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**ACADEMIC STAFF DEVELOPMENT OF THE
TRANSPORT COLLEGES IN THE PERIOD OF INDUSTRIALIZATION,
MODERNIZATION, AND INTERNATIONAL INTEGRATION**

Research Area: Education Management

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**SUMMARY
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INTRODUCTION

1. Rationale

In the context of globalization and international integration, "human capital" becomes the priority object in economic development policy of the country. Education and training have always been considered as the most effective means to establish the quality of human resource.

Academic staff has always been considered a factor to determine the training quality of human resource. However, "there has been a lack of the top academic staff; professional competency, practical skills, ability to communicate in foreign languages and computing skills are limited; the lecturer rate with high education and rank is low". Resolution No. 29/NQ-TW 8th Central Committee plenum (XI) on "radical and comprehensive innovation of education and training ..." points out tasks to standardize academic and management staff

Vietnam's Transportation Development Strategy (period 2011–2020) with a vision to 2030 identifies that enhancing the quality of training, developing and improving capacity of academic staff at the institutions are important tasks with the crucial for the quality of the human resource in the sector.

In Vietnam, the academic staff development approaching human resource management is quite new; more research should be both theoretical and practical basis for academic staff development to meet the requirements of industrialization, modernization and international integration period.

Hence, this study has been conducted to "*Academic staff development of Transport Colleges in the period of industrialization, modernization and international integration*".

2. Purpose of study

Science-based research and solutions proposed for academic staff development at Transport Colleges with a view to meet the requirements of industrialization, modernization and international integration.

3. Object and subject of study

- Object: Academic staff at Transport Colleges
- Subject: Academic staff development at Transport Colleges

4. Scientific Hypothesis

Evaluation approaching human resource management, academic staff development at Transport Colleges has some shortcomings: lacking in academic staff quantity, unbalanced academic staff structure, academic staff quality do not meet the training requirements of high quality human resources to serve industrialization, modernization and international integration. If the solutions to academic staff development conducted under the human resource management approach with strategic orientation, individual approach, unity within the organization, commitment and strengthen the role of subordinate managers synchronized impact on the basic phases of the academic staff development process (planning, selection, use, training and retraining; remuneration policy) will help Colleges in Transport sector develop academic staff with adequate quantity, reasonable structure, improved quality and meet the workforce development strategy with college level in Transport sector in the period of industrialization, modernization and international integration .

5. Task of study

- Studying theoretical fundamental of academic staff development.

- Studying reality of academic staff and academic staff development at Transport Colleges.

- Proposing solutions to academic staff development at Transport Colleges to meet the requirements of industrialization, modernization and international integration period;

- Assaying and testing some solutions to confirm the necessity and feasibility of the solutions.

6. Limitations and scope of study

- Study theory and practice on academic staff development at Transport Colleges to meet the requirements of industrialization, modernization and international integration period.

- Surveys on lecturers, managers, students of colleges under the Ministry of Transport and a number of experts and scientists involved.

7. Approach and methodology of study

7.1. *Approach*

Using the methods: Systematic approach; human resource management approach; functional approach; competency approach; standardized approach.

7.2. *Specific research methods*

- Theoretical method group: Retrospective performance, analysis, synthesis, confrontation and comparison.

- Practical research method group and experience summary: Investigation and survey; professional method; experienced summary method; assay and experiment methods.

8. View points of defending the thesis

8.1. Academic staff at Transport Colleges - a knowledged labor force, playing a crucial role to create quality, effect of training technical staff, skilled workers for the Transport sector. Academic staff development must be done from the perspective of human resource management to ensure the strategy; individual approach; unity within the organization; commitment; strengthening the role of subordinate managers; improve teaching, scientific research, management and social service competency of lecturers.

8.2. Reality in academic staff development at Transport Colleges exists some shortcomings: lacking in academic staff quantity, unbalanced academic staff structure, academic staff quality do not meet the training requirements of high quality human resources to serve strategic objectives in industrialization, modernization and international integration period.

