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Assessing the Impact of Lecturers Qualification to the Publication of Scientific Articles: VNU -University of Education Case Study

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Abstract:

In scientific research activities (SR), articles play a very important role. A university lecturer always performs two tasks, teaching and research. Most articles are published by the lectures who are teaching at universities. Although the role of scientific research is extremely important in higher education institutions, however the number of scientific publications in Vietnam is still modest for years. The report assesses the impact of lecturers' qualification to the publication of scientific articles: vnu -university of education. Three recommendations are given to adapted the findings.

Keywords: scientific research, university, lecturer, article, doctor.

1. Introduction

In scientific research activities (SR), articles play a very important role. It is not just the product of knowledge, but also called the currency in scientific world, through which can evaluate the professional ability and scientific productivity of the researcher¹. In each university, teaching and research are parallel. Many countries see that lecturer should spend at least 1/3 of the total amount of working time during the academic year for scientific research². A university lecturer always performed two tasks, teaching and research. Two tasks have intimate relationships and mutual impact. It is critical for lecturers to attach the research to teaching to enhance the training quality in university, continually renovate the teaching methodology to become a research-oriented university³.

In Vietnam, the higher education (HE) system includes colleges, universities and institutes; the national and regional universities and research institutes are assigned responsibility in doctoral training⁴. In 2013-2014 academic year, HE system has 3 national universities, 3 regional universities, 214 colleges and 243 universities, institutes and 56 research institutes are assigned for training doctoral degree. The whole system comprises of 118 bases with PhD training and 120 bases with master. The lecturers are inadequate in term of quality, quantity and structure. The proportion of professor (Prof.) and associate professor (Assoc. Prof) of the University lecturers is only about 4.5%; doctors (PhD) and Doctor of Science (D.Sc.) comprises approximately 14.2% and Master's Degree (MA) of about 46.3%⁵ of national average. To achieve the Government's goal on building faculty staff (by year of 2020, reaching 60% of lecturers with master's degree and 35% with doctorate degree)⁶, HE should have synchronized solutions to increase the rate. PhD and master students are important factor of creative system in HE. Along with the staff with doctorates and scientific titles, PhD and master students who implement, and perform scientific and technological tasks in the system. On average, each PhD students has 3 publications in 4-year study. 2, 222 PhD students and 36,052 master's students were recruited in 2014⁷.

On the national level, the number of scientific articles is the measurement of scientific and technical level and performance of the country⁸. Although the role of scientific research is extremely important in higher education institutions, however the number of scientific publications in Vietnam is still modest for years, in comparison with not only advanced countries with years of research, but

¹ Nguyen, T. V. (2013). *From research to publication - Soft skills for researchers*. HCMC: Tong hop Publishing house

² MOET, Decree 47/2014/TT-BGDĐT

³ Le, A. H. and Lam, H. B. (2010) Science Research - compulsory requirements to lectures in universitites. *Science and Technology Journal, Danang University*, Vol. 4(39).2010.

⁴ Educational Career Law (2013); Higher Education Law (2012)

⁵ MOET statistics, 2014

⁶ Vietnam HE Renovation Project, period 2006-2020

⁷ MOET statistics, 2014

⁸ Nguyen, T. V. (2013). *From research to publication - Soft skills for researchers*. HCMC: Tong hop Publishing house

also other countries in Southeast Asia. As Vietnam public announcement⁹, the total number of Science and Technology of Vietnam in Web of Science database (a database system monitoring folders used earnestly and widely around the world, formerly known as ISI) in period of 2010 - 2014 includes 9976 articles. In 2013, It was the first time Vietnam has scientific publications in Web of Science database exceeded 2,000 posts/year and reached 2427 posts (increase 24.97% compared to previous year). The number of published science and technology of Vietnam in 2014 was over 2,640 posts. The fields with highest international publication are Mathematics, Physics, Chemistry - accounting for 1/3 of the international publication of Vietnam. Compared to other countries in the region, Vietnam capacity of innovation and creativity higher than Philippines, but lower than Indonesia, Thailand and Malaysia. Meanwhile, Vietnam's population is nearly triple of Malaysia and half times of Thailand. Low in the number of publication showed that the factors supporting scientific research, innovation and creativity in HE system is not yet sufficient.

