highly integrated with information communication technologies (ICT) for the creation of an environmentally friendly and mobile campus. Such a system will include:

- Small-sized EV cars
- Motorbikes / EV motorbikes
- Bicycles (smart cycle) / EV bicycles
- Segways

(4) Foot Traffic / Pedestrians

Walking, the primary means of movement in and around the campus, should be encouraged by developing pedestrian routes and by avoiding conflicts with vehicles, using the following:

- Well-designed intersections to improve pedestrian safety
- Prevention of curbside parking to create wider sidewalks, enhanced landscaping
- Landscape and lighting treatment along each street and campus gateway
- Well-designed roadway to provide bike lanes

(5) Car and Bike Parking

It is essential to provide car and bike parking for a range of users, particularly, the disabled, students and staff who have limited alternatives to driving and parking, visitors, and staff who require a vehicle. However, cheap and readily available parking will become an incentive to drive even when there are other alternative transport options available.

Car and bike parking policy design therefore requires a careful balance between a good level of access to university facilities, and reducing parking inefficiencies and costs with some kind of parking restriction.

Table 7-8 Concept of Hoa Lac Campus Transportation System

Hoa Lac Area Transportation System Plan

VJU Campus is planned to be in 2 separate areas: one on the satellite campus inside the existing VNU campus area in Hanoi and the other in the Hoa Lac area.

Regarding the Hoa Lac area, there is one campus on VNU's new campus and another one at HHTP. In addition to connecting these 2 campuses to Hanoi Metropolitan Railway Line 5, it will connect other university facilities of VNU, factories and research facilities in HHTP, as well as the surrounding residential and commercial facilities.

Regarding the means of transportation inside the Hoa Lac district, the proposal shall follow these 6 concepts below:

Sustainable Transportation System

Maintain a transportation environment that is good for people & Mother Earth with the focus on bicycles & public transportation.

Develop a comprehensive social experiment of next-generation traffic in Vietnam and Hanoi

Concept 1. A positive introduction of a futuristic transportation system inspired by the name "high-tech park"

In order to realize a highly sustainable city, efforts to use more environmentally friendly energy and fewer motorcycles must be supported.. By actively introducing the futuristic transportation system, a charming high-tech park can be achieved.

- Promote the use of a futuristic transportation system using EV buses, EV motorbikes and EV bicycles as they are environmentally friendly
- Study a transportation system that introduced an on-demand bus experiment and did a test line laying of LRT

Concept 2. Promote use of environmentally friendly means of transportation

Maximize the use of bicycles which have small environmental damage and to enhance the environment for walking. Establish an environmental improvement and mechanism to make the use of bicycle easier, thus promote bicycle use.

- Develop use of joint bicycles, introduce a cycle-sharing system and bicycle parking establishment
- Enhance pedestrian network by installing bicycle lane and putting more green roads around the campus axis

Concept 3. Consider a well-balanced zoning of various modes of transportation

By making use of the zoning inside the district and classifying the user flow line, smooth transportation can be achieved by adapting the traffic mode to each classification.

- Establish a clear level definition of each transportation mode
- Consider user flow line classification (The flow line of a campus mall user, the flow line of other users, an approach road to the green space conservation)

Concept 4. Develop a secure transportation route connecting the campus in VNU's new campus area to the one in HHTP, as well as to the railway station (Line 5)

In order to have functional cooperation with Line 5 station's surroundings and to strengthen the role of the city as the center, an urban transport axis that connects both sides shall be formed.

- Ensure smooth access between the campus on VNU's new campus (right top, figure B) and at HHTP (right top figure A)
- Reorganize road space to support third-generation vehicles, including a transit mall and bike paths
- To install management and traffic route of emergency vehicles in several places inside the district

Concept 5. Station road that produces a lively campus town

A Line 5 train station and urban space that connects the university shall be formed. A space that can be a symbol of the international campus town shall be created by building establishment and cooperating with adjacent facilities.

- Develop the station square, improve the road space and form the streetscape by the roadside

Concept 6. Correspond to the gradual development

The gradual development and performance that takes into account the Line 5 railway station and the usage of the adjacent facilities shall be reviewed.

- To provide a priority, narrow down the major facilities in the district
- Develop a short-term, medium-term, and long-term future transportation plan

Target Area: Hoa Lac Area

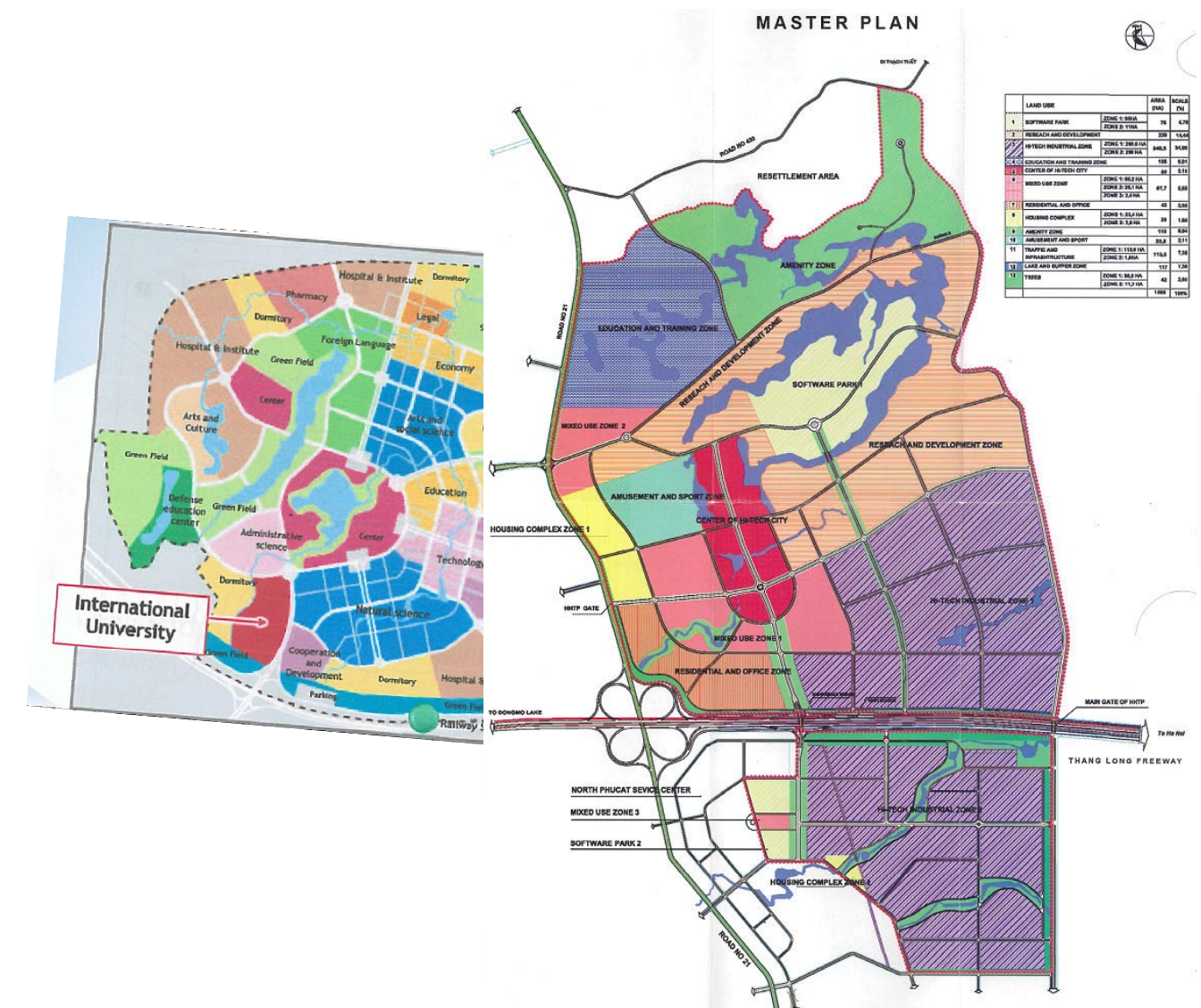
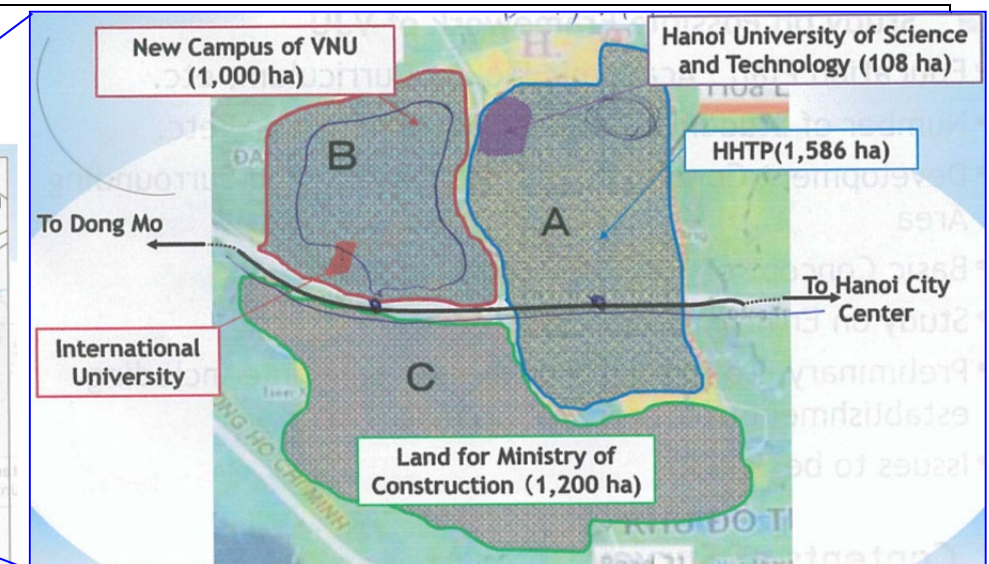
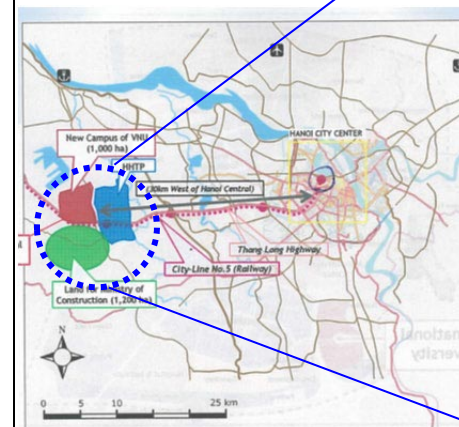

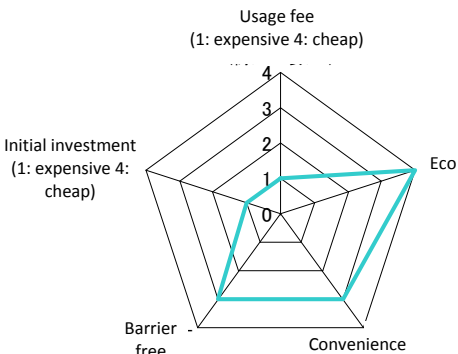

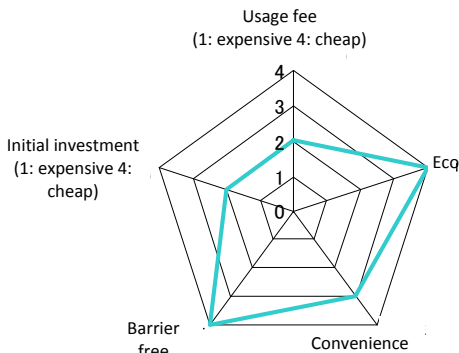

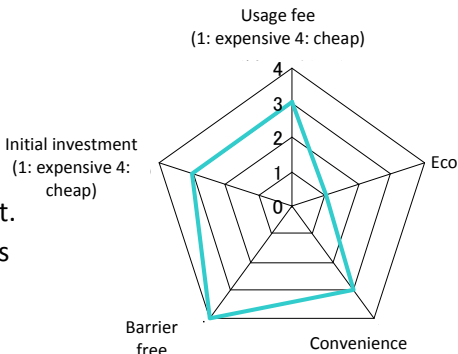

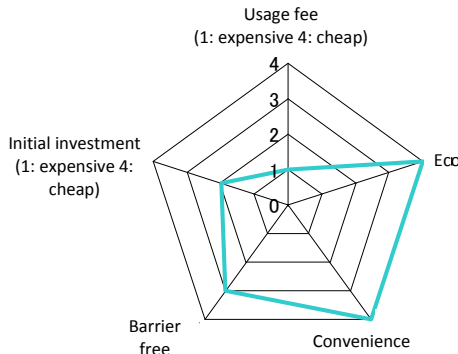

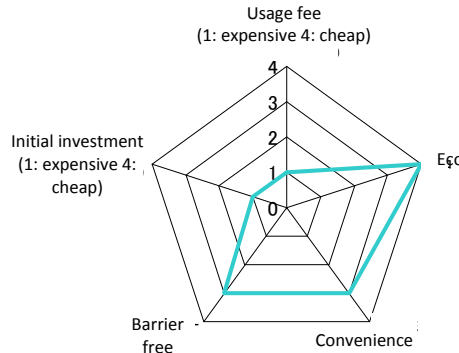

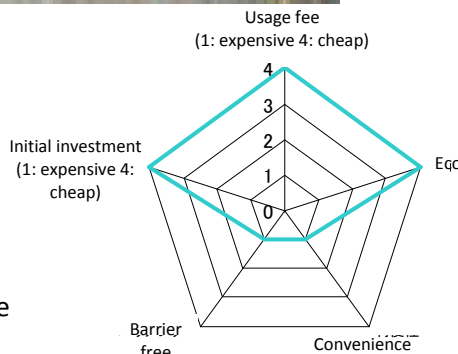


Table 7-9 Examples of Transportation System Installation

Tram	Bus	Community Bus
<div></div> <div><p>Installation example: University of Bordeaux, France ※urban rails that runs inside a school district (7 stations)</p><p>Issues: High initial cost compared to other modes. Problem of selection and employment of operator.</p></div> <div></div>	<div></div> <div><p>Installation example: China</p><p>Issues: Requires land for the charging stand. Requires accident prevention.</p></div> <div></div>	<div></div> <div><p>Installation example: University of Kyoto, Osaka, Tohoku, Kyusyu, etc.</p><p>Issues : Not suitable for short-distance transport. Not convenient when the waiting time is long. Requires a special lane and accident prevention.</p></div> <div></div>
Car, Bike, Bicycle	Power-Assisted Bicycle	Segway
<div></div> <div><p>Installation example: Chukyo University※(EV car, EV bicycle from Toyota)</p><p>Issues: Requires special lane for each vehicle, accident prevention and introduction of IC card use.</p></div> <div></div>	<div></div> <div><p>Installation example: Kashiwanoha Campus (Tokyo University)※</p><p>Issues : Requires accident prevention, anti-theft, and introduction of IC card use.</p></div> <div></div>	<div></div> <div><p>Installation example: Nagoya University※, Kanazawa Institute of Technology※</p><p>Issues : Requires practice prior to use and consideration of whether a special lane is necessary.</p></div> <div></div>

Source: JICA Study Team
※introduced as an experiment (2009 – 2015)

8. Possibility of Japanese Universities' Participation with VJU

8.1. Japanese Universities' Interest and Possible Participation

Participation of Japanese universities is one of the key factors for the successful and sustainable operation of VJU.

Through a series of consultation meetings with Japanese universities, it was confirmed that the following Japanese universities are interested in participating with VJU.

- 1) The University of Tokyo
- 2) Kyoto University
- 3) Tsukuba University
- 4) Osaka University
- 5) Nagoya University
- 6) Japan Advanced Institute of Science and Technology (JAIST)
- 7) Waseda University
- 8) Ritsumeikan University
- 9) Kinki University
- 10) Takushoku University
- 11) Kaetsu University

The above eleven universities are all those who expressed opinions through our survey; since the number of universities that could be contacted was limited, the actual number of universities is believed to be higher.

(1) Opinion Exchange Meetings with Universities

This meeting is held every 1-2 months in order to share information, exchange opinions and conduct further study regarding the concept of VJU.

Prof. Motoo Furuta from Tokyo University, who has been engaged in the shaping of this VJU project since the very beginning led the meetings. Please refer to the attachment for the attendees and issues of each meeting.

(2) Individual Visits to Universities

In order to raise interest and involvement, as well as to learn from past experiences of cooperating with Vietnamese universities, several individual visits to Japanese universities were made as follows.

Table 8-1 Universities from Japan

University	Date (2013)	University	Date (2013)
The University of Tokyo	June 3, July 19	Nagoya University	June 27
Kyoto University	June 6	Osaka University	June 6
Waseda University	June 5, July 4	Ritsumeikan University	June 5
JAIST	July 1		

Source: JICA Study Team

8.2. Possible Participation and its Methodology

(1) Possible Participation

From the discussion on alternative scenarios of VJU in IR/M-I, it was confirmed that the VNU side prefers the individual and permanent commitment of Japanese universities and that the Japanese universities issue their own graduate degrees, because the brands of Japanese universities will help to attract students and contribute to higher feasibility of VJU.

Japanese universities, however, prefer to formulate a consortium among themselves. Some of the reasons given are as follows:

- Reducing adverse impacts from specific Japanese universities is necessary, since the Japanese universities' decisions to participate or not will strongly affect VJU programs, and it will also affect the sustainable operation of VJU.
- It is better to have a multidisciplinary approach as a whole, in order to promote building a broader foundation through liberal arts studies and provide high-quality specialized education both at undergraduate and postgraduate levels.
- It makes it possible to coordinate with and enhance existing programs and measures provided by Japanese universities currently participating in Vietnam.
- It provides experienced academic and administrative staff in timely manner.
- Share and centralize information and dialogue with the Vietnamese side.

Another issue is that a degree from a Japanese university is only available after students have studied in Japan for a minimum of 6 months according to the current regulations issued by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). So a credit transfer system between the VNU and Japanese universities is required to provide opportunities for obtaining a Japanese university degree.

(2) Academic fields

The following table shows a summary of the academic fields that each university has the possibility to support and/or provide for VJU.

Table 8-2 Academic Fields that may be Provided by Japanese Universities

The University of Tokyo	Sustainability Development (graduate school): Disaster Risk Management and Environmental Science, Life Environmental Science, Area Studies, International Public Policy Humanities and Social Sciences Japanology and Japanese Language
Kyoto University	Medical Science and Disaster Risk Management
Tsukuba University	Life Science: Biology, Environment, Food Security, Economics, Japanese, International Policy, etc.
Osaka University	Medical Science Basic Life Science and Pathology Gene Therapy Construction of Database for Medical Science Business and Management
Nagoya University	Law Study, Japanese Language
JAIST	Information Science: Social analysis, Socio-Data Analysis (Data Mining), Social Infrastructure, etc.
Waseda University	Human Science & Social Science Area Studies (Asian Pacific) Japan Study, Japanese Language, and Japanese Culture
Ritsumeikan University	Information & Communication Technology Disaster Risk Management Business and Management
Kinki University	Economics, Finance, and Agriculture and Aquaculture
Takushoku Univ.	Japanese Language Course for Science and Technology Study
Kaetsu University	Business & Economics

Source: Information from each university (July 2013)

8.3. Necessary Arrangements for Japanese Universities' Participation

From past experience with international collaboration programs for universities, it is important to have the continuous participation of Japanese universities in order for the sustainable operation of VJU.

Most of the Japanese universities that have interest in VJU have experience participating with other international university collaboration projects.

The arrangements necessary for Japanese universities' participation, as collected from interview surveys, are summarized below:

- Teaching staff available for long-term assignment are limited to senior professors (retired) or young researchers who are waiting for a permanent position in the universities.
- It is difficult to dispatch permanent university staff or middle-aged experienced professors (associate professors) for long-term assignments. This is because of the difficulty for them to continue their research activities in Vietnam, and also because they generally are busy and have important roles in the universities. For these professors, only short-term ("flying professor") assignments are available.
- Government subsidies and financial support are needed for hiring substitute teachers, in addition to the cost of dispatching teaching staff to VJU and their supplementary expenses.
- In the long term, an increase in the number of Japanese lecturers and staff hired in Vietnam is expected. However, because there is disparity between the contract conditions of Japanese teaching staff dispatched from Japan and those hired in Vietnam, as well as the disparity between Japanese and Vietnamese staff hired in Vietnam, it is necessary to carefully set the compensation.

9. Alternative Study on Potential Scenarios

Based on the information collected from the initial data collection stage, alternatives of potential scenarios were studied. These were discussed in the Interim Report Meeting in Hanoi (IR/M-I: Exchange opinions on the preliminary alternative scenarios for VJU among VNU taskforce members, May 17) with the VNU taskforce, and in the Interim Report Meeting II in Tokyo (IR/M-II: Exchange opinions on the alternative scenarios for VJU and representatives from Japanese universities and VNU taskforce, June 4) with participants from Japanese universities and representatives of the VNU taskforce.

The result of the IR Meetings in Hanoi and Japan are as follows:

9.1. Branding of VJU

9.1.1. Vision / Goals / Mission of VJU

In both meetings, it was basically agreed among the participants from the VNU side and the Japanese universities side that VJU is to be a “Center of Excellence”, with a well-known university brand not only in Vietnam, but also in the region. However, it was also agreed that in the long term, VJU is to target becoming a “Center of Excellence with Practical Education” and to provide education to students who can participate on the global stage.

9.1.2. Legal Status: Private / Public / VNU Member University

Legal status is one of the most critical issues in securing the autonomy of VJU in order to provide quality education as an international university.

A comparison between 3 types of legal status was made: i) international university under VNU, ii) new model university (international university under MOET) and iii) private university. Both “i) international university under VNU” and “ii) new model university” seem to have advantages, while “iii) private university” is not recommended for VJU, primarily due to their limited fields of study (Languages, Business and Management) and high tuition fees, which is closely related to the mechanism of attracting students, but is feasible.

In Vietnam, public universities were established many years ago and are well known and have a good reputation. In addition, public universities can get support from the government in terms of funding and policies. On the other hand, private universities, which have just been newly established, have low entrance marks and not a high reputation.

9.1.3. Involvement from Vietnamese and Japanese Universities

Japanese universities and Vietnamese universities preferences for the participation structure differs from each other.

The Vietnamese side prefers the permanent involvement of individual Japanese universities rather than formulating a consortium of Japanese universities, so as to take advantage of the Japanese universities’ brands to achieve a higher feasibility. However, Japanese universities prefer to formulate a consortium of Japanese universities since they worry about the overburden on each university.

Vietnamese universities’ involvement will be limited to VNU-Hanoi in the beginning. Involving other universities will be discussed after VJU starts operation. This is due to the difficulty and time-consuming nature of collaboration among universities in Vietnam.

9.2. Education Plan

The Vietnam side emphasized the importance of VJU being under the umbrella of VNU-Hanoi in order to secure the reputation of a VJU degree, and the importance of providing Japanese university degrees to differentiate VJU from other universities and attract students to VJU. However, Japanese universities side proposed to issue a VJU original degree as there are some difficulties with issuing Japanese university degrees in foreign countries, according to a Japanese Government (MEXT) decree.

Japanese universities also understand the importance of providing opportunities to obtain Japanese degrees to attract students; however, it was pointed out that there is a requirement to study in Japan for a certain period in order to obtain a Japanese degree. The necessity of scholarships to support students who will study in Japan should also be considered.

9.2.1. Education Level, Academic Fields, Language

International universities under VNU-HCMC, VGU (Vietnam German University) and USTH (Vietnam French University) use English as the main teaching language.

English was chosen by these universities based on the market demand instead of their native languages, such as German or French.

It was pointed out by the Vietnamese side the importance and versatility of English, in addition to Vietnamese and Japanese in order to educate students who will work in global companies in the future. Both Vietnamese and Japanese sides agreed to use 3 languages, English, Vietnamese and Japanese, in VJU.

In parallel, however, it was expressed by the Vietnamese side that it is important to teach in Japanese with a Japanese curriculum to differentiate VJU from other similar universities, such as USTH, VGU and FTU.

9.2.2. Teaching and Administration Staff

In addition to the Japanese and Vietnamese teaching staff, the importance of international staff is also agreed upon by both Vietnam and Japan sides, in order to secure a high quality education at VJU and attract students.

9.3. Campus Location

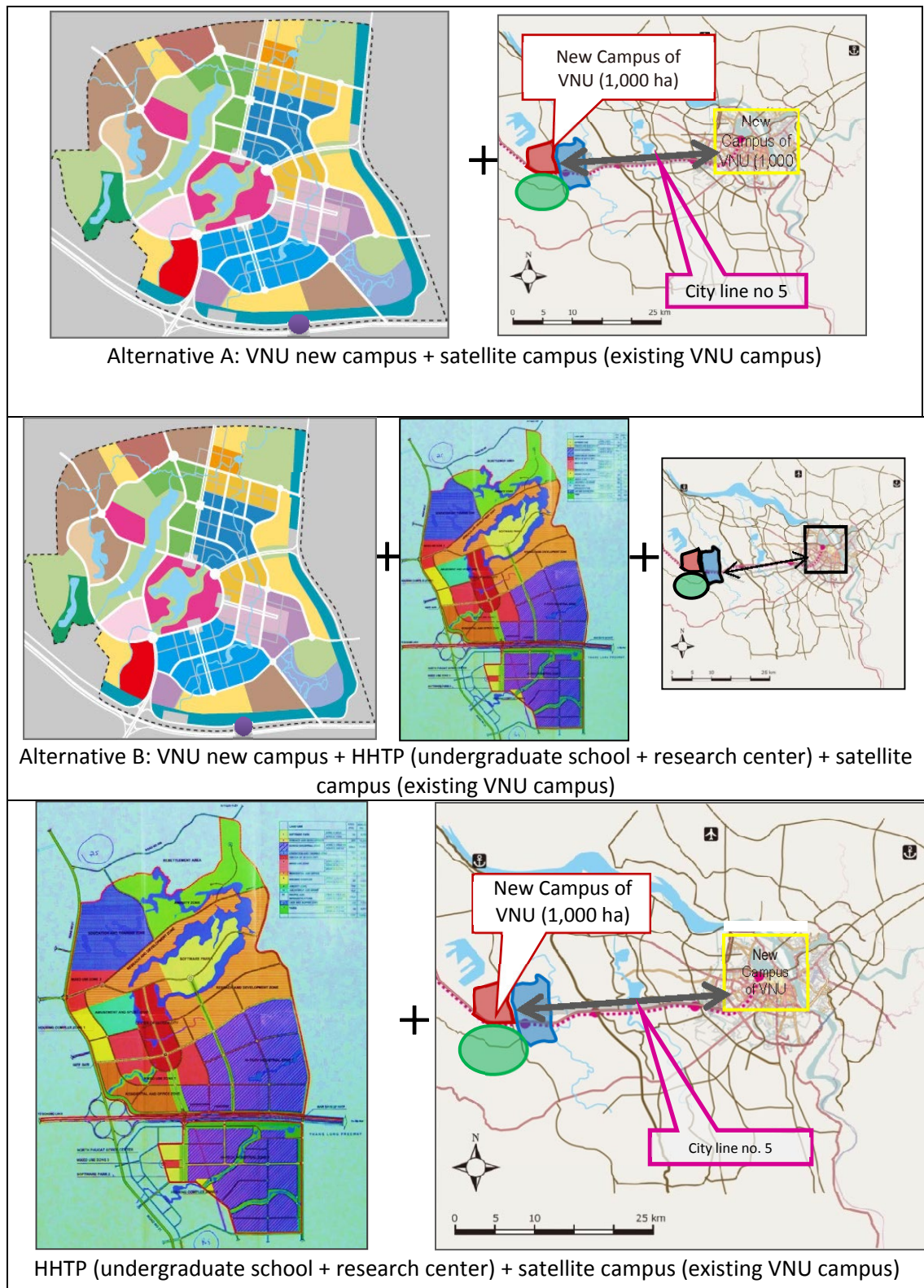
There are three options for VJU's potential site. These three alternatives are combinations of three potential sites: (1) Satellite campus (existing VNU campus), (2) VNU new campus in Hoa Lac and (3) Hoa Lac High-Tech Park (HHTP). The common elements to these three alternatives are as follows:

<Common elements >

1. VJU at VNU new campus
 - Good environment for study and research
 - Close interaction with whole university system of VNU
 - Sharing resources and facilities with institutes under VNU
2. Satellite campus at the existing VNU campus in the center of Hanoi

In addition to the potential sites, there is a possibility to use existing buildings in Hanoi as a VJU temporary campus before completion of the new building construction.

The three alternatives are shown below.



Source: JICA Study Team

Figure 9-1 Alternatives for VJU Potential Sites

According to VNU, it is better for VJU to be both independent and inter-dependent: independent in freedom to create new academic fields, training, and research, and also responsible to the law and society itself; and inter-dependent in collaboration and possibility

for the university's professors to teach in the other universities. Moreover, establishing VJU under the control of VNU through Announcement No. 313/TB-VP CP on August 16, 2013 is preferable.

9.4. Sustainability

9.4.1. Funding Sources and Financial Plan

Funding sources, financial plan, and operation and management plan to achieve the self-sustainability of VJU were discussed in the IR/Meetings.

In regard to the project implementation and its finance source for sustainable operation, the following three alternatives were set for discussion purposes:

- Alternative A: Vietnamese Government + Japanese ODA
- Alternative B: PPP + Donation
- Alternative C: Private Investment

Among these alternatives, most of the opinions supported Alternative A from the point of view of sustainability. They realized that the financial source will determine the image and reputation of the university. With funding from the Vietnamese Government and Japanese ODA loan, the reputation of VJU may be guaranteed, because students and their parents will know that VJU is a public university and is supported by both Governments. This point of view was supported by the common understanding toward public and private universities in Vietnam in that public universities are more preferable than private universities in Vietnam.

9.4.2. Operations and Management Body

In the operations and management of VJU, firstly VJU should be under a well-known university that already has a good reputation in Vietnam (ie. VNU), so that the reputation of VJU may be guaranteed.

At the same time, to provide ultimate education through partnership of Vietnamese and Japanese universities, autonomy and independence are required for academic programs, research activities, human resources, organization structure and financial management, etc.

Legal arrangement, which is the key factor for this autonomy of VJU, is discussed in Chapter 13.

9.5. Comparison of Alternatives

The following table shows the summary of the above comparisons.

Table 9-1 Alternative Comparison Table

Pros. & Cons	Alternative A	Alternative B	Alternative C	Recommended Alternative and Justifications
Target Establishment	Center of Excellence	Practical Education	Center Excellence + Practical Education	Center of Excellence + Practical Education
Pros	<ul style="list-style-type: none"> Simple and easy cooperation between VNU and Japanese universities High feasibility Legally use English as international university Could be extended to ASEAN countries Meet the need for HR of Vietnam-Japan cooperation 	<ul style="list-style-type: none"> Wide cooperation among Vietnamese and Japanese universities Best way to cooperate among Vietnamese and Japanese universities 	<ul style="list-style-type: none"> Not only in Vietnam but region-wide education and research institute 	Selected as a future VJU, not only in Vietnam but for region-wide education and research
Cons	<ul style="list-style-type: none"> Not wide cooperation from Vietnamese universities Political issue 	<ul style="list-style-type: none"> Risks from MOET (time for coordination) Japanese side cannot control Political issues Degree from VNU requires politics credit and military credit 	<ul style="list-style-type: none"> Risks from MOET (time for coordination) 	
Legal Entity/Status	Univ. under VNU (Setting Similar to IU)	New Model Univ. under MOET (Setting Similar to VGU and USTH)	Private Univ. (e.g. RMIT)	Establish New University Under VNU with Setting Similar to International University of VNU
Pros	<ul style="list-style-type: none"> High feasibility Economic model Critical mass Cooperation academic model Cooperation: among students, lecturers, researchers COE for research 	<ul style="list-style-type: none"> Once the legal arrangement is set, autonomy will be secured. 	<ul style="list-style-type: none"> High feasibility 	<ul style="list-style-type: none"> International university under VNU Economic model
Cons	Need to secure autonomy from VNU			
Vietnamese and Japanese universities' involvement	Consortium of Japanese Universities + VNU	Partner Universities by Faculty + Universities Under MOET	Branch of Japanese Universities (by Faculty) + Partner Universities (VNU and Univ. Under MOET)	Consortium of Japanese Universities + Consortium of VNU and Other Universities Under MOET (only VNU in the beginning)
Pros	Practical for Japanese universities to participate in VJU		<ul style="list-style-type: none"> High feasibility 	Japanese universities prefer to formulate a consortium among member universities as the most practical way.

Cons	<ul style="list-style-type: none"> Chaotic, cannot control 	<ul style="list-style-type: none"> Chaotic, cannot control 		<p>Vietnamese side prefers Alternative C in order to utilize the name value of Japanese universities for higher feasibility.</p>
Education Levels				<p>At the Beginning: Postgraduate Future: Undergraduate & Postgraduate</p>
Pros	<ul style="list-style-type: none"> Most students are interested in undergraduate programs only. Bachelor degree is a basic requirement for getting a good job. 	<ul style="list-style-type: none"> Undergraduate students may enter the postgraduate program. 	<p>Postgraduate (Research Oriented)</p> <ul style="list-style-type: none"> Research-oriented universities contribute to university's reputation and ranking. 	<p>Japanese universities prefer to start from post-graduate as it is easier and thus needs less time for preparation. Expand to undergraduate later. It will be more practical as it will educate teaching staff who will work for VIU undergraduates.</p>
Cons	<ul style="list-style-type: none"> Preparation stage will need more time than postgraduate course. No research 	<ul style="list-style-type: none"> It will take time to start with both undergraduate and postgraduate. 	<ul style="list-style-type: none"> Difficulty of attending full-time postgraduate course Requires high-quality students Requires a lot of advanced technology and equipment 	<p>Vietnamese side prefers to have both undergraduate and postgraduate, and start from undergraduate.</p>
Curriculum				
Pros	<p>VNU/MOET Curriculum (A)</p> <ul style="list-style-type: none"> Suits the current situation in Vietnam 	<p>VJU Original Curriculum (B)</p> <ul style="list-style-type: none"> This alternative is the best choice because it covers both pros and cons of alternatives A and C. 	<p>Japanese Universities' Curriculum (C)</p> <ul style="list-style-type: none"> Image of Japanese curriculum is good: more advanced and up-to-date technology and knowledge Subjects that are specific and adapt to real situations in Vietnam are missing. 	
Cons	<ul style="list-style-type: none"> Doesn't meet the requirement of Japanese firms (e.g. language and culture) 			
Teaching Staff				
Languages	<p>Vietnamese Staff</p> <p>English + Vietnamese</p> <ul style="list-style-type: none"> Most students study English in high school. 	<p>Vietnamese Staff + Japanese Lecturers</p> <p>Japanese + Vietnamese</p>	<p>Japanese Lecturers + New Vietnamese Staff</p> <p>Japanese + English + Vietnamese</p> <ul style="list-style-type: none"> Vietnamese or Japanese 	<p>Vietnamese + Japanese + International Lecturers and Staff</p> <p>English Should be the Core Language + Japanese + Vietnamese</p> <ul style="list-style-type: none"> Japanese firms prefer to employ people who know Japanese Some subjects are better taught in English English will be easier for students to apply Some subjects need to be taught in Vietnamese Japanese is very difficult to study.
Pros				
Cons	<ul style="list-style-type: none"> Japanese companies prefer students who know Japanese. 	<ul style="list-style-type: none"> Students who can speak Japanese are limited. 	<ul style="list-style-type: none"> Students who can speak Japanese are limited. 	
Academic Degrees	<p>VNU Degree or VIU Original Degree</p>	<p>VNU & Japanese Double Degree</p>	<p>Japanese Degree Only</p>	<p>VIU Original Degree + Japanese Degree (Double Degree)</p>

Pros	<ul style="list-style-type: none"> VJU will be able to issue original degree. 		<ul style="list-style-type: none"> Some students will prefer Japanese degree. 	<ul style="list-style-type: none"> VJU can issue original degree Give choice to students since some students prefer Japanese universities' degrees.
Cons	Without reputation, VJU degree is not so attractive for students.	No degree at VNU. Should be under the name of universities under VNU-HN.	<ul style="list-style-type: none"> Depends on the Japanese university that will issue the degree. 	<ul style="list-style-type: none"> Need to study in Japan for certain period to obtain Japanese degree. Difficulty to issue a degree from VJU Japanese universities consortium.
Places to Study	4 Years in Vietnam	4 years in Vietnam & 2 Years in Japan	2 Years in Vietnam + 2 Years in Japan	4 Years in Vietnam & 2 Years in Vietnam + 2 Years in Japan
Pros	<ul style="list-style-type: none"> Less cost 	<ul style="list-style-type: none"> Student should be given a choice 	Attract students who want to study abroad Less cost than studying abroad for 4 years	VNU side prefers to give choice to students whether they study 4 years in Vietnam or combination of 2 years in Vietnam + 2 years in Japan.
Cons	<ul style="list-style-type: none"> Difficult to attract students who are willing to study abroad Less differentiation from other public universities 		<ul style="list-style-type: none"> Living cost in Japan is expensive. 	
Sustainability	Vietnamese Government + Japanese ODA	PPP + Donation	Private Investment	Vietnamese Government + Japanese ODA
Pros	<ul style="list-style-type: none"> Image / Reputation Support from government Experience & expertise can be obtained Long-run sustainability No tax 	<ul style="list-style-type: none"> Less reliance on state budget & ODA loan 	<ul style="list-style-type: none"> Quick process Good and quick services Flexible administration 	The finance source will determine the sustainability of the university and thus create a good image and reputation of the university. If VJU will be funded by Vietnamese and Japanese governments, it will help to raise its reputation.
Cons	<ul style="list-style-type: none"> Many procedures to undertake Slow implementation and construction works 	<ul style="list-style-type: none"> Complicated Need mechanism for identifying private participation (interest) 	<ul style="list-style-type: none"> No reputation in the beginning Complex legal procedure Tax burden Expensive tuition fee Depends too much on interest of private entities 	Government procedures require longer time than private investment.

Source: JICA Study Team

9.6. VNU's Expectations of VJU

The following are expectations from VNU to VJU which were raised and explained in the IR/M-II in Tokyo as well as in their proposal to the Vietnamese government.

