

**ESTABLISHING VIETNAM NATIONAL UNIVERSITY,  
HANOI (VNU) AS A RESEARCH UNIVERSITY  
BY PROMOTING SCIENCE AND TECHNOLOGY ACTIVITIES**

**MSc. Le Anh Xuan**

Vietnam National University, Hanoi (VNU)

---

***Abstract:***

*VNU is one of the major university centers in Vietnam which has set a goal to become a research university (2010). With those characteristics of the research-university model (mentioned in the paper Essential characteristics of research universities on the website of UNESCO) we can see that in a research university, S&T activities play an important role.*

*By analyzing existing information on S&T activities in VNU, this paper is aimed to inform the current condition of VNU and what the necessary policies should be made to establish VNU to become a research university.*

***Keywords:*** *Science-technology policy; Science-technology activities; Research university model.*

In the development of S&T, universities or especially research universities take a very important position. That is because of being an academic institution, the university based on the strength of S&T human resource to "create of new knowledge" and after that widely disseminate them. In addition, as an important element constitute to the R&D system, the university will undertake the scientific research activities (including basic and applied research) to provide S&T products as a prerequisite for firms and companies to conduct mass production. Moreover, universities can also take the collaboration with business/enterprises or research institutes to conduct research activities right in those organizations, which may be linked with technical development. Then we can see that by its mission, the university contributes significantly to the development of economy and society in each country.

By the trend of the globalization and the emergence of the knowledge economy, in many countries, the role of research university becomes more important in taking a part of making development policies or building of the economic sectors with the advantage. Therefore, by an expert on the research university model, *Philip G Altbach*, although the establishment of a research university needs a huge investment, many countries - including the developing countries - have set the goal of building in their country one or more research universities reached a high level of region or in the world. It seems be the same

in Vietnam with the information from the draft of “Vietnam Strategy of Education to 2020” in which Vietnam expected to hold a number of universities in research-oriented so that to 2020 Vietnam will have about 30 “Basic-research-oriented universities”. As the one of major university centers in Vietnam, VNU has set a goal to become a research university and on August 2010 VNU is the first university who announced the goal of becoming a research university in Vietnam.

**1. Science and technology activities in Vietnam National University, Hanoi**

**1.1. The policies from the State and funding for science and technology in Vietnam National University, Hanoi**

In general, the State has many claims to encourage S&T activities in the universities. Actually, the State budget for S&T activities to be prioritized for research institutes rather than universities. This stems from the characteristics that Vietnam exists two systems of state institutions performing S&T that are the research institutes and universities, and although both of them take a participation in S&T activities, research institutes received more investment from the State budget for research activities.

**Table 1:** The State budget expenditures for S&T activities to the two of national academics

(Vietnam Academic of Science and Technology - VAST and Vietnam Academic of Social Sciences - VASS) and the two of National universities in 2011

*Unit: million VND/million USD*

<b>Capital</b>	<b>Total</b>	<b>From Domestic Capital</b>	<b>From Foreign Capital</b>
<b>Organizations</b>			
	(1) = (2) + (3)	(2)	(3)
<b>For all:</b>	<b>4,870,000</b>	<b>4,735,000</b>	<b>117,000</b>
.....			
- VAST	391,120	391,120	
- VASS	224,280	224,280	
- VNU, Hanoi	66,406	66,406	
- VNU, HCM city	65,630	65,630	

Source: Resolution 52/2010/QH12, published on November 10, 2011 by the National Assembly of Vietnam

Along with the investment from the State for S&T activities, according to current regulations of the State, the investment-funding for S&T activities in universities in Vietnam (including VNU) comes from:

- State budget;
- S&T development funds (established and managed by universities);
- State for implementation of the State research projects/plans;
- Loans;
- International collaboration on S&T activities;
- Others.