8.3. Academic staff development of Transport Colleges requires both a moderate interest in developing staff (to assurance of quantity, quality, and structure) and a paying attention to the development of individual lecturers and upgrading the necessary competency to meet the requirements of industrialization, modernization and international integration period; ensures the needs and interests of lecturers and the overall objectives properly.

9. New scientific contributions of the thesis

9.1. Contribute to codify and develop reasoning on academic staff development in general and academic staff development of Transport Colleges in particular in the context of industrialization, modernization and international integration period, including the new approach: human resource management approach; competency approach; combination of personal development with the staff development, which takes personal development as the foundation for the staff development.

9.2. Evaluate the reality in academic staff and academic staff development at Transport Colleges.

9.3. Propose solutions to academic staff development at Transport Colleges to meet the training needs of high-quality human resource to serve industrialization and modernization and international integration of the country.

10. Structure of the thesis

Besides the introduction and conclusion, the thesis consists of three chapters:

Chapter 1: Rationale for academic staff development approaching human resource management

Chapter 2: Reality of academic staff development at Transport Colleges

Chapter 3: Solutions to academic staff development approaching human resource management at Transport Colleges

Chapter 1

THEORETICAL BASIC OF ACADEMIC STAFF DEVELOPMENT APPROACHING HUMAN RESOURCE MANAGEMENT

Chapter 1 is presented in 61 pages (pp.1 - 61), including:

1.1. Literature review on human resource management and academic staff

1.1.1. *Joint research on management and human resource management*

- "Essentials of management" by Harold Koontz (1982), Cyril Donnell and Heinz Weihrich; "Fundamentals of management" by James, H.Donnelly, J.R.James (2000); "The principles of scientific management" by F.W.Taylor (1911); "General theory of management" by Nguyen Quoc Chi and Nguyen Thi My Loc (1996) points out the core issues of management.

- "Managing human resource development" by Leonard Nadller and Galand D.Wiggs (1986); "Human resources and personnel management" by W.B.Werther and K.Davis (1996) "Human resource management: Theory and practice" by J.Bratton and J.Gold (1999); "Human resource development: Paradigms, policies and practices" by Noonan Richard (1977); "Comprehensive human development in the industrialization and modernization period" of Pham Minh Hac (2001); "Management of human resources in Vietnam, some theoretical and practical issues" by Pham Thanh Nghi, Vu Hoang Ngan (2004); "Improving the efficiency of human resource management in the process of

industrialization and modernization of the country" by Pham Thanh Nghi (2006); "Management of strategic human resources based on the competency" by Nguyen Tien Hung (2014) ... show that the fundamental issues of human resource management in the process of industrialization, modernization and international integration .

1.1.2. *Research on lecturers and academic staff*

The researches on positions, roles, functions and responsibilities of lecturers as "Key challenges to the academic profession" by Maurice Kogan & Ulrich Teichler (2007); "The academic profession in the third world" by Phillip G.Altbach (2003); "The academic profession in international and comparative perspective: Trends in Asia and the world" by Akira Arimoto (2013); "Academic profession in Vietnam" (2013) by Pham Thanh Nghi; "Vietnam lecturers and times" by Nguyen Canh Toan (2004); "Think about the standards and quality of higher education" by Ha Minh Duc (2004); "Education innovation to successfully implement industrialization, modernization and international integration" by Tran Huu Phat (2004); "Application of the total quality management method (TQM) and training trainers to teach effectively, by Nguyen Thi Ngoc Bich (2004)... remark that lecturers give the human essence knowledge, organize, direct, guide their students to get knowledge actively and creatively. Lecturers are the educators who orient their students' career in the future, directly and actively contribute to students' personality formation and development.

The studies on the academic staff management and development as: "Higher education staff development directions for the 20th century" by UNESCO (1994); "Academic staff development" by Marriss Dorothy (2010); "The effective strategy for teachers and educational leaders in the era of globalization" by Lee Little Soldier (2009); "Some thoughts on academic staff management issues contribute to improving the quality of education at a university" by Phan Quang Xung (2004); "Construction work, improving the quality of organic academic staff and policy of academic staff development..." by Nguyen Vu Minh Tri (2009); "A number of measures to develop junior academic staff" by Nguyen The Manh (2009); "National Policy on developing faculty in Vietnam" by Tran Khanh Duc (2009); "Development of lecturers and education managers" by Dang Ba Lam show that developing academic staff with sufficient quantity, reasonable structure, standard quality to perform well objectives, content and

training plan to meet the demand increasing scale, improving the quality and efficiency of higher education; point out the fundamental limits in management policies, academic staff development in Vietnam today.