9.6.1. Contribution to Rapid Development of VNU-HN

The establishment of VJU as a member of VNU-HN following the model of an excellent research-based university will generate a new element -- a standard structure for the interconnection of training and research, development and technology transfer; connection between universities and private companies to generate the motivation for the development of VNU with the orientation of applied research and improved efficiency.

Establishment of VJU will contribute to the development and completion of the multi-disciplinary and interdisciplinary structure of VNU, especially for the number of high-tech and advanced academic fields. It will integrate fundamental science, technology, management and service in order to increase the portion of training, scientific research and service activities approaching international standards. It will improve the internationalization indicators of VNU such as the number of international publications, inventions, patents, international lecturers and students.

The establishment and operation of VJU in VNU has a solid premise. In addition, VJU will also be an important factor in developing the collaboration between VNU and Japanese universities in particular, and taking collaboration in education and training between the two countries generally to a whole new level.

9.6.2. Expectations of VNU to VJU

VJU is targeting to achieve the following:

- Become an advanced research university of COE model
- Be in the top 200 universities of Asia by 2020
- The best Japan-Vietnam "bridge" for mobility and exchange of human resources, knowledge, culture, services and economic development
- Create cooperation of the best Japanese universities and VNU with industry-business-government-society ("knowledge PPP")
- Internationalized through collaboration with prestigious Japanese universities
- Guarantee of highest autonomy

9.6.3. Necessity of VNU for VJU

The reasons why VJU needs VNU are as follows:

- VNU guarantees long term vision and confidential and sustainable collaboration
- Quality assurance from VNU and its international partners
- Provides the most interdisciplinary education environment in Vietnam
- Provides existing expertise and human resources
- Quick decision-making process
- VNU can provide large area of land for building VJU campus

- Use VNU infrastructure
- Use brand name of VNU to recruit the best faculty, resources and students from public and private sectors
- Increase effectiveness by contribution of VNU to stakeholders

9.6.4. Means to Meet VJU Expectations

In order to cope with expectations and achieve the expected goals, VNU and VJU are expected to become mother universities both in Vietnam and Japan through the following means:

- Enhance partnership of Japan and Vietnam
- Attract students, not only from within Vietnam, but also from Japan, the region and eventually the world
- Create long-term human networks amongst Vietnamese and international students
- Produce highly capable and practical personnel for Japanese and global companies

9.6.5. Priority Fields of Education/Research Expected by VNU

The following fields are given priority for education and research from the VNU side:

- Life science, medicine and pharmacy
- Nanotechnology and advanced materials
- Information technology
- Interdisciplinary fields: climate change, global change, sustainability, environment science and technology, non-traditional security
- Social science and humanities: international studies, Japanese language and Japanese culture
- Other advanced technologies

10. Framework for the Vietnam-Japan University Project

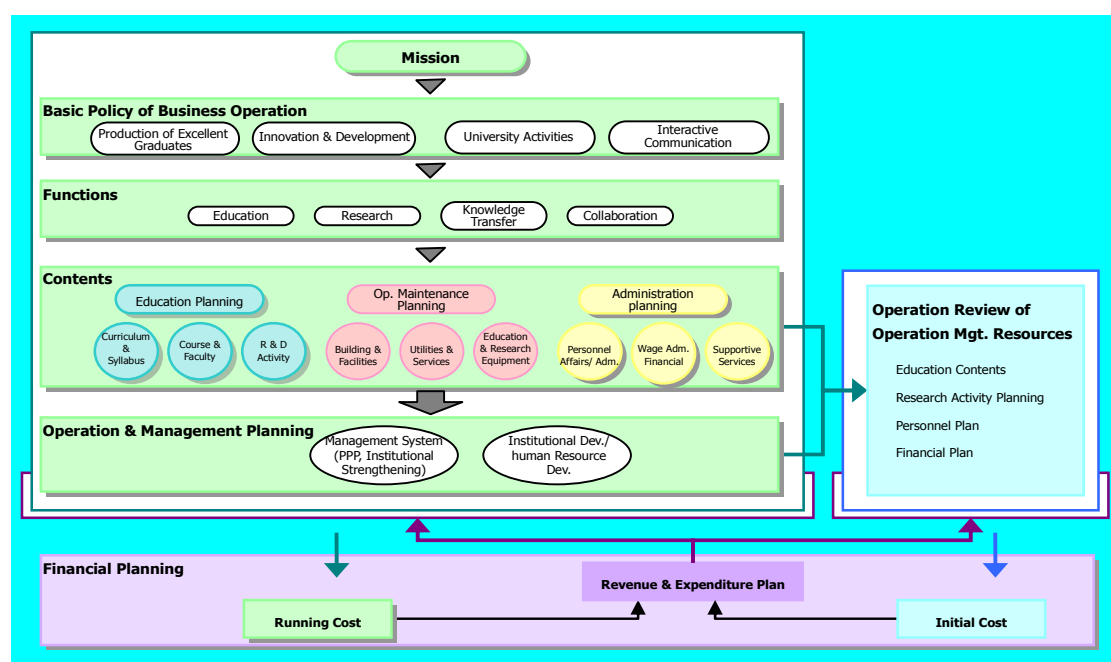
Based on the above arguments, this chapter explains the framework of VJU.

10.1. Objectives of VJU Establishment: Vision, Mission, Functions

Before designing the organization and operational procedures of VJU, the type and scale of each business/function must first be determined. The bases by which to determine the operation types and their scales are the roles and functions of the university. Such roles and functions depend on the mission and policy for establishment of the university. Because the detailed plan of operations must be expanded out from the master concept, it is necessary to establish a master concept prior to preparing detailed operation plans.

First of all, a clear idea of operations such as mission, basic operation policy and concept should be established. Then, business units can be determined based on it and the methods and contents of each business can be decided. For selection of business units, it is necessary to clarify the full characteristics of the university and to make sufficient sustainable plans based on the functions and contents of each business unit.

After this, the optimal system and environment can be defined for the related businesses. When the planning work is carried out in this order, it becomes possible to depict the proper system and environment for the businesses. Once the system and environment are clarified, a financial plan can be prepared by estimating the costs. If the revenues do not cover the costs, the plan shall be amended by seeking ways to increase revenue or to reduce costs. Through iterations of such reviews, the accuracy of the plan will be improved. This process is shown in the figure below.



Source: JICA Study Team

Figure 10-1 Flow for Preparation of the University's Organization and Operation Plan

The founders of a university expect the university's establishment to provide all that is needed for full university functioning. To realize this goal, professional and experienced staff from various areas must participate, and their work must be well integrated. Otherwise the expected effects will not materialize. Every staff member of VJU must share a common vision and cooperate with each other. What is important in operations planning is to establish this

vision in clear and simple words. This is extremely important for all works. Such a vision becomes the criteria shared by all staff in order to fix the scope of operations.

(1) Mission Statement

It is vital, in establishing and planning the university, to assert a mission for VJU that explains the goal of its establishment, a clear vision of its activities, as well as its philosophy as a starting point for becoming an independent corporation.

The current study regarding the mission statement of VJU is preliminary, which eventually should be authorized by the board of directors (a consortium of selected universities from both Japan and Vietnam). The basic current guidelines are shown below.

Since VJU will be established based on the close and friendly relationship between the Vietnamese and Japanese Governments, exchange of human resources, cultural integrations, and economic developments of both countries are expected.

(2) General Objectives

After consulting the task force members of VNU regarding the concept of VJU, the current target of VJU was developed as follows.

In general, the establishment of Vietnam – Japan University, a member of VNU-HN, aims to be a leading university in Asia, promote cooperation in education, science, and technology, culture between Japan and Vietnam, and supply high-quality human resources in order to meet the demand of socio-economic development of both countries.

The general objectives of the Project are as follows:

- VJU establishment will have the structure of a first-class university with fundamental science and high-tech base and will have close relations with other VNU-HN members and other training centers in Vietnam and Japan.
- In the year of 2025, VJU will be expected to be ranked in the top 50 Asian universities.
- VJU will provide high-quality human resources and research results in order to increase competitive factors and develop the knowledge industry of Japan and Vietnam.
- Last but not least, VJU will be a symbol of Vietnam–Japan relations on cooperation, education, science, and culture.

(3) Specific Objectives

Based on the above general objectives, the content of VJU's specific objectives at present are as follows:

- To establish and operate Vietnam–Japan University as a leading university in Vietnam on education, research, knowledge exchange, and science and technology development
- To ensure the effective cooperation and relation among the university, Japanese, and local government
- To have up-to-date training programs and methods that are well coordinated with science and technology research, knowledge exchange, modern and state of the art facilities, laboratories, training materials, reference documents, operation systems, and studying and working environments in order to ensure the training quality of VJU to be equal to top universities in the world.
- To supply high-quality and world-class human resources to meet the needs of Vietnamese companies, Japanese companies in Vietnam, and companies in regional

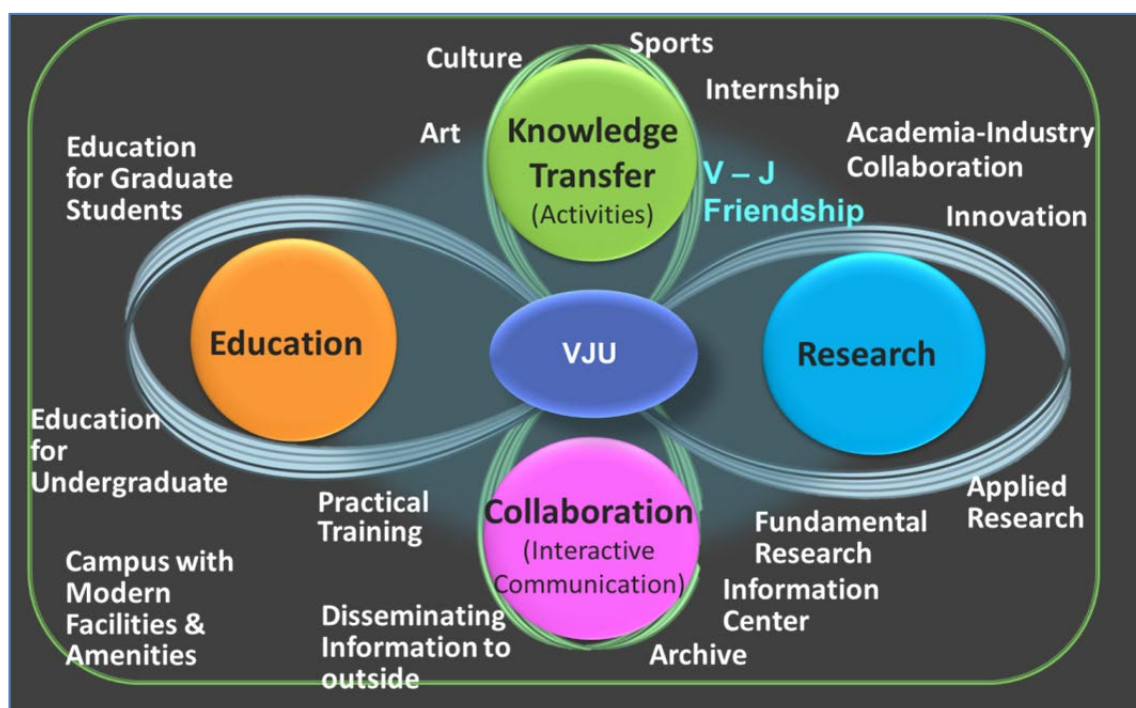
countries; to increase the number of exchange students between Vietnam and Japan and vice versa.

- To provide training programs of equal quality to those in famous universities in Japan; to adapt the most successful majors of Japanese universities to the needs in Vietnam.
- To improve the capability of VNU – HN's staff by operating science education and research training courses between VJU and other VNU-HN's members.
- To create friendly and ideal living and working environments in order to attract excellent local and international human resources.
- To familiarize students with team working methods and group activities, and to strengthen their leadership skills through extracurricular activities in sports, art and culture.

(4) Functions and Contents

It is indispensable to have value-added functions, as well as to clarify VJU's social roles.

VJU functions include education for undergraduates, education for teaching staff, research, extracurricular activities in sports, art, and culture, communication and information center. These functions are listed in the figure and table below and explained in the sections that follow.



Source: JICA Study Team

Figure 10-2 Concept for New Functions of VJU

In order to carry out the concept of new functions, necessary functions for both physical and soft aspects are summarized as follows:

Table 10-1 Functions of University Areas

University Area	Physical Functions	Soft Functions
Education Area	Classroom Seminar/Convention Hall	
Research Area	Laboratories	
Industry – Academia Collaboration	Incubation Center	
Research Center	Library	
Student Service	Dormitory Information Center Helpdesk Cloakroom ATM Kiosk Sitting Area Nursery Area Center for Study in Japan	
Career Service	Job Placement Center	Job Fair Internship Service
Sports & Cultural Activities	Sports Field Gymnasium Swimming Pool Tennis Court Badminton Court Music Room Japanese Tea House and Garden	Coaching Tea Ceremony
Administration, Faculties & Researchers	Administration Office Rector Room Director Room Meeting Room Teaching Staff Room Research Room Resident Guest House	
Visitor Information	Meeting Point Orientation Map Information Boards	Attendant
Promotion	Exhibition space Theater Lecture room Archive and Information Center	Exhibits Event (Seminar, Workshop, Education) Guidance
Commercial Area	University Goods Shop Bookshop Restaurant Café Kiosk	Activity
Transportation	Parking Lot (Motorbike, Car, Bicycle) EV-Bus	
Fundamental Features	Admission/Vehicle Control Information on Rules Visitor Information of VJU Toilets Refreshments	

Non-Public Features	Staff Room First Aid and Dispensary Office Room Storage Room Cleaning Room	
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Source: JICA Study Team

Each function has its own specific operational issues and points to be dealt with and highlighted in order for VJU to prepare, consider, and make decisions to finalize the operation and management plan.

10.2. Uniqueness of VJU

The uniqueness of VJU was also described in the proposal of VNU to the Vietnamese Government. It is important for VNU to demonstrate its difference from conventional universities in Vietnam, including the foregoing German and French NMUs. Besides, a synergy effect with the member universities of VNU is crucial to establish VJU and its sustainability.

10.2.1. Development Model

Tentatively, VJU will be an international university in VNU as a new model, with a high level of sustainability and feasibility. The main features of VJU are as follows:

VJU will be a national university, a member of VNU-HN. VJU will be established by the prime minister of Vietnam under a special regulation of organization and operation with high autonomy and self-responsibility. It will be a non-profit organization established in accordance with preferential resource nationalization.

VJU will be a member of VNU-HN—a multidisciplinary and interdisciplinary university—having interconnected and organic links with other members of VNU-HN and their affiliated units. VJU will not only be able to develop its own strength but also earn benefits through interdisciplinary collaboration and resource sharing of scientific staff and infrastructure (academic staff, laboratories, libraries, dormitories, IT infrastructure, etc.) which will minimize required investment and strengthen its foundation to develop in the future.

The organization and operation of VJU is a new model, piloting the autonomy of the university, allowing the university to exploit the existing advantages of VNU which are multidisciplinary interconnections with other university members of VNU and the intensive participation of Japanese universities, generating favorable conditions for VJU to develop quickly to meet international standards as other advanced universities in the region and in the world.

VJU will be a typical model of an applied-science-based university that has connections with private sector enterprises. VJU has an advanced curriculum and a combination of training and research activities, linking scientific research with knowledge transfer to serve both Vietnamese and Japanese companies, especially Japanese enterprises in Vietnam.

Applied science in VJU will be based on fundamental science which is a strong field of VNU-HN and further development of it is expected to accelerate.

The development orientation of VJU is to become a prestigious university in the region and in the world based on the foundation of fundamental science and advanced technology, and the integration of fundamental science, technology, management, and services, which is in

line with the policy of higher education reform in Vietnam in general and at VNU-HN in particular.

Besides the function and obligation of an education and high-quality research institution, VJU will be a center for promoting art, culture, sports and information exchange between Vietnam and Japan. VJU is the entity to initiate, draw, and implement collaborated activities of Vietnam and Japan.

10.2.2. Educational Outputs

Expected educational outputs of VJU are envisaged by both VNU and taskforce member professors from Japanese universities. VJU will train high-quality human resources in two fields, which are natural sciences and engineering, and social and human sciences. In other words, by integrating academic disciplines of fundamental sciences, technology, management, and services, the educational outputs will meet the professional standard of international universities.

Regarding natural sciences and technology, training activities will be included in specifically collaborative research programs with companies (Japanese companies in the beginning), in order to generate high-quality outputs of human resources with practical and highly qualified skills, which satisfy the requirements of research, development and collaborations of companies.

Regarding social and human sciences, it will be practical training through cultural exchanges and collaboration between two countries in order to generate the outputs of human resources who have a deep understanding of Vietnam-Japan and will be able to work in an international environment.

VJU will be an international educational environment where students will study 100% in foreign languages (English and Japanese for Vietnamese students; English and Vietnamese for Japanese students) following standards of foreign partners in programs, curriculum, teaching methodology and lecturers from prestigious Japanese universities.

(1) Necessity of the Japanese Language as a Teaching Language

It would be ideal that all graduates of VJU will know basic Japanese to foster collaboration between Vietnam and Japan even after graduation. However, as an international university, with international staff, it is better to use English as a core teaching language, with Vietnamese and Japanese (for Japanese and Vietnamese students respectively) for selected subjects.

According to interviews conducted for this Study, Japanese companies appreciate the ability to speak in Japanese, but the most important thing for working in or doing business with a Japanese company is business manner and sense of values.

Because VJU will be established primarily for Japanese companies, Japanese language proficiency is important. However, to work in a Japanese company, whether in Vietnam or in Japan, it is important to have a basic knowledge of the Japanese language, to have the behavior and values that fit into a Japanese company and to have some knowledge of Japanese arts and culture. In this regard, it is important for students to have a culturally diverse experience, to be able to take classes on Japanese arts and culture, and to have access to a study abroad program at Japanese universities, which will be a good entryway into internships with leading multinational Japanese companies.

According to the experience of APU, the key issue is not to learn Japanese, but to study their majors in Japanese. To educate fluent/bilingual students, what is important is to study one's major (i.e. science, law, economy, etc.) in foreign languages, such as Japanese, Vietnamese (for Japanese students), and English.

Moreover, it is also very important for VJU to set a standard career path for the students in order to gain students both in qualitative and quantitative areas.

The minimum requirement of proficiency in Japanese language at VJU will be N2, the same as the requirement of qualification for studying in Japanese universities in Japan.

(2) Starting from Graduate School

Since it will be a long project that will take 10 years or more, it is possible to start from the graduate level and then proceed to the undergraduate level. Starting from graduate studies enables the training of future professors for undergraduate level. It is easier and more efficient to start from the graduate level since several Japanese universities already have ongoing collaboration programs with VNU at the graduate level.

Starting from graduate studies is more practical and feasible, and it will make it possible to train future professors for the undergraduate level. However, the undergraduate establishment should not be delayed too long because otherwise the goal of providing liberal arts and practical education will be achieved.

(3) Structure of Education Concept

1) Sustainable Development

The primary goal of VJU is to supply high-quality human resources in order to meet the demand for socio-economic development of both countries and the world. However there are many obstacles along the course of socio-economic development related to global and regional problems that involve various aspects that are interlinked with each other.

Poverty, water pollution, informal settlements, biodiversity degradation, water and food shortages, and low literacy rates are typical regional problems that we observe today in various regions around the world. Such problems are interrelated with each other and not easy to solve with a single solution.

For example, in the climate change issue, the prediction of the rise of the Earth's temperature is the problem for applied physicists, however, estimations of the effects of temperature increase and climate change on water resources, crop production, sea level rise, infectious diseases and fisheries are carried out by scientists and engineers in various fields.

In this regard, "Sustainability Science" is a new academic field advocating sustainability through holistic solutions to complicated real-world problems. Sustainability Science is vital to applying sustainability concepts to society and it has become evident that Sustainability Science has made tremendous progress towards linking and integrating discrete academic sectors.

Application of scientific knowledge for the benefit of society requires a sophisticated education program and feedback system to modify application methods.

Sustainability science is an academic field that aims to secure the sustainability of natural, social and personal systems. However, our planet has undergone dynamic changes in the past. Ancient climate change, the industrial revolution, wars, major natural disasters, and information technology have drastically changed society. It is peace and prosperity that society wants to achieve through sustainability science. As an integrated academic discipline,

Sustainability Science proposes the optimal direction and path for fundamental disciplines to solve complicated problems, and finally lead society to a state of enhanced peace and prosperity.

Therefore, VJU will be a professional interdisciplinary university with a focus on sustainable development.

For the opening of Vietnam-Japan University in 2016, “Vietnam-Japan Graduate School of sustainable development (a tentative name)” will be established under VNU-Hanoi. The significance of sustainable development has already been fully recognized in Vietnam’s Socio-Economic Development Strategy for 2011 – 2020 (Prime Minister Nguyen Tan Dung, on April 12, 2012, signed Decision No. 432/QĐ-TTg), so the graduate school will be established to educate/research on issues such as global environments, climate change, disaster control, sustainable developments of regions, and international public policies, comprehensively.

The idea of sustainable development is supported by the VNU side since this program meets Vietnam’s National Strategy and no other university is focusing on this field in Vietnam.

However, during the workshop some members felt that the concept of sustainability development needed to be defined to include sharing ideas among the VNU and Japanese university members, and that it would be necessary to promote the concept to Vietnamese students.

It should also be noted that there were comments expressing concerns about the capabilities of Vietnamese students since sustainable development requires interdisciplinary knowledge. Regarding this, it is also considered necessary to provide preparatory classes as well as undergraduate-level extra classes prior to entering the initial stage of VJU Graduate University. Hence, it is necessary to validate and review the majors and departments that need specific preparatory course establishment for the programs and targeted curriculum. Regarding the establishment of these preparatory courses, while strengthening liberal arts at the undergraduate level of VJU, it is also necessary to prepare courses for prospective and current students from other universities, who have interest in entering VJU Graduate University.

2) Liberal Arts

Based on the concept of establishing a postgraduate school of sustainable development, VJU curriculum will be enhancing critical thinking in small, discussion-based classes for 20 students at the postgraduate level. In order to create and foster broad-minded and critical-thinking human resources, it is important to provide liberal art studies at the undergraduate level.

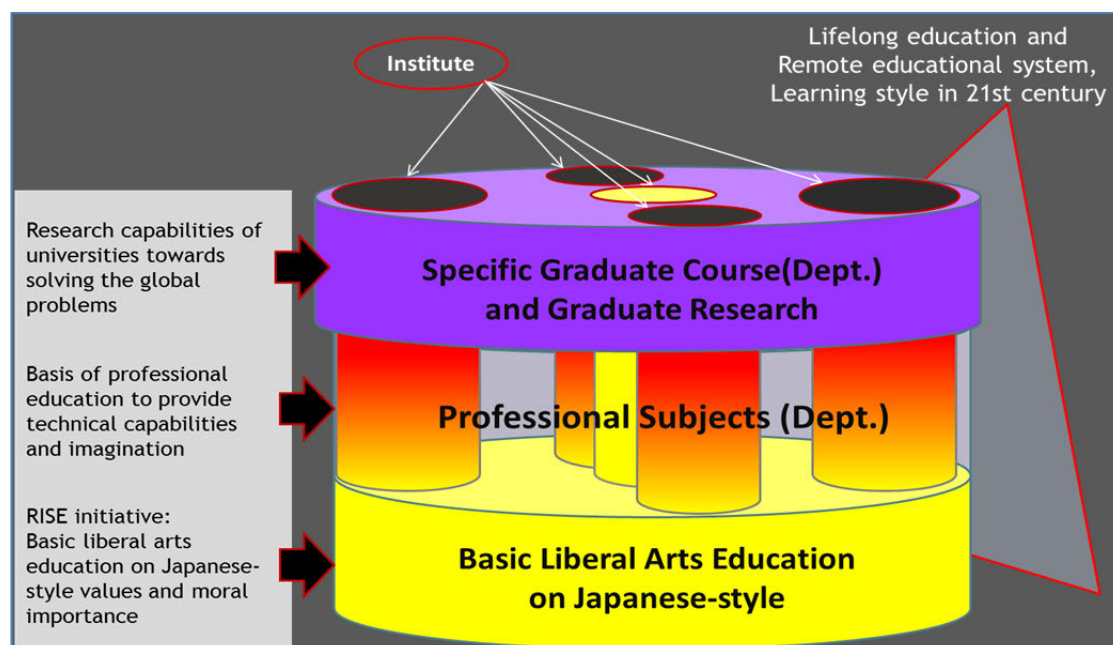
VJU is targeting to educate students who have a wide range of knowledge and to stress the importance of liberal arts. However, it was pointed out from several participants during the workshop that introduction of liberal arts may face difficulty in the beginning for the following reasons:

- There is no time for students to study additional subjects due to their workload in the current educational program.
- In general, Vietnamese students tend to focus on subjects closely related to their majors.

Therefore, it is necessary to develop and integrate liberal arts studies into the existing VNU curriculum to provide high-quality students graduating from the undergraduate level to enter VJU postgraduate school.

VJU could provide compensatory classes, optional courses, as well as extra curriculum for VNU's undergraduates, which will be beneficial for both sides.

The conceptual structure of the education program in VJU is envisaged in the following figure.



Source: JICA Study Team (Prof. Cassim)

Figure 10-3 Structure for Education Concept

(4) Graduate School of Sustainable Development

At the beginning, the school will start as a graduate school with a 2-year master's course (the first term of the doctoral course) and doctoral degrees (the latter term of the doctoral course) which will include options such as studying at graduate schools in Japan and pursuing a joint degree programs. In addition to studying in the doctoral course, the target of the graduate school will be to comprehensively develop the students into leading politicians, government officials, leading executives/specialists of companies including Japanese companies, excellent experts and entrepreneurs.

The graduate school will offer the 2-year master's courses and all students will be requested to take the 'International Liberal Arts' course to learn general basic knowledge that will support the development of their specialized research in the future. The liberal arts course will focus on the broad liberal arts education expanding students' perspectives, will be the special basic education connecting Vietnamese undergraduate education with Japanese master's courses, and will be characterized by active learning to inspire active attitudes for learning.

The following four special courses in humanities & social science and natural science will be established in the graduate school three years later.

1) Humanities & Social Sciences:

Regional Research Courses:

Vietnamese Affairs, Japanology (Japanese Language, Japanese Culture, etc.), Regional Affairs including Japan and Vietnam in East Asia, Contents & Design, Regional Industries (Agriculture/Forestry/Fishery, Food, Food Sanitation, Distribution System, Marine Development, Tourism, Venture Companies including University Ventures, Services).

International Public Policies Courses:

Development Economics, Economics (Macroeconomics, Microeconomics, etc.), Public Economics, Business Management (Management, Marketing, Company Establishment, etc.), Finance, M&A, Law (International Private Law, Intellectual Property and other laws), City Planning, Public Policy.

2) Natural Sciences:

Environment and Disaster Control Studies Courses:

Environment, Disaster Control, Automobile, Electronic Machinery, Robots, Railway, Urban Engineering, Construction, Civil Engineering, Energy, Atomic Energy, Housing, Landscaping, etc.

Environment and Life Sciences Courses:

Life Science, Biotechnology, Genome, Nano-Science, Health & Physical Training, Ions, Chemistry, New Materials, etc., plus Medical Care, Nursing Care, Medicine, etc.

3) Knowledge Sciences:

Information Science Course:

Informatics and Telematic Technologies, NEMS/MEMS.

Digital Humanities:

Robotics, Collective Enterprise Management.

4) Engineering Sciences:

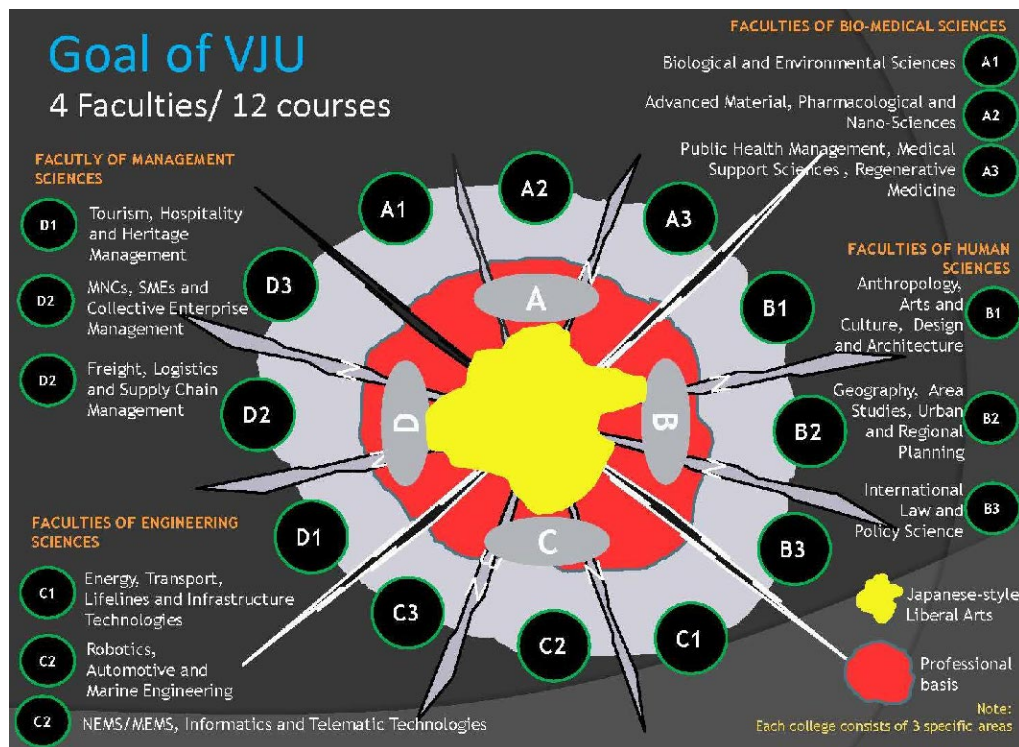
Environmental Engineering:

Automobiles, Electronic Machinery, Railway, Shipbuilding, etc.

Renewable Energy:

Energy, Transport, Lifelines and Infrastructure Technologies, New Materials, etc.

The targeted academic fields of VJU are drawn in the following figure:



Source: JST (Dr. Cassim)

Figure 10-4 Academic Fields of VJU (Final Version)

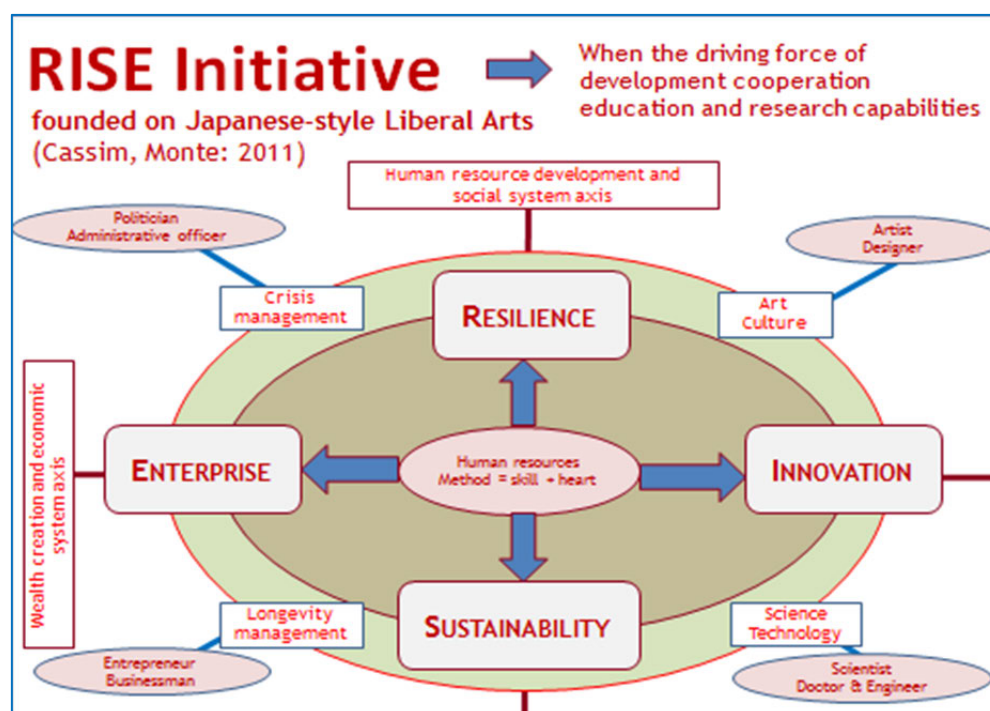
10.2.3. Scientific and Technological Outputs

VNU also envisaged some outputs of scientific and technological aspects by VJU.

VJU will collaborate with HHTP and coordinate with Japanese companies to promote the existing resources and facilities of VNU in order to generate advanced scientific and technological outputs that have high applicability and economic value. The research outputs of VJU will be technical measures, manufacturing processes, patents, inventions and utility solutions, registered intellectual property, outputs applicable to industries such as IT and communication, aerospace technology, health medicine, energy and environment, responsible for climate change and natural disasters, etc.

Based on collaboration between researchers and lecturers of Vietnamese studies and Japanology from both countries, VJU will generate social scientific outputs to be the foundation for the development of the Vietnam-Japan collaboration, to spread and promote the traditional values of both countries.

Based on the collaboration and sharing of research on the economics and finance of Vietnam and the world, as well as learning from Japanese experiences, VJU will generate the basis for publication of research on economics and management that will be valuable to the sustainable development of Vietnam, integrating fundamental sciences, technology, management and services, development of decision-making sciences, service sciences, etc.



Source: JICA Study Team (Dr. Cassim)

Figure 10-5 Science and Technological Outputs Based on Japanese-Style Liberal Arts

10.3. Degree Accreditation and Education Plan: Levels, Fields, Curriculum, Syllabus, etc.

The training programs of VJU will be accredited by regional and international quality assurance agencies and recognized by prestigious universities in other countries. VJU also participates in the quality assurance and certificate acknowledgement system, and VJU's qualifications will be equivalent to international standard universities.

10.3.1. Accreditation System in Vietnam

In 2003, the General Directorate for Educational Testing and Accreditation (GDETA), with the responsibility of not only establishing an accreditation system but also coordinating examinations used for student entrance examinations to universities, was established. It controls both the processes of institutional self-monitoring and national external evaluation. The "Regulations for Higher Education Accreditation" were set out in 2007. In addition, a National Accreditation Council (NAC) was established in 2008 under MOET, consisting of members from MOET and external members. The council has already approved accreditation for 20 universities. It is also necessary for VJU to be approved by NAC.

10.3.2. Accreditation of Foreign Program

The foreign training program provided in Vietnam must be a program whose quality has been accredited overseas or the program of an educational institution accredited by foreign quality assessment organizations or foreign competency agencies.

The subjects in an educational association designed to issue foreign qualifications must be taught in foreign languages, not in Vietnamese or through a translator. The educational association programs designed to issue Vietnam's qualifications and certificates may be taught through a translator. The teachers and lecturers teaching in foreign language in the educational association programs must satisfy the requirements of the programs in foreign

languages, but must not be lower than C1 level in the Common European Framework of Reference for Languages (CEFR) or equivalent.

Students will be required to reach this level of foreign language skills (i.e. English and Japanese) before entering VJU. In collaboration with VJU, VNU-HN provides courses in foreign languages to help students reach the levels required before starting the official program at the graduate school.

VJU can be free to set up its educational programs without being bound by the program framework provided by MOET. VJU will establish and announce its standards of knowledge and skills required for graduation and the volume/number of credits required for those educational programs.

VJU will adopt educational programs in foreign languages to ensure quality of education with the condition that these programs be evaluated and recognized in Vietnam.

VJU's intellectual property (including information's copyright), teaching materials and publications, including literary works, scientific works, textbooks, teaching courses and other works expressed in written language or other characters, lectures, addresses and other speeches, press works, sketches, plans, maps and drawings related to scientific works, etc., are protected by law.

In addition to accreditation by NAC, VJU will issue or be entitled to request the issuance of certificates issued by Japanese Universities complying with Japanese law.

10.3.3. Degree Accreditation

The educational program at VJU is planned to start as a graduate school (of sustainable development studies) in the initial stage and gradually become a university offering various academic fields and degrees.

The degrees currently planned to be offered by VJU are as follows:

Table 10-2 Proposed Degree in VJU

Educational Levels	Academic Degree	Duration	Contents
Graduate	M1. VJU original degree	Graduate school Preparatory course + 2 years in Vietnam	VJU shall develop joint programs with VNU and Japanese universities. The programs will be accredited by NAC.
	M2. VJU & Japanese universities double degree	Graduate school Preparatory course + 1 year in Vietnam + 1 year in Japan	Students will spend 1 year studying at VJU in Vietnam and another 1 year at a partner university in Japan, and they will acquire a master's degree from both universities. For a year in Vietnam, students may learn basic knowledge to study in Japan, technical education and Japanese language. The languages used in the one year in Japan shall be both Japanese and English. Note that adjustment with Japanese universities is necessary where the number of admitted students will be limited depending on the department. Supporting systems such as scholarships are also

			necessary.
	M3. VNU & Japanese universities double degree	Graduate school Preparatory course (1 year/ part time) + 2 years in Vietnam	Students will be able to get master's degrees from partner Japanese universities without having to study in Japan. The remaining 2 years will be provided by dispatched Japanese professors and remote education organized by partner Japanese universities in Vietnam. Master's degrees will be from both VJU and the partner university in Japan. Note that this program will operate only after the facilities, organization and undergraduate program of VJU are established.
Undergraduate	B1. VJU original degree	Undergraduate Preparatory course + 4 years in Vietnam	VJU will provide undergraduate studies once the facilities and organization are ready. Programs will be jointly developed by VNU-HN and Japanese universities, and will be accredited by NAC.
	B2. VJU & Japanese universities double degree	Preparatory course + 2 years in Vietnam + 2 years in Japan	This program will enable undergraduate students to acquire a degree from partner Japanese universities. After 2 years of studying at VJU in Vietnam and 2 years at partner Japanese universities in Japan, students will earn degrees from both universities. During the 2.5 years in Vietnam, students may learn basic knowledge and Japanese language. In general, the language used during studies in Japan will be Japanese. Note that the admitted number of students and fields of study will be limited depending on the admission of the Japanese universities.
	B3. VJU & Japanese universities double degree	Preparatory course + 4 years in Vietnam	The ultimate goal of VJU is to provide programs offering degrees from Japanese universities without having to study in Japan. In the first 2 years, students will study general education and Japanese language to prepare for the following years. After that, education by dispatched Japanese teachers and remote education organized by partner Japanese universities will be provided in Japanese. The degree offered will be from VJU and partner Japanese universities. Note that it is necessary to further discuss the feasibility of this scheme with partner Japanese universities.

