Transfer - Development

"... I was impressed by VNU-HCM and its development objectives, which are in line with the development trend of the world…"

Prof. Klaus Schwab
Executive Chairman of the World Economic Forum
8th June 2010
Objectives 2010:

- The focus of VNU-HCM for the year 2010 is "Transfer & Development" with the following specific objectives: "Management competencies for higher education must be improved. The strengths of VNU-HCM on training and scientific research will be developed. Transfer in and out of VNU-HCM has been strongly enhanced. Campus A of the University was constructed. Some operational activities will meet the standards of the ASEAN."
- Decree No.296/CT-TTg dated 27 February 2010 by the Prime Minister emphasizes on "renovating management methods for higher education in the period 2010 - 2012"
- The theme of the academic year conveys "upgrading management modes, enhancing the quality of education for the benefit of society"

Policies 2010:

- Conducting activities relating to autonomy and accountability within VNU-HCM
- Upgrading administrators’ competencies
- Continuing audit and assessments for educational institutions both at national and international levels. Investing on programs which have passed national and international assessments.
- Studying and establishing distinctive academic program structures of VNU-HCM
- Building a community-oriented science and technology closer to international standards
- Facilitating basic construction and facility development of the planned campus in Thu Duc - Di An, especially student sports and recreation centers
- Renovating the strategy-based management and the quality control of outputs
To implement the academic year theme "Transfer - Development", VNU-HCM has taken advantage of the power of a comprehensive multi-disciplinary system, gradually implemented joint programs in and out of VNU-HCM, improved educational quality based on national and international standards through joint programs and developed some programs of ASEAN and international standards; thereby, contributing to the establishment of a research university.

**Output standards - A commitment to educational quality and competence**

"VNU-HCM: Renovating the strategy-based management and the quality control of outputs": VNU-HCM has set up output standards for each faculty / major / program at both undergraduate and graduate levels based on the standards of CDIO, AUN-QA and ABET. These standards have been also established in line with the policy of Ministry of Education and Training and VNU-HCM. Their contents meet the requirements and are publicized in a timely manner.

**Reference websites:**
- University of Technology: http://www.aaot.hcmut.edu.vn/dhcq.html
- University of Information Technology: http://www.uit.edu.vn/uploadf/congkhaithongtin/ChuanDauRa.htm
Transfer - A Flexible Academic Environment

A transfer for courses of political theory and national defense among VNU-HCM affiliates... VNU-HCM is currently implementing the English Course Project as a legal foundation for a system wide transfer of undergraduate and graduate English courses in 2011. Transfer at VNU-HCM affiliates: A transfer for general and elective courses is continued conducting among faculties / majors.

Transfer outside of the VNU-HCM: 12 programs of VNU-HCM have joined the AUN-ACTS Credit Transfer System.

VNU-HCM: A member of AUN-ACTS Credit Transfer System
12 programs of VNU-HCM recognized as transfer equivalencies by member universities of ASEAN Credit Transfer System - ACTS.

<table>
<thead>
<tr>
<th>No</th>
<th>Affiliate</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>International University</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>University of Social Sciences and Humanities</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>University of Information and Technology</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>University of Laws and Economics</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Center for French Universities</td>
<td>2</td>
</tr>
</tbody>
</table>

Cooperation - Cultivating strengths and motivation for a fast and sustainable development

Besides high-quality programs, universities and affiliates of VNU-HCM are conducting more than 51 joint educational programs with 35 prestigious foreign universities in the USA (e.g. UC, CA, Rutgers, UCLA, Illinois, Duke, Loyola,...), France (e.g. Universities of Paris Orsay, Pierre et Marie Curie,...), INP System of Japan (e.g. University of Tokyo, Waseda University) and Korea (e.g. Korea University,...). The most distinctive program in 2010 is the doctoral program MANAR (molecular and Nano-structured materials). This is the first MANAR doctoral program in Vietnam jointly developed by VNU-HCM and the University of California, Los Angeles (UCLA), an internationally recognized university. The doctoral program in MANAR is one of the joint ventures between VNU-HCM and UCLA as a step towards the establishment of a MANAR research center in future.
MANAR DOCTORAL PROGRAM
COOPERATION BETWEEN VNU-HCM AND UCLA, USA

This offers a good opportunity for Vietnamese students who have desire to do their PhD thesis at a top quality accredited US university (ranked 11th). Students will also have a chance to work with a leading research team at UCLA led by Prof. Yaghi. Prof. Yaghi is one of the nominees for Nobel Prize in Chemistry.