1.1.3. *International experiences on academic staff management*

The experiences of countries such as the US, China, Thailand shows that academic staff is always considered a factor determining quality of education and training; training and management to strategic academic staff; management mechanism towards autonomy model associated with social responsibility; policies to attract talent to participate in career education and training; respect the academic freedom of lecturers; link implementation of the teaching functions and scientific research of academic staff; instead of lifelong staffing mode to create inertia and thought "neo average" within academic staff in the public schools of Vietnam, some countries have adopted teaching contract combining with other forms of assessment, screening that create competition within academic staff. Hence, each individual self-consciously strives to improve the competency to meet the needs of society.

1.2. Human resource development and management: Presented from page 20 to page 32. This section clarifies the concept of management, the elements of the management, the concept of human resource, human resource management, the model of human resource management, human resource development, in which emphasizing the characteristics of human resource management is different from personnel management in the following basic points: (1) long-term orientation (strategy), (2) individual approach, (3) unity within the organization, (4) commitment, (5) strengthen the role of subordinate managers. These are important characteristics to manipulate in developing academic staff.

1.3. Industrialization, modernization of the country and international integration and their impacts on the development of academic staff: Presented from page 32 to page 38. This section refers to the basic characteristics of the industrialization, modernization and international integration period; analyzes the impact on academic staff development, in which two key factors considered are scientific, technology development and globalization, international integration.

1.4. Academic staff management and development: Presented from page 38 to page 60. This section clarifies the concept, role and functions of lecturers and competency requirements for the lecturers; clarifies the concept of academic staff; views on academic staff management and development: *Academic staff management* known as "find ways to facilitate academic staff fulfill the strategic objectives and plans, enhance their contributions suit the institution's strategy". Academic staff management includes (1) Academic staff planning; (2) Recruiting, employing lecturers; (3) Training and retraining lecturers; (4) Evaluating lecturers; (5) The remuneration policy. Academic staff development means to make academic staff sufficient quantity, synchronous structure, quality and effectively using academic staff to implement the objectives, content and training plan to meet the requirements of education. At the same time, build a pedagogical collective, in which each individual takes a sense of responsibility and attachment to institution, actively and creatively participating in the process of teaching and learning. Under approach to human resource management, the authors affirms that academic staff development dominates not only the skilled competency, expertise and training in general, but also the competency development and use that competency to perform the functions of the lecturer effectively, as well as satisfying career and personal life of the lecturers. Therefore, academic staff development including staff development (quantity, structure, quality) and individual development (teaching, scientific researching, managing and community servicing competency), recruiting, using, evaluating, treating policies to motivate lecturers to develop comprehensively, in which individual development is the foundation of academic staff development. Academic staff development needs to be done based on harmony needs and interests of lecturers and the overall objectives of the institution.

Conclusion of Chapter 1

Chapter 1 has codified and enriched the reasoning of academic staff development in the industrialization, modernization, and international integration period in Viet Nam. Basing on theory, along with the new approach: human resource management approach competency approach, individual development in coordination with academic staff development in which individual development being background for academic staff development, the thesis has conducted theoretical framework of academic staff

development under human resource management approach, which supports assessment of the reality and proposing solutions to develop academic staff of Transport Colleges in the next chapters.

Chapter 2
THE REALITY IN ACADEMIC STAFF DEVELOPMENT IN THE COLLEGES UNDER TRANSPORT SECTOR

Chapter 2 is presented in 64 pages (from page 62 to page 125), including:

2.1. The founding and developing process of colleges under the Transport sector

2.1.1. History of Transport Colleges

Brief history of founding four colleges, including: Transport College (University of Transport Technology, headquartered in Vinh Phuc province now); Transport College II (Da Nang); Transport College III (Ho Chi Minh City) and the Central Transport College (Ha Tinh province).