Source: JICA Study Team

Graduate school preparatory courses (for one year/part time) mentioned above will provide prospective students of VJU with general education, Japanese language, and basic technical education. They also serve as an extra lecture for senior undergraduate students and preparation courses for current students.

Undergraduate preparation courses are extra courses providing students with Japanese language and basic learning skills either prior to entering or in parallel with undergraduate courses.

As VJU is under and approved by VNU, the educational program of VJU is not restricted by that of MOET. Instead VJU is entitled to establish its own educational program with accreditation by MOET.

At the stage of establishment, VJU will start as a graduate school. In order to prepare for it, the plan is to send the prospective academic staff to study in Japan. For this reason, the M2 program in the table above is prioritized because it enables students to earn master's degrees at existing partner Japanese universities. Also, with the concept of educating future VJU lecturers, this program encourages students to proceed to PhD programs. However, financial support, such as scholarships, is considered necessary.

Furthermore, in order to develop double degree programs, cooperation from Japanese universities is essential. Hence, more specific topics such as admission and fields of study shall be discussed further once this feasibility study is finished. Usually, these kinds of double degree programs require an individual process from each partner university. This time, however, it shall be handled by a consortium of Japanese universities. Thus, it is necessary to establish a new mechanism regarding the possible responses.

For the program offering degrees from Japanese universities, the N1 level of Japanese language necessary. Therefore, only very limited students are eligible for this criteria. As for the degree from VJU, the curriculum is planned to be offered in Vietnamese, Japanese or in English.

10.4. VJU Students

10.4.1. Impression of Prospective Students

In the beginning, student recruitment and enrolment may face difficulties, as experienced by other NMUs such as VGU and USTH, primarily due to VJU being a newly established university and not having a high reputation in comparison with other prominent universities in Vietnam.

Another hindrance for student recruitment may be the teaching languages at VJU, which will be English and Japanese for technical classes. In order to solve these constraints, VJU is required to implement strategic promotion activities. VJU should also aim to attract students in Group A1 and Group D, prepare and implement training programs with preparation courses in order to improve the English and/or Japanese level of students and lecture in foreign languages as in other VNU-HN members.

It is therefore important to show potential students some examples of students who entered and graduated from VJU. The envisaged function of VJU is shown in the following table.

Table 10-3 Input and Output Images of VJU Students

Students to be Educated at VJU	Pro-Japan Vietnamese, Pro-Vietnam Japanese <ul style="list-style-type: none"> • Global individuals to become executives of Japanese companies • Global individuals responsible for the future of Vietnam • Policymakers/researchers/educators • Vietnamese entrepreneurs/managers • Vietnamese-Japanese working in international organizations • Vietnam representatives in Japanese companies
Skills Expected from VJU Graduates	<ul style="list-style-type: none"> • Critical thinking • Leadership • Teamwork • Ability to work spontaneously and well • Creativity • Interdisciplinary knowledge • Ability to conduct cutting-edge research • Ability to develop independent products from Vietnam • Ability to study in Japan for doctoral course
Target Students	<ul style="list-style-type: none"> • Students with interest in working in Japanese companies or interest in Japan • Excellent students (from VNU or others) who have interest in continuing their studies at VJU or Japanese universities • Employees in Japanese companies in Japan (training) • Vietnamese government officials (training) • Vietnamese researchers • Japanese who wish to work internationally

Source: JICA Study Team

Potential students to enroll in VJU are: students who study the Japanese language in high school and students who plan to study in Japan.

Vietnam started Japanese language education with 60 students in 2 high school classes, and there are now 31 schools teaching Japanese in 5 provinces, including Hanoi, HCM, Hue, Da Nang and Binh Dinh. The number of students studying Japanese in secondary education institutions in 2006 was about 1,900 students, while in 2012 the number has increased to about 5,500 students²⁴, showing the tendency to increase the number of students that might be interested in studying at VJU.

Table 10-4 Number of Students Studying Japanese

Area	Schools	Students	Including
Hanoi	13	3,500	8 public secondary schools, 2 private secondary schools, 3 public high schools
HCM	18	1,053	-
Hue		2,000	-
Da Nang			
Binh Dinh			
Total	31	6,553	-

Source: JICA Study Team

²⁴ Japan Foundation "Survey Report on Japanese-Language Education Abroad 2012", December 2013

MOET announced that starting from the year 2013, teaching and learning Japanese will become a component of the National Foreign Language Scheme 2020. This means that the Japanese language will be highly promoted by the Vietnamese Government so that the number of students who study Japanese language is expected to increase rapidly.

Particularly, the number of new enrolments for Japanese class among VNU ULIS gifted students compared to other languages is described in the table below.

**Table 10-5 Number of Students Studying a Foreign Language
at VNU ULIS High School for Gifted Students**

Nationality	2009	2010	2011	2012	2013
Japanese	35	35	40	40	40
English	165	165	165	180	180
Russian	30	30	25	20	20
French	45	45	45	40	40
German	35	35	35	40	40
Chinese	70	70	70	60	60

Source: JICA Study Team

According to JASSO (2012), the total number of international students in Japan is 137,756 as of May 1, 2012. There are 4,373 Vietnamese students in Japan, which ranks 4th in the international student populations in Japan, and has increased by 8.4% compared to 2011.

Table 10-6 International Students in Japan (2012)

Top 5 Countries	Number of Students	Trend
China	86,324	1.4% down
Korea	16,651	5.6% down
Taiwan	4,617	1.0% up
Vietnam	4,373	8.4% up
Nepal	2,451	21.6% up

Source: JASSO

Additionally, people who study Japanese language in language centers are also potential students for VJU. The trend of Vietnamese people studying the Japanese language is obviously increasing over the years primarily due to increasing demand from Japanese companies.

10.4.2. Student Management

(1) Enrolment Methods

In regard to the methods of enrolment, there are entrance exams, profile evaluations or the combination of the two. HEIs should autonomously make decisions on the enrolment methods and bear the responsibilities.

As mentioned in Chapter 2, all students (except for those in the foreign associate programs) must graduate high school and participate in the national entrance exam compiled by MOET. Some special universities (with subjects of art, dance, music, sports, etc.) organize separate entrance exams.

VGU and USTH run independent entrance examinations. Similarly, VJU will need to develop an original method (in combination with interviews) to select students who meet VJU's requirements.

(2) Number of Students

The student enrollment set based on the needs from the Socio-Economic Development Plan on human resources in Vietnam, depends on the number and quality of teaching staff, infrastructure and equipment of the university.

Public universities in Vietnam need to autonomously determine the enrolment targets and are responsible for disclosing the enrolment targets (Article 34 of HE Law). However, the number of students in a university has to meet the legally required ratio of lecturers to students. It is also necessary to evaluate the possible number of lecturers to be secured at VJU.

Table 10-7 Number of Students per University Lecturer

Field of Education	Number of Students per Lecturer
Art/Sport	10
Medical/Pharmaceutical	15
Others	25

Source: MOET

An important indicator for setting the number for students is the floor area of the university, according to which the area for 1 student is not lower than 2 m². Based on the framework of VJU, the expected number of students in the final stage would be 6,000 and therefore a minimum of 12,000 m² of floor area is necessary.

Table 10-8 Number of Future VJU Students

Type of Students	1 st Stage (2016-2019)	2 nd Stage (2019-2022)	3 rd Stage (2022-2025)
Doctoral Students	-	120	600
Master's Students	160	480	1800
Undergraduate Students	-	1400	3600
Total	160	2000	6000

Source: JICA Study Team

The calculation base of each stage is as follows:

1st Stage

- Master's: 2 academic years x 4 departments x 1 course x 10 students = 160 students

2nd Stage

- Undergraduate: 4 academic years x 4 departments x 3 faculty x 30 students/faculty = 1,440 students
- Master's: 2 academic years x 4 departments x 3 courses x 20 students/course = 480 students
- Doctorate: 4 departments x 3 courses x 10 students/course = 120 students

3rd Stage

- Undergraduate: 4 academic years x 4 departments x 7-8 faculty (7.5 on average) x 30 students/faculty = 3,600 students
- Master's: 2 academic years x 4 departments x 10 courses x 20-25 students/course (22.5 on average) = 1,800 students
- Doctorate: 3 academic years x 4 departments x 10 courses x 5 students/course = 600 students

(3) Tuition Fees

In regard to student tuition, as mentioned in Chapter 2, public HEIs have to follow government regulations. However, under Article 65 of HE Law 2012, public HEIs are entitled to independently determine the tuition fees within the tuition fee bracket specified by the government (see Table 2-11 for the maximum tuition fees for each major in HEIs).

On the other hand, as the Vietnamese government aims to increase the number of foreigners studying in Vietnam, VJU also expects students from Japan's surrounding countries to attend. However, while tuition fees for foreign students should be independently determined by HEI, there should be individual conditions and policies in order for VJU to be able to set its own.

Tuition fees for VGU, USTH and IU in VNU-HCM are much higher (USD 1,500~USD 2,500) than those of other public universities. VGU and USTH are still testing the suitable tuition fees while adjusting to the situation of student application.

To attract students, VJU needs to set a strategy. Such a strategy could be setting lower tuition fees in the initial stage, gaining a better reputation, then raising tuition back to a reasonable level for each program and academic field.

Limited to VJU, some Japanese students are expected to enter VJU not only to study in Vietnam, but also to attend classes while living with their family in Vietnam.

(4) Scholarships

VNU possesses a firm position in cooperation with Japanese partners. Recently, VNU has been seeking and conducting various cooperative programs with top universities, economic groups and companies from Japan such as 10 cooperation projects with the Japanese Government, 4 associated education programs and 5 scholarship programs with 14 top universities in Japan. VNU has also cooperated with JAIST for more than 10 years.

In regard to the government grant in the form of scholarship to students attending Vietnam HEIs, there are two types, including (i) granting academic scholarships and (ii) subsidizing, reducing, or exempting tuition.

As it is regulated in Article 89.1 and Article 89.2 of Educational Law, the state should elaborate policies on granting academic scholarships to the following: learners with good academic and training results at vocational education institutions and universities; students enrolled from recommendation; and pupils at pre-university schools, boarding schools for ethnic minorities, vocational training schools for war invalids, disabled and handicapped people.

The state shall elaborate policies on subsidy and reduction/exemption of tuition for learners from social policy targeted groups, ethnic minorities in areas with extreme socio-economic difficulties, homeless orphans, disabled and handicapped people with economic difficulties and people who overcome their exceptional economic difficulties to gain excellent study results.

Particularly, there is an academic scholarship fund in the HEIs, under Article 2.3 of Decision No.44/2007/QĐ-BBGDDT, dated August 15, 2007, on scholarship, to encourage learning for pupils, students in specialized schools, gifted schools, higher education institutions and vocational intermediate schools of the national education system ("Decision No.44/2007"). This regulation will be amended under the draft circular amending and supplementing Article 2.3 of Decision No.44/2007 issued by MOET, in which academic scholarship funds will be arranged for at least 8% of the tuition revenues of formal education for the public schools and at least 2% of the tuition revenues for formal education for non-public schools. For

institutions that provide education-related majors in which students are exempt from tuition fees, an academic scholarship fund will be arranged for at least 8% of the tuition revenues.

In regard to the government grant to Vietnamese students being sent to study in HEIs in other countries, Article 4.1 of Decision No.05/2013/QĐ-TTg, dated 15 January, 2013, providing regulation on overseas study of Vietnamese citizens regulates that MOET should implement the enrolment and send Vietnamese citizens abroad to study using the following funding sources:

- Scholarships from the state budget under the schemes and projects approved by the government and the prime minister
- Scholarships under agreement and cooperation agreement between Vietnam and foreign countries or international organizations
- Scholarships funded by foreign governments, territories, international organizations, non-governmental organizations or individuals through the Government of Vietnam

Quality improvements can also be made through reforms in teacher training and continuing professional development. Vietnam universities have a low number of faculties with PhD qualifications. The government has made progress in redressing this under its implementation of the HERA objective to increase the PhDs available for universities through the government scholarship program mentioned above. This is the purpose of a special program (Project 911) for the training of HE lecturers at the PhD level. Project 911 can be applied for the training of VJU lecturers as well.

Sponsorship for the purpose of awarding scholarships or subsidies to students complies with Circular No. 35/2011/TT-BGDDT (Circular 29) stipulating on awards and receipt of scholarships or subsidies to students in educational institutions of the national education system.

Circular 29 stipulates principles of sponsorship, forms of sponsorship, management and use of sponsored amounts, responsibilities of educational institutions receiving sponsorship and responsibilities of relevant management agencies.

Educational institutions directly funded with financial assistance shall negotiate with the sponsors on the specific requirements of relevant parties and agree, in writing, with the sponsors awarding the scholarships or subsidies.

Educational institutions will widely report and publicize the scholarship or subsidy programs for students to know.

Through the activities of the fund, disadvantaged students and outstanding students will be sponsored under different types of tuition funding, and scholarships to support and encourage them.

VJU has to attract outstanding students by offering various scholarships such as subsidies from Vietnam's government, scholarships from Japan's government as well as study-abroad programs and scholarships from Japanese companies and relevant associations. Besides, not only will VJU provide funding and facilitate the research of students to encourage student scientific research, it will also invest in some works that serve and improve students' lives through cultural events, art and sport.

10.5. Plan for Academic Staff

10.5.1. New Recruitment and Training of Staff

(1) Recruiting Foreign Staff in Vietnam

In regard to hiring and contracting staff, the key legal documents are Education Law, Decree of Government No.75/2006/ND-CP, of August 2nd, 2006, detailing and guiding the implementation of a number of articles of the Educational Law, and Decree 34/2008/ND-CP on employment and administration of foreigners working in Vietnam, amending and supplementing Decree 46/2011/ND-CP.

The Minister of MOET and the Minister of MOLISA shall, according to their respective competence, assume the prime responsibility for, and coordinate with the Minister of MOHA in, guiding HEI in the recruitment, management and participation in the transfer by competent state agencies of teachers, cadres and personnel working at public educational institutions. They will provide the working regime for teachers at every educational level and training degree.

The recruitment of national staff working in Vietnam higher education institutions has to follow the regulations of labor contracts in Labor Code 2013 (Chapter III).

The recruitment of foreign staff working in Vietnam higher education institutions is regulated in Decree No. 34²⁵, according to which, foreigners working in Vietnam must have a work permit.

Unlike public HEIs, private HEIs are autonomous and self-accountable for their planning, institutional development plan, organization of educational activities, development of teaching staff, mobilization, and utilization and management of other resources to implement educational objectives. This means that they are entitled to decide by themselves the recruitment, salary, and financial incentives of teachers and personnel working for them²⁶.

Likewise, VGU and USTH have special authority in staff recruitment as well as in inviting teaching staff from Germany and France. Therefore it is more appealing for both universities' local staff to work there compared to working at other Vietnamese private universities.

Decision No. 380/QĐ-TTg issued the regulation on organization and operation of VGU, in which it explains about its own standards for organizing its member administrators, lecturers and staff. It also enables VGU to hire and lay off their employees. The rector is responsible for determining the standards and criteria for selecting staff, as well as for making their work efficient. In order to educate future technical staff, VGU provides study-abroad opportunities in Germany (for 1 academic year) or programs to acquire master's/doctoral degrees in Germany.

On the other hand, Decision No. 1126/QĐ-TTg promulgated the regulation on organization and operation of USTH that explains the right to employ and manage lecturers and staff and their salaries as well as to determine the number of staff. In the framework of the project on

²⁵ Decree No. 34/2008/NĐ-CP on 25 March 2008 on employment and administration of foreigners working in Vietnam.

²⁶ Clause 2, Article 65 of the Education Law

training the staff in foreign institutions using the state budget, and based on the need for academic staff at USTH, MOET authorized USTH to recruit and train 40 PhD scholars in France using national budget in 2012. In July 2012, USTH officially became a partner of the Erasmus Mundus Action 2 PANACEA project that enables the dispatch of 15 bachelor's, master's, PhD students and staff to Europe. Therefore, since VJU will have an authority similar to that of VGU and USTH, VJU should strive in securing excellent human resources by paying salaries nearly four times those of national universities.

In contrast, it is important for VJU to maximize the role of Japanese lecturers who stay long term to do full-time research and lectures, but at the same time the project will focus on training Vietnamese lecturers through high-quality undergraduate and graduate programs in collaboration with other members of VNU as well as the consortium of Japanese universities. In the first few years, the ratio of Japanese lecturers may be as much as 50%.

VJU will also utilize and promote the strength of VNU by sharing highly qualified staff between VNU members in teaching and scientific research. VNU has experience in developing international joint programs and teaching programs in foreign languages. VNU has nearly 1,000 academic staff that has doctoral degrees in many fields and the capability to teach in foreign languages (including English and Japanese) that satisfies the requirements for the initial stage of VJU development.

(2) Attracting Japanese Professors to Stay in Vietnam

According to Japanese professors, it is not difficult to find young Japanese researchers. If the young Japanese researcher is interested in international comparison/study, going to Vietnam for teaching and conducting research will be a motivation for them. However, the issue is how to cover the vacancy of young researchers who go to Vietnam. It will be helpful if a financial scheme provides such universities with the cost for substitutes of the teachers/researchers who go to Vietnam.

An idea was also raised by Japanese professors to establish a well-equipped laboratory in Vietnam to motivate young staff to stay in Vietnam; this is as important as sending young researchers to Vietnam.

However, the difficulty or ease of sending Japanese researchers depends on the fields of research that will be practiced in Vietnam. Regarding medical fields, researchers who are interested in specific diseases present in Vietnam will be willing to go to Vietnam. However, as for education, which is fundamental, since there is no incentive as a field of research, dispatch of professors is difficult.

Another positive comment was that it would give a chance to young Japanese researchers who are facing difficulties finding jobs in universities in Japan to have a university teaching experience. This will help them secure a position in a Japanese university, should they chose to move back to Japan.

In conclusion, it is important to look for professors who share a common interest regardless of nationality or age, and to match up interests. Thus, the effectiveness of the faculty/university's commitment to future promotion depends on convincing young staff to go to Vietnam.

The summary of incentives when sending Japanese teaching staff to Vietnam is shown below:

- Attractive research topics in Vietnam
- Well-equipped laboratories
- Assistants to support research activity

- Opportunities to write research papers and give presentations
- Comfortable living environment
- Attractive titles such as “specially appointed professor” or “associate professor”
- Additional credit to internationally recognized activities
- Financial support to secure teachers’ substitutes (for the Japanese university from which the staff is coming from)

10.5.2. Number of Academic Staff

The maximum ratio of students to teachers is regulated in Vietnam: 10 students per teacher, applicable to arts; 15 students per teacher, applicable to science and technology; 25 students per teacher, applicable to social science, humanities, and economics.

In universities, the proportion of lecturers that hold master’s degrees and doctorate degrees must not be lower than 80%, among which the proportion of lecturers that hold doctorate degrees must not be lower than 35% of lecturers in the institution.

The quantity of permanent lecturers must be able to undertake at least 60% of the program of each discipline.

Based on these criteria, VJU is planning to provide the following number of academic staff.

(1) Staff Calculation Base for the 1st Stage

The final number of students in the 1st Stage is planned to be 160 master’s students. This number comes from 2 academic years and 4 departments, where each department will have 1 course. Each course has 3 Japanese academic staff. If 1 Japanese academic staff has 1 student, the calculation will be as follows.

Table 10-9 Number of Japanese Academic Staff (1st Stage)

Position	Number of Staff	
	Japanese	Vietnamese
Management Staff	2 people	2 people
Specialized Academic Staff	4 dept. x 1 course x 3 people x 2 years = 24 people	4 dept. x 1 course x 3 people x 2 years = 24 people
Liberal Arts Staff	4 people	-
Japanese Language Staff	18 people	14 people

Source: JICA Study Team

Please note that since the 1st Stage will be the start of the university, the number of Japanese staff (already trained) will be more than that of Vietnamese. In addition, the number of clerical staff is calculated to be about 70% of the academic staff based on the current situation in VNU.

(2) Staff Calculation Base for the 2nd Stage

The final number of students in the 2nd Stage is planned to be 2,000, including students from undergraduate, master’s, and doctoral courses. The assumption is that each department at the undergraduate level will have 3 courses with 30 students each, so there will be 360 students. Each department at the master’s level will have 3 courses with 20 students each, so there will be 240 students. Each department at the doctoral level will have 3 courses with 10 students each, so there will be 120 students. If each academic year of each course will have 1 Japanese and 1 Vietnamese lecturer (to meet the ratios of lecturers to students abovementioned), the calculation will be as follows.

Table 10-10 Number of Japanese Academic Staff (2nd Stage)

Position	Number of Staff
Management Staff	Satellite & HHTP 4 people each = 8 people
Lecturers for Undergraduate Course	2 people x 12 courses x 4 academic years = 96 people
Lecturers for Master's Course	2 people x 12 courses x 2 academic years = 48 people
Lecturers for Doctoral Course	2 people x 12 courses = 24 people
Japanese Language/ Japanese Culture Additional Staff	4 people
Total	180 people

Source: JICA Study Team

Please note that the number of Vietnamese students who return from studying in Japan will increase year by year in the 2nd Stage. These are planned to be the lecturers of VJU, eventually making about 80% of the total lecturers to be Vietnamese. In addition, the number of clerical staff is calculated to be about 70% of the academic staff based on the current situation in VNU.

(3) Staff Calculation Base for the 3rd Stage

The final number of students at the 3rd Stage is planned to be 6,000 students, including students from undergraduate level to doctoral level. The assumption is that undergraduate will have 4 departments, each with 900 students, 7-8 faculty, with each course containing 30 students. Each department at the master's level will have 225 students, 10 courses, with each course containing 20-25 students. For the doctoral level, each department will have 150 students 10 courses, with each course containing 5 students. If each academic year of each course will have 1 Japanese and 1 Vietnamese lecturer, the calculation will be as follows.

Table 10-11 Number of Japanese Academic Staff (3rd Stage)

Position	Number of Staff
Management staff	Satellite & HHTP, VNU New Campus 4 people each = 12 people + 2 people = 14 people
Lecturers for Undergraduate Course	1 person x 7.5 faculty x 4 departments x 4 academic years = 120 people
Lecturers for Master's Course	1 person x 10 courses x 4 departments x 2 academic years = 80 people
Lecturers for Doctoral Course	1 person x 10 courses x 4 departments x 3 academic years = 120 people
Japanese Language/ Japanese Culture Additional Staff	36 people
Technical Additional Staff	30 people
Total	400 people

Source: JICA Study Team

It is noted that the number of Vietnamese students who return from studying in Japan will increase year by year in the 3rd Stage. These are planned to be the lecturers of VJU, eventually making approximately 90% of the total lecturers to be Vietnamese. In addition, the number of clerical staff is calculated to be about 70% of the academic staff based on the current situation in VNU.

A summary of the number of staff per stage of VJU development is presented below.

Table 10-12 Summary of VJU Staff

Year Staff	1 st Stage (2016-2019)		2 nd Stage (2019-2022)		3 rd Stage (2022-2025)	
	Academic Staff	Clerical Staff	Academic Staff	Clerical Staff	Academic Staff	Clerical Staff
Japanese	18	5	34	12	48	18
Vietnamese	14	16	146	114	352	262
Total	32	21	180	126	400	280

Source: JICA Study Team

10.5.3. Arrangement of Salary

In terms of recruitment, salaries and incentives, in public HEIs, salaries and professional allowances of lecturers and staff (who are considered as official cadres) are well regulated by the government in accordance with their level of profession and seniority.

Even in the few public HEIs that are allowed to be autonomous in financial matters, their professors and teaching staff may enjoy greater salaries, but in the end, those greater salaries have to be within a frame regulated by the government.

National staff in public HEIs receives a salary, professional allowances, and other allowances regulated by the government²⁷.

And by other regulations (Decree 204/2004/NĐ-CP on salary regime for cadres, public servants, officials, and armed force personnel; Decision No. 244/2005/QĐ-TTg of preferential allowances for teachers who directly teach in public educational institutions, issued by the prime minister), in public HEIs, salaries and professional allowances of lecturers and staff are well regulated by the government in accordance with their level of profession and seniority. It shows the deep involvement of the government in public HEIs.

It should be noted that public HEIs apply various schemes and payment initiatives to increase the incomes of their teaching staff while following the government regulations. These measures include participating in different association programs, outside university education, research activities and so on.

Additionally, national staff in public HEI will receive seniority allowances as regulated by Decree 54/2011/NĐ-CP on the seniority allowance to teachers.

In contrast, private universities are autonomous and self-accountable for their development of teaching staff and mobilization, utilization and management of other resources. This means that they are entitled to decide for themselves the recruitment and salary financial incentives for teachers and personnel working for them.

Similarly, VGU and USTH, being public, enjoy special treatment with autonomy in recruiting teaching staff. Therefore, because they become attractive to local teaching staff and better than private universities, they can invite reputed foreign staff with support from foreign (German and French) partners.

Under Article 3.3 of Decision 303/QĐ-TTg from March 14th, 2012, regulating the specific financial mechanism of VGU and Article 3.3 of Decision 78/QĐ-TTg from January 9th, 2013,

²⁷ Article 81 of the Education Law.

regulating the specific financial mechanism of USTH, VGU and USTH both have and use the full measure of autonomy on the expenditure including salaries for managing staff and lecturers on the basis of internal expenditure regulations within the financial resources to ensure proper transparency and efficiency.

Salaries for Germany/French management staff and German/French and/or foreign lecturers is decided and paid by VGU/USTH from the financial support provided by the German/French governments, based on the agreement between Vietnam and these countries, the quality and quantity of work performed, the living standards, and the working conditions in Vietnam.

Regarding salaries for Vietnamese management staff, lecturers and other staff, for the period of 2009-2020, VGU/USTH are required to pay them an additional amount (beyond the official salary for the basic rank of public employees at other public universities) based on their qualifications, working performance and the financial ability of VGU. Beginning in 2020, VGU and USTH will be entitled to decide for themselves the salary of Vietnamese staff based on their qualifications, working performance, and the financial ability of VGU/USTH.

In light of the above, VJU will basically have autonomy and privileges similar to those obtained by NMUs, which offer financial rewards four times higher than traditional universities in Vietnam.

(1) Salary Increase Term

Salary increases at VJU will be determined based on the duration of service. After a defined term for each working position, the employee's multiplier will increase by 1 grade. The duration needed for a raise is within 12 months.

For senior experts who are not in the final grade of the payroll, the salary will increase by 1 grade after 5 years (full 60 months).

For employees of type A0~A3 in Table 2 and Table 3, who are not in the final grade of the payroll, the salary will increase by 1 grade after 3 years (full 36 months).

For employees of type B and C in Table 2 and Table 3, who are not in the final grade of the payroll, the salary will increase by 1 grade after 2 years (full 24 months).

Employees who are not in the final grade of the payroll and will retire within 12 months before the end of their salary increment term will be moved up 1 grade before their retirement.

Employees who are not in the final grade of the payroll and have a special achievement will be considered to move up 1 grade no longer than 12 months before the end of their salary increment term.

(2) Allowance

Special occupational allowances are defined as follows:

Application objectives: Employees who directly perform training activities (conducting curriculum, giving lectures, guiding theses, etc.).

Allowance rate for lecturers in public universities, colleges and institutes: 25%

Allowance rate for lecturers of pedagogy in public universities, colleges and institutes: 40%

Allowance rate for lecturers of Marxism-Leninism and Ho Chi Minh Ideology in public universities, colleges and institutes: 45%

Seniority allowance is defined as follows:

Application objectives: Employees in Public Education Institutions who are beyond the grade defined in the payroll. Senior experts and employees holding leadership titles do not receive this allowance.

After 2 years of being in the final grade of the payroll, the employee can receive excessive frame seniority allowance as 5% of the latest fixed salary. From the third year of being in the final grade of the payroll, excessive frame seniority allowance will increase by 1% of the fixed salary at the final grade every year.

Outside of total salary calculated in the previous section, employees in public education institutions are allowed to sign contracts with private sector companies and receive payment for knowledge and technology transfer, scientific research and other legal activities under Vietnamese law.

International joint research is another source of income. Rules on remuneration are determined by donors.

Public education institutions have the right to generate their own regulations on variable wages and bonuses that are deducted from their revenues. For example, employees of International University – VNU Ho Chi Minh (HCM-IU) can get USD 1,500 for each extra article published in an international journal. The purpose of this extra payment is to encourage scientific research activities and improve the university ranking.

The coefficient of academic title and their remuneration is shown in the following table.

Table 10-13 Average Relative Coefficients of Salaries and Remuneration in VNU

(unit: 1,000 VND)

No.	Title	Coefficient	Effective Remuneration as of August 15 th , 2013
1	Director	1.30	1,495.0
2	Vice Director	1.10	1,265.0
3	Chairman of Committee	0.90	1,035.0
4	Vice chairman of Committee	0.70	805.0
5	Head of Division	0.50	575.0
6	Deputy Head of Division	0.40	460.0

Source: JST based on the information obtained from VNU

(3) Overtime Wage

Overtime pay per year = Number of overtime teaching hours in a year × Overtime wage per hour

Overtime wage per hour = Wage per teaching hours × 150%

Wage per teaching hour = Total Fixed Salary per year ÷ Obligated teaching hours × 22.5 weeks ÷ 52 weeks

Number of overtime teaching hours = Total teaching hours – Obligated teaching hours

Total teaching hours = Actual teaching hours + Converted teaching hours + Bonus hours (if any) + Exempted teaching hours (if any)

Exempted working hours are defined in the Labor Law 2013 (treatment of pregnant women, women who have a baby less than 12 months old, elders, etc.). Exempted working hours can also be increased by employer's decision.

(4) Calculation Method

Total Salary = Fixed Salary + Overtime Wage + Allowance + Remuneration for doing projects/theses

Fixed Salary = Basic wage level × [Multiplier + Coefficient for leadership (if any)]

Allowance = Special Occupational Allowance + Excessive Frame Seniority Allowance (if any)

Special Occupational Allowance = Allowance rate × [Fixed Salary + Excessive Frame Seniority Allowance (if any)]

Excessive Frame Seniority Allowance = Allowance rate × Fixed Salary

Remuneration for doing projects/thesis varies depending on the budget for each project/theses.

(5) Necessary Cost for Japanese Academic Staff

Basic requirements of necessary costs for dispatching Japanese academic staff are as follows:

- Dispatching specialist fee: JPY 5 million/annum
- Substitution cost for specially appointed professor (in Japan): JPY 10 million/annum

Note: The above figures are in the case of national universities in Japan and are based on the conditions of the JICA scheme for the dispatch of long-term experts.

10.5.4. Conditions and Requirements of Academic Staff

(1) Qualifications of Academic Staff

As regulated in Decree 73, a teaching staff member of an HE institution should meet the following criteria:

- For education at the university level, the lecturer must possess at least a master's degree in the discipline being taught.
- For education at the master's level, the lecturer that teaches or guides master's theses, and participates on a master's thesis committee must possess at least a doctorate; the lecturer that guides the practice, internship and teaching of foreign languages must possess at least a master's degree.
- For education at the doctorate level, the lecturer must possess at least a doctorate in a discipline suitable for the assigned subject in the doctorate course.
- The foreign teachers and lecturers teaching educational programs must have at least 5 years of experience in the disciplines being taught.

In general, the qualification requirements for teaching staff in national and international HEIs are equal. However, in some cases, it is different, e.g. for the foreign-invested universities, teachers must possess a doctoral degree for teaching specialized subjects or supervising master's theses or participating on an examination committee for master's degrees, while the Education Law (Article 77) only requires a master's degree for teaching specialized subjects or supervising master theses.

As discussed in the report on Meeting IV in Hanoi, these conditions would likely prevent VJU from inviting visiting professors from the private sector and therefore necessary adjustments in the rules of VJU are required to allow such visiting professors and private sector lecturers.

(2) Working Hours of Academic Staff

Working hours of academic staff as public servant are generally 40 hours per week and the work schedule is decided annually. Annual working hours of academic staff are 1,760 hours and the breakdown of total working hours is as follows:

Table10-14 Breakdown of Working Hours of Academic Staff

(unit: hours)

Task	Lecturer	Associate Professor and Principal Lecturer	Professor and Senior Lecturer
Teaching	900	900	900
Scientific Research	500	600	700
Other	360	260	160

Source: JST based on the information obtained from VNU

Table 10-15 Obligated Teaching Hours of Academic Staff

(unit: hours)

Position	Obligated Teaching Hours	
	General Regulation	For Physical Education
Professor and Senior Lecturer	360	500
Associate Professor and Principal Lecturer	320	460
Lecturer	280	420

Source: JST based on the information obtained from VNU

Table 10-16 Obligated Teaching Hours (Managerial Level)

Position	Obligated Teaching Hours
Director	10% ~ 15%
Vice Director or President	15% ~ 20%
Chairman of Management Board, Vice President or Head of Department	20% ~ 25%
Deputy Head of Department or Head of Division	25% ~ 30%
Deputy Head of Division	30% ~ 35%
Dean and Associate Dean:	-
<u>For faculty that has 40 lecturers and 250 students or more</u>	-
Dean	70% ~ 75%
Associate Dean	75% ~ 80%
<u>For faculty that has less than 40 lecturers and 250 students:</u>	-
Dean	75% ~ 80%
Associate Dean	80% ~ 85%
Program Coordinator	80% ~ 85%
Assistant to the Dean or Academic Aide	85% ~ 90%

Source: JST based on the information obtained from VNU

Specific obligated teaching hours for each working position are decided annually by the head of the education institution.

(3) Scientific Research

Each academic staff member at VJU will be required to publish at least 1 article in a scientific journal per year.

Converting Rules

1 theoretical lecture in subject-based model is equal to 1.0~1.8 teaching hours

1 theoretical lecture in credit system is equal to 1.1 times of 1 theoretical lecture in subject-based model

1 thematic lecture, 1 theoretical lecture at master's or doctoral level, 1 lecture taught in foreign language except language subjects or 1 lecture of advanced programs is equal to 1.2~2.0 Teaching hours

1 tutorial, 1 practical lesson or 1 experiment lesson are equal to 0.5~1.0 teaching hour.

1 working day of guiding internships is equal to 1.5~2.5 teaching hours

Guiding a bachelor's thesis is equal to 12~15 teaching hours per thesis

Guiding a master's thesis is equal to 20~25 teaching hours per thesis

Guiding a doctoral thesis is equal to 45~50 teaching hours per thesis

Other tasks and specific number of teaching hours converted will be decided by the head of the education institution.

Total teaching hours per year for lecturers of regular subjects should be no more than 400 hours and no less than 260 hours.

Total teaching hours per year for trainers of physical education and sports should be no more than 550 hours and no less than 400 hours.

10.6. Operation and Management Body

Central control of the operation of public universities is pervasive in Vietnam. The government regulates admission numbers for regular students and staff numbers through the budget process. University staff personnel are public servants are remunerated under public service salary law, though above-scale payments are permitted.

The government maintains some control over the appointment of rectors, and over staff promotions. For example, the rectors are appointed or accredited by competent state agencies, and the head of the directly-managing state agency (i.e. MOET or other ministries) is entitled to appoint and dismiss the rector of a public HEI, and the rector of a private HEI shall be accredited by decision of the People's Committee of the province in which the HEI is located. The presence of all these controls over a long period of time has reduced the capacity to innovate and to respond to change in many universities. A few universities that no longer rely on regular state subsidies because of their own resources have more freedom.

10.6.1. Operations Planning

In the planning of ordinary university operations in the past, it was only necessary to have a faculty and department for each operation and to set up its scope of activities. However, for a well-functioning university to collaborate with private sector companies, a number of project teams including professionals and experts from various business markets must be organized to cooperate. Thus, it is necessary to recruit staff from a wide variety of areas as well as to ensure the operational flexibility of the organization. Such operational flexibility is expected to increase the operational complexity of VJU. The operations planning should define and coordinate decision-making, prevent potential confusion and help ensure smooth operation of the university.

The first step in establishing an operative organization is to analyze its pre-conditions, such as operation areas. The plan that has been developed shall be summarized according to the following structure in order to check for missing components.

Table 10-17 Checkpoints for Precondition Analysis

Mission	University Policy University Functions
Scope of Operations	Operation Areas Operation Plans
Management Plan	Management System Organization
Operations Resource Arrangement	Communication Plan Information and Communications Plan Staffing Plan Facility Plan Equipment Plan
Financial Planning	Initial Costs Running Costs Revenue and Expenditure Plan

Source: JICA Study Team

While the above structure is used as a generic procedure for carrying out the arrangement and operations of the university, each actual item has its own characteristics depending on its contents. Especially, “Scope of Operations” should include VJU’s role, as a new model university, collaborating with private sector businesses that stimulate the Vietnamese and Japanese industries; this approach will contribute to maximizing the utilization of the Japanese technology and resources in universities and industries. It also will provide the university with the possibility to exert a large influence on Vietnamese higher education and cultural industries.