As part of the strategy for building a strong team of researchers on MANAR (molecular and nano structured materials) with a concentration on MOFs and ZIFs, VNU-HCM has assigned University of Technology and University of Science to do research on MANAR. Besides, in order to connect education with scientific research, VNU-HCM is the MANAR doctoral program in cooperation with UCLA of the US. Top graduated students of VNU-HCM will be automatically admitted to this program, and will study and do research for 2 years at VNU-HCM before transferring to UCLA to complete their doctoral thesis in 2 or 3-year time. Full scholarships will be awarded during the study time in Vietnam and the USA. So far, the program has already selected the first 9 students for the academic year 2010 - 2011 starting in September.
Advanced Program in Computer Science (APCS) Cooperation between VNU- HCM and Portland State University, USA

APCS is one of the first 10 advanced programs under the project "Vietnamese Higher Education Renovation" approved by the Prime Minister in 2005. The program is piloted at the University of Science using the curriculum of Portland State University, USA with a flexible adjustment to best suit the culture and the development need of Vietnam. Faculty of this program includes professors from internationally recognized universities such as University of California Berkeley, Princeton University, Paris Institute of Technology, California State University, Technical University of Berlin and ECE Graduate School of Paris.

Educational quality assessment at VNU-HCM - Recognition of educational quality

There are two remarkable achievements after 4 years of implementing educational quality assurance as follows:

1. Establishing a documentary system including procedures, regulations and personnel organization for the whole system from top VNU-HCM to member universities. This system consists of VNU-HCM Assessment Council which directs and supervizes all activities and operational mechanism of each affiliate.

2. Conducting initial assessment of the current quality status of VNU-HCM, thereby correctly evaluating the strengths and weaknesses of VNU-HCM based on statistical data and records as well as providing strong evidence of educational strengths of VNU-HCM affiliates through its participation in regional assessment programs.

The Vietnamese-French High Quality Engineers Program (Programme de Formation d’Ingénieurs d’Excellence au Viet Nam or PFIEV) is audited by Commission des Titres d’Ingénieur (CTI) and recognized by the French government for the period 2010 - 2016. Simultaneously, it is granted the EUR-ACE for the period 1/9/2010 - 31/8/2016 by European Network for Accreditation of Engineering Education (ENAEE) for the following fields: Mechanical Engineering including Aviation Technology, Mechatronics, Automated Production, Advanced Materials, Polymer-Composite, Electrical Engineering consisting Information System and Media, Telecommunications, Industrial Informatics, Energy System and Civil engineering comprising Transportation Infrastructures, Waterway Construction Engineering and Urban Technology.

External assessment results based on AUN-QA standards

ASEAN University Network - AUN consisting of 21 top universities in the region have already conducted the program level external assessment based on AUN-QA standards. The results are as follows.

<table>
<thead>
<tr>
<th>No.</th>
<th>Affiliate</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Electronics - Telecommunications Program Faculty of Electricity - Electronics, University of Technology</td>
<td>4.10</td>
</tr>
<tr>
<td>2.</td>
<td>Information Technology Program Faculty of Information Technology, University of Science</td>
<td>4.92</td>
</tr>
<tr>
<td>3.</td>
<td>Information Technology Program Faculty of Information Technology, International University</td>
<td>4.61</td>
</tr>
</tbody>
</table>