2.1.2. Some common characteristics of Transport Colleges

Under the management of Ministry of Transport; Transport Colleges share the task of training scientific and technical staff with college level, professional and technical workers in the Transport sector; scientific research serves socio-economic development (particularly University of Transport Technology takes more tasks to train technology engineers); careers trained mainly in the fields: transport economics, engineering technology, infrastructure building.

2.2. Evaluate and survey the reality of academic staff and academic staff development of Transport Colleges

2.2.1. *Overview of survey activities*

2.2.1.1. *Respondents*: Scope of the study is that the colleges under the Ministry of Transport, however, to get the full screen of the reality of academic staff and academic staff development of colleges under the Transport sector, in addition to 3 colleges (Transport College II, Transport College III, the Central Transport College), the author has added University of Transport Technology (formerly Transport College), was upgraded to the university in 2011) to survey, because its training syllabus target towards technology and professional application, close to the colleges' syllabus target. On the other hand, University of Transport Technology is currently training 22 specialties with

college degrees. Respondents including 317 teachers, 120 managers, 301 students are evenly distributed in four schools surveyed.

2.2.1.2. *Survey tools*: Designing the competency assessment questionnaires to perform the tasks of academic staff and academic staff development. The respondents choose the appropriate boxes next to the questions to tick their answers, the respondents stated their opinions with the open questions with a view to add more issues that are not addressed in the questionnaires or propose their own ideas about the academic staff development of Transport Colleges.

2.2.1.3. *The survey activities*: Conduct a survey by questionnaire and interviewing managers, lecturers and students according to the contents designed; observing, studying management records (work diary, staff management; reports summarizing the school year, minutes of school board meeting...); comparing the results of studying the lecturers' function reality with some other studies at the same period; finding more the reality of the implementation of existing regulations on the functions and duties of teachers and academic staff development; reviewing the ideas of lecturers, managers, scientists, experts... to the extent required to meet the academic staff development and the issues need to be innovated in this work.

2.2.2. *The reality of the academic staff*

2.2.2.1. *The reality of the number of the academic staff*

The rate students/teachers is 28.3/1, higher than the required standards. That shows that lecturers in Transport Colleges are insufficient, failing to meet the requirements in terms of quantity, especially a number of key specialties such as traffic engineering technology; automotive technology; business accounting... Some lecturers have too much more class-hours than the required standards.

2.2.2.2. *The reality of academic staff structure*

a) The academic staff's structure of degree trained

During the period 2007-2014, the academic staff's degree in universities and colleges under Transport sector has been gradually improved; lecturers with doctorate increase to 4,1% in the 2013-2014 school year from 1,2% in the 2007-2008 school year; The lecturers with master also increase; lecturers with college degree decrease from 16.8% (2007) to 6.2% (2014). However, the academic staff's high education degree of

Transport College is lower than required standard compared with the syllabus target of Vietnam higher education reform and network planning of universities and colleges in the 2006-2020 periods.
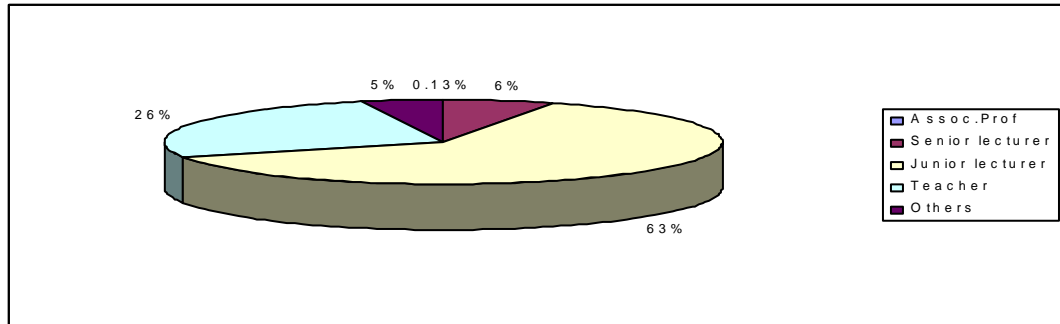
    * Professional titles:

Chart 2.2: Professional titles of the academic staff in 2014

    * Foreign language levels:

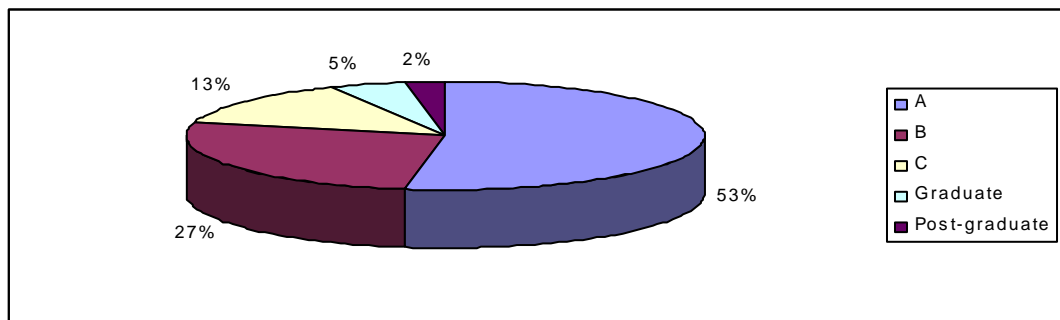
Chart 2.3: Foreign language levels of the academic staff in 2014

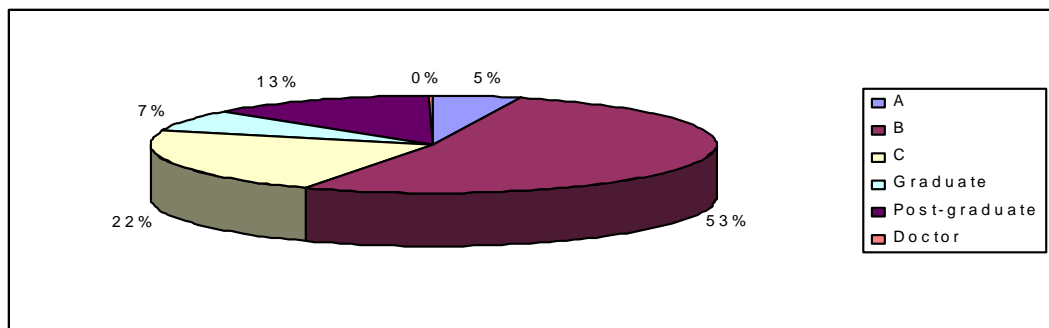   * Computer levels of the academic staff in 2014:

Chart 2.4: Computer level of the academic staff in 2014

b) Career structure of the academic staff

    Recruiting colleges' lecturers often basing primarily on students' enrolls in term of fields and careers is the cause of the imbalance in the academic staff's structure of fields and careers if the needs of students change each year.

c) Academic staff's structure teaching theory and practice

Target and orientation of Transport Colleges are that training development in line with the technology application, so training curriculum content to practice is 40%÷45%. Therefore, there is a reasonable correlation between lecturers' structure teaching theory and practice. However, the number of theoretical teachers is too big (83.5%), in comparison with the number of practicing teachers, is too small (16.5%). The proportion of skilled teachers is under standard (3.8%).

d) Academic staff's structure of age, gender and seniority

* The academic staff's age: The average age of lecturers is 35 years old. The lecturer ratio between the ages is disproportioned, a number of experienced lecturers aged 50 is too small (7.1%), in contrast, the number of lecturers aged <40 is quite big (accounting for 61, 8%), in which the young lecturers aged < 30 are 31.4%.

* The academic staff's gender and seniority: Female lecturers (accounting for 35.7%) are fewer than male lecturers (accounting for 64.3%); however, it is also perfectly suited to the characteristics of technical colleges. The problem concerned here is the academic staff's seniority. The number of lecturers with seniority > 20 years is too small (accounting for 11.5%), while the number of lecturers with seniority <10 years is too big (accounting for 60.1%).