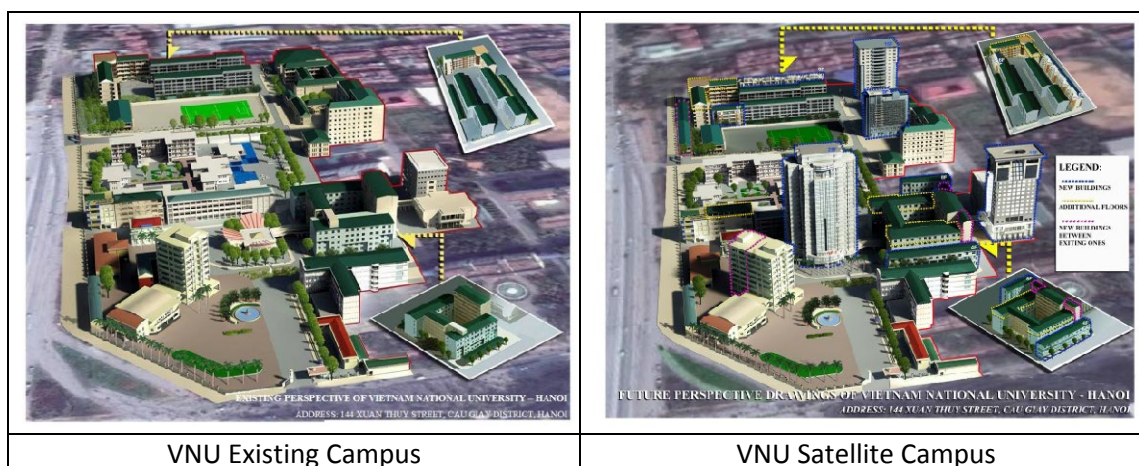
10.7. Campus Site Location and Surrounding Area

The location of VJU is not only important from a financial point of view. As a symbolic project that shows the relationship of Vietnam and Japan, VJU has been strongly promoted politically, and its location is the factor that most directly will affect the morale of the people involved in this project. Therefore, the placement of this university should be at a symbolic place where the public will recognize it as a “Representative State-of-the-Art University”, preferably where one can feel a sense of belonging to the area.

After consulting with VNU, the following three campuses are being considered for VJU Campus. Also, since there is a need to build a new facility in addition to the new VNU Campus development, the facility development is planned to be constructed in accordance with the infrastructure and to open as needed based on the number of students and staff as well as transfer the campus.

10.7.1. Located Inside VNU-HN Existing Campus at 144 Xuan Thuy Street, Hanoi:

According to the master plan for VNU-HN construction in the Hoa Lac area, which was approved by the prime minister in 2006, at phase 1, new facilities and related infrastructures will be built for the University of Science, the University of Engineering and Technology, the National Security and Defense Center. During that time, VNU-HN will arrange and move its members to new locations and allocate an area of 3 ha on 144 Xuan Thuy Street for the satellite campus of VJU, as shown in the figures below.



Source: VNU

Figure 10-6 144 Xuan Thuy Street Campus Development Plan

Since the existing campus of VNU is located very close to Ring Road No. 3, with an LRT station to be built right in front of the campus in the near future, and since the station of MRT Line 5 is located close by, the location of this campus is very convenient even in Hanoi. VJU could be established on this property as well.

With a rising number of Japanese companies occupying the surrounding buildings, as well as the number of students in this area, there are many cafes and restaurants making the streets vibrant and alive.

10.7.2. Located Inside HHTP Area

Aiming for cooperation with the private sector, utilizing the land inside HHTP is also under consideration. The management board of HHTP has approved the construction of VJU facilities in the HHTP area. VJU originally requested to establish its facilities not in the area that was proposed by the management committee of HHTP, i.e., the education area in the north, but the area close to the arterial road in the south, as well as the area near the mixed-use development district. Finally, however, an area of 26ha close to VNU New Campus on the west side and along the main road was secured. However, since the land acquisition has not been completed yet, the implementation of the plan must not be greatly delayed due to land problems, just like what happened to USTH, which was developed by the French government and ADB. Because the development of basic infrastructure within HHTP has already started, the development of the campus shall proceed relatively quickly once the land is expropriated.

10.7.3. Located inside VNU-HN New Campus at Hoa Lac area

The basic design of VNU New Campus at Hoa Lac, which includes the site for the International University and the Advanced Research Center has been approved by the prime minister.

The prime minister has also issued the approval document for construction of VJU on the VNU New Campus at Hoa Lac. However, VNU needs to formulate further details regarding where the specific area will be inside Hoa Lac. This is necessary and requires the prime minister's approval. It is worth noting that at present, an area of 60 ha on the east side of VNU New Campus along the arterial road adjacent to HHTP has been secured for VJU. Since this site is located across the arterial road inside HHTP, not only does it provide good access between campuses but it also allows future construction to be performed easily with respect to the ready-to-use basic infrastructure and easy access for construction vehicles.

However, same as the site in HHTP, the land acquisition has not been completed yet and thus requires an early solution from the Vietnam Government regarding this problem.

Table 10-18 VJU Campus Relocation Plan (Provisional)

	1st phase	2nd phase	3rd phase
Period	From 2016 to 2019	From 2019 to 2022	From 2022 to 2025
Educational Activity	Establish master's course (Sustainable development study)	Establish doctoral course (Sustainable development study)	Establish undergraduate course and other master's courses
Campus	- Use the existing building in Hanoi - Completion of the existing satellite campus of VNU	- Use the existing satellite campus of VNU - Completion of new campus in HHTP	- Use the existing satellite campus of VNU - Use new campus in HHTP - Completion of VNU New campus in Hoa Lac

Source: JICA Study Team

10.8. Requirements for the Facility Planning of a University

According to the Vietnamese education standard: the land area must be at least 9 m² per student; the minimum study area 6 m² per student; the minimum residential area 3 m² per student; and the minimum office area 8 m² per person. Based on the benchmark verification in Chapter 3 and 4, in order to establish a high-level international campus it should have at least 25 m² per student. This number includes a wide range of facilities, including private sector facilities, various laboratories, industry-university cooperation facilities and testing and research institute facilities in the future to ensure an education and research environment that enables activities for technicians and professionals training across various fields.

Moreover, the university should have appropriate facilities such as the following: conference room; library; test laboratory; workshop; canteens and facilities for recreation, sports and cultural activities; healthcare facilities; and other technical facilities satisfying the requirements of the training program and science- and technology-related activities. However, for a foreign higher educational institution that plans to operate in Vietnam more than 20 years, the land transfer or lease must be approved by the Provincial People's Committee. Within the first 5 years, it must have agreements on leasing facilities to deploy the teaching and training. The investment in building facilities must be consistent with the progress of the project. The high requirements for quality and standards of infrastructure facilities put new higher educational institutions in a much better position in term of infrastructure, facilities, and potential for further development; however, it creates a huge loan burden and takes a large amount of budget away from any other planned development.

Regarding the floor area of the university, according to the guidelines in Vietnam, the minimum floor area per student is 2 m². Thus, since VJU expects to have 6,000 students based on the framework, a total floor area of at least 12,000 m² is necessary.

However, the basis of this calculation is made on the area of classroom buildings and minimum shared space, such as toilets, corridor and stairs, but does not include the educational and research environment for international research activity as defined in 10.7.

At present, the facilities and scale of each campus are assumed to be as follows.

Table 10-19 Scale of Buildings, Facilities and Other Properties of VJU

Items	The Satellite Campus in Central Hanoi	HHTP	VNU New Campus in Hoa Lac
Headquarters of VJU Including a Museum, Facilities for Trainees, etc.			10,000 m ²
Buildings and Facilities for Undergraduates			40,000 m ²
Buildings and Facilities for Graduates		10,000 m ²	20,000 m ²
Satellite Campus in the central Hanoi	15,000 m ²		
E-Library (Open 24 Hours)	5,000 m ²	5,000 m ²	10,000 m ²
Student Communication Centers Including Restaurants, Meeting Rooms, Shops and Others)	5,000 m ²	5,000 m ²	10,000 m ²
Center of Industry-Academia Collaboration	15,000 m ²	5,000 m ²	
Center of New Businesses and Industrial Development		10,000 m ²	
University Hall Including an Auditorium and Halls for Big Events and Meetings		10,000 m ²	10,000 m ²
Facilities for Sports such as Tennis, Basketball, Swimming and Other Athletics		5,000 m ²	5,000 m ²
Accommodations and Dormitories for Researchers, Lecturers, Specialists, Students and Other Relevant People		20,000 m ²	20,000 m ²
Facilities for Industry-Academia Collaboration, Research and Others, Mainly By Private Investment		(10ha~)	
Park Area	(0~1 ha)	(6 ha)	(20 ha)
Playgrounds and Fields for Various Sports, Parking Lots and Others		(10 ha)	(10 ha)
Total Floor Area	40,000 m ²	70,000 m ²	125,000 m ²
Land	2-5ha	26 ha	60 ha

Source: JST (JVEF)

10.8.1. Scale of Satellite Campus

In the initial stage, while bearing the advertising function, this campus will have classrooms and research facilities for master's students. In the future it will also function as a place to transfer information and as a base of industry-academia-government collaboration on behalf of Japan.

Therefore, not only the necessary facility for education and research, but also a multi-function flexible facility will be planned. Also, a space to attract private investment is also planned to be secured.

In the future, the plan is to have a facility that can be used by 10% of the total students, which is about 600 master's and doctoral research students. Calculating 25 m² floor areas per person will result in 15,000 m² of floor area necessary for educational and research activity and the facilities that go along with it. Considering the convenient access, likely to be implemented are humanities studies, which can be easily accepted by working people.

On the other hand, as has been mentioned above, apart from education and research activities, the satellite campus will be a facility that can function as an information center and a promotion of Japanese culture and technology, as well as the source of rental income. It will have the following functions: 1) Advertising feature: showroom, convention hall, multi-function event hall, and digital workshops (about 5,000 m²); 2) Industry-academia-

government collaboration function: VJCC, adult education center, venture entrepreneurship center (about 15,000 m²); and 3) Information center function: Library, Japanese companies' comprehensive information and employment center, archive centers, and orientation center (about 5,000 m²). With all 3 functions added, there will be a total floor area of 25,000 m². Thus, the satellite campus is planned to have a total area of 40,000 m².

10.8.2. The Scale of Facilities on the HHTP Campus

This campus will be developed during the 1st phase, and it will be used as education and research facilities for undergraduate courses as well as for the graduate school in the 2nd phase.

Since it is located within HHTP, this campus will be used as a center for industry-academia collaboration in natural science fields, ultimately.

In the beginning, facilities that can accommodate about 1,400 students are required. Calculating 25 m² of floor area per person will result in 35,000 m² of floor area, including subsidiary facilities.

At the same time, from the 2nd phase, club activities at the University of Vietnam are planned to be promoted in parallel with education and research activities. Facilities for cultural activities such as an auditorium, sports facilities, comfortable accommodations and dormitories with state-of-the-art technology will further require floor space of 35,000 m². Consequently, the HHTP campus is planned to have a total floor area of 70,000 m².

10.8.3. The Scale of Facilities on the VNU New Campus

VJU would be operated at both the satellite campus and HHTP campus before this campus is developed. It would be prudent to re-examine the number of students, to review the scale of facilities on this campus at the end of the 1st stage.

The facilities on this campus are planned to have a capacity to accommodate about 4,000 students. Calculating 25 m² of floor area per person will result in 100,000 m² floor area necessary for educational and research activities and subsidiary facilities.

For the purpose of promoting club activities such as sports and cultural activities at this VNU new campus, sports facilities and an auditorium, which can also be used by other VNU students, are also planned to be developed. With comfortable accommodations and dormitories for students, lecturers and researchers, an additional floor area of 25,000 m² will be required.

VJU at the VNU new campus is planned to have a total floor area of 125,000 m² in future.

10.9. Transport Development Framework for VJU

Regarding the connection between the satellite campus and the Hoa Lac campus (VNU's new campus and the campus inside HHTP), as explained in Chapter 7, a transport systems study was conducted in order to provide good accessibility for VNU students, staff and visitors.

Basically, considering the recommended program for transportation between the Hoa Lac campus and Hanoi City, below is the main proposed project for VJU students.

10.9.1. City-to-Campus Transport

1) Hoa Lac Campus to Changing Terminal

- In the long term, MRT Line 5 will become fully operational and will be able to provide high-quality, mass and rapid transit services. With the MRT as the main mode of transport, it should be reinforced with ordinary buses and exclusive shuttle bus service.
- In the midterm, the phase 1 section of MRT Line 5 will become operational not later than 2023. The remaining section from the terminal station to the Hoa Lac campus should be provided with ordinary bus and/or exclusive shuttle service. On the other hand, to have a timely connection to Hoa Lac with MRT Line 5, one idea is to implement the Line 5 project from the suburban section between the satellite campus to the Hoa Lac campus (from Stn. 6: Me Tri Station to Stn. 15: Tien Xuan Station). As the entire suburban section is proposed to be at-grade level, this alternative could keep the capital investment cost at a reasonable level.
- In the short term, existing bus route No. 71 should be strengthened and shuttle bus service should be provided for students, professors, staff, and also visitors of VJU.

2) Satellite Campus to Changing Terminal

- In the long term, MRT Line 8 will connect the satellite campus to the changing terminal according to the approved MRT master plan.
- In the midterm, the route should remain to be served by a combination of ordinary bus and exclusive shuttle bus services.
- In the short term, bus route No. 39 should be strengthened. Additionally, exclusive shuttle service with no intermediate stops should be provided to cater to VJU. It will operate non-stop or have minimum stops between the satellite campus and the changing terminal.

Table 10-20 Preliminary Transport Development Scenario

Corridor	Function	Short-term (2015 – 2020)	Midterm (2020 - 2025)	Long-term (2025 -)
Corridor 1 (Hoa Lac - Changing Terminal)	Main	Exclusive School Bus	MRT (Line 5)	MRT (Line 5)
	Sub	Ordinary Bus	Exclusive School Bus Ordinary Bus	Exclusive School Bus Ordinary Bus
Corridor 2 (Satellite - Changing Terminal)	Main	Exclusive School Bus	Exclusive School Bus	MRT (Line 8)
	Sub	Ordinary Bus	Exclusive School Bus Ordinary Bus	Exclusive School Bus Ordinary Bus

Source: JICA Study Team

3) The Detailed Development Plan

A) Package A: Enhancements to Existing Public Transport

Working with the public transport provider (TRANCERCO) to enhance public transport services to university facilities (including bus shelters, bus service information, ticketing, bus route planning, and bike user access), the Project aims to offer quality service for VJU students, staff and visitors.

Table 10-21 Project Outline – Package A

Bus Route	Existing Route No. 71 and No. 39
Executing Agency	JICA (technical assistance) or local authority
Objective	To offer quality service for VJU students, staff and visitors
Scope	<ul style="list-style-type: none"> • Rerouting to link 3 campuses without change of bus • Developing policy menus for prioritizing public transport • Promoting the use of public transport • Enhancing the level of service (LOS)

Source: JICA Study Team

B) Package B: Procurement of Exclusive Shuttle Bus Service

As an initiative of VJU to encourage public transport use, the Project will procure bus coaches to provide exclusive shuttle bus service between 3 campuses as an easy and affordable option for VJU students, staff and visitors.

Table 10-22 Project Outline – Package B

Type of Bus Coach	Ordinary Bus or EV Bus
Passenger Capacity/Coach	55 passengers/coach
Service Headway	Every 10 minutes
Itinerary	VJU campus – Satellite campus – Hoa Lac campus (outbound) Hoa Lac campus – Satellite campus – VJU campus (inbound) (Non-stop Campus to Campus Transport Service)
Number of Bus Stops	3 (VJU, Satellite and Hoa Lac campus)
Service Length	27.5 km (one-way)
Average Speed	25 km/h
Number of Bus Coaches	10 (Operation 9 + Standby 1)
Estimated Project Cost	USD 2 - 3 million
Financing Resources	As part of VJU development project

Source: JST

C) Package C: Development of Public Transport System Across Hoa Lac Campus

The Project aims to serve Hoa Lac campus, HHTP, MOC land, affiliated zones and Line 5 MRT Station for trunk routes with buses or trams. Providing good access to public transport for VJU students, staff and visitors, will encourage minimized use of private transport to move around campus or HHTP facilities.

D) Package D: Introduction of Vehicle Sharing and Personal Mobility System

The Project aims to introduce a vehicle-sharing and personal mobility system. By use of membership or transit pass programs, discounts and other incentives should be provided to promote the use of low-emissions vehicles as a primary choice or secondary mobility choices.

E) Package E: Traffic Demand and Mobility Management

The Project aims to develop and implement sustainable traffic demand and mobility management programs to create an efficient transport hierarchy and linkage between the modes.

Table 10-23 Project Outline – Package E

Project Location	Main campus and its perimeter
Executing Agency	JICA (technical assistance) or local authority/VJU
Objective	To develop and implement sustainable traffic demand and mobility management programs
Scope	<ul style="list-style-type: none"> • Building major pedestrian routes into & within the campus • Creating a network of campus access routes that serve users of all levels of mobility • Collaborating with the community on access improvement programs at the campus perimeter • Restricting fuel vehicles to designated times and routes • Developing smart parking system at the edge of campus

Source: JST

4) Some Implications for Successful Transport Development

For the successful development of transport systems, the executing agency and stakeholders should carefully consider the following things.

Collaboration with Japanese Stakeholders

There are several Japanese stakeholders in developing sustainable transport systems in Hanoi. The VJU project can collaborate with Japanese universities and Japanese private automotive/motorbike manufacturers particularly on introduction of personal mobility. The Eco-City Group, MLIT of Japan can, as a coordination and linkage body, liaise with different stakeholders for planning and delivering opportunities for more sustainable outcomes.

Energy Efficient Program

Large institutions, such as universities, should contribute to the social, economic and environmental objectives of HPC. In this connection, VJU should implement an energy efficiency program, such as reducing the number of trips made, and ecology training. With such efforts, application to the CDF (Clean Development Fund) is an additional way of securing financial resources for the next program. An Environment Management Committee may be established by the effort of VJU to realize sustainability programs.

Parking Restrictions

A combination of incentives to walk or cycle and disincentives to drive and park, including improving walking and cycling facilities and safety, and applying parking restrictions (either via limiting availability or by price) should be positively considered.

Smartcard Ticketing

Smartcard ticketing should be considered as an incentive to attract potential users. It can be assumed that new students (and staff) to the university may be more readily encouraged to try sustainable transport services if they are made aware of the availability of the service and are given an incentive to try. Also, smartcard ticketing systems will allow collection of information about the use of the transport network. It would be useful for VJU to conduct market research in order to improve understanding of students' use of transport to improve the capacity to plan for these user groups.

Concession Fare

VJU and the public transport operator should offer concession fares for university students both on single trips and for multi-ride tickets. The university student fare should be set at a

reasonable level, say 50% of the full adult fare. Also, students should be able to have opportunities to reduce the cost of fares further when purchasing a smartcard.

10.10. Environmental Consideration of the Proposed Site

10.10.1. Policy of environmental protection in Vietnam

Policies of environmental protection in Vietnam are as follows.

- Law on Environmental Protection, dated 29 November 2005, of the National Assembly of the Socialist Republic of Vietnam.
- Law on standards and technical regulations, dated 29 June 2006, of the National Assembly of the Socialist Republic of Vietnam.
- Decree No. 29/2011/ND-CP, dated 18 April 2011, of the government, providing regulations on strategic environmental assessment, environmental impact assessment and environmental protection commitment.
- Circular No. 26/2011/TT-BTNMT, dated 18 July 2011, of the Ministry of Natural Resources and Environment to provide detailed guidelines for some articles of Decree No. 29/2011/ND-CP, dated 18 April 2011, of the government, providing regulations on strategic environmental assessment, environmental impact assessment and environmental protection commitments.
- Circular No. 12/2011/TT-BTNMT, dated 14 April 2011, of the Ministry of Natural Resources and Environment on the management of dangerous wastes.
- Circular No. 39/2010/TT-BTNMT, dated 16 December 2010, of the Ministry of Natural Resources and Environment regulating the national standards on environment.
- Circular 08/2009/TT-BTNMT, dated 15 July 2009, of the Ministry of Natural Resources and Environment regulating the environmental management and protection of economic, industrial and high-tech zones.
- Other environmental standards and regulations.

(1) General Procedure of EIA in Vietnam

The normal procedure has the investor (or project manager of the VJU) sign a contract with the EIA consultant company, who has function and expertise to do the EIA. The EIA consultant company will act on behalf of VJU to carry out the EIA and defend the report at the MONRE.

The steps of the procedure can be summarized as follows:

- 1) Screening: To define whether the project needs to do EIA.
- 2) Scoping: To define the type, level and scale of EIA.
- 3) Set up TOR for EIA.
- 4) Surveying for preparing basic investigation reports, including recognition of environmental issues relating to the project.

At this stage, the designer and environmentalist should work together to outline the environmental issues relating to the project. List all environmental items within the project.

- 5) Approval of basic investigation report.
- 6) Preparing EIA.
- 7) Getting response of local people.
- 8) Submit EIA plus basic design reports to MONRE.
- 9) Approval of EIA
- 10) Obtaining the investigation license.
- 11) Feasibility technical design report.
- 12) Approval of feasibility technical design report.
- 13) Construction stage.
- 14) Checking and certification of the environmental items after building.
- 15) Operation stage.
Operating the environmental monitoring sites or frequently doing the environmental monitoring works following approved EIA. Writing the environmental report and submitting to MONRE/DONRE every 6 months.
- 16) Reserve and publish the environmental data.

10.10.2. Time Schedule for EIA

The time schedule for EIA procedures is shown below.

Table 10-24 Time Schedule for EIA

	Month	1	2	3	4	5	6	7	8	9	10	11	12
1	Screening												
2	Scoping												
3	TOR												
4	Survey												
5	Basic Design												
6	Approval of Basic Design												
7	EIA												
8	Public Response												
9	Approval of EIA												
10	Investigation License												
11	Technical Design												
12	Approve Technical Design												
13	Construction												
14	Certify Environmental Items												
15	Environmental Monitoring												

Source: JICA Study Team

10.10.3. Necessary EIA Procedures for VJU Project (General)

At this current stage, according to Decree 29/2011/ND-CP, issued on 18th April 2011, by the government, on regulation of strategic environmental assessment, environmental impact assessment and environmental protection commitment, the EIA is not really needed.

VJU only needs to consider how to get the agreement letter from the prime minister and other relevant ministries, including:

- Permission for setting up the VJU project. The best solution is a decision for setting up VJU issued by Prime Minister (PM).
- Supporting letters for setting up the VJU project from all related ministries: Industry and Trade; Planning and Investment; Education and Training; Science and Technology; Construction and Hanoi Capital People Committee. In some special cases, consultation from the Ministry of Transportation, the Ministry of Agriculture and Rural Development, etc., may be needed.

In order to get the agreement letter of the PM, VNU is the best partner, who joined with VJU to submit the requirement letter to the PM. VNU will also be the party who contacts and follows the procedure to get the letter from the PM.

There are two ways to submit the letter:

- Top-down way: VNU, on behalf of VJU, submits the dossier directly to the PM, then the PM will ask all relevant ministries for their comments.
- Bottom-up way: VNU, on behalf of VJU, submits the dossier through the Ministry of Planning and Investment as an invested project.

VNU has already taken the first option and this way could save time and get support not only from the PM, but also from the warm relationship between the two countries, Japan and Vietnam. Although VNU submitted the project documents directly to the PM, VNU also needed to contact with all relevant ministries in advance to ask for comment from all of the relevant authorities concerned.

(1) Legal Documents Required Before Doing EIA

- Permission for setting up the VJU project. The best solution is a decision for setting up VJU issued by the prime minister.
- Letter of agreement for setting up the VJU project from all related ministries including: Ministry of Industry and Trade; Planning and Investment; Education and Training; Science and Technology; Construction and Hanoi Capital People Committee. In some special cases, consultation from the Ministry of Transportation; Rural and Agriculture; etc., may be needed. In case the VJU project is within the HHTP, the additional consultation from other ministries may not be required.
- Certify the land is available for the project (i.e. no people living there, no bombs, weapons, etc., or the land is absolutely clean).
- Decision to set up the VJU project issued by the investor/financer.
- Certificate for investigation issued by the Ministry of Planning and Investment.

(2) Technical documents are required before doing EIA

Before doing the project, the following documents need to be collected for references and used as basic data for EIA later:

- Geology, geo-engineering (whether there are any subsidences or a karst cave system under the surface).
- Hydrogeology (aquifer and aquitard within the project area).
- Hydrology (river, stream, lake or pond within the project area).
- Present water quality (surface and groundwater).

- Geomorphology, landscape (the characteristics of the geomorphology, landscape).
- Soil (whether the present soil before starting the project is clean or polluted).
- Air condition (whether the air condition before starting the project is clean or polluted).
- Noise/vibration (whether there are any noise problems before starting the project).
- Climate (rainy, sunny, smoky, etc.).
- Transportation systems including airline, road, waterline (how and where the project connects with the national road system. In case the project is within the HHTP, this requirement is not needed).
- Electricity systems (how and where the project connects with the national electric line).
- Drainage system.
- Existing plants (vegetable cover of the areas for the project and temporary work place while carrying out the project).
- Heritage (is there any heritage within the project area?).
- Existing residents, especially ethnic minorities within the project area.
- Weapons, army sites (to be sure there is no weapon within the project area and the project site is outside any army site and the construction of the project has no effect on the army site surroundings).
- Master plan of the province or district, where the project will be located.

10.10.4. Necessary EIA Procedures by Location

(1) Campus at HHTP

Necessity of additional EIA for campus at HHTP.

Refer to Decree 29 regulating the project's need to do EIA:

- Construction of establishments for research and development or manufacturing in high-technology zones must do EIA.
- Project for the construction of hospitals.
- Construction of laboratories that generate hazardous waste from laboratory activities.
- Construction of condominium areas and/or apartments for 500 people or 100 apartments or more.

(2) Campus at VNU New Campus

Necessity of additional EIA for campus at VNU's new campus.

GENERAL PLANS AND SECTIONS

Location Map showing the following:

- Project area
- Location of flow and rainfall measuring stations used in the analysis

General Layout Plan showing the buildings of the project:

- Headquarters
- Power building

- Classroom
- Hall, etc.

BASIC DESIGN PARAMETERS

- Number of laboratories
- Type of laboratories
- Number of houses

METEOROLOGICAL AND HYDROLOGIC DATA

- Mean monthly precipitation
- Mean monthly evaporation
- Mean monthly temperature, etc.

GEOLOGIC DATA

- Rock type and quality at the site
- Depth of overburden to be excavated for foundation of key structures
- Details of rock and soil conditions, etc.

CONSTRUCTION PLAN

Construction schedule showing:

- Construction of access roads
- Construction of access electric line
- Construction of buildings/laboratories, etc.

ENVIRONMENTAL PARAMETERS

- Air
- Water
- Soil
- Ecosystem, etc.

RESETTLEMENT ASPECTS

- Number of households resettled
- Number of persons resettled
- Area of land subject to compensation

DEMAND AND SOCIAL ASPECTS

- Percent of households below poverty level
- Income distribution of households in local service area
- Current energy supply to local area from other sources

INSTITUTIONAL AND FINANCIAL DATA

- Expected ownership structure
- Expected equity holders and equity share

- Expected opportunity cost of capital to each equity holder
- Expected sources of debt
- Expected interest and loan term
- Expected operating and maintenance costs
- Other expenses including taxes
- Distribution of disbursements during construction
- Internal rate of return

In case of resettlement of people living in the project site as experienced by the USTH project in HHTP, the investor will need to collaborate with the local authority (HPC) to define exactly how many people need resettlement. The procedure is as follows:

- VJU needs to send a letter to the local authority to ask for support for the resettlements. This letter can be effective after getting the approval letter for setting up VJU from the PM. Then, the local authority will issue a letter saying that they will support the resettlement of the people living on VNU's new campus.
- After receiving the investment license, VJU can proceed to the second step to do the resettlement. There are two options in this case. The local authority can help VJU project do the resettlement and VJU will pay the resettlement board of the local authority. The second option is that VJU can set up a resettlement board who will negotiate directly with the local people living on VNU's new campus.

The ideal procedure is the first option. VJU should go through the local authority, because the VJU project belongs to the priority project list and is not a commercial project. Thus, it should be relatively easy for VJU to obtain support from HPC. In this case, VJU is able to obtain the cleared land for the project before starting building.

After completing the draft EIA, VJU needs to get the comments on the report from all potential impact people/organizations around the project area by sending the summary of the draft version to:

- Community-level people's committees
- Representatives of the community
- Organizations that are directly affected by the project (if any)
- Organizations that approved the environmental impact assessment report for the project of construction of infrastructure (if any)

The above people/organizations will study the VJU EIA summary and give VJU some comments on whether the VJU EIA is sufficient or not. The supporting comments from them are the key condition for approval of the project.

For the response from representatives of community, the investor often invites local people living within or around the project area (20-30 people depending on the size of the project) to attend one or two meetings, gives them the summary of the EIA and Q&A sheets, then asks them to fill in the Q&A. To be sure the Q&A sheets are real and to avoid any religious matters, the investor often requires the chairman of the community-level people's committees to collaborate on the meeting, then sign and seal all Q&A sheets.

For organizations that are directly affected by the project, the supporting letters from them are also needed when VJU prepares for EIA. Without supporting letters from them, the EIA

may be delayed during the approval process. MONRE may require the investor to get such documents before signing the EIA approved document.

(3) Needs of EIA for Satellite Campus on the Existing VNU campus

Refer to the Decree 29 regulating the project's need to do EIA:

In the case that there is a satellite building on an existing campus, VJU still needs to do EIA for the new building if the total invested money in the changes is more than 10% of the existing building or if VJU will change the design of facilities, technology or main equipment of the project.

EIA is not required in the case that the project only repairs some damaged part of the existing building, and the project does not change the capacity or design.

Expected EIA procedures for the satellite building are as follows:

- During the time preparing the basic design, all environmental issues need to be identified. Thus, from the beginning, it is necessary to survey and give out the outline for the EIA.
- After the EIA report is submitted to the MONRE, 45 days is the maximum time for reviewing, considering and giving the answer.
- Gain local people's support for the project. Before or during the time of preparing the EIA, the investor/financer needs to hold a public meeting with the local people to get responses from them. Positive response from the local people is a concrete condition for approval of EIA reports. The positive response of the local community authorities, where the project located, is also a concrete condition for EIA approval.

10.11. Preliminary Sustainability Study of VJU

VJU is a public university and a member of VNU-HN, therefore there is a similarity in organizational structure and a close connection in training and scientific research activities to other VNU-HN member universities. Therefore the operation of VJU will be stable and sustainable as other VNU member universities.

In the first stage, VJU will be operated and supported by people from Japanese universities and VNU-HN. In the following stages, Vietnamese lecturers and staff will be trained and supported in order to enhance capability to operate VJU by themselves. It is important to provide an excellent teaching environment with research and laboratory spaces and equipment as well as reasonable funds in order to attract Japanese lecturers to station in Vietnam.

VJU will be operated with high financial autonomy and developed using a step-by-step method. VJU income and outcome will be balanced in order to stably operate and develop. The financial sustainability of VJU can be achieved by:

- Tuition fees from students: With the advantages of priority application for attractive jobs in Japanese companies/organizations after graduation, VJU students will accept high tuition fees.
- Various scholarships will be available from Japanese companies and organizations as well as opportunities of study in prestigious Japanese universities. These will attract excellent Vietnamese students to enter VJU.
- Government subsidization: VJU is expected to be a public university with international standards on training high-quality human resources to serve the socio-economic

development of Vietnam. Therefore, every year, the Vietnamese government will subsidize a fund to support further VJU operation activities.

- VJU operation activities will be well associated with Japanese companies/organizations in Vietnam, therefore VJU may look for investments in laboratories to research & develop new products and technical innovations. They will be income sources for VJU reinvestment.

VJU will be constructed in order to bring the best status in campus environment and facilities. As a VNU-HN member, VJU may share infrastructures, facilities and lecturers in order to minimize operation costs and ensure sustainability.

11. Financial Plan of VJU Development

11.1. Basic View

Financially, VJU will be expected to be self-supporting and provide the “maximum level of autonomy” for the administration and management including curriculum formation and personnel management.

The proposed framework of VJU discussed in Chapter 10 is summarized below:

Table 11-1 Basic Framework of VJU

Executing Agency:	Announcement no 313/TB-VPCP dated August 16, 2013, informing VNU-HN to be the responsible institution for VJU development: Vietnam National University, Hanoi (VNU-HN) Address: 144 Xuan Thuy Street, Cau Giay, Hanoi Tel.: +84 437 547 669 Fax: +84 437 547 724 Email: vanphong@vnu.edu.vn
Establishment of the Taskforce:	VNU-HN Decision No: 3270/QĐ-DHQGHN dated September 18th, 2013, to establish a Taskforce of twelve members headed by the President of VNU-HN, Assoc. Prof. Phung Xuan Nha, as the Chairman of the Taskforce.
Implementing Agency:	Project Management Unit for Vietnam - Japan University, VNU-HN
Schedule:	Implementation of the project will start in 2016 with the graduate school, and will be completed by 2025.
Preparation Stage: (2013-2016)	Prepare proposal to the Government of Vietnam, implement preliminary study, feasibility study, prepare legal procedures of VJU establishment and develop collaboration plan with private companies. Recruiting key personnel for management, teaching and research activities. Prepare and apply land acquisition and facilities construction of VJU.
Initial Stage: (2016-2019)	Establishment of master's courses in some key science and technology majors, namely “Graduate School of Sustainable Development,” 160 students with four courses in two years, providing a Supporting Program for liberal arts and basic knowledge for specific fields.
Second Stage: (2019-2022)	Establishment of master/doctoral and undergraduate courses for 2,000 Students (1,400 undergraduate, 600 postgraduate), interdisciplinary linkage with other research institutions and private companies.
Final Stage: (2022-2025)	Full capacity operation in education, training and scientific research to achieve original goals with 6,000 students (undergraduates 3,600, research students 2,400) 4 Colleges, 12 Departments, 36 Majors, 5 Research Institutes
Final Composition:	A 5/3/2 ratio of education, research, and services activities respectively.
Category of Establishment:	National (with autonomy gained by Decision of PM) and through PPP development
Governance:	Board of Trustees: President (of VNU), Rector and Vice Rectors (of VJU), External Members of Board
Location:	VJU Campus will be established in the following three locations: 1) HHTP, 2) Hoa Lac New VNU Campus, and 3) Existing VNU-HN campus at 144 Xuan Thuy Street, Cau Giay, Hanoi. (Total of 90 ha project areas in three locations)
Academic Staff:	Full-time: Life-long full time, temporary full time Part-time: Life-long part time, temporary part-time, temporary dispatch Total: 200 research professionals in order to meet the standards of a research oriented university, which are 12 students per lecturer. The teaching team will include regular visiting professors, experts and collaborators from top universities in Vietnam, Japan and other countries.
Administrative Staff:	Full-time, temporary contract, dispatch (permanent staff of approximately 280 administrative staff members)
Financial Foundations:	Public financial resources (general, specific), tuition revenues, operating income, private and company's donations Total investment cost for VJU is estimated at approximately US\$ 528 million, of which: -Japanese ODA funds: more than US\$ 200 million.

	-Vietnamese Government funds: approximately US\$ 97 million. -Japanese private sector funds: approximately US\$ 100 million. -Future Investment fund: approximately US\$ 131 million.
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Source: JICA Study Team

The income-and-expenditure balance of VJU depends on its scale and quality, tuition fees, land areas, industry-academia collaboration, government support, and investments from private companies. Therefore, it is important for VJU to promote its construction by actively securing income and more supporters as well as private and institutional investors.

The proposal is that the basic capital assets for the construction and management of VJU will be expected from the ODA funds from the Japanese Government and that the land will be procured by the Vietnamese Government. Additionally, seeking out various other financial sources such as bank financing, donations, and investments of companies should be considered. Also, it is necessary to organize a project management unit which has high management skills for the efficient management of construction and project implementation.

11.2. Approximate Cost of the Establishment of VJU

Assumptions for the approximate cost estimation are summarized below:

11.2.1. Proposed Scale of VJU

Based on the discussion above in Chapter 10, the planned number of courses, students and staff in each stage of development is shown below.

Table 11-2 Number of Staff and Students of VJU

Stages Type	The First Stage (2016-2019)		The Second Stage (2019-2022)		The Third Stage (2022-2025)	
Doctoral Course	—		4 departments × 3 courses (10 students/course/3 academic years)		4 departments × 10 courses (5 students/course /grade)	
Master Course	4 departments × 1 course (20 students/course)		4 departments × 3 courses (20 students/course /grade)		4 departments × 10 courses (20 students/course /grade)	
Undergraduate	—		4 departments × 3 faculties (Approx.30 students /faculty/grade)		4 departments × 7-8 faculties (Approx. 30 students /faculty/grade)	
No. of Students in Doctoral Course	-		120		600	
No. of Students in Master Course	160		480		1,800	
No. of Students in Undergraduate	-		1,400		3,600	
Total	160		2,000		6,000	
No. of Staff	Academic	Administrative	Academic	Administrative	Academic	Administrative
Japanese	18	5	34	12	48	18
Vietnamese	14	16	146	114	352	262
Total	32	21	180	126	400	280
Satellite Campus	Master course, industry- academia collaboration activities, student exchange center		Industry-academia collaboration activities, master course, student exchange center		Industry-academia collaboration activities, master course, student exchange center	
HHTP Campus	—		Doctoral course, master course, industry-academia collaboration, etc. Undergraduate(tentative)		Doctoral course, master course, industry-academia collaboration, etc.	
VNU New Campus	—		—		Undergraduate and VJU main office	

Source: JICA Study Team

11.2.2. Proposed Facilities and Equipment of VJU by Campus

VJU would be presumably located in three places: the satellite campus in the existing VNU campus (3 ha), the Hoa-Lac High-Tech Park Campus (26 ha), and the VNU new campus in Hoa Lac (60 ha). Facilities proposed in these three campuses are described in chapter 10.7.

The cost of construction and maintenance of the buildings and facilities, including fundamental equipment, will be covered initially with ODA and the preparation of land and site clearance by the Vietnamese Government, followed by financing, investments, financial support and donations from the Governments, private companies and other organizations. In the medium and long term, the cost should be covered by Government support, revenue from related services, asset-income from the buildings and facilities, sponsorships and investments from private companies and so on.

The basic development plan for the university facility is as follows. Facilities for university management, such as a lecture building, are proposed to be constructed under ODA (Yen Loan). The satellite campus and a research building, which are possibly subjects of industry-academia collaboration, are proposed to be developed by the private sector. As the number of students increases, additional facilities such as sports facilities, dormitories and student services will be required. Those are proposed to be developed by the VJU's own future fund or private sector in the future.