Total working time of lecturer in an academic year to perform the tasks of teaching, scientific research, academic training and other missions in the field is 1,760 hours. Standard hour is time unit to perform the work that equivalent to class hour of theoretical lectures direct in the classroom at colleges and universities, including working time needed before, during and after teaching hours. Required hours for lecturers in an academic year is 270 hours; in which, class hours accounted at least 50% of the prescribed limit. Lecturer must spend at least 1/3 of the total working time in the academic year for scientific research. Lecturers yearly must accomplish the assigned scientific research tasks corresponding to their position and job placement. The scientific research result of lecturers is evaluated by the products, including the participation in scientific research projects at all levels, or articles published in scientific journals or scientific report in specialized scientific seminars nationally or internationally.

Improving research competency in universities is now the critical matter to strengthen the quality of teaching and scientific research of lecturers. The university has a bunch of research on the issue. The article "Improving the quality of scientific research activities in the universities and colleges in Capital area"¹⁰ has showed problem affected directly to research competency of lecturers, such as: too much teaching time, linkage between research and teaching is low, the poor qualified lecturers, low salary. The research on "Views on scientific research in universities of the country"¹¹ stated the problems, such as: low association in teaching and research, lack of lecturer with competency in research. The study on "Enhancing scientific research activities of lecturer in Hue universities in our country,"¹² Analysis and Strengthening the research quality in the institution through studying the motivation to conduct science research and the impact factors, including professional qualification.

Vietnam National University, Hanoi (VNU) develops on research-oriented basis. Over the years, VNU has focused its investment on scientific research and obtained remarkable achievements. In terms of quantity, in 2014, VNU has 51 professors and 336 associate professor, 881 doctorates and 1,340 masters¹³, accounted for 27% of lecturer with doctoral qualifications, 37.2% of lecturers with master's degree respectively. VNU scientific research officers have published 342 articles in prestigious international journals ISI/Scopus, in which the number of articles published in international journals of ISI system is 265, 65 more articles compared with the target of 200 in VNU Science and Technology Plan period 2011-2015. Number of publication comprise nearly 15% of the total number of international articles of the whole country, in which the social sciences and humanities - 8%, the natural sciences and medicine - 76%, science - technology and interdisciplinary science - 16%¹⁴.

University of Education, is one of seven universities directly under VNU, has function in training of lecturers, teachers for all educational levels; educational managers, officers and researchers in science education. Currently, the University of Education has a high percentage of doctorates and master (37.3%; 33.8% respectively)¹⁵. This group contributes the most study of the university, accounts for over 80% of all of the research in 2014 (the whole university has 87 articles, of which 68 articles of the lectures with doctorates). The data shows that lecturers with PhD are the main force in research. As a research-oriented university, currently it is extreme necessary to find an appropriate solution to enhance research competency, published articles of lecturers.

The above research partly shows the problems in scientific research at the universities of Vietnam, including issues related to competency, research quality, lecturer qualification. The question is whether doctoral title really has impact to research capacity of a scientist? This study points out the influence of lecturers with doctorate to research competency, then propose recommendations to enhance research activities at the University of Education, in particular and other Vietnamese universities, in general.

2. Research Methodology

There are many ways to evaluate research competency of a lecturer, and one of the most common ways is based on the number of publication in the journal. This study uses data collection methods, including primary and secondary data to learn, observe, evaluate the changes of lecturers in their research publication on prestigious journals in the different period- before, during taking PhD and after obtain doctoral degree. The evaluation on the qualification impact of doctoral degree to the research capacity of lecturers will then be made.

⁹ Science and Technology Ministry (2014). Vietnam Science and Technology, KHKT Publishing house

¹⁰ Nguyen, C. V. Journal of Cultural Research. Vol. 6, University of Culture

¹¹ Vo, N. V. (2011). Scientific Workshop Yearbook, Duy Tan University.

¹² Phan, N. T. T. (2011). Science Journal, Hue University. Vol 68/2011

¹³<http://vnu.edu.vn/home/?C1958>

¹⁴<http://vnu.edu.vn/home/?C2076>

¹⁵ Annual Report, academic year 2014-2015. VNU-University of Education

2.1. Research Samples

In the framework of this study, research sample are all of lecturers obtained doctoral degree in University of Education, including the officers with title of Professor, Associate Professor.