**Table 2:** The structure of investment funds for S&T activities in VNU, Hanoi*Unit: million VND/million USD*

Year	2006	2007	2008	2009	2010
<b>Funds</b>					
<b>1-Funding from the state budget</b>	30,100 ( 100%)	38,080 ( 100%)	40,818 ( 100%)	45,940 (100%)	47,710 (100%)
<b>2- Funding from S&amp;T activities</b>	21,368 (70,99%)	23,252 ( 61,06%)	46,177 (113,13%)	60,057 (130,73%)	112,328 ( 235,44%)
<i>2.1. From the state research projects/plans by "winning bid".</i>	5,409 (17,97%)	6,337 (16,64%)	19,997 (46,54%)	25,997 (56,59%)	38,225 (80,12%)
<i>2.2 Collaboration in the country</i>	8,807 (29,26%)	10,898 (28,62%)	8,257 (20,23%)	13,557 (29,51%)	18,569 (38,92%)
<i>2.3. International collaboration</i>	7,149 (23,75%)	6,218 (16,33%)	18,838 (46,15%)	20,498 (44,62%)	17,481 (36,64%)

*Source: The report on S&T activities of VNU, Hanoi from 2006 to 2010, published in 2011, provided by R&D Department, VNU, Hanoi.*

We can find that beside the funding for S&T activities from the State, VNU also made to mobilize other funding sources for S&T activities (from "winning bid" of state research projects/plans and cooperation with national and international organizations). This mentions the initiative of VNU in finding funding for S&T activities from outside the state budget.

However, contribute significantly to the "leap" in funding from S&T activities of VNU in the last 5 years that is funded from the "winning bid" from state research projects/plans (State announces the research projects/plans with the funding for academic institutions to compete and achieve the right to conduct those research projects/plans). Meanwhile, cooperative funding from national and international cooperation is not stable growth. This is noteworthy because we know that with its role as a major center of universities in Vietnam and the priority from the State, VNU has the advantage of access to the state research projects/ plans compared to other organizations but in the S&T cooperation with partners from the different economic sectors, requirement for the real

effectiveness of S&T projects will not give the priority for VNU if cannot afford conduct those S&T projects.

### ***1.2. Science and technology activities in Vietnam National University, Hanoi***

S&T activities in universities in Vietnam are considered as the second operation after training. Under the provisions of the Ministry of Education and Training, the task of faculty in universities in each year primarily to complete training duties then to the research activities, and work hours of researching are less than required for training.

**Table 3:** Regulation of the worked hours per year of university teaching staff in Vietnam

<b>Lecturers</b> <b>Tasks</b>	<b>Lecturer</b>	<b>Ass Professor and Senior Lecturer</b>	<b>Professor</b>
For teaching	900 hr	900 hr	900 hr
For researching	500 hr	600 hr	700 hr
Other	360 hr	260 hr	160 hr
Total	1760 hr	1760 hr	1760 hr

*Source: Decision 64/2008/QĐ-BGDĐT, published on November 26, 2008 by Vietnam Ministry of Education and Training.*

The table above gives information about the norm working hours of faculty in universities, for each grade teaching position that they undertake. It also is used as a basis for assessing the completion of the task of faculty after each school year. Faculty often has to complete the task of teaching, before participating in other activities. Besides, a situation quite common in Vietnam universities recently is after a long time universities conducted to expand training to increase the revenues, faculty in universities become busy with teaching, not have enough time to research activities. They have become accustomed that to coming university is to perform teaching duties.

This is the cause of the fact that S&T activities have not been comprehensively implemented by the entire faculty in VNU and so the results of quality scientific research can only be reached by a few of outstanding scientists. In addition, the implementation of scientific research was still mainly expecting from the "distribution" of the Government, whereas the link to other organizations in the society in S&T activities is being built (*The report on S&T activities of VNU, Hanoi from 2006 to 2010*, published in 2011, provided by R&D Department, VNU, Hanoi).

### 1.3. Human resources for science and technology activities in Vietnam National University, Hanoi

As a major university center, VNU has a number of large staff and highly qualified. It is an advantage compared to other universities in country. During the development and expansion, the number and quality of VNU staff has also increased.