For the sake of financial calculation, the expected scale of floor areas of buildings, facilities and other related properties by three proposed funding sources: [1] JICA ODA Loans, [2] Private Sector Development, and [3]Future Investment) are as shown in the following table:

Table 11-3 Proposed Scale of VJU Facilities and Surroundings

Items	Satellite Campus	HHTP Campus	VNU New Campus
Proposed JICA ODA Loans Facilities	Total Floor Area		100,000 m²
Headquarters of VJU including Facilities for exhibitions, Trainees , etc.	-	-	10,000 m ²
Buildings and Facilities for undergraduates	-	-	40,000 m ²
Buildings and Facilities for graduates	-	10,000 m ²	20,000 m ²
E-Library (open 24 hours)	-	5,000 m ²	-
Centre of Industry-Academia Collaboration	-	5,000 m ²	-
Centre of New-Businesses and Industrial-development	-	10,000 m ²	-
Sub-total Floor Area	0 m ²	30,000 m ²	70,000 m ²
Private Sector Development Facilities	Total Floor Area		55,000 m²
Satellite Campus in Hanoi Central	15,000 m ²	-	-
Center of Industry-Academia Collaboration	15,000 m ²	-	-
E-Library (24- hours-open)	5,000 m ²	-	-
Student Communication Centers including Restaurants, Meeting Rooms, Shops and others)	5,000 m ²	5,000 m ²	10,000 m ²
Sub-total Floor Area	40,000m ²	5,000 m ²	10,000 m ²
Future Investment Development Facilities	Total Floor Area		80,000 m²
E-Library (open 24 hours)	-	-	10,000 m ²
University Hall including an Auditorium and Halls for Big Events and Meetings	-	10,000 m ²	10,000 m ²
Facilities for Sports such as Tennis, Basketball, Swimming and other athletics	-	5,000 m ²	5,000 m ²
Accommodations and Dormitories for Researchers, Lecturers, Specialists, Students other relevant people	-	20,000 m ²	20,000 m ²

Sub-total Floor Area	0 m ²	35,000 m ²	45,000 m ²
Facilities for Industry-academia collaboration, Research and others mainly by private investments	-	(10ha~)	-
Park Area	(0~1ha)	(6ha)	(20ha)
Playgrounds and Fields for various sports, Parking lots and others	-	(10ha)	(10ha)
Total Floor Area	40,000 m ²	70,000 m ²	125,000 m ²
Total Site Area	2~5ha	26ha~	60ha~

Source: JST (JVEF)

As shown in the table above, the development is proposed based on these three fund sources listed below:

- Development from Japanese ODA Loans: 100,000 m² (including classroom building, library,)
- Development from Private sector funding: 55,000 m² (including industry-university cooperation facilities, dormitories, etc.)
- Development from VJU's own future funds and private sector funding: 80,000 m² (including auditorium, facility expansion associated with students number increase)

The approximate construction costs of buildings in the three campuses are summarized in the table below. The unit cost applied for construction work on average is US \$800/m², excluding the procurement cost of equipment.

Table 11-4 Rough Estimation of Construction Cost (by proposed funding source)

Funding Source	Floor Area / Construction Cost	Satellite Campus	HHTP Campus	VNU New Campus	Total
JICA ODA Loans	Floor Area	0 m ²	30,000 m ²	70,000 m ²	100,000 m ²
	Construction Cost	\$0	\$24,000,000	\$56,000,000	\$80,000,000
Private Sector Development	Floor Area	40,000 m ²	5,000 m ²	10,000 m ²	55,000 m ²
	Construction Cost	\$32,000,000	\$4,000,000	\$8,000,000	\$44,000,000
Future Investment Development	Floor Area	0 m ²	35,000 m ²	45,000 m ²	80,000 m ²
	Construction Cost	\$0	\$28,000,000	\$36,000,000	\$64,000,000
Total	Floor Area	40,000 m ²	70,000 m ²	125,000 m ²	235,000 m ²
	Construction Cost	\$32,000,000	\$56,000,000	\$100,000,000	\$188,000,000

Source: JICA Study Team

The costs for the procurement of equipment, consultant services, and contingency costs are roughly estimated as shown below. These are estimated based on a set percentage for basic expenses (costs for building construction and equipment procurement).

Table 11-5 Basis for Calculation of Non-Construction Cost

Unit Cost: US\$ 1,000

Outline	Basic Expense			Consultancy service expense [2]	Contingency cost [3]
	Construction Cost	Equipment Cost	Total [1]		
Percentage	58.7%	41.3%	100%	[1]×10%	[1]+[2]×10%
JICA ODA Loans	\$80,000	\$56,550	\$136, 550	\$13,700	\$15,100
Private Sector Development	\$44,000	\$30,950	\$74,950	\$7,400	\$8,200
Future Investment Development	\$64,000	\$45,000	\$109,000	\$10,900	\$12,000-
Total	\$188,000	\$132,500	\$320,500	\$32,000	\$35,300

Source: JICA Study Team

11.2.3. Study on the Unit Costs for First Estimates

For the purpose of approximating costs for VJU, a trial estimation study was undertaken. The anticipated cost elements are presented below.

(1) Cost for Fellowship Programs

From the initial stage of the project, it is necessary to provide upgrading programs for teaching staff to recruit new lecturers for VJU with a target number of staff as shown in Table 11-2.

For this purpose, it is proposed to send a number of Vietnamese undergraduates and master course students to Japan to obtain degrees in master and doctoral courses by a Japanese fellowship program. They will work for VJU in the future. In parallel, fellowship programs provided by a private sector development fund are also considered.

Note that stages of development and input of human resources must be consistent. It is necessary to dispatch students and faculties gradually in stages, and not to send all of them to training programs at once.

The plan for first stage and the beginning of the second stage is, 45% (65 personnel, of which 40 will be funded by Japanese ODA Loans) of Vietnamese lecturers required in the second stage (146) will be trained through this program. 58% (205 personnel, of which 160 will be funded by Japanese ODA Loans) of the total in the third stage (352) will also be trained.

The costs of the fellowship program are assumed at US\$ 100,000 per year for doctoral students and US \$ 75,000 per year for master students.

(2) Cost for Construction and Materials

Given the required quality for internationally recognized education and research facilities, a unit construction cost for university facilities is assumed at US \$800/m², considering a possible collaboration with Japanese private companies. Estimation of the cost is based on US\$600/m² which is also employed in the cost estimation for the VNU new campus master plan. In addition, based on the assumption to equip the laboratories at same level as the Japanese laboratory facilities, the procurement cost of equipment for education and research activities is estimated as 41.3% of the construction cost (including building, M&E works, and equipment procurement) which is approximately 70% against the building cost.

(3) Cost for Consulting Services

Consulting services includes the following works.

- Plan and design campus, facilities and equipment

- Tender documentation, tender evaluation and assistance
- Project management and construction management

The unit cost for consulting services is assumed to be 10% of the total expense for facilities, equipment and M&E works, since the project requires advanced competence in the construction of special research facilities and equipment, an understanding of multi-functional complex facilities, and the development of a campus with rich greenery.

The cost for consulting services for program development and implementation management regarding the fellowship program is assumed at 5% of the total project cost.

(4) Contingency Costs

Contingency costs for the consulting services, facilities and materials are assumed to be 10% for each. However the contingency cost did not apply to the fellowship program.

(5) Taxes and Interests during the construction

VAT is assumed at 10% with an exception for the fellowship program. Interest rates during construction for the cost proposed to be funded by Japanese ODA loans were assumed as follows:

- Interest rate during construction for the fellowship program: 0.15%
- Interest rate during construction for construction and materials: 0.75%
- Interest rate during construction for the consulting services: 0.01%

(6) Cost for Land and Site Clearance

For the satellite campus, there are no costs induced for land and site clearance, since the license has been already granted to VNU. Also, there is no additional cost for the land of the new VNU campus, since compensation for relocation and the land cost have been already budgeted as a part of the VNU transfer cost to Hoa Lac area. Therefore, the land cost is only added up for 26ha in HHTP.

Land cost in Vietnam is categorized into three price bands based on the distance from main trunk roads. The most expensive land price in the category was applied to the VJU project as VJU would be expected to locate alongside the trunk roads. Besides, land prices were set according to the purpose of usage (residence, agriculture and business). The VJU project was assumed to be categorized as a business purpose.

Compensation for relocation is also categorized based on the distance from main trunk roads and the original usage of the land. For the VJU project, the compensation cost was estimated on the assumption that 21.5% of total land would be used for resident purposes, and 78.5% would be used for agriculture purposes.

Estimation of the cost for land, expropriate and transfer are as follows:

Table 11-6 Calculation basis for the land price

Units: US\$ 1,000

items	Area (ha)	Land	Expropriation/Transfer	Total
Satellite campus	3ha	\$16,000	-	\$16,000
HHTP Campus	26ha	\$38,000	\$10,000	\$48,000
VNU New Campus	60ha	\$88,000	\$20,000	\$108,000-
Total	89ha	\$142,000	\$30,000	\$172,000

Source: JICA Study Team

(7) Cost for Project Management Unit (PMU)

Main responsibilities of PMU are envisaged as follows:

- Preparatory works at the beginning of project implementation (application form, etc.)
- Development of management plan and contents related to the university establishment
- Implementation management and coordination of campus planning, design, and construction activities
- Coordination with relevant ministries and authorities concerned
- Public announcement, tender and tender evaluation for construction and equipment procurement

The cost for PMU is assumed at 2.7% of US\$ 300million, the total expense for Japanese ODA Loans and private development investment. Allocations by fiscal years depend on: the initial cost of office establishment and the purchase of materials, stages of intensive construction and equipment giving and defect liability periods.

Labor cost and operational expenses for the next ten years are estimated that the labor costs account for 60%, and operational expenses, including the initial office establishment, OA facilities, consumable goods, transportation and travel expenses, accounts for 40%, assuming 20 people on staff per year on average.

(8) Cost for Feasibility Study

To propose the implementation of the VJU concept as a Japanese ODA Loan project, the following Feasibility Studies are required in addition to the present studies: verification of the project as a Japanese ODA loan project, confirming the possibility for private sector initiatives, arrangement of preparatory works for an university establishment, a campus master plan in three sites, and a detailed financial plan based on the master plan.

The period of study implementation and the expected contents of the study are as follows:

1) Period of Study

The study implementation period is expected to be one year.

2) Cost for Study

The cost for the study is estimated at approximately 50 MM, based on projected travel expenses, car lease/office rent, local expenses and labor costs of three interpreters (concurrent with secretary).

3) Organizational Structure for Implementation

Through FS, the VJU coordination committee and its secretary office will be established to facilitate coordination with the technical cooperation project operating in parallel to the VJU project. After the completion of the study, the secretary office will be reformed into a preparatory office for establishment.

4) Fields of Specialty of FS Team Members

Fields for operational staff in FS are shown below:

- Team Leader/project formation and organizational structure
- Plan and design for university facilities (Architecture, Structure and M&E services)
- Basic infrastructure/site preparation and civil work plan
- Educational and research equipment plan
- Project cost estimation/assist in tender documentation

- Campus plan/improvement plan for living environment
- ICT plan
- Construction and procurement plan
- Education program (coordination with technical cooperation project)
- Human resource training plan
- Industry-academia collaboration promotion and planning
- Private funding promotion/PPP plan
- PR and job placement plan
- Economic and financial analysis

(9) Cost for Technical Cooperation Project

It is necessary to dispatch Japanese experts at the preparatory and operation stages to give technical assistance for the development of VJU.. In case technical cooperation project is to be implemented, the cost would be as calculated below.

1) Preparatory Stage

In this stage, Japanese teachers will be dispatched to Vietnam as experts. The period is projected to be around one year.

They will take in charge of the following tasks:

- convey the concept of balance of faculties between Japan and Vietnam, organizational management, human resource and treatment
- secure autonomy as well as relationships with VNU headquarters
- total coordination of the contents of VJU
- manage the university consortium
- coordinate with counterparts in other universities, VNU, private companies and governments

Particularly for the following tasks, expert staff will stay in Vietnam and take charge:

- Curriculum development, coordination with VNU: develop a curriculum of arts and science, coordinate with professors and lecturers, organize the form of lectures, organize administrative work for the purpose of university establishment.
- Recruitment, Enlightenment, Study Abroad: recruit professors and lecturers in cooperation with the Vietnamese side, preparatory works for student recruitment and enlightenment, organize a study abroad system (In this scope, also take charge of coordination among FS studies)
- Plan a proposal for an industry-academia collaboration and coordinate with counterparts regarding implementing a plan on behalf of the university representative, widely coordinate among universities, Japanese and Vietnamese governments and private companies.

The cost to dispatch experts is the sum of following expenses: travel expenses, car lease/office rent, other miscellaneous expenses and expenses for hiring three local interpreters (concurrent with secretary). Three long term experts (curriculum, recruitment, industry-academia collaboration: approximately six months to one year) and four short term experts (for each of the four departments) were planned to be dispatched.

2) Stages of Operation

The cost for the technological cooperation during the stages of operation, i.e. during approximately four years of the first stage, covers the cost to dispatch Japanese university staff. This cost is added up not to the project cost but to the operating cost.

11.2.4. Development Plan

For such a university construction project, the number of students and faculties largely rely on the completion schedule of the facilities; and hence the estimation of operation and project cost also rely on those.

Realistically, it is proposed that the almost 10-year development plan of VJU from 2016 to 2025 should be divided into three stages, which are discussed below. Since the academic year in Vietnam starts in September, the fiscal year for the estimation follows that convention, i.e. from September to August.

(1) First Stage (from September 2016 to August 2019)

At the first stage, VJU plans to establish a master course (the first term of doctoral courses). The graduate school named “Graduate School of Sustainability” (a tentative name) will be established in three years as the core facility and catalyst of VJU.

For the purpose of the establishment of doctoral courses and faculty, related lectures and seminars would be started and practical human resource training would also be held for fostering high-level specialists and technical experts.

The school would be started in the rented rooms of the building in central Hanoi.

The graduate school would start with 160 students (the quota) in the master courses and with around 50 professors and lecturers. To spark the beginning, one course for about 20 students, is envisaged to be established for each department.

In association with VNU-Hanoi, VJU will begin its activities as in the following:

- Preparations of curricula and graduate-courses by each course, research-group, and professor.
- Establishment of the education and research systems and environment allowing the effective works of professors, lecturers and other staff of the University.
- Recruiting and fostering of eligible Japanese and Vietnamese professors and lecturers.
- Training of highly qualified specialists and technical experts.
- Promotion of the support and relevant investments of private sector companies and organizations.

Utilizing Japanese education programs such as “Distant learning” and “advancement to the doctoral courses”, a relatively small graduate school will be established at the initial stage, then during a later stage, the graduate school will be expanded into a university with undergraduate courses.

In this period, the satellite campus in central Hanoi will be progressively constructed and will be put into use.

In order to clarify the sustainability of the entire development of VJU, it is important to conduct Post Feasibility Study that covers income-and-expenditure prospects, land clearance and preparedness, commitments of support and investments from both Governments and

private sector companies and organizations, and the specific needs of students and companies.

(2) Second Stage (from September 2019 to August 2022)

In the next three to four years (the second stage), VJU will be expanded into the latter term of the doctoral courses and some undergraduate courses to become a full university with the graduate school.

Full courses of a doctoral program and small undergraduate schools will be established depending on the needs of students and Japanese companies and on the line-up of the University staff until six or seven years later.

Upgrading a variety of high-level human resource development programs, expanding the training courses, the opening of industry-academia collaboration facilities including companies' research institutions, and financial support and investments of Japanese companies will be promoted.

In this period, the campus in HHTP will be progressively constructed and will be put into use, and a shuttle bus service between Hanoi and HHTP campus will be commenced. Though initially VJU starts at the satellite campus and the campus in HHTP, when construction of Hoa-Lac campus completes, research and educational function of VJU will be transferred to there. HHTP campus will take in charge of the industry-academia collaboration, research institutes, capacity building and the investment to R&D by private companies.

The number of students would total 2,000 including more than 600 post-graduates, at which point the Graduate Schools of Natural Science and of Humanities & Social Sciences would have been fully established.

In this period, the University staff will be organized with as many Vietnamese as possible.

Professors and lecturers are planned at around 180, and other personnel at around 120.

The requirements for the sustainable development of VJU such as the income-and-expenditure prospects, the situation of the land, the support and investments of the Governments and private companies and the needs of students and companies, would be clarified again, so the construction plan of the University should be reviewed from the viewpoint of sustainable development.

(3) Third Stage (from September 2022 to August 2025)

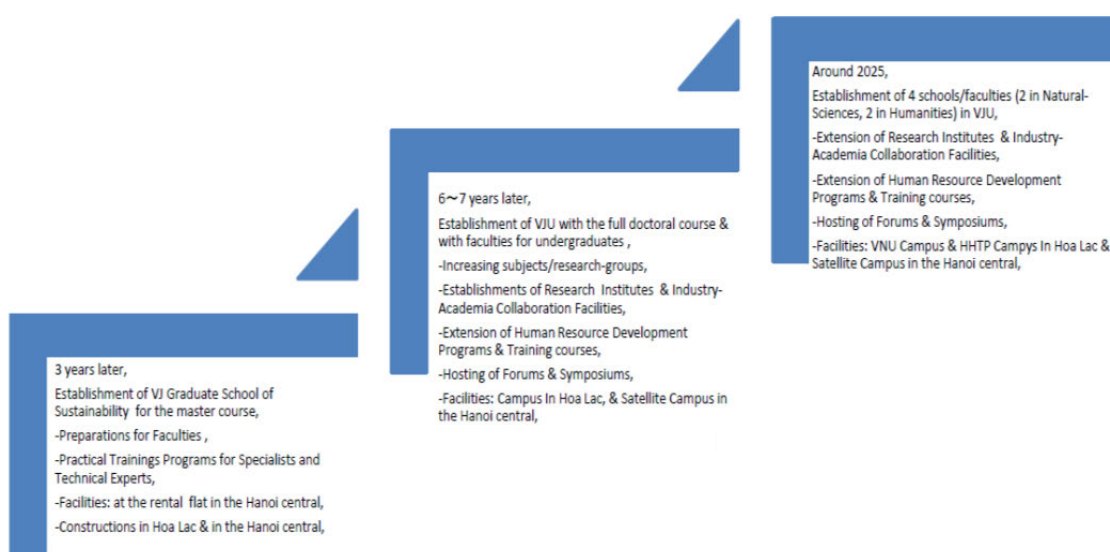
Assuming the progress of construction of VJU is implemented as scheduled, four faculties/twelve courses in the field of humanities & social sciences and natural sciences would be established. The relevant facilities such as industry-academia collaboration facilities and research institutions would be also constructed and a variety of high-level human resource development programs and training courses would have been developed to mid-2023.

During this time, the visits of Japanese students and experts from various fields would be increased and various symposiums and lectures will be held frequently. The satellite campus in central Hanoi should be developed to be the center of those activities and events.

As for the facilities of VJU, all of the VNU, the new campus in Hoa-lac, HHTP campus and the satellite campus in central Hanoi would be in operation.

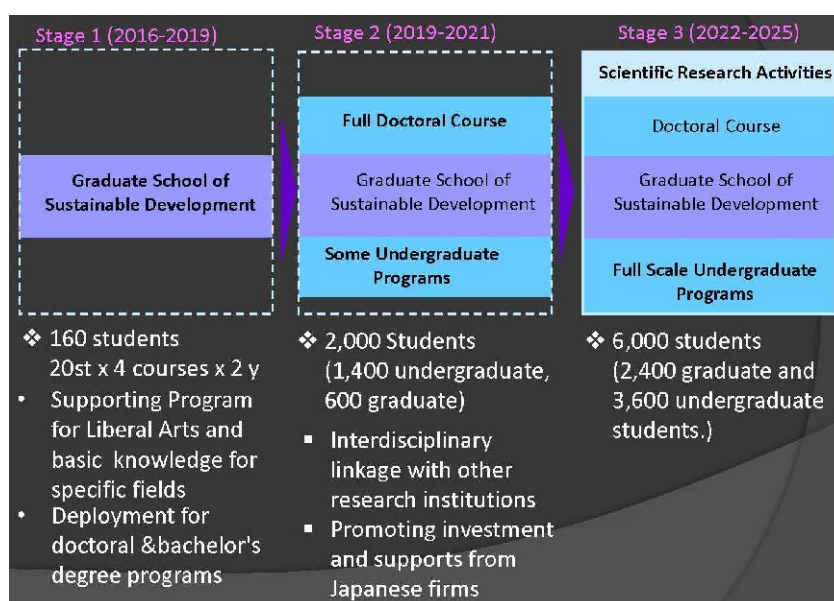
At that time, the number of students would total about 6,000 (including 2,400 postgraduates) and there would be about 400 professors and lecturers and about 280 University staff.

Three stages of development are summarized as follows:



Source: JST (JVEF)

Figure 11-1 Three Stage Establishment Plan for VJU



Source: JICA Study Team

Figure 11-2 Three Stage Construction Plan for VJU

11.2.5. Estimates Project Cost

Roughly estimated project costs based on the three development schedules above are shown in tables 11-8 and 11-9.

In table 11.8, project costs are estimated by fiscal year for each stage of project development and campus development.

As mentioned earlier, at the stage of initial construction, it is important to invest intensively for the environment providing the quality of education and research as a core of VJU, promoting industry-academia collaboration and attracting professors and researchers.

Through this process, it is expected that the scope of industry-academia collaboration as well as private finances will be gradually broadened.

It is expected to take three to four years after its establishment to make a detailed projection on the future of VJU. To this end, it is also necessary to develop a precise financial plan as well. The whole development plan shall be reviewed right after the first stage and at the beginning of the second stage.

The contribution from the Vietnamese government is summarized as follows. It covers taxes (VAT), interests during the construction, land and site clearance costs, expense for PMU (See sections 11.2.3(5), (6) and (7)), including taxes on investments in the future development.

Table 11-7 Calculation Basis for Vietnamese Government Contribution

Items of Expense	US\$
Tax, Interests	41,000,000
Land rent, Compensation for relocation (HHTP)	48,000,000
Expense for PMU	8,000,000
Total	97,000,000

Source: JICA study team

The estimated construction cost over ten years for facilities and equipment will probably exceed 40 billion JPY. At this point in time, the scale of the proposed Japanese ODA loans is estimated at around 20 billion JPY which has already been informed to Vietnamese side. However, this scale is not fixed but subject to change depending on the scale of land, location, management structure of VJU, collaboration with private companies, etc.

Table 11-8 Construction Cost and Consulting Service Cost for VJU project (Unit: US\$)

													Unit: US\$	
Component			Preparatory Stage	1st Stage				2nd Stage			3rd Stage			Total
			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25		
			9 - 8	9 - 8	9 - 8	9 - 8	9 - 8	9 - 8	9 - 8	9 - 8	9 - 8	9 - 8		
Technical Cooperation Project													0	
	Preparatory Stage	2,550,000	2,550,000										2,550,000	
	Operation Stage	3,024,000											0	
													0	
Fellowship Program			Total	0	3,000,000	7,500,000	10,500,000	10,500,000	7,500,000	3,000,000	0	0	42,000,000	
	Fellowship program by JICA ODA Loan	Sub-total	0	3,000,000	6,000,000	7,500,000	7,500,000	6,000,000	3,000,000	0	0	0	33,000,000	
	Fellowship program by private sector	Sub-total	0	0	1,500,000	3,000,000	3,000,000	1,500,000	1,500,000	0	0	0	9,000,000	
			0	1,500,000	1,500,000	1,500,000	1,500,000	0	0	0	0	0	6,000,000	
	PhD (ODA)			0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	0	0	0	6,000,000	
		60			0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	0	0	6,000,000	
					750,000	750,000	0	0	0	0	0	0	1,500,000	
	PhD (Private)					750,000	750,000	0	0	0	0	0	1,500,000	
		15					750,000	750,000	0	0	0	0	1,500,000	
	Masters (ODA)		0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	0	0	0	7,500,000	
		100		0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	0	0	7,500,000	
	Masters (Private)				750,000	750,000	750,000	750,000	750,000	0	0	0	2,250,000	
		30				750,000	750,000	750,000	750,000	0	0	0	2,250,000	
	Total	205		0	20	45	53	53	35	0	0		205	
													0	
Consulting Services			Breakdown	1,015,000	4,448,000	3,844,000	2,666,000	7,880,000	5,274,000	5,133,000	4,620,000	2,430,000	0	37,310,000
	Portion for the Japanese ODA Loans	16,740,000	0	2,640,000	2,746,000	1,310,000	3,099,000	2,415,000	2,340,000	2,190,000	0	0	16,740,000	
	Portion for Private Sector Investment	8,580,000	1,015,000	1,808,000	1,098,000	1,356,000	1,431,000	699,000	1,173,000	0	0	0	8,580,000	
	Portion for Future Investment	11,979,000	0	0	0	0	3,350,000	2,160,000	1,620,000	2,430,000	2,430,000	0	11,990,000	
5%	Fellowship Program (ODA Loans)	1,650,000	0	0	150,000	300,000	375,000	375,000	300,000	150,000	0	0	1,650,000	
5%	Fellowship Program (Private Sector)	450,000	0	0	0	75,000	150,000	150,000	75,000	0	0	0	450,000	
	VAT (for JICA ODA Loan)	10%	0	264,000	274,000	131,000	310,000	242,000	234,000	219,000	0	0	1,674,000	
	VAT (for Private Sector)	10%	101,000	180,000	109,000	136,000	144,000	70,000	118,000	0	0	0	858,000	
	VAT for Future Investment	10%		0	0	0	335,000	216,000	162,000	243,000	243,000	0	1,199,000	
													0	
Construction + Equipment Procurement			235,000	0	3,500,000	22,080,000	58,190,000	36,260,000	37,840,000	97,640,000	32,610,000	64,470,000	0	352,590,000
	Portion for the Japanese ODA Loans	100,000	0	0	8,000,000	15,840,000	33,620,000	30,800,000	62,000,000	0	0	0	150,260,000	
	Portion for Private Sector Investment	55,000	0	3,500,000	14,080,000	42,350,000	2,640,000	3,960,000	11,440,000	4,450,000	0	0	82,420,000	
	Portion for Future Investment	80,000	0	0	0	0	0	3,080,000	24,200,000	28,160,000	64,470,000	0	119,910,000	
Satellite Campus			40,000										0	
	Portion for the Japanese ODA Loans	0		0	0	0	0	0	0	0	0	0	0	
	Portion for Private Sector Investment	40,000		3,500,000	14,080,000	42,350,000	0	0	0	0	0	0	59,930,000	
	Portion for Future Investment	0	0	0	0	0	0	0	0	0	0	0	0	
HHTP Campus			70,000										0	
	Portion for the Japanese ODA Loans	30,000	0	0	8,000,000	15,840,000	21,300,000	0	0	0	0	0	45,140,000	
	Portion for Private Sector Investment	5,000	0	0	0	0	0	440,000	2,640,000	4,450,000	0	0	7,530,000	
	Portion for Future Investment	35,000	0	0	0	0	0	3,080,000	12,320,000	12,320,000	24,770,000	0	52,490,000	
VNU New Campus in Hoa Lac			125,000										0	
	Portion for the Japanese ODA Loans	70,000	0	0	0	0	12,320,000	30,800,000	62,000,000				105,120,000	
	Portion for Private Sector Investment	10,000	0	0	0	0	2,640,000	3,520,000	8,800,000			0	14,960,000	
	Portion for Future Investment	45,000	0	0	0	0	0	0	11,880,000	15,840,000	39,700,000		67,420,000	
	VAT (for JICA ODA Loan)	10%	0	0	800,000	1,584,000	3,362,000	3,080,000	6,200,000	0	0	0	15,026,000	
	VAT (for Private Sector)	10%	0	350,000	1,408,000	4,235,000	264,000	396,000	1,144,000	445,000	0	0	8,242,000	
	VAT (for Future Investment)	10%	0	0	0	0	0	310,000	2,420,000	2,816,000	6,450,000	0	11,996,000	
													0	
	Land & Site Clearance Costs	48,000,000	24,000,000	24,000,000									48,000,000	
	PMU Activities	8,000,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	1,200,000	800,000	400,000	8,000,000	
	Interest during construction for JICA ODA Loan		0	1,000	65,000	128,000	264,000	243,000	475,000	5,000	0	0	1,181,000	
													0	
	Sub-total (Japanese ODA Loans)	100,000 m2	0	2,640,000	13,746,000	23,150,000	44,219,000	40,715,000	70,340,000	5,190,000	0	0	200,000,000	
	Sub-total (Vietnamese Government Subsidy)		24,901,000	25,595,000	3,456,000	7,014,000	5,479,000	5,357,000	11,553,000	4,928,000	7,493,000	400,000	96,176,000	
	Sub-total (Private Sector Investment)	55,000 m2	1,015,000	5,308,000	15,178,000	45,206,000	7,071,000	7,659,000	14,113,000	4,450,000	0	0	100,000,000	
	Sub-total (Future Investment)	80,000 m2	0	0	0	0	3,350,000	5,240,000	25,820,000	30,590,000	66,900,000	0	131,900,000	
Total			235,000 m2	25,916,000	33,543,000	32,380,000	75,370,000	60,119,000	58,971,000	121,826,000	45,158,000	74,393,000	400,000	528,076,000

Source: JICA Study Team

Table 11-9 Approximate Cost Estimation for VJU Project (by funding source)

No.	Items	JICA ODA Loan + Technical Assistance			Private Sector Development			Future Investment Development		
		Amount			Amount			Amount		
		(VND)	(JPY)	(US\$)	(VND)	(JPY)	(US\$)	(VND)	(JPY)	(US\$)
A	BASIC EXPENSES									
1	Construction Cost	1,680,000,000,000	8,800,000,000	80,000,000	924,000,000,000	4,840,000,000	44,000,000	1,344,000,000,000	7,040,000,000	64,000,000
1.1	Satellite Campus Development	0	0	0	672,000,000,000	3,520,000,000	32,000,000	0	0	0
1.2	HHTTP Campus Development	504,000,000,000	2,640,000,000	24,000,000	84,000,000,000	440,000,000	4,000,000	588,000,000,000	3,080,000,000	28,000,000
1.3	VNU New Campus Development	1,176,000,000,000	6,160,000,000	56,000,000	168,000,000,000	880,000,000	8,000,000	756,000,000,000	3,960,000,000	36,000,000
2	Equipment Cost	1,187,550,000,000	6,222,000,000	56,550,000	649,950,000,000	3,406,000,000	30,950,000	945,000,000,000	4,950,000,000	45,000,000
2.1	Equipment for Satellite Campus	0	0	0	472,500,000,000	2,475,000,000	22,500,000	0	0	0
2.2	Equipment for HHTTP Campus	356,265,000,000	1,867,000,000	16,965,000	59,220,000,000	311,000,000	2,820,000	411,600,000,000	2,156,000,000	19,600,000
2.3	Equipment for VNU New Campus	831,285,000,000	4,355,000,000	39,585,000	118,230,000,000	620,000,000	5,630,000	533,400,000,000	2,794,000,000	25,400,000
3	Fellowship Program	693,000,000,000	3,630,000,000	33,000,000	189,000,000,000	990,000,000	9,000,000	0	0	0
4	Consultancy service expense	352,170,000,000	1,846,000,000	16,770,000	164,850,000,000	864,000,000	7,850,000	228,900,000,000	1,199,000,000	10,900,000
4.1	Consulting Services for Feasibility Study	29,820,000,000	157,000,000	1,420,000				0	0	0
4.2	Consulting Services for Fellowship Program	34,650,000,000	182,000,000	1,650,000	9,450,000,000	50,000,000	450,000	0	0	0
4.3	Consulting Services for Project and Construction Management (including design development, tender assistance and construction management9)	287,700,000,000	1,507,000,000	13,700,000	155,400,000,000	814,000,000	7,400,000	228,900,000,000	1,199,000,000	10,900,000
5	Technical Cooperation Project for Japanese Professors	117,054,000,000	614,000,000	5,574,000						
5.1	TCP (Preparatory Stage)	53,550,000,000	281,000,000	2,550,000						
5.2	TCP (Operation Stage Stage)	63,504,000,000	333,000,000	3,024,000						
6	CONTINGENCY (10%)	317,100,000,000	1,661,000,000	15,100,000	172,200,000,000	902,000,000	8,200,000	252,000,000,000	1,320,000,000	12,000,000
	SUB-TOTAL (A)	4,346,874,000,000	22,773,000,000	206,994,000	2,100,000,000,000	11,002,000,000	100,000,000	2,769,900,000,000	14,509,000,000	131,900,000
B	Counter Part Fund (by Vietnamese Government)									
1	Expenses of site clearance (HHTTP)	1,008,000,000,000	5,280,000,000	48,000,000	0	0	0	0	0	0
2	Expense for Project Management Unit	168,000,000,000	880,000,000	8,000,000	0	0	0	0	0	0
3	Tax (including VAT)	350,700,000,000	1,837,000,000	16,700,000	191,100,000,000	1,001,000,000	9,100,000	277,095,000,000	1,452,000,000	13,195,000
4	Interest during construction	24,801,000,000	130,000,000	1,181,000	0	0	0	0	0	0
	SUB-TOTAL (B)	1,551,501,000,000	8,127,000,000	73,881,000	191,100,000,000	1,001,000,000	9,100,000	277,095,000,000	1,452,000,000	13,195,000
	TOTAL (A+B)	5,898,375,000,000	30,900,000,000	280,875,000	2,291,100,000,000	12,003,000,000	109,100,000	3,046,995,000,000	15,961,000,000	145,095,000
Breakdown of A										
	Technical Cooperation Project and SAF	146,874,000,000	771,000,000	6,994,000						
	Counter Part Fund (by Vietnamese Government)	1,551,501,000,000	8,127,000,000	73,881,000	191,100,000,000	1,001,000,000	9,100,000	277,095,000,000	1,452,000,000	13,195,000
	Total							2,019,696,000,000	10,580,000,000	96,176,000
	Total: JICA ODA Loan	4,200,000,000,000	22,002,000,000	200,000,000						
	Total: Private Sector Development				2,100,000,000,000	11,002,000,000	100,000,000			
	Total: Future Investment Development							2,769,900,000,000	14,509,000,000	131,900,000
	Total							9,069,900,000,000	47,509,000,000	431,900,000
	Grand Total							11,089,596,000,000	58,089,000,000	528,076,000

Source: JICA Study Team

11.3. Basic Assumptions for Financial Plan

In addition to the project cost, the income and expenditure during the operational stage of VJU is calculated, and summarized as a cashflow over ten years for the three stages of the development schedule.

Running costs (personnel cost, training and education expenses) are initially proposed to be funded by Vietnamese government subsidies, Japanese ODA, support and cooperation from private companies, and in the long term, proposed to be funded by support and cooperation from the Vietnamese government, facilities' fees, income from relevant services and rents, support from the VJU fund and private companies, and research grants.

Finance measures for various activities in VJU are not uniform. They depend on general conditions such as the initial availability of the funds and the scale of the campus, as well as on the specific types of activities including curricula. Therefore, it is important for these activities to actively respond to demands in the market.

For the estimation of operational costs, the most important parameters is the number of students, since the scale of the facilities and the volume of faculties and staff are based on it.

The expected number of students for VJU was estimated based on recent data on the number of students who entered VGU, USTH and member universities of VNU. The revenue/expenditure plan for VJU was prepared by taking into account revenues such as tuition fees, lease/rental fees, endowment and expenditures such as administration and management costs, operation and maintenance and personnel costs.

Variable factors such as the number of entrants are estimated along with the completion schedule of facilities consistent with the three stages of the development schedule.

The outlines of revenue, expenditure, and profit or deficit for one year are described. In case of a deficit, financial support should be provided. A 10-year cashflow is prepared to see changes due to student growth, building and facility expansion and cost escalation.

Firstly, Vietnamese legal conditions on commercial facilities within the university are summarized as below.

11.3.1. Vietnamese Legal Conditions on Commercial Facilities

(1) Commercial Facilities within University

Based on the Laws on enterprises, investment and other relevant regulations, with a purpose of providing training activities, higher education institutions have the right to establish companies to operate the commercial facilities off-campus, production systems, and offices.

In regard to supporting commercial facilities inside the VJU campus site, one of the conditions for permission of training activities is having land, facilities, equipment, dormitories, and physical education facilities serving the demands for those training activities (Article 23 of HE Law).

Vietnamese law only provides general regulations specifying some compulsory kinds of facilities. VJU must have the facilities satisfying the requirements of the training program and science and technology activities such as: conference rooms, libraries, test labs, workshops, etc.; and canteens and constructions serving the recreation, sports, cultural activities, and services, as well as medical facilities serving the managers, lecturers, and students (Article 29.5 of Decree 73).

VJU should be an information and documentation center which manages, supplements and supplies information sources and materials on domestic and foreign sciences and technologies in the university's operation fields; collect and preserve books, journals, tapes,

discs and theses which have been stored at the University, VJU publications and other archives; and guide and manage the intellectual property work of the university (Article 19 of Decision 61).

As mentioned above, the residential area for each student is required to be at a minimum of 3m² per student. The library should meet the requirements of training in reading rooms, an information research room, source of textbooks, lecture courses, and related materials, computers, software and equipment for borrowing and searching reference documents.

The canteens certainly must ensure the hygiene and food safety for all food and drinks supplied and is subject to the quality control of a State agency under the relevant laws.

Vietnamese law does not mention the transportation system anywhere as a compulsory kind of facilities within the university.

(2) Commercial Facilities Annexed to the University

On the other hand, based on the Law on enterprises, Law on Investment and other relevant regulations, with a purpose of providing training activities, higher education institutions have the right to establish companies to operate commercial facilities off-campus, production system, and offices.

The commercial facilities annexed to the university may include hotels, restaurants, workshops, hospitals, rehabilitation centers, etc. which can be revenue sources for VJU.

In regard to supporting commercial facilities outside the VJU campus site, VJU is entitled to establish enterprises, production and business establishments with the purpose of serving training activities (Article 19 of Decision 61, Article 44 of Decision 58).

Enterprises and/or business establishments required to be established by VJU according to the Law on enterprises, Law on Investment and relevant regulations. There are a number of examples in this respect.