VNU-HCM affiliates' internal assessment results

<table>
<thead>
<tr>
<th>No.</th>
<th>Affiliate</th>
<th>Time</th>
<th>Result</th>
<th>Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>University of Social Sciences and Humanities</td>
<td>Sep 2010</td>
<td>82%</td>
<td>X</td>
</tr>
<tr>
<td>2.</td>
<td>International University</td>
<td>Sep 2010</td>
<td>82%</td>
<td>X</td>
</tr>
<tr>
<td>3.</td>
<td>Institute for Environment &amp; Resources</td>
<td>Oct 2010</td>
<td>83.9%/56 criteria</td>
<td>X</td>
</tr>
</tbody>
</table>
Being a national advanced center for scientific research and technology transfer, VNU-HCM is striving to improve the quantity and quality of scientific researches in the expectation to meet the requirements and standards for scientific research assessment of prestigious international organizations. With their goal-oriented determination, in the first ten months of 2010, VNU-HCM researchers registered 137 scientific research papers including 2 national ones. Moreover, there were 423 papers published in international journals and conference proceedings, out of which 88 papers were on ISI list. The research quality has been improved, especially the applied researches have made a great contribution to the effective technology transfer which can be seen through their annual turnover. In the first six months of 2010, VNU-HCM made VND 30.7 billion from technology transfer activities.

Another remarkable activity is the development of scientific information and technology through the Science and Technology Development Journal. In 2010, after the appointment of the editorial board, this journal issued 10 volumes including 72 articles in the fields of natural sciences, technology, earth and environmental science, social sciences and humanities, economics, laws and management. Currently it has become a reputable science forum playing an important role in the quality improvement of training and research in VNU-HCM.

The above-mentioned achievements result from VNU-HCM's strategic and effective investment in strong research teams who can approach international level, and in the research laboratory system to enhance the effectiveness and quality of research projects and trial production.
VNU-HCM has intensively invested in a well-equipped laboratory system with facilities modern enough for scientific research, technology transfer and training. So far, VNU-HCM has built 62 laboratories with total investment of VND 1,048 billion. Particularly in the period of 2006 - 2010, there have been 40 projects valued VND 430 billion. Out of the 62 mentioned laboratory projects from 1999 - 2010, there are 49 projects receiving the State fund with total value of VND 690.2 billion and 13 funded by World Bank and other international organizations. Up to now, 43 projects have been completed and the other 19 are under construction.

The key laboratories are listed as follows:

- 2 national key laboratories: Laboratory for Digital control and System technology; and Laboratory for Polymer and Composite Materials.
- 10 VNU-HCM key laboratories: Laboratory for Research and Application of Stem Cells, Laboratory for Molecular biotechnology, Laboratory for Nanotechnology, Laboratory for Material Technology, Laboratory for Applied Physics and Chemistry, Laboratory for Chemical engineering and Petroleum, Laboratory for Centered Analysis, Laboratory for Combustion engines, Laboratory for Environmental technology and Laboratory for High-Technology Waste Disposal.
Major achievements of the research teams

■ 32-bit processing chip VN1632 launched
After 8-bit microcontroller chip publication, the Integrated Circuit Design Research & Education Centre (ICDREC) successfully produced a 32-bit processing chip VN1632. This chip meets the requirements of complicated control systems which require high processing speed such as mobile phones, encoding/decoding, communications and image processing equipments…This event marks a new step of IC technology of Vietnam when the 32-bit processing chip using IBM 0.13um was first designed.

■ Vietnam successfully produced biochips
The Integrated Circuit Design Research & Education Centre (ICDREC) and the Saigon High-Tech Park’s Research and Development Center have successfully produced the biochip whose full name is Quatz Crystal Microbalance (QCM). QCM, designed and produced in Vietnam by Micro-Electro-Mechanical Systems or MEMS technology, is effectively applicable to various sectors, especially to the healthcare for detection of E. Coli O157-H7 bacteria.

■ The Little Chickens won the first prize at the LSI Design Contest
The Little Chickens from the Integrated Circuit Design Research and Education Centre (ICDREC) won the first prize at Large Scale Integrated (LSI) Design Contest in Japan. The Japanese media highly evaluated the Vietnamese team for winning the highest prize in its first time participation of this contest.

The biochips for detection of E. Coli O157-H7 bacteria
Radio Frequency Identification tags created at LNT; soft ones (above) and hard one (right).

Fabrication of Radio Frequency Identification tags (RFID tags)

The Laboratory for Nanotechnology successfully created soft RFID tags using UHF waves and hard ones using STMicroelectronics chips. The tags have passed the trial tests and can be used for automatic barriers and inventory tracking and management. Radio Frequency Identification (RFID) is an automatic identification technology.