**Table 4:** Statistics of VNU's staff

*Unit: person*

Statistics	Total	Scientific title		Training levels				
		Prof.	Ass Prof	Doctor	MA	BA	College	Other
<b>A. Permanent manpower:</b>	<b>2,280</b>	<b>46</b>	<b>248</b>	<b>672</b>	<b>872</b>	<b>620</b>	<b>13</b>	<b>103</b>
<b>1. Leaders/managers:</b>	<b>727</b>	<b>30</b>	<b>168</b>	<b>416</b>	<b>210</b>	<b>92</b>	<b>3</b>	<b>6</b>
- Part-time teaching	564	30	168	394	140	29	0	1
<b>2. Staffs / officers</b>	<b>574</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>134</b>	<b>327</b>	<b>9</b>	<b>96</b>
- Part-time teaching	11	0	0	0	8	3	0	0
<b>3. Researchers</b>	<b>138</b>	<b>2</b>	<b>0</b>	<b>16</b>	<b>70</b>	<b>51</b>	<b>0</b>	<b>1</b>
- Part-time teaching	8	1	0	5	3	0	0	0
<b>4. Lecturers/faculty</b>	<b>841</b>	<b>14</b>	<b>80</b>	<b>232</b>	<b>458</b>	<b>150</b>	<b>1</b>	<b>0</b>
<b>B. Temporary staffs</b>	<b>1,007</b>	<b>1</b>	<b>5</b>	<b>33</b>	<b>269</b>	<b>628</b>	<b>26</b>	<b>51</b>
- Work in teaching	432	0	2	20	146	260	1	5

*Source: Statistics document of every six months from the office of VNU, published on June 30, 2011, provided by VNU's office*

However as discussed above, human resources of VNU is now mainly used for training activities like other universities in Vietnam. In addition, VNU is not fully active in staff size according to the needs of their activities, which should have approval from the state agencies involved, under which, the staff size of VNU is determined based on the number of undergraduate students that VNU annual training.

### 1.4. The facilities, academic environment for science and technology activities

Currently, the organization of universities of VNU is arranged into three levels: University - Faculty - Department, then faculty are "organized" to Department and in the Department, faculty tend to thought that their main task is teaching and became the staffs with the habit busy with teaching.

Besides have not developed an enabling environment for S&T activities, VNU is still in the process of building facilities to meet the needs of S&T activities

The lack of infrastructure for S&T activities have been shown in the report on the activities of S&T of VNU: “VNU is one of the largest university in Vietnam but being in the lack of land and infrastructure. State has implemented to build infrastructure for VNU in Hoa Lac high-tech park (about 30 kilometers far from Hanoi), but so far this project has not made any significant changes” (The report on S&T activities of VNU, Hanoi from 2006 to 2010, published in 2011).

## **2. Recommendation for establishing VNU as a research university by development policy to promote science and technology activities**

### ***2.1. Policy for the sustained and sufficient funding on science and technology***

Under current regulations from the State, VNU is the one of the clue are received directly the state budget from government agencies, including the expenditures for building infrastructure and regularly S&T activities (According to regulations of the Prime Minister’s Decision No. 16/2001/QĐ-TTg of February 12, 2001, issuing the regulation on organization and operation of the national universities). In addition, VNU also has certain advantages in obtaining the major research plans/projects from the government, as a major academic institutions with prestigious in the national academic institution system. Therefore, to maintain this important resource, VNU should have policies to efficient use of incentive mechanism and investments from State for key universities like VNU.

With the funding outside the State budget, the relationship and cooperation to companies and other organizations need to be expanded through provide high quality S&T products and training. The university in Vietnam, with the understanding the actual situation of the locality, possible to cooperate with businesses in research investment and from that provide business appropriate S&T products, with more affordable. This is the direction that VNU has the capability to fully implement, with the advantages and capabilities of the major center of universities in Vietnam.