The Hoang Long Hotel, a commercial facility annexed to the Hanoi Tourism College, conducts business activities related to the field of hospitality education of the College with the mission of creating a professional practice environment for students. The Hoang Long Hotel performs an independent accounting regime as assigned by the Rector, has its own seal and bank account.

In 2013, FPT University, a private university, established a non-profit company named FPT Technology Innovative Company (FTICO) with the mission of promoting and facilitating student projects to make them come true. The company will invest in the business ideas of students and also gives them the opportunity to work on real projects. Each group of students will be directly guided and supervised by an experienced project manager, and be paid corresponding to actual contribution.

By the consent of the Ministry of Education and Training on 24th Mar 2008, Hanoi University of Science & Technology, a public university, has announced the establishment of Bach Khoa Hanoi Technology Investment and Development One Member Company Limited (BK-HOLDINGS). This is the first business model in a university in Vietnam.

The objective of the company is for resource mobilization of government, organizations and individuals, domestic and foreign enterprises, to participate in the research process, incubator and commercialization of Science and Engineering technology products of the university. Scientists have become the subject of capital contribution, wisdom and effort to build the business.

Activities of this Company include:

- Investment ventures, association, share capital contribution to the businesses.

- Mobilizing and managing capital for the incubator and commercialization of technology products from the Hanoi University of Science and Technology.
- Providing training services to adapt skills and update knowledge as required of society.
- Providing other services: Technology Consultant & Transfer, investment consultant, management consultant, financial consultant, entrusted investment capital from organizations and individuals in and outside the country, deployed business activities.

Based on the above factors, VJU main sources of income are considered to be: 1) income from admission and tuition fees from students, and 2) income from commercial spaces. The revenue from commercial space is in the form of rent or profit share, which is assumed to be used to operate cafes, restaurants, and shops as well as dormitory and transportation services.

11.3.2. Revenue from Tuition and Admission Fees

With governmental budget and subsidies, national HEIs are able to enjoy partial independence in its financial statements. Although they are permitted to determine the amount of expenditure related to operations on one hand, the standard of tuitions and admission fees, which are the primary financial sources, are regulated. In contrast, private universities are free to set revenue and expenditure and enjoy complete independence in its financial statements. However, it is also possible to suffer a shortage of revenue from tuition fees.

Despite VJU being a national university under VNU, it is a new university with a self-supporting accounting system. Until VJU has established its reputation, tuition and admission fees must be supplemented. Once the reputation is established, tuition fees can be set higher according to the standards.

Revenue from tuition fees is calculated based on the number of students admitted to VJU including the admission fee. It should be noted that the number of students for the calculation of revenue excludes scholarship students, which is calculated as a certain percentage of the number of students to the University.

The assumed annual number of students admitted in the periods 2016-2019, 2019-2022 and 2022-2025 are shown below.

Table 11-10 Number of Students in VJU

Year		First Stage (2016-2019)		Second Stage (2019-2022)		Third Stage (2022-2025)	
Type of Student		Local	Overseas	Local	Overseas	Local	Overseas
No. of Ph.D. Students				96	12	528	42
	Scholarship			12(10%)		30 (5%)	
No. of Master's Students		104	8	372	60	1,605	105
	Scholarship	48 (30%)		48 (10%)		90 (5%)	
No. of Undergraduate Students				1,212	48	3,147	273
	Scholarship			140 (10%)		180 (5%)	
Total (No. of Students with Scholarship)		160 (48)		2,000 (200)		6,000 (300)	

Source: JST

The development scheme of VJU is staged into three phases and available classrooms for students of each stage are determined by the completion of each university building. Therefore, the method of calculation is based on stages (the same numbers will be applied for each year during each stage).

Annual tuition and admission fees are summarized in the next table. Although there is usually a certain difference between social science and natural science, the mean number is used.

Social science provides better employability with distinguished students and hence is popular among students. In addition, the cost for education and research has no overhead costs for experiments and materials unlike in natural science. Thus, the tuition fee for social science is rather profitable for the university. In the case of natural science, the level of tuition fees should be carefully examined since training costs for students are much higher than that of other subjects. For some fields in natural science, specific support from the government and private companies can be considered according to needs. If there is a significant gap in support amongst the departments, it needs to be filled by means of scholarship and so on.

The assumed amount of tuition and admission fees/annum for each stage is summarized in the following table:

Table 11-11 Unit rate of VJU Tuition and Admission Fees

(Unit: US\$/student/annum)

Year Level of Courses	2016-2019		2019-2022		2022-2025	
	Local	Overseas	Local	Overseas	Local	Overseas
Student Background						
PhD Programs	-	-	3,500	7,000	5,000	10,000
Masters Courses	2,000	4,000	3,500	7,000	5,000	10,000
Undergraduate Courses	-	-	3,500	7,000	5,000	10,000
Admission Fee	2,000	4,000	3,500	7,000	5,000	10,000

Source: JST

Based on the assumptions shown in the above tables, revenue from tuition fees and admission fee are summarized below:

Table 11-12 VJU Tuition and admission fees (per annum)

(Unit: US\$)

Year Level of Courses	2016-2019		2019-2022		2022-2025	
	Local	Overseas	Local	Overseas	Local	Overseas
Student Background						
PhD Programs	-	-	336,000	84,000	2,640,000	420,000
Masters Courses	208,000	32,000	1,302,000	420,000	8,025,000	1,050,000
Undergraduate Courses	-	-	4,242,000	336,000	15,735,000	2,730,000
Admission Fee	104,000	16,000	1,823,500	322,000	8,825,500	1,340,000
Total	312,000	48,000	7,703,500	1,162,000	35,225,000	5,540,000

Source: JST

11.3.3. Revenue from Space Rental for Student Service Areas

Since the operation of restaurants, cafés, shops, dormitories, conference halls, and transportation services will be contracted to private companies, revenue will consist of rents for space and the share of operation income. (It should be noted that the term “revenue” is used for revenues to VJU Fund, and the term “income” is used for the revenue of commercial activities.) According to the recommendations in the section of “Operation and Commissioning plan for commercial area”, it is assumed that rent revenues come from restaurants, cafés and shops, and shared income from dormitory and transportation services.

In order to receive rents or shared income from private companies, profits should exist with commercial activities. The feasibility of the operations of restaurants, cafés, shops, and dormitory and transportation services are examined in the following way:

(1) Income of Facilities for Light Meals, Eating and Drinking

Rent which keeps restaurant operation profitable is decided in the following ways:

- Operation income was calculated based on the number of seats, and average spending per seat incorporating a turnover ratio. It is assumed that restaurants and cafés have no use fee; therefore all students and visitors will have free access to them. Turnover ratio

was calculated based on the forecast number of users divided by the number of available seats.

Operating costs before rent payment, including the following is calculated as follows:

- Personnel cost was calculated based on the required number of personnel and the cost to the company per person.
- Material cost and other expenses were assumed to be 15% of operating income.

Operating profit before rent and income share payment was calculated from the operating profit before rent and income share.

Also, the return on the initial cost is verified to exceed 10% (i.e., if the term of lease is ten years, 10% per year is the minimum).

3% escalation of rents was assumed.

1) Income

The income of restaurants and cafés was calculated in the following way:

- Number of restaurant and café users is estimated based on a portion of students, though restaurants and cafés are open to everyone.
- Based on the number of restaurant and café users and the number of restaurant and café seats, seat turnover ratio was calculated.
- Based on the assumption of daily spending per seat per day at different restaurant and café, average daily spending per seat was calculated.
- Based on the above, restaurant and café operation income was calculated.
- Simulation of income and expenditure of the restaurants and cafés was compared with that of VNU-HN.

The following table summarizes the assumptions.

Table 11-13 Assumption for café and restaurant

Assumption Item	Café	Restaurant	Total /weighted average	Café	Restaurant	Total /weighted average	Café	Restaurant	Total /weighted average
	2016-2019			2019-2022			2022-2025		
Number of students ①	-	-	160	-	-	2,000	-	-	6,000
% of students user②	-	-	82%	-	-	82%	-	-	82%
Number of seats ③	23	78	101	291	970	1,261	871	2,899	3,770
Turn over (times) ④ =①*②/③	1.3			1.3			1.3		
Daily spending per seat (VND/seat/day) ⑤	20,000	40,000	-	21,855	43,709	-	23,881	47,762	-
Average daily spending per seat (VND /seat/day) ⑥=④x⑤	26,000	52,000	46,176	28,411	56,822	50,259	31,045	62,091	54,919

Source: JICA Study Team

The average daily spending is higher because of the higher quality of food and delivery of services of the restaurants and cafés at VJU compared with the existing restaurants and cafés at VNU-HN.

Table 11-14 Average spending in the existing cafés and restaurants in VNU

	VNU
Average daily spending per seat (VND/seat/day)	25,000

Source: JICA Study Team

The assumption for the number of seats per student and the floor area for each stage are shown below:

Table 11-15 Number of Seats for Each Stage, the Amount of Consumption per Student

Assumption item	Stage 1	Stage 2	Stage 3
No. of students	160	2,000	6,000
No. of students using café & restaurant (82%)	131	1,640	4,920
Total number of seats	101	1,261	3,770
Total floor area (m ²)	78	970	2,900
Expenditure per seat Expenditure X 1.3 (Seats turnover rate)	46,176 VND	50,259 VND	54,919VND
No. of operating days	321days		

Source: JICA Study Team

2) Running Cost for Restaurant

Personnel cost was calculated based on the number of people and with the private sector pay-scale assumptions. The number of personnel was calculated using the ratio of one employee per 20 seats. This is the same ratio as VNU-HN restaurants. The number of employees may not be sufficient for a full service restaurant; however, it should be enough for canteen service.

Material and other expenses were assumed at 15% of operating income.

Table 11-16 Assumptions for Restaurant Operating Costs

Assumption item	Stage 1	Stage 2	Stage 3
No of seats	101	1,261	3,770
No of Seats/ personnel	20		
Number of personnel (Manager/others)	6 (1/5)	64 (2/62)	189 (3/186)
Personnel cost per person (Manager/others) VND million /Year	76.8/38.4	88.9/44.4	102.9/51.4
Material and other cost (% of Income)	15%		

Source: JICA Study Team

3) Initial Investment

The initial cost for the restaurant includes kitchen equipment such as refrigerators, gas ranges, tableware, consumables, advertisement costs, and personnel costs for training before opening.

The return on the initial investment cost will be checked to see if operations can recover the investment. Since the restaurant interior and tables are provided to private companies, initial investment is smaller than usual; therefore the return on investment should be higher than usual.

Table 11-17 Assumptions for initial cost for café and restaurant

Assumption Item	Stage 1	Stage 2	Stage 3
Kitchen Floor area (m ²)	78	970	2,900
Unit cost (VND million / m ²)	3.4	3.7	4.0
Initial cost for kitchen etc. (VND million)	265	3,604	11,773

Source: JICA Study Team

4) Operating Income, Cost, and Rent

The following table summarizes the first year operating income and costs other than rents, and the rents to private companies. The rent is the rent revenue to VJU (assumed 0.7 million / m²).

It shows the return on the initial cost for kitchen exceeds 10% per year.

It is assumed that the rent includes utility costs since separate utility meters for restaurants and cafés are not originally available.

Table 11-18 Initial Income, Expenses, and Rents of Café and Restaurant

(Unit: VND million)

Assumption Item	Stage 1	Stage 2	Stage 3
Operating income	1,455	19,773	64,598
Operating expenses excluding rent	791	9,593	31,498
Rent Expenses (VJU rent revenue)	655	8,903	29,087
Total Expenses	1,446	18,496	60,585
Operating profit	9	1,277	4,013
1 st year return on initial cost (%)	3%	35%	34%

Source: JICA Study Team

The above results show that cafés and restaurants will generate sufficient operating income to pay back the initial investment. Alternatively, it is possible to outsource and earn the rent. However, at the first stage, the capital investment needs to be made by the VJU side.

(2) Shops of Students Service Area

Different rents for shops such as a book shop and a shop for VJU goods and stationary are applied to local shops and other shops around the project site.

1) Operating Income

Operating income of shops was calculated by the number of the visitors (students and visitors from outside) to shops and was adjusted by spending per customer. The adjusted spending per customer was calculated by multiplying the average purchase amount per person and the percentage purchaser out of shop visitors.

Since it is likely that students and visitors will make purchases at various shops in the VJU campus in HHTP, the new VNU campus site and the Satellite campus, it is assumed that 20% of students will make purchases at HHTP and the new VNU campus site where there are not as many activities, while at the Satellite campus a slightly higher purchase percentage will be expected (30%).

For the purpose of simulation, it was assumed that 25% of total students use the shops. Annual escalation in average spending was assumed to be 3%.

Table 11-19 Assumption for 1st Year Income of Shops

Assumption Item	Stage 1	Stage 2	Stage 3
Total student number	160	2,000	6,000
Purchasing students (25%)	40	500	1,500
Average spending per customer (VND)	15,000	16,391	17,911

Source: JICA Study Team

2) Running Cost for Shops

It was assumed that each of the following rooms would have one person for operation and costs of goods and other expenses were assumed at 20% of income.

Table 11-20 Assumptions for Cost for Shops

Assumption Item	Stage 1	Stage 2	Stage 3
Total no of shops	2	5	10
Average size of shop (per / m ²)	20		
Number of personnel (manager/others)	2 / 4	5 / 10	10 / 20
Personnel cost (manager/others) VND million /Year	76.8 / 48	88.9 / 55.5	102.9 / 64.3
Goods and expenses (% of Income)	20%		

Source: JICA Study Team

3) **Operating Income and Rent**

Operating income share of VNU is currently VND 1 – 2 million per month per m² for shops inside the VNU campus, which is similar to the rent for existing shops at VNU-HN, which rates used are VND 1.33 – 1.66 million / m², while the offering price for rent outside of the VNU campus (Xuan Thuy St.) is around VND 0.5 – 0.6 million / m².

The current rental price of the Hoa Lac area is less than VND 0.1 million; however it is predicted that the rental cost at the time of the operation stage is much higher than this.

The operating income, expenses, and rent amounts for shops at the campus in HHTP, VNU new campus site and the satellite campus are summarized below.

For the purpose of simulation, the rent revenue to VJU was assumed as 0.7 million/m².

Table 11-21 Operating Profit / Annum for Shops

(Unit: VND million)

Assumption Item	Stage 1	Stage 2	Stage 3
Operating income	187	2,557	8,382
Operating expenses excluding rent	37	511	1,676
Personnel costs	346	1,000	2,316
Rent for local shops (VJU rent revenue)	336	918	2,006
Total Expenses	719	2,429	5,998
Operating profit	-532	128	2,384

Source: JICA Study Team

This shows a positive operating income from the second stage, and it is therefore possible to outsource and earn a rental fee. Observe that the existing shops on the VNU campus are selling more variety of goods than a typical Japanese “convenient store”, showing a great need for retail shops.

(3) **Revenues from Dormitory Operation**

Revenue comes from a share of dormitory operation income.

It should be noted that dormitory operations at the VJU HHTP and new VNU campus site are combined with the existing new VNU campus site dormitory operation at the site. Therefore, the existing dormitory fees and amenity fees will be considered as a source of revenue for VJU operations.

Revenues were calculated based on the assumptions of capacity for dormitory, accommodation fees, and utilization rates. Current accommodation fees were assumed for the combined operations for the VJU new campus site and a higher accommodation fee for VJU HHTP was applied.

Amenity fees including laundry, security, and Wi-Fi were included within the dormitory fee and a 3% per year escalation was assumed for both the accommodation fee and the amenity fee.

1) Dormitory Income

Since VJU HHTP and the VNU campus site is not in downtown Hanoi, the majority of students tend to stay in the dormitory. Accordingly, high capacity utilization is assumed as shown below.

Table 11-22 Capacity Utilization

Assumption Item	Stage 1	Stage 2	Stage 3
No. of students	160	2,000	6,000
Ratio of students using dormitory	50%	60%	70%
Number of students using dormitory	80	1,200	4,200
No. of students (Vietnam)	72	1,080	3,780
No. of students (Foreigner)	8	120	420
Total revenue	672	11,014	42,126

Source: JICA Study Team

It should be noted there is no tariff increase per year taken into consideration for the base case based on the assumption that it may be difficult to raise them again soon.

2) Running Cost for Dormitory

Personnel costs are divided into manager class and workers for dormitory such as cleaning, security, and handyman. The manager class is assumed based on the current situation in the dormitories of VNU in that they have three major departments; Administration, Accounting and Facility Management, and has two management units to supervise daily activities.

Table 11-23 Personnel, Rent and Maintenance Cost of Dormitory

Assumption Item	Stage 1	Stage 2	Stage 3
Number of personnel (manager/worker)	2 / 10	5 / 37	15 / 128
Personnel costs (manager/worker) VND million / year	76.8 / 28.8	88.9 / 33.3	102.9 / 38.5
Total personnel costs VND million/year	442	1,662	6,477
Rent for dormitory (VJU rent revenue)	475	7,789	29,789
Maintenance cost	70	1,043	3,652
Total Expenses	987	10,494	39,918

Source: JICA Study Team

3) Income Share

Based on the above cost, the shared income payable to the VJU Fund was calculated.

Table 11-24 Revenues and Profit for Dormitory Operation

Assumption Item	Stage 1	Stage 2	Stage 3
Number of rooms (local students) for four students	18	270	945
Number of rooms (foreign students) for two students	4	60	210
Size of room (m ²)	30		
Dormitory fee (local students) VND million / year	480	7,867	30,090
Dormitory fee (foreign students) VND million / year	192	3,147	12,036
Total Revenue (VND million)	672	11,014	42,126
Operating profit (VND million)	-314	520	2,208

Source: JICA Study Team

Similarly with other services, a sufficient profit is not expected during the first stage, but it is likely to generate a positive profit from the second stage on. Therefore, it is possible to operate dormitories in VJU by themselves as VNU currently does. However, for the purpose of the cashflow calculation, only the rent was calculated as revenue.

(4) Revenues from Transportation Services

It should be noted that transportation operation between the Hanoi Satellite campus and Hoa Lac (HHTP and VNU new campus site) is a shuttle operation between the sites. Therefore, the transportation fee will be considered as a source of revenue for the VJU Fund.

Revenues are calculated based on the assumptions of capacity for vehicles, tariff, and utilization rate.

A 3% per year escalation was assumed for both tariffs.

The tariff for the Shuttle bus between HHTP and VNU new campus is assumed to be set to cover the initial cost and operating costs, therefore the tariff is not considered as a source of income of transportation operations.

1) Income

Since a majority of students will stay in dormitories, a minority of students tends to use the shuttle bus, but visitors and staff are relatively more likely to use the shuttle bus between the Satellite campus and the Hoa Lac area. Accordingly, a different capacity utilization was assumed as shown below.

Table 11-25 Capacity Utilization of Transportation

Assumption Item	Stage 1	Stage 2	Stage 3
No. of Students/No. of Staff	160/53	2,000/306	6,000/680
Ratio students using bus (Ratio of Students / Staff)	40%/40%	40%/60%	40%/60%
No. of students using bus / No. of staff using bus	64/21	800/184	2,400/408
Tariff of bus (students / staff)	12,000 / 18,000	13,113 / 19,669	14,329 / 21,493
Total revenue (VND million / year)	359	4,400	13,465

Source: JICA Study Team

Compared to the ordinary bus fares, those operating to Hoa-Lac campus were set considerably low, since the shuttle bus was considered as a part of service for student and staffs of VJU rather than business.

2) Transportation's Cost

Personnel cost for transportation was assumed for the number of buses operating and the shifts of the drivers and those who were working in support and managerial aspects.

Fuel consumption was also calculated based on the distance between Hanoi and the Hoa Lac area and the rotation of bus services.

Table 11-26 Personnel Cost for Transportation

Assumption Item	Stage 1	Stage 2	Stage 3
Number of buses (including one stand by)	2	5	10
Number of shifts	2	2	2
Number of trips between Hanoi and Hoa Lac area	8	3	3
Number of drivers	4	11	23
Number of staff (Admin. Accounting, Mechanics, Manager)	5	6	11
Total Personnel Cost (VND million)	809	1,788	4,163
Distance (km)	5	30	30
Total length of transportation	320	900	1,620
Distance / liter (km)	10	10	10
Amount of fuel (liter)	32	90	162
Fuel cost (VND / liter)	25,570	27,941	30,532
Total fuel cost (VND million / year)	255	785	1,543
Maintenance and operation cost	36	440	1,347
Total cost for transportation	1,100	3,012	7,052

Source: JICA Study Team

3) Income Share

Based on the above personnel cost, fuel cost and maintenance cost, the shared income payable to the VJU Fund was calculated.

Table 11-27 Income Share

(Unit: VND million)

Assumption Item	Stage 1	Stage 2	Stage 3
Investment cost for transportation services	10,500	26,250	52,500
Operating profit	-741	927	4,284
Ratio of income share			33.2%
Amount of income share	0	460	2,129
Repayment (year)	-	35	13

Source: JICA Study Team

Under the current low bus fare, it is hardly expected to generate a positive income share in the first stage, and unlikely that the initial investment will be initially gained back even in the second stage. Therefore, it is advisable to outsource the service to private or public bus companies rather than running by themselves. It should be noted that the fare assumed in the estimation can only be achieved with government subsidies to the operation cost.

11.3.4. Revenue from Space Rental for Research and Industry - Academia Collaboration

The basic concept of VJU is not only to develop facilities from private initiatives but also to strengthen the cooperation with private sector, which can enable student supporting services (such as canteen, shops, and dormitories) for both students and teaching staff, along with improving the university's revenues from rental income of the space provided in the student services area, with an aim to have sustainable development.

On the other hand, VJU can purchase the design, construction, and management services of the facilities that utilize private funds in research and industry-academia collaboration facilities, and offer space constructed by either ODA or private funds; thus income can be generated from facilities' rental fees.

Method of using the facilities in research and industry-academia collaboration facilities are mainly divided into 2 types as explained below. However, it is assumed that each facility has operating revenue as well as the ability to provide services.

- VJU Direct Management-Commission Type:
A method of collecting usage fee from private contractors that rent the spaces and facilities developed by private or ODA funds and directly managed by VJU.
- Rent-Collecting Type:
A method of collecting rental fee of facilities that are designed and constructed by private sectors by having them continue to operate and manage the facilities.

The subject facilities, the rentable area from the total floor space, and the assumed income types are summarized in the table below.

Table 11-28 Subject Facilities, Rentable Area and Assumed Income Type

	Facilities	Project Finance	Management Type	Total Floor Area (㎡)	Rentable Area (㎡)	Assumed Income Type
Satellite Campus						
	E-library	Private Funds	VJU Direct Management-Commission Type	5,000	2,500	E-Journal, e-book, DVD rental, bookstore, TV meeting room
	Satellite Campuses in Hanoi	Private Funds	VJU Direct Management-Commission Type	15,000	5,000	Research rooms and common chemical laboratories
		Private Funds	Rent-Collecting Type		2,500	Rental laboratories
	Center of Industry-Academia Collaboration	Private Funds	Rent-Collecting Type	15,000	15,000	Conference rooms, exhibition space, career center, study abroad support center, convention hall
	Student Communication Center	Private Funds	Rent-Collecting Type	5,000	2,500	Student support service (welfare)
HTTP Campus						
	E-library	ODA	VJU Direct Management-Commission Type	5,000	5,000	Media lounge, PC station, TV meeting room, 3D printing
	Center of Industry-Academia Collaboration	ODA	VJU Direct Management-Commission Type	5,000	5,000	Conference rooms, exhibition space, career center, study abroad support center, convention hall
	Center of New-Businesses and Industrial Development	ODA	VJU Direct Management-Commission Type	10,000	10,000	Core laboratories, common chemical laboratories, rental laboratories, technology incubation rooms
	Student Communication Center	Private Funds	Rent-Collecting Type	5,000	2,500	Student support service (welfare)
VNU New Campus						
	E-library	Future Investment	VJU Direct Management-Commission Type	10,000	10,000	Media lounge, PC station, web service, archive center, digital seminar room, bookstore, TV meeting room
	Student Communication Center	Private Funds	Rent-Collecting Type	10,000	10,000	Student support service (welfare)
			Total	85,000	67,500	

Source: JICA Study Team

The basis for facilities rental fee calculation is shown in the table below.

Table 11-29 Basis for Facilities Rental Fee Calculation

Item	Monthly Unit Price (㎡)	Annual Unit Price (㎡)	Facility Usage Unit Price (㎡) With 3% Annual Escalation	Utilization Rate
Average rent around VNU	US\$ 25.-	US\$ 300.-	—	—
VJU Direct Management-Commission Type (90% of the average rent)	—	US\$ 270.-	US\$303.88	70%
Rent-Collecting Type (60% of the average rent)	—	US\$ 180.-	US\$202.59	70%

Source: JICA Study Team

11.3.5. Calculation Basis for Endowments and Scholarships

Depending on the requirements of each scholarship or subsidy program, selecting students to receive scholarships or subsidies shall be under the proposal of the Council or through the collective opinion of teacher, faculty, departments and organizations of educational institutions.

The endowment to the educational institution includes voluntary non-refundable financial assistance resources from the capital sources apart from state budget of domestic and overseas organizations and individuals in two forms as follows:

- In Cash (including Vietnamese Dong, foreign currencies) or via their accounts at the State Treasury or commercial banks.
- In Kind (specifically books, notebooks, clothes, food, foodstuff, materials, teaching equipment and appliances and other kinds having a useful value and meeting the demands of learners and educational institutions).

Values of donated amounts and kinds must be monitored and recorded in accounting books of the educational institutions.

In any form and from any donor, the endowment must enhance physical foundations, support teaching-learning activities as well as educational activities.

Educational institutions neither regard the endowment as a condition for their supply of educational service nor specify any endowment level for donors. Donors are not entitled to claim the right to exploit economic benefits arising from the endowment for educational institutions as a condition for granting the endowment.

Management and use of donated amounts and kinds must ensure a public and transparency principle. VJU should make a plan on the use of donated amounts and kinds, specifying use purposes and beneficiaries; methods of implementation, implementation schedules; quality of activities, quality of products or works together with detailed cost estimates should be in accordance with provisions on current standards and norms.

Plans on the use of financial assistance amounts must be announced and publicly posted at least 15 working days before organizing implementation to gather the opinions of teachers, staff members, students, and donors. After completing the plan above, a finalization report for completed jobs shall be prepared and publicly posted for review and assessment by students and society.

In case donors upgrade, repair or newly build, purchase new assets for educational institutions or organize teaching-learning support activities, extracurricular activities by themselves, educational institutions shall have the responsibility of guiding and helping donors with donated amounts and kinds, properly meeting the demand and suitable to development plans of educational institutions; accepting and receiving products or works performed by donors; and taking responsibility for the management, repair and maintenance in order to ensure products and works are being used effectively and for a proper purpose.

The value of donated real estate property is not distributable, and is to be managed on the principal of preservation and development, and used properly without changing the use purpose and converted into private ownership in any form (Article 66.4 and Article 67.2, Law on HEIs).

The heads of VJU (i.e., rector or director) are responsible before the law for the management and use of the endowment for VJU. VJU is required to issue reports on the receipt and expenditure of financial assistance amounts and the result of implementation, and send them to superior management agencies and donors. A division to receive the endowment of VJU should be set up with representatives from the university board and Association of Students.

Because the amount of scholarship is not specified so far, the present study calculates the amount of scholarship based on the number of students, and regards it as the amount of financial assistance from both the Vietnamese and Japanese governments and from the private sector.

Basis of calculation for the ratio of scholarship is shown below:

Table 11-30 Ratio of Scholarship Students among VJU Students

Year		2016-2019	2019-2022	2022-2025
Type of study				
No. of Doctoral course student			180	570
	Scholarship students		20(10%)	30 (5%)
No. of Master course student		112	450	1,710
	Scholarship Students	48 (30%)	50 (10%)	90 (5%)
No. of Undergraduate student			1,170	3,420
	Scholarship Students		130 (10%)	180 (5%)
Total (No. of Scholarship students)		160 (48)	2,000 (200)	6,000 (300)

Source: JICA Study Team

In the first stage, the amount of scholarship provided to students in the graduate school of sustainable development shall be 30% of the total as it aims at attracting outstanding Vietnamese students. In the second stage, the ratio of scholarship students shall be downsized to 10 % of each program although the total number of students is expected to increase after an establishment of the VJU campus in HHTP. In the third stage, as a new VJU campus in Hoa Lac is established, the total number of students will reach 6,000, of which 5% will receive some form of scholarship.

The amount of scholarship as shown in the following table was calculated based on the unit value of admission fees and tuitions in table 11-11.

Table 11-31 Calculation of Tuition and Admission Fee for Scholarship Students per Year

Unit: US\$

Course	Year	2016-2019	2019-2022	2022-2025
Doctoral Course		-	42,000	150,000
Master Course		96,000	168,000	450,000
Undergraduate		-	490,000	900,000
Admission		48,000	220,500	500,000
Total		144,000	920,500	2,000,000

Source: JICA Study Team

It should be noticed that transfer students from other universities are not involved, and therefore an enrolment fee is only received at the beginning of the first year of study.

Donations could be endowments, contribution, and financial support from individual, groups, or companies, as well as donations from parents and alumni in the future. The ratio of endowments and donations in the university revenue in developed countries including Japan are slightly different based on the country's taxation system, the university's tradition, and the area of academic studies, and the European and American universities which are said to be international universities (Harvard, MIT, Yale, Oxford, Cambridge), National University of Singapore and the Hong Kong University of Science and Technology, the percentages of income from endowments and donations are 30% - 70% of the total income.

Therefore, it was assumed that 40% of tuition fees were added to other revenues as the amount of endowments and donations from individuals, private companies and organizations, holding of lectures, study and research contracts, research grants and joint research funds.

11.3.6. Base Case Assumptions (Expenditures)

(1) Personnel Cost

Based on the planned organization of the VJU operations, personnel costs including benefits, etc., was calculated. Different costs per person were used for the VJU staff between national staff and foreign staff.

While the timing of employment by VJU is uncertain, it is assumed that the pay-scale of the VJU staff will be revised at the time of the university opening.

Table 11-32 Number of personnel for VJU

Assumption Item	Stage 1		Stage 2		Stage 3	
	Vietnamese	Foreigners	Vietnamese	Foreigners	Vietnamese	Foreigners
Number of academic staff	32		200		600	
	14	18	152	48	470	130
Managerial level and professors	4	5	20	10	36	30
General teaching staff	10	13	132	38	434	100
Number of supporting staff	21		140		420	
	16	5	112	28	378	42
Managerial staff	4	2	12	8	48	10
General supporting staff	12	3	100	20	330	32
Total	53		306		680	

Source: JICA Study Team

At the initial stage, the ratio of foreign academic staff is relatively high, but will be gradually replaced by local staff. Note that, it is also necessary to keep recruiting outstanding foreigners so that VJU holds an international reputation.

Although the common understanding of the pay-scale for the managerial staff in the public sector is considered to be around VND 7,800 million/year, the pay-scale of Director for VJU has been made slightly higher than this norm in order to attract competent personnel who will deal with multi-disciplinary roles including the promotion of VJU, business administration, accounting, education and research capacities. It is also important to offer an attractive compensation as well as educational and residential environment since the working and residing areas for those assigning for VJU will be away from the cosmopolitan urban setting like Hanoi.

Table 11-33 Pay-Scale of Personnel

Assumption Item	Stage 1		Stage 2		Stage 3	
	Vietnamese	Foreigners	Vietnamese	Foreigners	Vietnamese	Foreigners
	VND million	JPY million	VND million	JPY million	VND million	JPY million
Academic staff						
Managerial level and professors	865	9.60	1,001	9.60	1,159	9.60
General teaching staff	577	7.68	668	7.68	773	7.68
Supporting staff						
Managerial staff	676	8.64	783	8.64	906	8.64
General supporting staff	451	5.76	522	5.76	604	5.76

Source: JICA Study Team

It should be noticed that an annual increase rate of salaries for faculties and staffs was uniformly assumed at 5%.

(2) General Expenses

General expenses are estimated as a percentage of personnel cost.

Higher percentages are used for education, research and development, since VJU focuses on research oriented education. Maintenance costs of equipment including utilities such as ICT facilities, and audio visual equipment were estimated separately and were included in the maintenance cost.

Table 11-34 General expenses (% of personnel cost)

Assumption Item	% towards personnel cost
Administration, accounting, promotion, general affairs	5%
Education, Research and development	60%

Source: JICA Study Team

(3) Costs for Materials and Utilities

Recurrent costs for VJU including utility costs, fuel for generators and solid waste were calculated based on the following assumptions: Cost of material and utility.

Table 11-35 Utility cost and material cost

Assumption Item	% of personnel cost
Materials, Electricity, Water, Fuel, Gas, Waste disposal	10%

Source: JICA Study Team

(4) Maintenance Cost

Maintenance costs of services, ITC and audio visual and educational equipment including renewal cost of visual and educational programs are based on the estimates provided by suppliers. Since the first year is the supplier's defect liability period, maintenance costs are assumed from the second year and will be escalated.

Table 11-36 Maintenance Cost

Assumption Item	% of personnel cost
Electrical equipment, HVAC, AV equipment, Computers, Education equipment	10%

Source: JICA Study Team

11.3.7. Base Case Cashflow

Revenue expenditure cashflow was calculated based on the revenue and cost items as described above. The cashflow consists of three parts. One is for the main activities, which include management and general affairs, education and research, another is for the commercial area, such as restaurants, merchandising, dormitories and transportation services and the last is for effective utilization of research and industry – academia collaboration facilities.

Revenue expenditure cashflow for the main activity was calculated based on admission and tuition revenue and the costs of personnel and other expenses for activities, utilities and O&M costs.

In the base case cashflow and as mentioned above, scholarship covering tuition fees and admission fees were added to other revenue. 40% of the total revenue from tuition fees was also added to other revenue, referring donations, research grants, joint research grants and lectures provided by private companies.

The base case involving various parameters which affect revenue and expenditure cashflow will be refined in discussions with VNU. Based on the assumptions for the base case scenario, the annual cashflow for VJU at each stage is summarized as follows.

The cashflow was assumed not continuous but in stages, since the development of facilities was placed in three different sites in stages. Although the academic year in Vietnam starts in

September and ends in August, in calculation of the cashflow, the first stage was assumed to start in September in 2016 and the third stage assumed to end in August 2025.

Table 11-37 Base Case Cashflow

Unit: US\$ 1,000

Revenues and Expenditures	1st Stage			2nd Stage			3rd Stage		
	2016 – 2019			2019 – 2022			2022 – 2025		
1.Revenue Estimates	Unit: US\$1,000								
① Admission Fee	120.0	120.0	120.0	2,145.5	2,145.5	2,145.5	10,165.0	10,165.0	10,165.0
② Tuition Fee	120.0	240.0	240.0	2,355.5	4,291.0	5,575.5	16,700.0	23,800.0	27,600.0
③ Space rental/Revenue share revenue	0.0	0.0	0.0	1,965.7	6,702.2	7,119.0	10,572.2	11,666.0	12,430.9
1) Space rental for Student Service Areas	0.0	0.0	0.0	370.3	676.8	912.9	1,855.5	2,687.8	3,183.3
2) Space rental for Research and Industry – Academia Collaboration	0.0	0.0	0.0	1,595.4	6,025.3	6,206.1	8,716.7	8,978.2	9,247.6
④ Other Revenues	144.0	240.0	240.0	1,383.2	2,377.9	3,028.2	8,365.0	11,390.0	12,990.0
1) Scholarship	96.0	144.0	144.0	441.0	661.5	798.0	1,685.0	1,870.0	1,950.0
2) Endowment from Private Sector	48.0	96.0	96.0	942.2	1,716.4	2,230.2	6,680.0	9,520.0	11,040.0
⑤ Government Subsidy	390.9	1,574.7	1,828.6	533.6	994.4	1,367.3	0.0	0.0	0.0
1) Vietnamese Government	54.9	230.7	484.6	533.6	994.4	1,367.3	0.0	0.0	0.0
2) Japanese Government	336.0	1,344.0	1,344.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenue Total	774.9	2,174.7	2,428.6	8,383.5	16,511.0	19,235.5	45,802.2	57,021.0	63,185.9
2.Expenditure									
2-1. Personnel Cost	796.1	2,525.3	2,568.6	4,829.4	8,873.7	12,037.3	16,434.0	24,062.0	28,814.6
① Academic Staff	445.9	1,805.5	1,828.6	3,231.2	5,923.6	8,017.5	10,667.7	15,594.8	18,646.8
1) Local Staff	109.9	461.5	484.6	2,134.6	3,977.5	5,469.1	8,422.6	12,437.4	15,016.3
2) Foreign Staff	336.0	1,344.0	1,344.0	1,096.6	1,946.0	2,548.4	2,245.1	3,157.4	3,630.5
② Supporting Staff	350.2	719.8	740.1	1,598.3	2,950.2	4,019.8	5,766.3	8,467.1	10,167.7
2-2. General Expenses	597.1	2,146.5	2,183.3	4,105.0	7,542.7	10,231.7	13,968.9	20,452.7	24,492.4
① Administration and Management	39.8	126.3	128.4	241.5	443.7	601.9	821.7	1,203.1	1,440.7
② Education, Research, Development	477.7	1,515.2	1,541.2	2,897.6	5,324.2	7,222.4	9,860.4	14,437.2	17,288.7
③ Supply and Utilities Cost	79.6	252.5	256.9	482.9	887.4	1,203.7	1,643.4	2,406.2	2,881.5
④ Maintenance Cost	0.0	252.5	256.9	482.9	887.4	1,203.7	1,643.4	2,406.2	2,881.5
Total (General Expenses)	597.1	2,146.5	2,183.3	4,105.0	7,542.7	10,231.7	13,968.9	20,452.7	24,492.4
Expenditure total	1,393.2	4,671.7	4,751.9	8,934.4	16,416.4	22,269.0	30,403.0	44,514.6	53,306.9
VJU activities net cashflow	-618.3	-2,497.0	-2,323.4	-550.9	94.6	-3,033.5	15,399.3	12,506.4	9,878.9
Accumulative Revenue (Reserve Fund)	-618.3	-3,115.3	-5,438.6	-5,989.5	-5,894.9	-8,928.4	6,470.8	18,977.2	28,856.2

Source: JICA Study Team

As described in the cashflow, personnel costs of university staff are a big burden for VJU's management to finance. Tuition fees cover only 52% of total expenditure at the targeted fiscal year.