Phu An Bamboo Village received UNDP's Equator Prize for biodiversity

In September 2010, "Phu An Bamboo Ecological Museum and Botanical Reserve", also known as Phu An Bamboo Village, is among 25 international organizations to receive the UNDP's Equator Prize 2010 on biodiversity by United Nations Development Program in New York.

Phu An Bamboo Village Project was implemented in 2003 in Binh Duong with the cooperation of France's Rhone Alpes region, province of Binh Duong, the Pilat Natural Park of France and University of Science. The village is considered the largest bamboo reserve in Southeast Asia, which gathers all species of bamboo throughout Vietnam. Currently, this ecological reserve
has a collection of 300 samples of bamboo varieties in Vietnam. Among them, there are rare and precious varieties such as Phyllostachys, Bambusa, Teinostachym, ivory, and tripped-yellow bamboo, etc.  

Phu An Bamboo Village has changed the ‘iron triangle’ during the war into the green one where more jobs are offered to reduce poverty; natural resources are reserved; gender equality are focused, and research and education programs on biodiversity preservation are provided for a sustainable development.

- Vestige complex of ancient culture and history in An Giang province

There have been long-term researches lasting for 65 years (1944 - 2009) together with many scholars’ excavations and analyses on the culture of Oc Eo located in An Giang, the province named “A Hero of the People’s Armed Forces” of the Mekong Delta but there are still unresolved puzzles about its history.

The 2006 - 2008 key research of VNU-HCM named as "Archeological vestiges of Oc Eo and post- Oc Eo culture in An Giang" was the first project of Vietnam implementing these objectives: systematizing prehistoric and historic vestiges of culture in An Giang province; applying GIS (Maplnfor, GPS) to manage scientific research data and building original documents (specialized on pottery) for VNU-HCM Culture and History Museum today and tomorrow.

This project was highly evaluated by Mr. To Buu Giam, Chairman of the Tran Van Giau Science Award Committee, as the best study with the most updated information about traditional culture of prehistoric Southern area. It was also considered as an authentic scientific document for other historical and traditional culture researches of An Giang province in particular and Southern area in general. From this finding, Assoc. Prof. Pham Duc Manh and his VNU-HCM research team of “History of the Southern Culture” have reasonably explained its historical and cultural processes as well as the inhabitants’ social and spiritual life. On the 99th birthday anniversary (1911-2009) of Professor Tran Van Giau who was recognized as a Labor Hero and People’s Teacher, the project was granted the Tran Van Giau Science Award 2009 according to the Decision No. 04/09

The Equator Prize is presented to recognize and celebrate outstanding community efforts on the conservation of biodiversity to contribute to poverty reduction, community empowerment, gender equality, environmental protection for a sustainable development.
Assoc. Prof. Phan Thi Tuoi at University of Technology won Vietnam Kovalevskaia Prize

Assoc. Prof. Phan Thi Tuoi (Faculty of Computer Science, University of Technology) was awarded Kovalevskaia Prize. She supervised 8 scientific research projects, participated in 2 key national research projects and was the author or co-author of 37 scientific articles. Her research findings have made great contributions to the development of information technology - one of the national key fields nowadays. Thanks to Assoc. Prof. Tuoi’s guidelines and support, many high-qualified engineers, masters or postgraduate researchers have been successful. Among those, there are currently some lecturers and departmental management board for different universities.

There are some titles, medals, certificates of merit awarded to Assoc. Prof. Tuoi as follows:

- Title of Associate Professor and Excellent Lecturer awarded by the President in 2008
- Order of Labor Glory, 3rd Class in 2004
- Order of Labor Glory, 2nd Class in 2008
- Certificates of Merit by the Prime Minister, Ministry of Education and Training, HCMC People’s Committee and Vietnam Women’s Union.