2.2. Research Objectives

Determine how qualification will have impact on individual's research competency (qualifications of the lecturer in this study will be shown by doctoral degree, research competency is assessed by the publication of scientific articles/reports). Therefore, the researchers will have to answer two following research questions:

- + Current status on research publication before and after obtaining doctorate of lecturers in University of Education?
- + The connection between obtaining doctorate and competency in publishing research published of lecturers in the University of Education?

2.3. Research Toolkits

We use data sources which collected from scientific activities of doctoral lecturers in University of Education. All information is fully updated until December 2015. We split the professional development of lecturers into 03 phases include: from graduate to fellow, in the period of fellow and after becoming PhD. From that, we arranged the scientific research publication of each doctors from these 03 phases in order to determine the average research capacity of each lecturer in each phase and assess the change.

Then, we use the toolkit chi-squared test to determine the relationship between the level of doctoral and the research capacity. This is a popular testing method to enquiry about the relationship between two random variables.

Some in-depth interviews to test the outcomes.

2.4. Implemental Process

Data sources are updated until 31/12/2015, based on the annual science and technology reports and other documents related to the scientific publications of lecturers in University of Education. The results will be processed to serve the analysis and answers to the research questions.

2.5. Data Processing

Data will be processed by chi-squared test. All information variables will be analyzed and it will point out the influence of the PhD on the scientific research publication.

3. Findings

Currently, the total article numbers of doctors in the University of Education had published 708 posts, including national and international posts. To determine an average landmark for research capacity, we divided the total article numbers into the sum of years after graduate of these doctors and identified that a doctor in UEd published averagely 0.89 articles/ year.

To determine how doctoral title influence scientific research capacity, we were counted that publishing capacity of these doctor in 3 phases as follows:

	Less than 0.89 article/ year	More than 0.89 article/ year
From graduate to fellow	40	3
In the period of fellow	22	21
After becoming PhD	24	19

Table 1: Publishing capacity of research subjects in 3 phases

Thus, based on this table, we can easily realize that before joining the training of doctors, our research subjects have a low productivity: 40 people have less than 0.89 articles per year (93% research subjects). But this number changed immediately when they began the process of training doctors (in the period of fellow): there are 21 people who published more than 0.89 articles/ year (48% people). After becoming PhD, this number declined a little: only 19 people who have more 0.89 posts / year. However, in order to identify clearly the relationship between article publishing capacity and doctoral title, we have made the 3 testing as follow:

In the first testing, we want to define the relationship between article publishing capacity and title status: before and after become a fellow. Therefore, we used chi-squared test to determine the relationship between two variables. The hypothesis of the chi-squared test is expressed as follows:

- H0: No relation between article publishing capacity and fellow title
- H1: There are relation between article publishing capacity and fellow title

After testing, the author has the following results:

Results			
	Less than 0.89 article/ year	More than 0.89 article/ year	Total row
From graduate to fellow	40 (31) [2.61]	3 (12) [6.75]	43
In the period of fellow	22 (31) [2.61]	21 (12) [6.75]	43
Total column	62	24	86

Table 2

The chi-square statistic is: 18.7258.

The p-value = .000015.

After using the chi-squared test to check the relationship between article publishing capacity and fellow title. We see that p-value = 0.000015 < 0.05 (or 5%). So, at the 5% significance level, we can reject H₀ and determine the relationship between the article publishing capacity and fellow title. It means that joining a PhD program will help lecturers be motivated to strengthen their research capacity.

Then, likewise, the author will test the relation between article publishing capacity and PhD title as follows:

The hypothesis of the chi-squared test is expressed as follows:

- H₀: No relation between article publishing capacity and PhD title
- H₁: There are relation between article publishing capacity and PhD title

After testing, the author has the following results:

Results			
	Less than 0.89 article/ year	More than 0.89 article/ year	Total row
From graduate to fellow	40 (32) [2]	3 (11) [5.82]	43
After becoming PhD	24 (32) [2]	19 (11) [5.82]	43
Total column	64	22	86

Table 3

The chi-square statistic is: 15.6364.

The p-value = .000077.

We see that p-value = 0.000077 < 0.05 (or 5%), So, at the 5% significance level, we can reject H₀ and determine the relationship between the article publishing capacity and PhD title. That means after the completion of doctoral training, the research capacity of these doctors improved markedly. The PhD title have a major impact on their motivation and research capacity.

Finally, to determine that after becoming doctors, lecturers can improve publishing capacity than in the fellow period or not, we have made the 3rd test.