Note that the scholarships are added to non-operation revenue, assuming VJU accepts support from both Vietnamese and Japanese governments and private companies.

In addition, it is assumed that subsidies from the Vietnamese Government will cover 100% of the basic salary for Vietnamese academic staff during the first stage, 50% in the second stage, and 0% starting in the third stage.

As shown in the cashflow above, there are deficits in cashflow over the first and second stages. Operating income deficit accounts for around US\$ 0.5-3.0 million/annum. Therefore, Japanese ODA funding and subsidies from the Vietnamese government are essential and further funding are necessary in the initial stages in which support from private companies do not play a major role. From the third stage on, operating profits turns into a surplus with significant contribution not only from tuition fees, but also from the effective utilization of research and industry and academia collaboration facilities. The revenues from VJU's own properties such as cafés, restaurants, shops and dormitories are very limited due to the facilitating services for students and academic staff. Revenues in the cashflow will come mainly from the rent for student services and its amount is very limited.

On the other hand, the profitability of annual revenue in the third stage is still not improving and the amount of revenue tends to decline every year, primarily due to increase in the personnel cost which is caused by the increase in number of university staff and their annual escalation. Therefore, in order for the sustainable development of VJU, income from research facilities as a result of industry-academia collaboration, donations from private companies are expected to play a crucial role from the third stage in which Japanese ODA funding and subsidies from the Vietnamese government will fade out. To this end, therefore, measures to improve the profitability of VJU's own businesses are necessary.

12. Possibility of Private Sector Involvement

Income from government research grants, from private sector research and development contracts, and from donations which are more likely to support science, technology and engineering, is low in the public universities – well under 5% of total revenue in 2005.

The HERA target in Vietnam has brought up to 15% of public universities revenue, a very big shift from the current practice. Hanoi University of Technology is an example of a university which has had some success in building relationships with and earning revenues from the industry, often through the transfer of basic technology and research.

Although New Model Universities (NMUs) by virtue of the quality of their staff and facilities should be well placed to pioneer growth towards the HERA target through the supply of hi-tech services, there are not many deals from the private sector enterprises in Vietnam as of yet and it will take time to fully obtain the Governmental support to sustain research infrastructure and activities.

In terms of collaboration with the private sector, public university will possess the functions to perform scientific services, production and business (Article 59 of Law on Education), which also applies to VJU. VJU should cooperate with production-trade-service units to carry out education, scientific research and technology transfer for socio-economic development.

In implementing the activities above, VJU should look for support from the State, as well as cooperation with State institution as follow:

- To receive land allocation or rental, infrastructure allocation or rental by the State, to receive tax reductions or exemptions, to receive loans as regulated by laws.
- To associate with economic, educational, cultural, sporting, athletics, medical, and research organizations to improve educational quality, to link training with use, to serve socio-economic development and to generate extra financial sources for institutions.
- To use incomes generated from economic activities to invest in the institution's infrastructure, to expand production and business activities and to compensate for educational activities.

12.1. Basic View of Collaboration with Private Sectors

In order for VJU to be self-supporting on a market-oriented basis in due time, the maximum level of autonomy should be provided for the administration and management including curriculum formation and personnel management both from VNU and the Vietnamese Government.

Being a self-supporting university, the cost of administration, management, and construction of VJU would mainly be financed by funds from the Japanese ODA, related investments of the Japanese Government, and relevant contributions from the Vietnamese Government, and would receive the land for the VJU campus from the Vietnamese Government.

In addition to these, tuition for students would also be covered by various supportive contributions such as scholarships, endowments from endowed chairs of private companies, internships, bank financings on the schemes of PPP projects and project loans, various investments of companies for research institutes' activities, and other industry-academia collaboration activities.

Therefore, collaboration with the private sector will fundamentally be an important role of the VJU project, and it will be necessary to ask for strong support and cooperation for the project from Japanese companies and other private organizations.

12.1.1. Highly-Qualified Human Resources Development in Response to Companies' Needs

VJU will foster highly-qualified experts and engineers in response not only to the Vietnamese Government, but also to various needs of Japanese companies, related Vietnamese companies, and students. VJU will also positively support students to further study in Japanese universities.

In addition, VJU will prepare practical education, studies, and training in various fields and will also foster highly-qualified engineers, experts, and managers for companies in cooperation with good existing training programs.

VJU will also foster leading specialists/managers in the field of new businesses including M&A educations and relevant services for the reform and the revitalization of companies.

12.1.2. Merits of the Collaboration with Private Companies for VJU

- Allowing broad practical education/research including effective internship.
- Securing good and appropriate employment for students and researchers through facilitation of job seeking.
- Improvement of the quality of education and research activities through promotion of cooperative research projects under industry-academia collaboration and establishment of cutting-edge research laboratories.
- Invitations of executives, managers and engineers of Japanese companies as lecturers.
- Offering various related university services to private companies, accepting relevant investments, and securing revenues from those services.

12.1.3. Concept of Collaboration with Private Companies

The collaboration with the private sector is a main pillar of the Vietnam-Japan University project. VJU should be effectively utilized by the private sector and would be the place to accept intellectual investments easily and to develop various activities according to companies' needs.

In addition, practical education/research activities should be carried out in collaboration with private companies, and the practical fostering of human resources would raise the reputation of VJU further. In this regard, on the occasion of the development of VJU, it will be essential to promote collaboration with the private sector.

A JICA survey of major Japanese companies in Vietnam, found some indication that Japanese companies in Vietnam are already supporting high quality human resource training in the field of tertiary education such as information technology and Japanese language, in the current higher education of Vietnam. However, most companies understood that it would be certainly necessary for Japanese companies to develop the highly qualified specialists who can understand Japanese culture and the Japanese language to strengthen cooperation with the ASEAN area under the current deepening economic relationships.

Leading business groups and several big companies in Japan have already expressed an intention to cooperate with the VJU project in the field of human resources development, and moreover It was confirmed that they are considering cooperating with the development of VJU, but they are waiting for more specific information to support. It was also confirmed that a lot of Japanese companies have already expressed a positive interest and support toward the VJU project in this JICA survey.

Adding to the abovementioned condition, it is believed that the cooperation between VJU and private companies can progress more effectively by opening the necessary legal independent body for each of these two funding sources below:

- Utilization of funding from scholarships, donations, and educational institutions' endowments and endowments
- Utilization of funding from PPP for project development as well as operation and maintenance

12.2. The Establishment of VJU Fund (Tentative Name)

Regarding the development fund for the management of VJU, including the type of support from the private sector for operation costs in education and research activities, such as scholarship and endowed courses, differs from the investment of private business operators based on funding for facilities' construction such as in a PPP program. Therefore, rather than leaving these activities to a legally independent body such as private sector's Special Purpose Company (SPC), the Vietnam-Japan University Fund (tentative name, hereinafter referred to as "VJU Fund") will be established following the VNU Development Fund (VNU-F) which was established during the initial stage of VNU-HCM.

Vietnamese laws do not provide regulations on the establishment and operation of university funds, except this requirement for private universities: *"Deduction of at least 25% of revenue for the university's investment development fund and other deductions for other funds according to resolutions of the Board of Directors and Shareholders' General Meeting"* (Article 30.2 of Decision 61/2009/QĐ-TTg amended). As to the legal lack on this matter, VJU can learn from the operation of the HCM National University Development Fund ("VNU-F") in practice.

This VNU-F was established under a decision of Ho Chi Minh City People's Committee, as a division of VNU-HCM, and is an independent legal entity. VNU-F has its own seal and account in a bank and state treasury, and a head office in VNU-HCM. The initial capital of VNU-F came from donations from alumni, organizations and individuals inside and outside Vietnam, and voluntary contributions from society to support students and lecturers of VNU-HCM. This initial capital was used to cover costs related to education, training, and development of facilities serving the activities of teaching and learning. VNU-F has since then mobilized new financial sources for its activities in the way of indirect investment through contributing capital to companies, developing science and technology enterprises inside and outside of VNU-HCM, and conducting business activities based on the technical strength of the VNU-HCM. VNU-F manages its finance, expenses and is responsible for the financial operations and takes responsibility before the State Authority and VNU-HCM on its entire operation, and performs the accounting and financial system in transparent manners.

12.2.1. VJU Fund Establishment Purpose

The VJU Fund aims at broadening education and research activities and covers a wide range of needs from students and companies. It does not focus on profitability or investment opportunities. Japanese companies show an interest to the establishment and support to the VJU Fund as a platform for sustainable interrelation between education/research activities in VJU and a dynamic changing market.

In the future, the VJU Fund is expected not only to play a role as a university fund, but also to deal with finances closely related to private sectors such as research grants and joint research. It is necessary to be a legally independent entity and disclose financial statements

to supporting companies. To this end, the VJU Fund shall be a legal entity with an independent bank account from the university. It is important to develop the fund as an independent organization on equal terms for attracting more private sector investments and donations, not under the university like VNU-HCM in the future.

Therefore, while maintaining a mutually complementary relationship with the university, the VJU Fund must be developed as an autonomous organization providing management and services on behalf of VJU, providing scholarships to students, coordinating with companies for internships or job placement, and comprehensively supporting study abroad programs funded by private companies and education and research activities in VJU.

At the stage of the feasibility study, it is necessary to conduct a study of prospective partnerships with the private sector and potential sources of funds, to implement promotion measures, and to plan and establish the VJU Fund, as well as to effectively use of financial resources.

12.2.2. Form of VJU Fund's Establishment

VJU would hopefully be provided its autonomy/independence under the umbrella of VNU-HN. Aiming for endowed chairs under this condition, it is advisable for VJU Fund to support the implementation of the VJU establishment and to promote its sustainable development and smooth running.

VJU Fund would be considered as a subsidiary organization or an independent legal entity established in stages. The VJU Fund and VJU, making a cooperation agreement, can support the construction and the current management of VJU as well as the training of highly qualified specialists and technical experts, the promotion of industry-academia collaboration, the construction of laboratories, the securing of supports and investments of private companies and related services. Since a university is prone to have various institutional restrictions imposed on its activities, it is recommended to establish VJU Fund in order to practice international level education and organizational framework with flexible and interdisciplinary research activities.

VJU Fund should be responsible not only for the expansion of education and research, but also for activities enhancing dynamism and attractiveness. For example, promoting sport events such as soccer tournaments for younger generations or scientific educational and entertainment events (edutainment).

The types of for-profit and non-profit legal entities available in Vietnam are described as follows:

(1) For-Profit Legal Entities

For both domestically- and foreign-invested enterprises, there are three main company forms:

- A single-member limited liability company ("SLLC").
- A multiple-member limited liability company ("MLLC").
- A shareholding company ("SC"), also referred to as a joint stock company ("JSC").

The key difference between an SLLC/MLLC and a JSC is the ability of a JSC to mobilize capital by the sale of shares and securities. Furthermore, a company that wishes to list on a public securities exchange in Vietnam or conduct a public offering must be a JSC. In general, shareholders of a JSC have the right to freely assign their shares. In contrast, in an SLLC/MLLC, the assignment of charter capital (equity) is subject to the right of first refusal by the

members. In general, the corporate governance structure of a JSC is more complex than that of an SLLC/MLLC.

Table 12-1 Comparison of Legal Entities

SLLC	MLLC	JSC
Investors and their investment intentions		
<ul style="list-style-type: none"> • The sole investor may be an organization or an individual • Cannot be listed 	<ul style="list-style-type: none"> • Two or more investors/members (maximum of 50 members) who may be organizations or individuals • Cannot be listed 	<ul style="list-style-type: none"> • Three or more investors (no upper limit) who may be organizations or individuals • May be a “public company” (more than 100 shareholders or has made a “public offer” via mass media) and therefore subject to higher disclosure and other requirements • Can be listed
Capital or form of equity investment		
<ul style="list-style-type: none"> • “Charter capital” is the capital that the investor contributes or undertakes to contribute in a certain period of time • Cannot issue shares • Cannot reduce charter capital 	<ul style="list-style-type: none"> • “Charter capital” is the capital that the investors/members contribute or undertake to contribute over a certain period of time • Failure to contribute in full and on time gives rise to a debt owed by the relevant investor to the MLLC • Cannot issue shares 	<ul style="list-style-type: none"> • “Charter capital” is divided into equal portions called shares • Must have ordinary shares and may have preference shares, including voting preference shares, dividend preference shares, redeemable preference shares and other types stipulated in the charter • May issue all types of securities to raise funds and may issue bonds, including convertible bonds
Transfer or assignment of capital		
<ul style="list-style-type: none"> • Where an investor transfers only part of the charter capital, the SLLC must register for conversion into an MLLC 	<ul style="list-style-type: none"> • Investors wishing to transfer all or part of their capital contribution must first offer to sell such share of capital contribution to all other investors proportionally 	<ul style="list-style-type: none"> • Shares may be freely transferred (except for certain limitations on founding shareholders for the first three years) • Voting preference shares may not be transferred
The legal representative		
The legal representative is either the chairman of the members’ council, chairman of the SLLC or the general director.	The legal representative is either the chairman of the members’ council or the general director.	The legal representative is either the chairman of the board of management or the general director.

Management structures		
<p>Members' council</p> <ul style="list-style-type: none"> Where the investor appoints more than one authorized representative, they form the members' council (the "MC"). The investor appoints one authorized representative as chairman of the MC The MC is the highest authority in the SLLC <p>Chairman of the SLLC</p> <ul style="list-style-type: none"> Where the investor appoints only one authorized representative, that person will be the chairman of the SLLC <p>Authorized representative</p> <ul style="list-style-type: none"> A corporate investor must appoint one or more individuals as its authorized representatives <p>General director</p> <ul style="list-style-type: none"> The MC or the chairman of the SLLC appoints a general director (the "GD") to manage the day-to-day business operations. This position is similar to that of a CEO. The GD must not be related to a member of the MC, the chairman of the SLLC, or to a person authorized to directly appoint the authorized representative or the chairman of the SLLC. <p>Inspectors</p> <ul style="list-style-type: none"> The investor must appoint one to three inspectors who oversee the actions of the MC or chairman of the company and the GD and report to the investor <p>Where the investor is an individual, the SLLC has a chairman and a GD. The investor can be the chairman and/or GD</p>	<p>Members' council</p> <ul style="list-style-type: none"> The MC comprises all the investors (or their authorized representative in the case of investors who are enterprises) The MC is the highest authority in an MLLC. Specified matters must be decided by the MC Voting thresholds are set at 65% for basic matters and 75% for certain specified matters. Some enterprises are permitted to lower these thresholds to a simple majority, but this depends on several factors, including the home country of any foreign investors. <p>Chairman of the MC</p> <ul style="list-style-type: none"> The chairman of the MC is appointed by the MC <p>General director</p> <ul style="list-style-type: none"> The GD manages the day-to-day business of the MLLC and is responsible for the MC The GD is appointed by the MC <p>Inspection committee</p> <ul style="list-style-type: none"> An MLLC with more than eleven members must have an inspection committee The inspection committee's responsibilities, powers, and conditions are stipulated in the charter 	<p>General meeting of shareholders</p> <ul style="list-style-type: none"> The general meeting of shareholders (the "GMS") comprises all shareholders who have the right to vote The GMS is the highest authority. The law specifies certain matters requiring GMS approval. Voting thresholds are set at 65% for basic matters and 75% for certain specified matters. Some enterprises are permitted to lower these thresholds to a simple majority, but this depends on several factors, including the home country of foreign investors. <p>Board of management</p> <ul style="list-style-type: none"> The board of management (the "BOM"), akin to a board of directors, has three to eleven people appointed (via cumulative voting) by the GMS Investors holding specified percentages have the right to nominate candidates for the BOM Decisions are passed by simple majority The BOM supervises the GD The chairman of the BOM, appointed by either the GMS or the BOM, has a casting vote and may be the GD <p>General director</p> <ul style="list-style-type: none"> The GD, akin to a CEO, is appointed by the BOM and is responsible for the day-to-day management of the SC The GD cannot concurrently be the GD of any other Vietnamese companies <p>Inspection committee</p> <ul style="list-style-type: none"> If an SC has more than eleven investors, or more than 50% of the shares are held by investors who are enterprises, it must have an inspection committee The inspection committee supervises the BOM and the GD

Source: Made by JICA Study Team based on Vietnam's Enterprise law

(2) Non-Profit Legal Entities

A non-profit legal entity providing services to VJU may also be established under the form of an enterprise based on the Enterprise Law as mentioned above.

Apart from this, a non-profit legal entity can be established as either of the following three forms:

- Social Fund
- Non-governmental organization
- Scientific and Technological organization

These forms differ in the establishment procedures, operation objectives, functions, and management methods.

1) **Social Fund:**

The establishment and operation of social funds is subject to Decree 30/2012/ND-CP on the organization and operation of social funds and charity funds.

With the definition of Article 3.2 and 3.3 of Decree 30, we have determined that the Social Fund is more suitable to the intention of this project in comparison with the Charity Fund:

- Social fund means a fund which is organized and operates on a not-for-profit basis for the principal purpose of supporting and promoting the development of culture, education, healthcare, physical training, sports, and science as well as for community development purposes.
- Charity fund means a fund which is organized and operates on a not-for-profit basis for the principal purpose of supporting the remedy of difficulties caused by natural disasters, fires or serious incidents and supporting fatal patients and other disadvantaged persons in need of social assistance.

A social fund has the legal entity status and its own seal and account. The social fund can set up and perform various programs and projects under the following principles:

- Being established and operating for not-for-profit purposes.
- Being self-motivated, self-financing, and taking responsibility before laws with their assets.
- Operating under a charter recognized by competent state agencies, and in accordance to laws.
- Making public all their revenues, expenditures, finances, and assets.
- Not dividing their assets during their operation.

However, it is noted that foreign individuals and/or organizations are not allowed to establish a social fund themselves, but they can cooperate with Vietnamese individuals and/or organizations (one person or more, 1 organization or more) to contribute to setting up the fund. The fund must have at least three founders, and the chairman of the management council must be Vietnamese, and also holding the position of legal representative of the fund.

In such cases, the value of assets of the social fund must reach at least:

- 7 billion VND for funds operating nationwide or in more than one province.
- 3 billion VND for funds operating within a province.
- 1 billion VND for funds operating within a district.
- 5 hundred million VND for funds operating within a commune.

Total value of contributed assets shall be converted into Vietnam dong, of which at least 50% will be transferred to the fund's account.

The Minister of Home Affairs is competent to grant establishment licenses and charter recognition of the fund with assets contributed by foreign organizations or individuals.

2) **Non-Governmental Organization**

The Japanese side can establish in Japan and under Japanese law: a non-governmental organization, non-profit organization, social fund, private funds or other social organization. The organization could then carry out not for profit activities in Vietnam.

A foreign NGO wishing to operate in Vietnam may consider obtaining one of the following licenses: (i) an operation registration certificate, (ii) a project office registration certificate, or (iii) a representative office registration certificate under Decree 12/2012/ND-CP on registration and management of activities of non-governmental organizations in Vietnam.

A foreign NGO shall submit a dossier comprising of corresponding documents to the Committee for Foreign Non-Governmental Organization Affairs for consideration and decision. An NGO wishing to operate in Vietnam under an operation registration certificate must:

- Have the legal person status under the law of the country in which it is established,
- Have a clear operation charter and guidelines, and
- Have a plan on humanitarian and development activities in Vietnam through programs, projects or non-project aids in line with socio-economic development policies of the Vietnamese State.

An operation registration certificate is valid for three years from the date of its grant, and the term can be extended.

An NGO wishing to set up a project office in Vietnam must:

- Have obtained an operation registration certificate mentioned above.
- Have a program or project approved by a competent Vietnamese authority and the size and nature of that program or project must require regular and temporary administration and supervision.

A project office registration certificate is valid for five years from the date of its grant and the term can be extended.

An NGO wishing to set up a representative office in Vietnam must:

- Have obtained an operation registration certificate mentioned above,
- Have a committed long-term operation through programs and projects approved by competent Vietnamese authorities,
- Have operated effectively in Vietnam for at least two years, and
- Base its representative office only in Hanoi, Da Nang or Ho Chi Minh City.

A representative office registration certificate is valid for five years from the date of its grant and the term can be extended.

3) **Scientific and Technological Organization (STO)**

Under the Law on Science and Technology taking effect on 1/1/2004, Scientific and technological organizations ("STO") include: (i) scientific research institutions, scientific research and technological development institutions (hereafter referred collectively to as "research and development institutions"); and (ii) scientific and technological service organizations.

The research and development institutions shall be organized in forms of research and development institutes, research and development centers, laboratories, research stations,

observation stations, experiment stations. The scientific and technological service organizations shall be organized in forms of centers, offices, and testing laboratories.

The purpose of scientific and technological service organizations is to conduct activities in service of scientific research and technological development and activities related to intellectual property and technology transfer; and to provide services on information, consultancy, personnel training and fostering, and popularization and application of scientific and technological knowledge as well as practical experiences.

Conditions for the establishment of a foreign-invested STO:

- Possessing an investment certificate granted by a competent state management agency in charge of investment.
- Having an operation charter which states operation domains compliant with Vietnamese laws.
- Having sufficient scientific and technological staffs specialized in their operational domain. Each STO must have at least five staff members possessing a university or higher degree, at least 20% of all staff should have professional qualifications in any of the main operation domains to be registered and at least 40% of them should work on a full-time basis. The head of a STO shall take responsibility before the law for all activities of the organization and must possess a university or higher degree.
- Having offices and physical and technical facilities for its operation (i.e. workshops, laboratories, machinery and equipment, intellectual assets and other physical and technical facilities).
- Obtaining a written agreement on the establishment of the STO, issued by the People's Committee of the province or centrally-run city in which the organization is to be headquartered. The STO's head office in Vietnam must have an area of at least 25 m².
- Having a registered capital of at least of 2 hundred million VND.
- Meeting environmental requirements as prescribed by law.

The Prime Minister shall decide on the establishment of a 100% foreign-owned STO. The Minister of Science and Technology shall decide on the establishment of other kinds of foreign-invested STO.

12.2.3. Fund Establishment Challenges

In addition to thoroughly consulting with VNU about the fund's legal status, aims of fund should take into account the benefits for VJU and for companies who wish to donate, as well as flexible service provisions are expected when establishing VJU Fund. Thus, the authority of having VJU Fund and securing its independence are crucial.

(1) Challenges for VJU Fund's Authority and Independence

VJU shall be established as a national university fully owned by the Vietnamese Government, and VJU Fund is only considered as the investor, and thus cannot be the owner of VJU. From a legal point of view, as long as VJU Fund does not own VJU, it is impossible to establish a managerial relationship between the two.

However, if VJU Fund and VJU are separate legal entities, they cannot be involved in the operation and finance management of each other. VJU operates independently not only from VJU Fund but also from other peripheral companies invested by the Fund (including hospital, restaurant, and hotel in the future). The investment amount from Japanese private sectors to both VJU and VJU Fund shall originate from Japan, but must differ from each other.

While VJU Fund can support the education activities of VJU, it is necessary to make a mechanism for obtaining potential financial sources come from activities in various supporting services from both inside and outside the university.

On the other hand, VJU Fund owned and established by VJU must be operated in the form of a Limited Liability Company or Joint Stock Company under Vietnamese law, which operates as an independent legal entity. The Limited Liability Company has the following method of raising capital: equity (the capital contribution and non-share profit), loan capital from other individuals and organizations, and issuance of bonds if satisfying the requirements under the regulations of laws. Apart from these, the Joint Stock Company can also raise capital by issuing and selling shares/stocks in accordance with conditions regulated under the Law on Securities.

Since VJU Fund will be invested and owned by VJU, it will be managed by VJU. The financial sources of VJU shall include a part of VJU Fund's transferred revenue. VJU, as the owner of VJU Fund can combine educational activities with the VJU Fund's manufacturing and business operation while VJU Fund is an independent legal entity.

Nevertheless, it is important to note that the business fields of VJU Fund established by VJU are limited to the training tasks of VJU, meaning that the activities of VJU Fund must conform to the professional training of VJU's majors that aim at providing research activities, and to the science and technology activities of VJU. Therefore, there is a possibility that these business fields of VJU Fund might not match the intentions of private companies.

Based on the progress of the private sector-led VJU, items such as: 1) starting the VJU Fund under the control of VJU, then when funds from private sector have reached an amount sufficient to get independent profit by providing the university's supporting service and cooperating with private sectors in research activity, 2) separating from VJU and be an independent legal entity, which will enable more flexible services and research activities and finally 3) developing as a holding company that owns VJU itself, are considered possible.

Therefore, during the feasibility study, the autonomy and independence of VJU Fund should be thoroughly discussed with the Vietnamese side. It is also important to discuss and study how to develop VJU Fund as an independent body possessing own objectives and policy in order to achieve sustainable development of VJU.

(2) Challenges Regarding Fundraising

A public relations campaign would be necessary in order to raise money and establish the VJU Fund. However, prior to that, the important point is whether VJU's vision, human resources development policy, and its targeted course setting, or research works are appealing to the private companies that might be interested to donate or invest.

Also, it is not possible to convince the private sectors if the detailed information regarding VJU Fund's establishment form, accounting, information disclosure, use of funds, or compensation is not provided. Therefore, in parallel with the preparation for VJU's establishment, it is necessary to develop a strategy to attract public relations and private funds based on the adjusted information regarding VJU and VJU Fund for private and public investors.

However, if there are not enough outstanding students as a premise to utilize VJU Funds, the meaning of establishing the fund would be lost. Thus, it is necessary, on one hand, to do public relations campaign to attract many excellent students from all across Vietnam, and on the other hand, to do another campaign to attract investors in the fund. Even though this

could be done using the Internet, Vietnamese and Japanese teachers should be required to come in person to local high schools and promote VJU, just like in USTH.

12.3. Utilizing PPP

12.3.1. Implementation of PPP Projects

At the initial stage, the special purpose company (SPC) appears to be the right type of organization to take charge of development projects such as the satellite campus and operation/maintenance.

The SPC will be a consortium established by companies, in which each company provides service in their specialized fields. The consortium then provides project development and operation/maintenance services to VJU.

VJU will articulate the implementing policy for the project and prepare the performance specification, then select an SPC by a tender.

Implementation methods are summarized as follows depending on the scale and the types of facilities.

- Services sold to VJU: a method which the private sectors are required to perform sets of design / construction / operation and maintenance services and VJU purchase these services.
- Financially free-standing business: a method which the private sectors do not need to pay usage fee to VJU for the facilities they designed and constructed themselves, but are responsible for any cost necessary to operate and maintain the facilities.

However, the form in which the design/ construction/ management are separated is considered as VJU Direct Commission-Management Type, also, since the method of entrusting a set of design / construction / operation and maintenance service to the private sectors and the facilities usage fee shall be collected from VJU is considered as Rent-Collecting Type as have been explained in Chapter 11, the rest of the facilities (spaces) will be implemented by methods under PPP scheme as shown below.

Table 12-2 Implementation of PPP Projects

Project Outline	Facility's Outline: The Rentable Area/ Total Floor Area (m ²)	Project Method	Project Implementation Form
Provide services of planning, design, construction, and maintenance of complex facilities in satellite campus and management of some of the facilities.	E-library: 2,500/ 5,000 Satellite campus: 7,500/ 15,000	BTO	Services sold to VJU
	Total area of Cafés, Restaurants, and shops at the Student Communication Center: 2,500/ 5,000		Financially free-standing business
Provide services of design, construction, operation, maintenance and management of the student services facilities in HHTP	Total area of Cafés, Restaurants, and shops at the Student Communication Center: 2,500/ 5,000	BTO	Financially free-standing business
Provide services of design, construction, maintenance, management, and operation for auditorium, gymnasium and dormitory in HHTP and VNU new campus.	Area in each campus: Auditorium: 10,000/ 10,000 Gymnasium: 5,000/ 5,000 Dormitory: 20,000/ 20,000	BTO	Services sold to VJU

Source: JICA Study Team

Although there are plenty of companies that provide services of design, construction, and facility maintenance in Vietnam, there are a limited number of companies to provide certain

services of management and maintenance. Therefore, to cultivate the local market and for technology transfer, it is possible to place a bidding condition such that the SPC should be associated with Japanese and Vietnamese companies.

12.3.2. Points to Consider on PPP Implementation

To move forward, VJU has proposed to tender and sublet the physical development and operations management of the University to private sector entities in the near term. However the following negative risks are envisaged that make this very impractical.

It will jeopardize the original concept of the establishing VJU as a subsidiary to VNU, if wrongly developed by the private sector.

Although the PPP arrangement of the VJU is quite attractive to private sector entities if feasible, near-term tendering could cause project developers experienced in “hard” or physical infrastructure such as roads, airports, commercial complexes, to prevent the ideal operation and management of VJU.

However, this project is not a typical “hard” infrastructure project. There is a need for complex coordination, consensus building, stakeholder coordination from an institution perspective and not entirely from infrastructure development/control/management perspective (e.g. between Government Office, VNU, MOET, MOC, HPC, business communities having CSR interests for research and educational promotions, etc.).

The responsiveness of CSR support could be negatively impacted. There is a scope for institutional development in a manner and providing mechanisms for involving business communities from CSR and educational/cultural perspectives. But this needs careful study and a planned approach for obtaining the true potential of possible involvement.

Public concerns about the objectives and benefits of the project could arise if tendering fails to get responses as have been experienced in projects even after using qualifying firms and entities. An assessment of several PPP and other procurement projects leads to the conclusion that projects need to be properly planned and developed to ensure the most optimal responses and protection of the public interest. A near-term tendering situation could lead to the image of the project becoming adversely impacted (also referred to as branding risks).

Working with the private sector requires the existence of full design and detailed specifications of the facilities and performance requirements as part of the tender for private sector entities to bid on. Without a proper PPP tendering (such as performance requirements, monitoring and evaluation mechanisms and penalty and reward arrangements), it is difficult to maintain an expected level of performance quality and sustain the original concept of the University (i.e., world class standard of operations and attractions with environment friendly, culture friendly and pollution free for the world prestigious university campus).

Lasting long-term impact requires not just physical investment but also institutional support which cannot be achieved by near-term tendering. What is required is a good quality of performance and delivery of services for VJU development. Private sectors could accomplish and harmonize with the requirements of institutional development support if proper instructions and scope of works are delivered.

13. Procedures and Legal Arrangement Required for the Establishment of VJU

13.1. The Requirement for University Establishment in Vietnam

When establishing a university in Vietnam, it must meet the minimum standard of the related laws and regulations. Some of the main requirements, which VJU must meet, are as follows:

13.1.1. Lecturers Requirements (Decree 73/2012/ND-CP)

(1) Eligibility Requirements

- For college: must be a Bachelor's degree holder or higher
- For university– undergraduate: must be a Master's degree holder or higher
- For university– graduate: must be a Doctor's degree (PhD) holder

(2) Required Parameters

- The maximum number of students per teacher is ten students for Art, fifteen students for Natural Science & Technology, and 25 students for Social Science, Humanities and Economics.
- In a university, the number of lecturers with a doctorate or master's degree is to be accounted for 80% of the entire faculty or more, with 35% of the entire faculty or more should be PhD holders
- More than 60% of the courses in each department shall be taught by full-time lecturers.

13.1.2. Site and Building Requirements (Decree 73/2012/ND-CP, Decision 07/2009/QD-TTg)

- University site area per student should be at least 25m²
- Per student, 1) Building floor area should be 9m² or more, 2) learning space 6m² or more, and 3) residence space 3m² or more
- The office space per staff should be 8m² or more.
- A sufficient number of classrooms, functional rooms, offices, conference rooms, libraries, laboratories, dining rooms, etc. shall be installed.
- The site total area shall be more than 5ha.

13.1.3. Investment Requirement (Decree 73/2012/ND-CP, Decision 07/2009/QD-TTg)

- The amount of invested capital per student shall be 150 million VND (about US\$ 7,500) or more (excluding costs related to land use rights).
- The total invested capital shall be 300 billion VND (about US\$ 15 million) or more.
- The investment for construction (except for the acquisition of land use rights), out of the total invested capital shall be 50 billion VND (about US\$ 2.5 million) or more.

13.1.4. Requirement for Graduate School Establishment (Decision 58/2010/QĐ-TTg, Circular 38/2010/TT-BGDĐT)

Basically, without having a university (undergraduate) in which two or more of its departments produce graduates, it is not allowed to establish a Graduate School (in other words, it must be noted that the form of a Graduate University in Japan is basically not approved).

Even for VNU, there were circumstances where this requirement became a problem during the establishment of the first Graduate School of Medicine & Pharmacy. However, because VNU as a whole has undergraduates, the establishment of the Graduate School was considered possible.

13.2. Relationship with WTO Commitment

Upon the establishment of the new university, in addition to the various requirements of the domestic law, there is a need to pay attention to the relationship with WTO commitments.

Fields where official certification is compulsory, like doctors, nurses, and lawyers, are not eligible for WTO commitments, unlike teaching in higher education in Vietnam that is open to overseas educational institutions in the WTO commitments, such as engineering, natural science, business administration, economics, accounting, international law, and language education.

Therefore, in order for VJU to provide higher education in these fields, it is necessary to take measures separately on the Vietnamese side regarding some sort of legal action.

13.3. Study on the Establishment of Vietnam-Japan University

The next step is to study the institutional method of establishing VJU.

The Concept of VJU is the product of a continuous cooperation and study between university officials on Japan's side and VNU Hanoi (hereinafter "VNU") as the counterpart of Vietnam's side. It is necessary to include VNU in the process concerning the specific method of establishing a university.

Given the condition above, the following two methods can be taken into account when establishing a university:

- The proposal of establishing an affiliated university of VNU, under VNU's organization.
- The proposal of establishing a separate university from VNU as a partner, the same way as VGU or USTH; that is to establish an International University called NMU (New Model University). Hereinafter "NMU".

Comparing the two proposals above concerning the main issues related to the establishment of a university and its management etc., will be as follows:

Table 13-1 Comparison of VNU Affiliated University and NMU (1)

	Affiliated University under VNU	New University using NMU Method (below are the example from VGU or USTH)
National/public or Private	• To be established by Vietnamese Government as a National University	• same as on the left

Legal basis	<ul style="list-style-type: none"> To be based on the existing laws and regulations related to VNU, VJU shall be established under the same procedure as other VNU members. Special legal basis does not exist. 	<ul style="list-style-type: none"> To sign a basic agreement between the foreign government and the Vietnamese government. Based on this, the Vietnamese government shall enact (special legal basis) the Prime Minister's decision on the new university.
Control authority	<ul style="list-style-type: none"> Prime Minister (VNU headquarters is at the same level with Ministry of Education and Training) How about at VNU? 	<ul style="list-style-type: none"> Ministry of Education and Training .
Establishment's approval process (refer to 13.5 for more details)	<ul style="list-style-type: none"> The approval of the Prime Minister is necessary. The new University's application shall be submitted directly by the Rector of VNU to the Prime Minister. However, it is necessary to obtain agreement on the establishment of the university from Ministry of Education and Training, Commissariat, and other related government agencies before submitting to the Prime Minister. 	<ul style="list-style-type: none"> The approval of the Prime Minister is necessary. As the regulatory agency, the Ministry of Education and Training has the primary responsibility of reviewing the contents of the new university's application and making adjustments with the Commissariat and other relevant ministries. .
Organizational structure	<ul style="list-style-type: none"> Dual structure of the affiliated university and VNU headquarters The council of the VNU headquarters approves the important matters of management plans or long-term strategies for each affiliated university, whereas VNU's Director approves those concerning legal matters. On behalf of each affiliated university, Rectors of the affiliated university legally take full responsibility for the management of the affiliated college under the supervision of VNU headquarters. . 	<ul style="list-style-type: none"> University Council consisting of selected members from both countries with the same number (government officials, university officials, company managers, etc.) makes decisions on important matters of long-term strategies of the University. On behalf of the university, the Rector legally takes full responsibility for the management of the university. The important matters of the size, structure, and management regulations of the University Council are based on the approvals of the Ministry of Education and Training.
Personnel affairs	<ul style="list-style-type: none"> VNU's President is appointed by the Prime Minister. The Head of VNU Council is VNU's President. The President of the affiliated university is appointed by the Ministry of Education and Training under the request from VNU's President. 	<ul style="list-style-type: none"> The Head of the University Council is appointed by Ministry of Education and Training. The President of the university is appointed by the Ministry of Education and Training under the request from the University Council.
Content of the curriculum	<ul style="list-style-type: none"> Legally, each university can determine freely, but in the case of a VNU affiliated university, there is a need to follow the rules (for quality assurance) which the VNU headquarters has prescribed for the contents of the education program. 	<ul style="list-style-type: none"> University can determine freely. . .
Teacher's remuneration	<ul style="list-style-type: none"> Can be set flexibly to some extent, but the upper limit is fixed. (the minimum remuneration the Ministry of Education and Training has prescribed is up to three times) 	<ul style="list-style-type: none"> University can determine freely. The home countries bear the remuneration of foreign lecturers.
Tuition	<ul style="list-style-type: none"> Must not exceed the maximum limit prescribed by the government. However, regarding the partnership programs with foreign universities (VNU/ International School), it can be determined freely. 	<ul style="list-style-type: none"> University can determine freely.