Kovalevskaia Prize, also called as Kova Prize, is to honor excellent female scientists in recognition of their achievements in scientific research and applications as well as their contributions to national socio-economic and scientific-technological development. The prize named after the Russian mathematician Kovalevskaia (1850 -1891), was founded in 1985 and initially financed by the American scientists Ann and Neal Koblitz. From then, the Prize has been awarded to some Vietnamese female scientists for their outstanding researches in natural and applied sciences. The Prize has been by now supporting 8 developing countries such as: Peru, El Salvador, Nicaragua, Mexico, Cuba, South Africa, Mozambique and Vietnam.
EXTERNAL RELATIONS

VNU-HCM is now in association with more than 150 international universities and institutes. Some of them are well-known and highly ranked organizations all over the world such as University of California Los Angeles (UCLA), Duke University, The University of British Columbia, University of Amsterdam, Grenoble Institute of Technology, Australia National University, University of Melbourne, University of Tokyo, Pusan University, Hong Kong University, Tsing Hua University, etc.

Moreover, VNU-HCM also plays roles in the Board of Management of educational organizations and associations in the region such as ASEAN Universities Network (AUN), ASEAN Technology Institutions Network (AUN/SEED-Net), ASEAN-European University Network (ASEAN UNI Net), etc.

Currently, VNU-HCM has implemented over 49 international projects, among which 35 were completed in 2009 and the remaining 14 are being carried out at total cost of USD 22,931,892, VND 35,143,200,000 VND and EU 320,000. These include the projects of VNU-HCM and of its affiliates.

Throughout the network of external relations, the image and position of VNU-HCM have been confirmed in the international education system, and the community-oriented educational and research activities have been also enhanced.
America: Master of Public Policy for Environmental Protection

Applying the model of "Enterprises-Universities-VNU-HCM" which takes advantage of enterprises' resources and cooperative relationships with foreign universities in order to improve its teaching and research quality and produce the society with highly capable human resource, VNU-HCM has set up the project namely "Public Policy For Environmental Protection (PPEP)" co-sponsored by the General Electric (GE, USA) and Duke University with the total amount of USD 1,080,000 to develop the curriculum and the faculty training program. The admission of the PPEP is scheduled to start in August 2011.

Enhancement of management competencies in higher education for VNU-HCM administrators

In association with the USA prestigious universities, VNU-HCM has developed a training program to enhance the management competencies in higher education for its administrators. The 3-week program will take place at the USA universities covering knowledge of higher education management and observation of the administrative activities. In 2009, there were 6 administrators sent by VNU-HCM to Loyola University Chicago under this program. In 2010, a team of 10 members including Directors of VNU-HCM functional departments and Vice Rectors of affiliate universities participated in the program at California State University, Fullerton.

Asia: JICA-SUPREM Project

JICA-SUPREM Project namely "Enhancing the capability of University of Technology for a stronger linkage with local community" commenced in 2006 and includes two stages (2006-2009 and 2009-2013). Its objective is to conduct researches for the local needs of industrial development. With this project, the University of Technology has strongly established and developed the research-oriented education and linkages with the local community, contributing to the human resource training and the technology solutions for provinces in the Mekong Delta, Central Highlands and West Eastern region.
Europe

The project "Model of Climate Change Forecasts" led by VNU-HCM in association with Delta Res (Holland) is valued at EU 320,000. A group of project implementers was built by VNU-HCM. So far, under the project, 10 members of the group have been trained, and a network of 30 collaborators in the Mekong Delta has been established.

Vietnam - Vietnamese Studies

The Faculty of Vietnamese Studies (FVS) is an affiliated unit of the University of Social Sciences & Humanities. Its precursor was the Department of Vietnamese Studies and Vietnamese Language for Foreigners of the Center for Vietnamese and South East Asia Studies, and was officially established under the Decision 439/QĐ/ĐHQG/TCCB issued on 26/12/1998 by VNU-HCM President. Currently, it has become a reputable institution of research and training in Vietnamese studies in the country and beyond, where a lot of students from Korea, Japan, USA and France, etc. have come to study and do research.

Australia

Under the partnership with Australia, a visit to Australian universities was made by VNU-HCM, which initially explored possible cooperation like staff mobility under the program ECV 1000 as well as reform and enhancement of English programs at undergraduate and graduate levels at VNU-HCM (Practicum). Moreover, as agreed in the "leadership program", the Australian government will annually sponsor 10 faculty members of VNU-HCM for training courses in Australia.