The hypothesis of the chi-squared test is expressed as follows:

- H₀: No relation between article publishing capacity, fellow title and PhD title
- H₁: There are relation between article publishing capacity, fellow title and PhD title

After testing, the author has the following results:

Results			
	Less than 0.89 article/ year	More than 0.89 article/ year	Total row
In the period of fellow	22 (23) [0.04]	21 (20) [0.05]	43
After becoming PhD	24 (23) [0.04]	19 (20) [0.05]	43
Total column	46	40	86

Table 4

The chi-square statistic is: 0.187.

The p-value = .665462.

So, we see that p-value = 0.665462 > 0.05 (or 5%), So, at the 5% significance level, we can't reject H₀ and can't prove that after becoming PhD, lecturers will change the article publishing capacity.

To confirm these assumptions, we have conducted a private interview with 2 interviewees who were masters and doctors. With the question: "Why article publishing capacity of masters is lower than doctors", one interviewee says that in the particular UEd environment and the general Vietnam environment, authorities have created a lot of conditions to encourage the scientific research of Masters. However, in reality, most research projects are reserved for doctors. For example, in the selection phase of university level project in 2015, 80% projects of UEd were held by doctors. With the ministerial or higher level, researchers who were masters don't

have a chance to become a director of these projects. Meanwhile, through these projects, the researchers can publish a lot of scientific articles. Therefore, masters have fewer opportunities to writing than doctors”.

The other said: “An individual will concentrate virtually into the research after join in a fellow program, then he will have motivation to focus on research suitable with its capacity. Even between Master and PhD programs, learning conditions were also very difference. Master training program isn’t claim scientific article, but with PhD training program, it is an important condition. And then, scientific research groups will often prioritize recruit doctors to join their study, which will increase a lot of opportunities to study”.

4. Conclusion and Recommendation

Scientific research capacity of lecturers was affected by many factors, some factors related to the management mechanism, the reward mode or macro factors like state policy. To solve these problems, we need not only macro-level policies, the coordination of relevant ministries. But also university or personal -level recommendations. The combination between these different methods will influence a lot to the article publishing capacity of lecturers. In brief, we propose 3 recommendations.

- Based on the mission, objectives and the actual situation, UEd needs to create favorable conditions for staff, lecturers can participate a fellow program; Increasing the number of doctors will increase the number of article publishing.
- Encouraging to enhance the research capacity of lecturers - researchers. Providing short-term training courses on how to write scientific research proposal, scientific style, scientific articles.
- Building and developing research groups, helping for the inexperienced individual to be trained, working with leading scientists about the specific research.

To participate effectively in scientific research, the exchanges, cooperation, sharing and learning are very important. That will help the young officers and lecturers mature quickly in the field of research. Each staff, lecturer must continually strive to improve professional qualifications as well as the awareness about their role in scientific research to contribute for the development of scientific publications, to bear the article publishing rate of Vietnam proximity to the rate of the world.

5. References

- i. Nguyen Van Tuan, “From research to publication - Soft skills for researchers”, HCMC Tong Hop Publishing house, 2013.
- ii. MOET, Decree 47/2014/TT-BGDĐT.
- iii. Le, A. H. and Lam, H. B. “Science Research - compulsory requirements to lectures in universities” Science and Technology Journal, Danang University, Vol. 4(39).2010.
- iv. Educational Career Law, 2013.
- v. Higher Education Law, 2012.
- vi. Vietnam HE Renovation Project, period 2006-2020.
- vii. Nguyen, T. V., “From research to publication - Soft skills for researchers”, HCMC: Tong hop Publishing house, 2013.
- viii. MOET statistics, 2014.
- ix. Science and Technology Ministry, Vietnam Science and Technology, KHKT Publishing house, 2014.
- x. Nguyen Van Cuong, “Improving the quality of scientific research activities in the universities and colleges in Capital area”, Journal of Cultural Research. Vol. 6, University of Culture.
- xi. Vo Van Nhi, “Views on scientific research in universities of the country”, Scientific Workshop Yearbook, Duy Tan University, 2011.
- xii. Phan Thi Tu Nga, “Enhancing scientific research activities of lecturer in Hue universities in our country”, Science Journal, Hue University. Vol 68/2011.
- xiii. Annual Report, academic year 2014-2015. VNU-University of Education.