Financial grounding	<ul style="list-style-type: none"> • Income: Tuition, the Vietnamese government subsidy, revenue associated with technology transfer, research & development, and donation from companies or individuals. • Including VNU, the majority of public universities are dependent on government subsidies. 	<ul style="list-style-type: none"> • Income: tuition, subsidy from both countries, revenue associated with technology transfer, research & development, and donation from companies or individuals. • At the establishment, 60% of the operating expenses will be paid by the Vietnamese government. • Financing from international organizations (ADB, WB).
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Source: JICA Study Team

13.4. Advantages and Disadvantages of Both Proposals

The institutional differences of both proposals are as shown above. Regarding other differences, the advantages and disadvantages are as follows:

Table 13-2 Comparison of VNU affiliated university and NMU (2)

	Affiliated University under VNU	New University using NMU Method
Independence of the university management (from the aspect of education & research, organizational management, and financial)	<ul style="list-style-type: none"> ● Moderately High Level ➢ The relationship between VNU Headquarters and the affiliated universities is similar to the relationship of a parent company and its subsidiaries. Institutionally, it is only natural for the affiliated universities to follow the instruction and supervision of VNU headquarters. ➢ On the other hand, as long as it is not against the laws, a wide range of autonomy may virtually be allowed at the discretion of the President of VNU headquarters (Example of IU and HSB) ➢ The answer of "has enjoyed a Full Autonomy" was obtained in a hearing with specific affiliated universities (for example: Hanoi School of Business and International School of VNU), but this should be understood as the context of the above and not necessarily be supported institutionally. ➢ In addition, with the assumption of establishing VJU using the current system, it may be subject to certain restrictions in terms of reward for lecturers as well as tuition, in the same way as other affiliated universities. 	<ul style="list-style-type: none"> ● <u>High</u> Level ➢ Based on the special law, Special Treatment to ensure the independence in aspects of education & research, organizational management, and finance, has been approved. ➢ However, regarding the most important matter of the configuration of the University Council, it is still under the regulation of the Ministry of Education and Training.

Ease of university establishment and operation	<ul style="list-style-type: none"> ● <u>Establishment & operation are less difficult</u> <ul style="list-style-type: none"> ➢ This method is strongly advised by VNU, who will also play a central role in making adjustment among Ministry of Education and Training, the Ministry of Science and Technology, and the People's Committees toward the establishment of the university. ➢ Support from VNU can be expected in terms of securing university site and Vietnamese teachers. ➢ Making use the popularity of VNU, it is easy to get students since its inception. (It will be even easier if it's possible to give more options after graduation (for example, chances to work in Japanese companies)). ➢ It should be noted that an establishment of university with only graduate courses are not allowed under the current Law. However, there is a special case for Graduate School of Medicine & Pharmacy. 	<ul style="list-style-type: none"> ● <u>Establishment & operation are more difficult</u> <ul style="list-style-type: none"> ➢ There shall be little cooperation from VNU because VJU will be under the supervision of Ministry of Education and Training. ➢ In that case, a number of difficulties are expected, particularly in ensuring the university site. ➢ VJU is expected to face the problem of struggling to get students from the inception because of low recognition degree, similar to both VGU and USTH as newly built university. ➢ It should be noted that an establishment of university with only graduate courses are not allowed under the current Law.
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Source: JICA Study Team

Taking into account the above-described aspects, the form of VJU shall be "VNU affiliated university", based on the considerations of land, facilities, and teachers, as well as a relatively easy access to excellent students. At the same time, considering that the "VNU affiliated university" method was taken, aspects such as education, research, finance, organization, personnel, and private cooperation business, etc. shall be discussed in detail and confirmed thoroughly with VNU, especially about VJU's independence. If necessary, a request made to VNU to apply to the prime minister to enact special laws for providing a high degree of independence for VJU should be considered.

13.5. Establishment Procedure and Necessary Documents of VJU

Finally, the establishment procedure of VJU will be different in the proceedings according to the difference of the establishment method of VJU, but for the basic procedures, the difference is not significant.

As mentioned previously, the Prime Minister's approval is required for a university established in Vietnam. This approval process is divided into two stages. (Decision 07/2009/QD-TTg)

13.5.1. First Stage: Approval of University Investment Project by the Prime Minister

At this stage, the content of the investment project for the establishment of a university is being examined. Mainly about the accuracy and validity of the targeted site and initial investment of the investment project is being screened.

The applicant of the establishment of a new university shall apply for an approval from the Prime Minister only after submitting all the documents below to Ministry of Education and Training or other government institutions and gaining approval:

- University application form describing the name of the University.

- A state-level written approval of the People's Committee on the use of a concrete explanation concerning the planned construction site.
- Documents that explain the specific contents of the University establishment project.

(A) Total investment amount of the investment project.

(B) The education and research program for the first three years.

(C) Documents that explain the legality and reliability of the source of funding for investment.

- Documents of land use right certificate of the university planned site, or the same kind of documents by the People's Committee.
- Land use planning and architectural planning at the University planned construction site.
- The documents on the financial support of the investment plan.

Information necessary at the first stage is based on the contents described in this report. Approval from the Prime Minister for the university investment project is expected to be granted by the 2nd quarter of 2014 as it already advanced by VNU.

13.5.2. Second Stage: Approval of the University Establishment by the Prime Minister

After obtaining the Prime Minister's approval at the first stage, the applicant shall apply for an approval from the Prime Minister concerning the establishment of a university only after submitting more detailed documents below to the Ministry of Education and Training along with the Prime Minister's approval (examination of investment projects) from the first stage.

- Prime Minister's approval at the first stage (examination of investment projects)
- Detailed documents related to the university investment plan (the description of the progress on financing and land securing are particularly important) and the opinion of the People's Committee.
- The applicant has created a construction plan of building the university (of the institutions already decided by the applicant).
- The letters of consent of those who are planning to inaugurate to the most important positions of University (President, Vice President, Dean, Executive Director, etc.).
- Tentative education programs (curriculum, syllabus, etc.) and the facilities' construction and utilization plan to realize it.
- Documents concerning the salary of lecturers and office staff.
- Documents showing the number and area of the required classrooms and necessary facilities other than offices.
- A document that explains the amount of available finances which shall not be used for any purposes other than to establish a university, a document that explains the existence of any finance plans and an additional allowance of the total required cost of five years after the establishment, and in the case of an in-kind contribution: a document that explains the transfer and acquisition of land use rights has been completed legally.
- Draft regulations for the operation of the University.

After obtaining the Prime Minister's second stage approval, it is possible to start operation of the new university.

The Vietnamese side will prepare the FS report based on the above mentioned information collected in the 2nd stage by the time of submitting the final draft report of the feasibility study. After clarifying the special conditions to university management of VJU, public finance and support from government, an approval of the prime minister for an establishment of university with maximum level of autonomy will be applied.

The schedule for application to an approval from the prime minister at stage one and two is shown in figure 14-2. Establishment of new university is possible after the approval of the prime minister at the stage two.

14. Preliminary Implementation Program of VJU Project

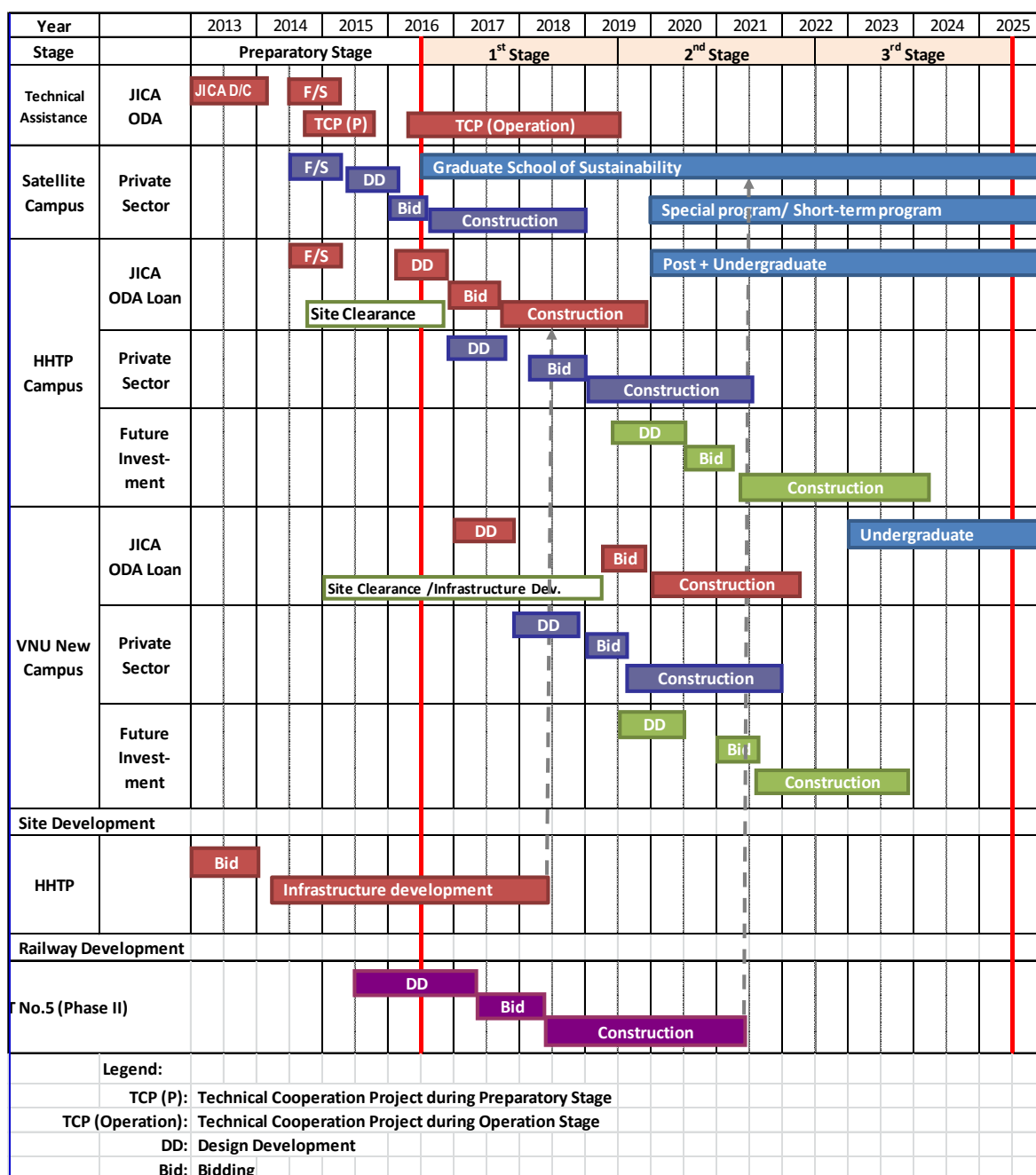
14.1. Proposed Schedule for Implementation of the Project

The preparatory works and pre-opening activities of VJU require more than one year, so they should be performed in addition and parallel to the completion of the construction activities and before the handing-over of the site. This is also suggested by the length of time required for the following work activities that need to be completed first:

- Feasibility Study of VJU
- Staffing and establishment of the VJU preparation office for managing and expediting pre-opening activities
- External organization set-up (establishment of authority, independent entity and advisory committees)
- Internal organization set-up (nominating board members, employment of managerial and highly skilled positions including teaching staff)
- Employment and training of teaching and administration staff
- Arrangement of project finance by PPP and ODA

Although the opening schedules of facilities of VJU in three locations (Hanoi, HHTP and VNU new campus site) are different due to the strategic procedures and timing of their work, the establishment of internal and external organizations encompassing all facilities and preparatory work is much more efficient therefore preparatory work for VJU should be one continuous process done for entire facilities and the organization.

The figure below shows a general procedure up to the opening of VJU and necessary actions to be taken in the time schedule.

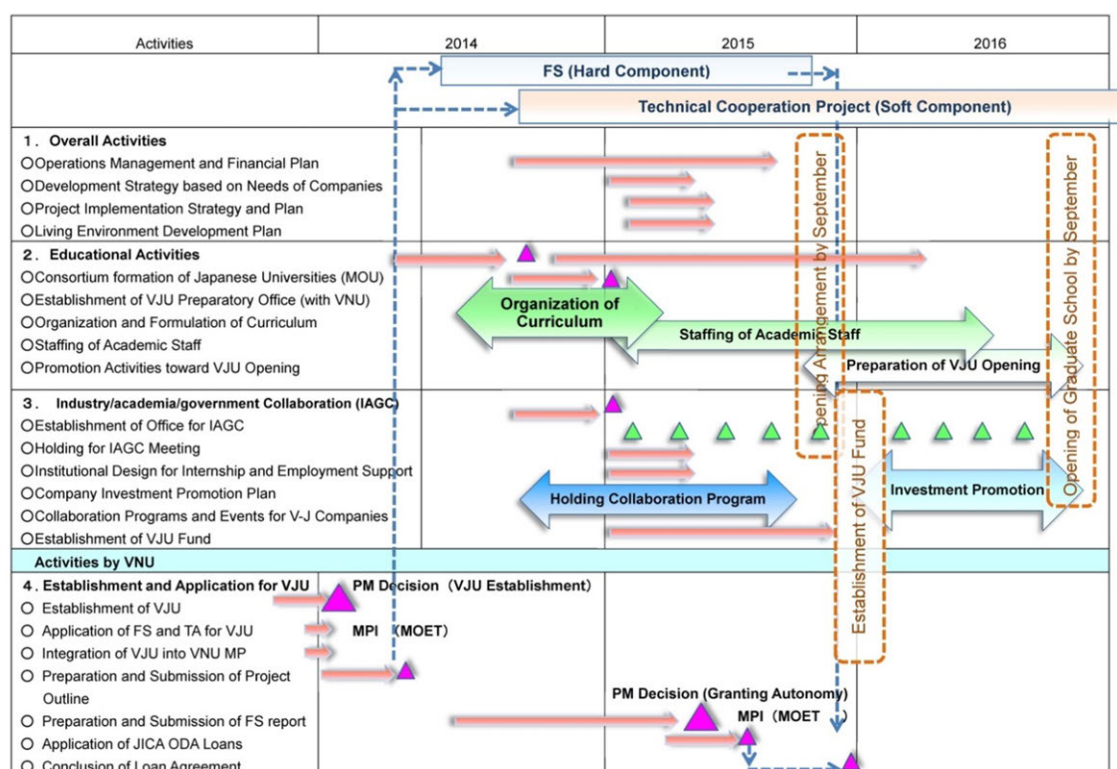


Source: JICA Study Team

Figure 14-1 Time schedule for the soft opening (proposed)

14.1.1. Preparatory Schedule (proposed)

The proposed preparatory schedule of this project (2014-2016) is closely related to activities mainly proceeded by Japan's side, activities proceeded by Vietnam's side, as well as activities proceeded by the cooperation from both sides, which outline is shown in the figure below.



Source: JICA Study Team

Figure 14-2 Preparatory Activity Schedule (proposed)

14.2. Possible Scheme/Financing Source for Implementation of the Project

For autonomous and sustainable financial development of the VJU initiative, it is confirmed that a partnership with the private sector is necessary. However, until VJU establishes its reputation, private finance is unlikely to come in. Hence, at the initial stage, financial support from the Japanese and Vietnamese governments is essential.

Basic capital assets and finances for the pre-opening activities and implementation management, civil work and equipment supply and fellowship and training programs of VJU will be composed of the following sources:

Table 14-1 Possible Finance Sources for Work Components for VJU Development

No.	Possible Scheme / Financing Source	Work Items and Components
1)	Japanese ODA for Technical Assistances arranged and financed by the Japanese Government	
	Feasibility Study	To implement a proposed yen loan project, studies of detailed business costs, implementing schedule, methodology (procurement, execution), implementing structure, operation/maintenance structure, environment social governance and proposal for capacity building to fulfil the impact of the project are required. Besides, for effective and efficient implementation, technical assistantship, business cost, an implementation schedule, a procurement method, an implementing structure and an operation/management structure are also examined. Besides, studies of exploration for private partnership, measures to secure private investment and establishment of VJU fund are necessary.
	Dispatch Japanese Professors and academic staffs by TCP(Preparation stage)	Expert professors, curriculum managers will be inputted to coordinate establishment and management activities such as specific curricula, units, courses and teaching methods.
	Partnership business with JST and JICA (SATREPS)	Research activities regarding specific topics (climate change, global environment issues, disaster prevention) will be conducted in cooperation with Japanese universities in order to have autonomous development of R&D capacity.
2)	Proposed Yen loan (total 200 million US\$)	
	Training program and research promotion scheme for prospective professors and lectures in Vietnam.	Two students each for four courses will be sent to Japan per year over six years (total 60 students) to obtain a Ph.D. as a part of the fellowship program. 100 students in master courses will also be sent. The scale of 3.5billion JPY is projected.
	Construction of buildings and campus Supply equipment and utensils	Cost for university and research facilities, relevant facilities, materials and campus environment development in HHTP and VNU new campus will be covered
	Consulting services and project management	A consulting service for the design of facilities and educational materials, the creation of design documents(basic design and detailed design) and execution plan, method and specification including construction materials in order to embody design and plan, and execution management regarding university management at the initial stage.
3)	Existing buildings provided by VNU	Lecture room and management office for the initial stage of the graduate school located at the center of Hanoi city
4)	Land and their Clearance provided by the Vietnamese Government	Satellite campus in VNU(3ha), HHTP campus (26ha), Land in VNU new campus(60ha)
5)	Dispatch Japanese professors and university staff by TCP	Cost for dispatching expert professors and researchers necessary for university management is covered by this scheme only in the first stage.
6)	Initial Finance provided by the Vietnamese Government (for 5 – 10 years)	Basic salary for Vietnam academic staff Scholarship for Vietnam students
7)	Public-Private Partnerships arranged by the Japanese Government	Construction and management of satellite buildings
8)	Other various finances and assets provided by Private Sector Companies, Institutions, Organizations and Individuals	
	Lectures provided by private companies : Donations (cash and goods), Investments, Endowments, Scholarship, Equipment and Research Expenses.	

Source: JICA Study Team

For the purpose of the prompt construction and efficient management of VJU, the Vietnam-Japan University Fund (VJU Fund, a tentative name) should be established, and the VJU Fund will execute various supporting activities such as the assignment of professors and lecturers to the University, the planning and management of seminars and symposiums, job-searching support for VJU students including foreign students studying in Japan, promotion of industry-academia collaboration, efficient management and construction of the related services and facilities in collaboration with the VJU preparation office.

14.3. Implementation Body

The implementation body can be classified into two different entities by stage; however, one entity could be evolved from the pre-operation stage including study, design, procurement, construction and staff employment and training, to the operation stage.

As mentioned above, the project implementation schedule is roughly divided into three stages: 1) Stage of Preparatory and opening of Graduate School, 2) Stage of Establishing a Satellite Campus and the opening of the Undergraduate School and 3) Stage of evolving into the full-fledged VJU including VNU Hoa-Lac new campus. Although each stage requires different skills and expertise, a continuous implementation body throughout the course of VJU development is the key for success of the project, and synchronizing the operation policy and intention of establishment.

In order to organize the continuous implementation body, an integrated institutional set-up during the early stage of the project is necessary.

14.3.1. Institutional Structure

In Vietnam, the same as Japan, public universities are part of a government entity (i.e. Ministry of Education and Training) and the employees are civil servants. Their governance and administration are integrated with that of the larger body.

Decision making is restricted and policies concerning administration fees, teaching hours, curricula and the pay-scale of personnel are set by the governing body. Memberships, sponsorships, donations and fundraising opportunities from the private sector are limited.

In order for the University to overcome the above issues, the institutional set-up of VJU should aim to attain functional as well as financial sustainability.

14.3.2. Institutional Requirements

While dealing with a large and complex project for both hard and soft issues like this University development, professors and taskforce members may not have enough time to review preparatory activities and projected operations daily since they are assumed to have other responsibilities with their assigned positions.

Accordingly, it will be necessary to create a VJU Preparation Office as a practical organization having the responsibility for registration and statutory work, institutional set-up, necessary preparatory activities and registration and approval processes for future operations. The Study Team recommends that VJU should establish a "Preparation Office".

One of the issues that arise during the preparation stage for an educational facility such as this University is the organization and system of the operation body and the timing of its set-up.

Because the financial resources needed to operate an organization such as this is great, and input resources will be limited at the initial stage, there is a need to minimize the number of staff. However, few cases under these circumstances have succeeded. For the operation of the University, it is essential to have teaching and administration staff members who sufficiently understand the policies of the University and the objectives of operations. In a short period of preparation, operation staff may not be able to fully understand the operation policies of the University. In this regard, it is important to open a preparation office at an early stage and to assign potential key staff who will continuously manage actual operations after the opening of VJU.

The VJU Preparation Office will also play an important role in establishing a reliable relationship between the operation body, VNU, and participating Japanese universities. In this project, it is very important to blend the image of the completed building facilities and the image of the University after the opening with well-organized institutional functions.

The VJU Preparation Office established under VJU will discuss these matters with the Director and staff of VNUPMU in detail and will make various suggestions concerning the preparatory activities. Receiving such suggestions, the staff of VNUPMU will review them to determine if they can actually manage them by themselves.

The VJU Preparation Office will consult on any unclear or difficult issues, and results will be reflected in the implementation and operations plan. In this way, the future staff of the University will have guidance in what they need to do and the University can be opened with full understanding to carry out the goals of establishment, operation policies, and the aims of the education activities. In the establishment of a VJU preparation office, the following organization at the initial stage is proposed to handle the constraint.

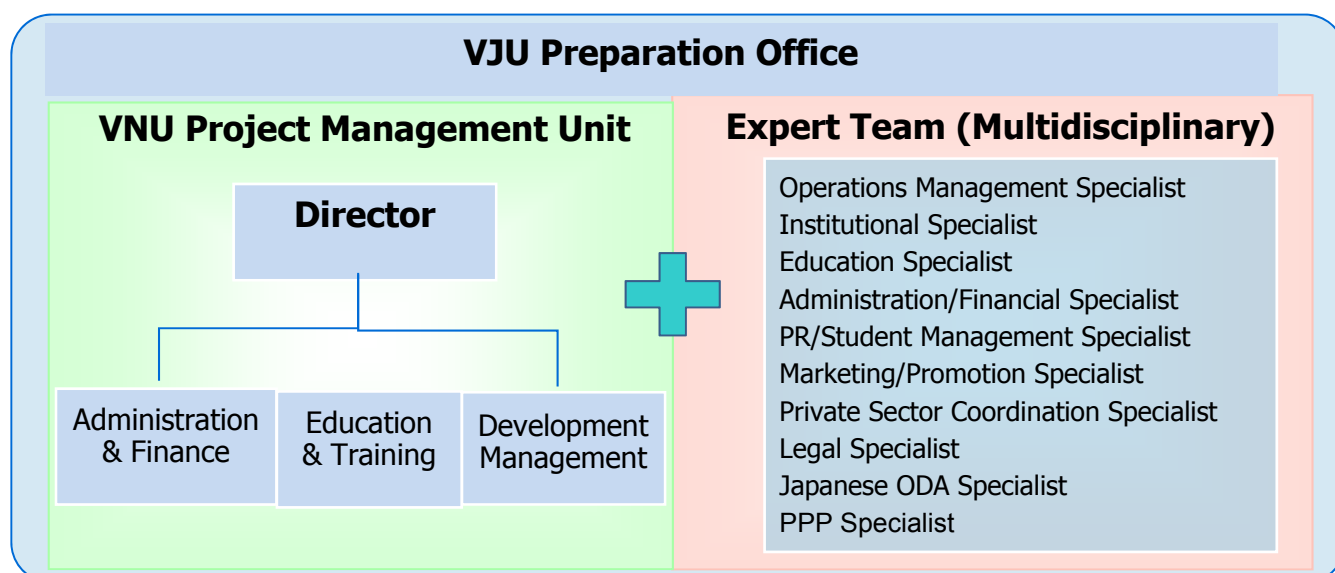


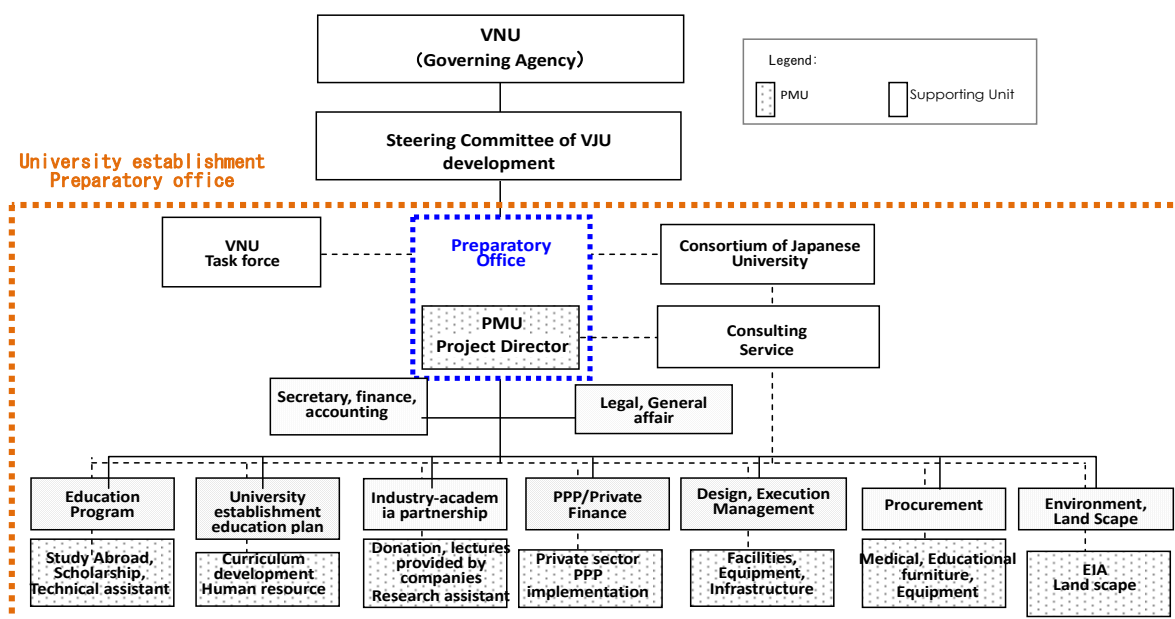
Figure 14-3 VJU Preparation Office

14.3.3. VNU Project Management Unit (refer to shaded box in green)

A minimum of four major positions are to be recruited as a core group: namely Director, Administration & Finance Head, Education & Training Head and Development Management Head.

- These four positions are proposed to be funded by the Vietnamese Government based on appropriate budgetary allocation.
- They need not be from the government sector, and can be retained as consultants in the build-up to the University. Eventually, they would be transferred to the entity operating and managing the University.

The following are tentative definitions, since the proposed Loan Agreement for the Japanese ODA Loans has not been finalized yet.



Source: JST

Figure 14-4 Organization Structure of Project Management Unit (PMU)

The main task of each organization unit is described as below.

(1) Vietnam National University, Hanoi

VNU-HN will represent the government as the coordinating body for the project. VNU-HN is expected to guarantee that the project will be executed in accordance with its objectives and its implementation schedule.

(2) Steering Committee

The Steering Committee is presided over by the President of VNU-HN and it is composed of the Vice Rectors, Deans, and Coordinators. The steering committee is the highest authority that undertakes the setting up of general policy and strategies. It approves the plans, financial programs, financial and administrative bylaws, as well as revising and approving the reports submitted by PMU.

(3) Project Management Unit (PMU)

PMU constitutes the management of the project implementation. The PMU director is responsible to the Steering Committee of VNU-HN. PMU is responsible for all aspects of project implementation including the employment of consultants, technical assistance, procurement of contractors and suppliers, and supervision of the overall implementation of the Project. PMU will provide overall project management, direction and guidance. The PMU director and officers should be on a full time basis and have experiences in each field and donor project. The funding for PMU operation and management shall be included in the overall project cost.

14.3.4. Expert team (refer to shaded box in pink)

This consists of a specialist expert/consultant team that would support the VJU Preparation Office in a wide range of activities including development of marketing & promotional strategies, monitoring, MIS, follow up among multiple stakeholders including the Government Office, the Ministry of Education and Training, the Ministry of Construction, the Ministry of Justice, the Ministry of Science and Technology, the Ministry of Natural Resources

and Environment, the Ministry of Finance, the Ministry of Planning and Investment and the Hanoi People's Committee, etc. The Expert Team will also support the Government appointed team of the VNU Project Management Unit in their work regarding coordination activities with the various authorities concerned, institutional set-up, PPP structure development, staffing and training, outsourcing and tender procedure, etc.

14.3.5. Execution and Implementation Agencies

The following are tentative definitions, since the Loan Agreement for the proposed Japanese ODA Loan has not been finalized yet.

Borrower: The Government of the Socialist Republic of Vietnam (GOV).

Executing Agency: Vietnam National University, Hanoi (VNU-HN).

Implementing Agency: Project Management Unit (PMU): PMU established under VNU-HN.

15. Conclusions and Recommendations

This survey was started as an initiative led by the private sector. However, this study has not yet led to present a numerical value and a concrete proposal to attract the private sector, since the location and size of the specific land has no specific data at this stage yet. Also, even if the land were granted as a support from the Government of Vietnam, the initial plan to contemplate 200 ha of land for University development as well as the surrounding 300 ha of land for private sector's development, acquiring a total of 500 ha of land is difficult.

Consequently, creating a fund associated with the development that is taking full advantage of real estate value, has to inevitably wait for the confirmation of place and the recovery of land in the future.

On the other hand, even though the scale is small, real estate value is envisioned as a revenue source, as in the construction of a satellite building at an existing VNU campus. While it is not fixed yet, the fact that its size and specific location have already been presented by VNU, it is considered possible for estimation. However, since the aim is to gain profit from management and rent from private sectors, even though it is hard to expect Japan's ODA for the initial investment in construction costs, there is a possibility that the PPP will work out by creating a condition where the operating activities are made within an educational facility, therefore the profit made can be transferred for research as well as educational activities.

The concept of a satellite campus is necessary as a catalyst for private initiative. Without this campus, the development of VJU and the idea of the university as a private initiative will not succeed; thereby VJU will be a university largely relying on the subsidies from the Vietnamese government.

As can be seen from the results of cashflow in financial planning, even by making the admission and tuition fees slightly more expensive than the current public universities, it only resulted in a continuing deficit in the operational balance, hence the Japanese ODA is greatly expected, especially for capital costs for the initial investment, such as the personnel cost of Japanese teaching staff, construction costs of school building, as well as the initial stage of personnel cost for university activities expenses, including personnel cost of Japanese.

However, in order to secure an autonomous and sustainable development of VJU, both in technical and financial aspects, the approaches below are indispensable.

Regarding the Vietnam-Japan University Initiative, not only based on practical issues in recent years on establishing and operating a foreign higher education institution in Vietnam, but also based on the analysis of the legal system which regulates the higher education sector in Vietnam, the following recommendations below were made.

15.1. Clearance of Land

Land is leased with incentives by the Government to a foreign HEI for non-commercial purposes or an HEI in areas with difficult economic and social conditions, and leased to a foreign HEI for commercial purposes that pays land rents annually or in a lump sum for the whole lease period.

However, land allocation is always the biggest problem for all newly established HEIs. No matter how good land-related incentives laws and regulations are set out in paper, in reality new HEIs have to face the prolonged and costly process of obtaining land for their campus.

Hoa Lac high-tech land in Hanoi, for example, has been promised land for HEIs for many years and yet it still has not received that land.

Even Government-supported 'new model universities' such as VGU and USTH are suffering this problem of land allocation and clearance for a long period of time, and today they can only operate on the existing infrastructures of their Vietnamese partners.

Therefore in order to obtain enough land for the future extension as well as for realizing a world class campus for the sake of VJU, land allocation and clearance should be tackled efficiently by the Vietnamese partner: i.e., VNU, with the cooperation of both Governments. Since the schedule of land clearance affects the implementing schedule of the projects, it is necessary for the Vietnamese government to make it clear before the start of the proposed Yen loan project.

On the other hand, it is not possible to accomplish the original development goal led by the private sector simply by transferring the land of HHTP or VNU, or by using the existing VNU campus as a VJU's satellite campus or by only building facilities. Since by applying city planning to each land and by positioning the campus on high-value land can stir the willingness of the private sector to invest, it is necessary to negotiate patiently with HHTP campus (Ministry of Science and Technology) as well as VNU new campus (Ministry of Construction). Also, in order to obtain the full cooperation from the Prime Minister, it is mandatory to propose a plan that clearly shows the importance of this project as well as the development of the future.

15.2. Input of Japanese Professors

For the success of VJU, It is vital to input outstanding Japanese academic staff into multidisciplinary fields of study. Therefore it is important for VJU to provide good incentives for invited Japanese professors regardless of contract term.

According to the survey result of VGU and USTH, most foreign lecturers of their institutes are so called "flying Lecturers" staying in Vietnam for only two weeks on each occasion.

VJU on the other hand, the fulltime input of Japanese professors, lecturers, researchers as well as administration staff for establishing core Japanese members amongst VJU organization structure is placed as the most important arrangement.

However, the conditions and upbringing of academic staff in Japanese universities does not prioritize the experience and contributions of teaching experiences overseas. It is vital for young Japanese lecturers to execute research activities continuously and publish dissertations overseas in parallel to teaching activities.

Therefore, in order to attract young and talented Japanese researchers to work in VJU, the following measures have to be taken:

- Enhancing their academic career by providing research and publishing dissertation opportunities while working in VJU.
- Providing favorable specific research fields in Vietnam in particular.
- Providing an attractive research and education environment.
- Providing proper financial supports to their institutions.
- Supporting recruitment of their replacement academic staff.

15.3. Autonomy of VJU

The level of autonomy, though clearly put in the HERA, is still much discussed and remains unclear and is subject to conflicting policies and contradictory practices.

As part of earlier reform strategies, the two VNUs (in Hanoi and in Ho Chi Minh City) operate under charters given directly to them by the Prime Minister. These universities enjoy special

privileges, including that the Prime Minister appoints their Rectors. The two universities have more academic and financial autonomy than any of the other public-sector institutions.

They can, for example, make a great many more budgetary decisions without reference to MOET. They can also, if they choose, depart from the MOET-approved national curriculum frameworks.

The private universities have different rights of self-governance. They must establish individual governing boards, elected or appointed by the shareholders. The governing boards have a higher level of financial autonomy, at least in relation to expenditure decisions. However, they must still comply with admission quotas given to them by MOET.

Public International universities of VGU and USTH possess more autonomy, including rights to determine its own curriculum, set its own fees, and determine its own enrolment criteria and numbers and to manage internal financial allocations and university assets, to make academic appointments below the level of Rector and Professors, and to make internal “regulations” about the administration processes. However, the charter, approved by the PM, still maintains a high level of state control over critical areas such as the size, structure and membership of the University Councils; the appointment of the President (Chair of the Council) and Rector; the operational rules of the University Council, including voting rights; the number, roles, size, structure and internal operations of the various sub-committees, etc.

Therefore, it is important to say which regulations and matters are to be waived from the conventional provisions of law in Vietnam; it is necessary to clearly stipulate in the proposal for requesting the decision of the Prime Minister for the sake of VJU operations.

It is also necessary to consider the role and influence of the Japanese Government, Japanese consortium of universities and research institutes as well as the Japanese business community to gain the most favorable and ‘special case’ treatment from the Vietnamese Government by seeking a kind of Government engagement such as a ‘declaration’ or ‘agreement’ between Vietnamese and Japanese Governments, based on which, the Vietnam PM would decide the establishment.

15.4. Attracting Students

15.4.1. Tuition Fee

In regard to student tuition, public HEIs have to follow Government regulation on the maximum level while private HEIs are free in deciding its own tuition policy. The low tuition set by regulations in combination with strong Government subsidies make a public HEI an ideal destination for students, especially for those from ordinary-income families all over Vietnam, and at the same time create a complete contrast to private HEIs.

High tuition will filter out a lot of students from families without financial capability and limit the number of training professions (WTO barrier) which may also be a reason for low enrolment.

Recently, some public HEIs are allowed to have financial autonomy; however various restrictions from the Government made this autonomy half open (public HEIs are autonomous in cash-out but not in cash-in). The public HEIs can establish the student’s tuition level within the limitation set by the Government. However, public HEIs receive support from the State budget, which plays a crucial role in keeping the university running and attracting students from all over the country.

Therefore, it is important to provide a range of scholarships for VJU for those who have achieved excellent scores; however, financial support is required in order to keep a certain level of tuition fee to cover the expensive operational costs of VJU.

15.4.2. Enrolment

In regard to the methods of enrolment, there are entrance exams, profile evaluation or combination methods. HEIs autonomously make decisions on the enrolment methods and bear responsibilities for the enrolment.

MOET is to compile common entrance exams for all universities, except for few special universities (with subjects of art, dance, music, sport, etc.) which organize separate entrance exams.

All students (except for those studying in the International HEIs and foreign associate programs) must graduate high schools and participate in the national entrance exam compiled by MOET and held annually in July. Based on the quota assigned by MOET, local HEIs decide their matriculation mark, not lower than the minimum mark announced by MOET.

Because of this matriculation mark system, each university is categorized in a hierarchy and top universities in each field attract more students.

Therefore, the prestige of the university (such as VNU) and Japanese quality may attract more students, but it is important for VJU to register under this matriculation mark system and it is necessary to achieve the top level in Vietnam.

At the initial stage, it is important to set the ratio of scholarship students higher and attract outstanding students as they are expected to be momentum to establish the academic reputation of VJU. Besides, it is also needed to keep a sound academic level by encouraging outstanding undergraduate students in VJU to promote to the graduate school in cooperation with VNU.

Visiting well-known high schools in remote areas, as USTH did, would also be an important pre-activity to attract outstanding students.

15.5. Infiltration of Research Activities amongst Students

With the exception of great performances of MIT in research activities in relation to private businesses, most universities are searching for research collaboration with the private sector due to their financial attractiveness.

VJU will be able to establish organizations of research and development, organizations of science and technology services, publishing organization, science and technology enterprises if VJU wants and other public-service units appropriate to the professions taught and science & technology activities; however these services have to meet the needs of the market and their trends.

VJU will certainly be encouraged to establish collaborations with businesses and provide target-based training. A good example for that collaboration is a training contract between the Hanoi Institute of Technology (HIT) and Intel Vietnam, according to which, HIT provides training in professions tailored to the needs of Intel Vietnam.

Therefore it is very important for VJU to establish a strong partnership with the private sector, especially with Japanese companies in Vietnam.

However, most of those who have tried to activate research activities with universities in Vietnam have faced the following difficulties:

- Most master course students and researchers do not study and research on a fulltime base. The majority of them works during the day and only attend seminars and research activities in the night time.
- Insufficient equipment and space for laboratory.
- Difficult to find well qualified supporting staff.

One of the solutions to those difficulties is an introduction of the Japanese academic chair system ("Koza" system) including learning in an apprentice relationship with professor, the Japanese way of problem solving skill and sharing the values. Those are exactly what Japanese companies expect from new graduates.

In light of the above, VJU should obtain a proper source of funds to realize research activities which are attractive to students and researchers and properly are equipped with specious laboratories.

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