Policies to attract the funding outside the state budget also can be done via investment in Research and Development (R&D) system in VNU, and through establishing "start up", “spin-off” companies and others with revenues. The model "business in the university" has been implemented at Hanoi Polytechnic University and initially offers a number of effectiveness. With this way, VNU can independently create the new products, tested and then "handed over" to the economy. These special products will be provided to the society in the form of “patents”, “licenses” and even the successful startup business with a unique or new field of business.

## ***2.2. Policy for changing mainstream operations, training to science and technology activities***

It is necessary for the regulations on the different requirements of the role and responsibilities of faculty/lectures in the model of a research university which compared with the same things of faculty/lectures in other universities, to give out. In a research university, the faculty/lecture must be researchers working with the spirit of continuous research to create and disseminate new knowledge. Accordingly, all service activities in VNU then should aim to promote research activities and creativity, making those operations should become mainstream activities in VNU. There can be a certain that faculty/lecturer of VNU would feel really excited to get back to doing the right work of researchers, in a major center of universities of Vietnam as VNU.

In this context, the increases in R&D activities can fully guaranteed income for the faculty when joining the S&T activities, rather than to participate in teaching. With the position of a multi-disciplinary central university, VNU is possible to expand cooperation with other organizations and businesses/enterprises in the country and international in R&D to create opportunities for the faculty to participate in these activities. The problem here is the initiative of VNU in capturing the demand for S&T products from the business and social organizations to through it taking research projects to attract the staff involved in implementing S&T activities.

## ***2.3. Policy for ensuring human resources in science and technology activities***

Personnel policies have a direct impact to ensure S&T human resources of VNU. The change from the old model to the research university model of VNU will lead to requirements for the corresponding changes in personnel policies.

In recruitment, to attract and maintain high quality human resources for S&T (the best faculty, researchers and students...), VNU need to take advantage of the position and the autonomy of a major center of universities to attract talent people come to work or collaboration. These people could come from the sources: researchers at the research institutes, universities, students are foreign-trained, personnel from R&D departments of companies... and especially the excellent students, graduate and PhD students are trained at VNU.

In employment, evaluation, treatment, distribution of benefits, VNU need to take advantage of the autonomy given from the State in the construction of specific provisions aimed at developing S&T human resources. VNU need a treatment policy is best and most accurate selection to ensure attract and maintain a staff of highly qualified in scientists, have contributed significantly to the increase in S&T capacity of VNU.

#### ***2.4. Policy for developing infrastructure, facilities and academic environment system for science and technology activities***

An academic environment with good conditions of infrastructure, facilities system for the S&T activities is indispensable for a research university. But it cannot be done quickly because this is related to mobilization of funds that VNU may have been getting, from the State budget or the cooperation with other organizations. Investment in infrastructure and facilities systems is very expensive and VNU cannot simultaneously satisfy the financing for this investment. However, with the requirement to develop infrastructure and facilities systems for S&T activities of the transition, VNU still need to have appropriate policies to gradually meet the requirements. Along with developing infrastructure and facilities systems for S&T activities, an academic environment encourages and supports up to S&T activities will create a great motivation for promoting the joining to S&T activities in VNU. To achieve the above objectives, VNU should perform the following tasks:

- Using State budget funding for key projects to build infrastructure and facilities systems which on the list of required investment for long-term goals;
- For the system of laboratories or pilot production lines for applied research activities: conducted attract support from businesses or call for the investment/construction from business for infrastructure and facilities systems that located in VNU to cooperate in undertaking R&D activities between universities and businesses. Continue to promote activities associated with research institutes, universities, etc in common using of laboratories or equipment as VNU has done in the before. According to some experts, this collaboration brings not only the economic and efficient use of infrastructure, facilities and equipments of the partners but also could help to provide “ultimate” or “different” S&T products to the society;
- Implementation of intellectual property protection for S&T products, ensuring that all research activities, creation of new knowledge along the product creation process that is protected in accordance with the law.

#### ***2.5. Expanding international cooperation in scientific research***

In the transition from currently model to research university model of VNU, the expansion of international cooperation, especially in scientific research is indispensable.

By expanding international cooperation in scientific research, VNU may improve S&T capacities, through the learning experience in scientific research from the major scientific research, or getting cooperation and investment in facilities systems and laboratories with the region and world standards.



The expansion of international cooperation gives VNU the opportunity to participate in the systems of "division of labor" in scientific research activities at the global scale. Cooperation in solving scientific problems can cause VNU found in its own strength on the basis of its existing capacity./.

## REFERENCE

1. Resolution No.53/2010/QH12 published on November 15, 2011 by the National Assembly of Vietnam.
2. Decision No. 16/2001/QĐ-TTg, published on February 12<sup>th</sup>, 2001, by the Prime Minister of Vietnam.
3. Decision No. 64/2008/QĐ-BGDĐT, published on November 28<sup>th</sup>, 2008 by Vietnam Ministry of Education and Training.
4. Resolution adopted at the Congress of VNU's leaders on August 13<sup>th</sup>, 2010.
5. Trinh Ngoc Thach. (2005) *Completing the model of VNU to become the oriented research university*.
6. Truong Quang Hoc. (2008) *Scientific research team - the deciding factor to S&T activities and postgraduate training*.
7. Truong Quang Hoc. (2009) *Towards the model of research university in Vietnam*. VNU Hanoi - Vietnam: published in the Bulletin of VNU, No. 217.
8. Vu Cao Dam. (2010) *The methodology of scientific research (in Vietnamese)*. Hanoi: Vietnam Education Publishing house.
9. Tran Ngoc Ca, Nguyen Vo Hung. (2010) *Current debates on the transformation of academic institutions*. In: Göranson, B., Brundenius, C., (eds), *Universities in Transition*. Canada: Springer.
10. Dao Minh Quan. (2010) *Establishing scientific teams to improve linkages between research and postgraduate training (in case of VNU)*. Master thesis, defended in 2010.
11. Lam Quang Thiep. (2011) *Higher education in Vietnam and the learning experience of American higher education*.  
<http://www.edtech.com.vn/index.php/ly-lun-nghien-cu/qun-ly-giao-dc-i-hc/117-gddhviet>
12. Nguyen Huu Duc. (2011) *Integrating training and research - Measure taken for VNU to reach to international level*.
13. Phạm Ngọc Duy (2011). *Research university: the core of the creation*. [www.vietnamnet.vn](http://www.vietnamnet.vn) on March 14<sup>th</sup>, 2011.
14. Biennenstock. (2006) *Essential characteristics of research universities*. <http://portal.unesco.org/education/es/files/51613/11634229035Biennenstock-EN.pdf/Biennenstock-EN.pdf> (on the website of UNESCO).
15. Khalid Aziz. (2006) *What is a Research University*. [http://sse.lums.edu.pk/documents/workshop2006\\_presentations/Khalid%20Aziz.pdf](http://sse.lums.edu.pk/documents/workshop2006_presentations/Khalid%20Aziz.pdf).
16. Philip G. Altbach. (2009) *Peripheries and centers: research universities in developing countries*. Seoul, Korea: Education Research Institute, Seoul National University. <http://www.springerlink.com/content/486N7442N85LJ655/fulltext.pdf>.

17. Prasada Reddy. (2010) *Lecture on Strategic Management of technology and innovation*. Master course of Science and Technology management by Lund University in Hanoi, Vietnam.
18. Benner, M. (2010) *Lecture on Governance of Science*. Master course of Science and Technology management by Lund University in Hanoi, Vietnam.
19. Benner, M (2010). *In search of excellence? An international perspective on Governance of University Research*. In: Göranson, B., Brundenius, C., (eds), *Universities in Transition*. Canada: Springer.
20. Göranson, B., Brundenius, C., eds (2010). *Universities in Transition*. Canada: Springer.
21. Rhoads. Robert A. (2011) *The U.S. research university as a global model: Some fundamental problems to consider*. University of California, Los Angeles (UCLA). <http://escholarship.org/uc/item/8b91s24r>.