2.2.2.3. *The reality of the academic staff quality*

Academic staff's quality is mainly assessed by lecturer's competency to implement their functions.

a) Teaching competency

- Teaching theory: designing and planning lessons have always been so well assessed.

- Academic staff's competency to design lesson plans and plan to teach; stimulate students' interest in learning; use technology, teaching facilities; use teaching methods and evaluate; organize and control classes; use language and present is assessed well.

- Academic staff's competency to design training curriculum; build draft; instruct practice; manage pedagogy situations; write textbooks, monographs surveyed attains only at average and under average in all 4 colleges. In particular, the ability to write textbooks, monographs and instruct practice capability gets the lowest level of all surveyed.

- Students' assessment tasks for students participating in organized group activities, discussions problem solving task is to reach the lowest level of the survey tasks, associated with lecturers' survey as: organizational competency and control classes; ability to use the teaching methods and evaluation.

b) Scientific research competency

- Academic staff's skill to design research issues and build research plans attains the highest level of the scientific research competencies.

- Skill to choose and apply research methods; analyze, synthesize, evaluate the data collected; write reports, scientific initiatives; write articles and workshop articles; organize scientific students' research activities is assessed at average or less. In particular, ability to organize students' scientific research activities gets the lowest level.

- Lecturers' implementation of task to instruct students to participate in scientific research evaluated by students is limited, only an average or less.

- The number of output publications in scientific research is limited in terms of both quantity and quality.

c) Management and community service competency

- Academic staff's skill to manage students, counsel them to study is assessed the best of the management and community service competency in 4 colleges surveyed.

- Academic staff's skill to be manager of faculty, group; deploy to apply research and technology results in production practice and spread scientific knowledge to the community is still bad.

2.2.3. *Reality in academic staff development approaching human resource management of colleges in Transport sector*

2.2.3.1. *Reality in academic staff development*

The planning is not strategic, mainly based on reality evaluation in quantity, quality, career structure, employing, the transition between generations in accordance with the criteria, labor norms but not really paid attention to new careers forecasted to emerge, their sizes and structures; the ratio of lecturers with titles and high degrees, the ratio of teachers teaching theory and practice, and the ratio of official lecturers and visiting lecturers are paid little attention.

- The forecast of demand and identification of lecturers recruited are assessed quite well by existing lecturers and managers.

- Academic staff development and planning; structure development planning and development planning to standardize academic staff attain below average by lecturers and managers' assessment. In particular, structure development planning is the worst of the criteria.

2.2.3.2. *Situation of the selection and use of teaching staff*

- The recruitment of teachers is done mainly basing on the school year's work plan and the size of each school's enrollment. The recruitment of employers is mostly new but not stored for transition when necessary. Moreover, it is decided by the principal, which fails to promote autonomy, self-responsibility of major department and group.

- The layout and employing lecturers are suitable for careers trained. However, lecturers have too many teaching periods leading to unleash the potential of both staff and individual, not to stimulate their striving of expertise, especially scientific research.

- The evaluation criteria of lecturer recruitment is supposed to be average and quite equivalent. Recruiting and employing the lecturers based on competency are greatly

different from each other in 4 colleges: lecturers and managers of University of Technology Transport and Transport College III have assessed two criteria relatively well; but poorly in Transport II and Central Transport College.

2.2.3.3. *Reality of training and retraining academic staff*

College leaders are so concerned about the training, retraining and upgrading academic staff's knowledge. In the past 5 years, the lecturers with Master of Art and Doctor of philosophy certificates have increased more rapidly than before. However, training and retraining academic staff in the colleges are not strategic and individual approach. The following are lecturers' and managers' evaluation results:

- Appointing lecturers to train and retrain inner and in situ the country is quite good and similar to each other in 4 colleges.

- Building training and retraining curriculum plans for academic staff is at the average.

- Appointing lecturers to train and retrain overseas and lecturers trained themselves is quite bad.

2.2.3.4. *Reality of evaluating and screening academic staff*

The colleges implement to annually evaluate the academic staff with various ways, but the efficiency is not high due to the lack of specific criteria; however the evaluation organization and results are in reverence; the lecturers' competency of performing the tasks has not taken seriously. Results of evaluating lecturers and managers are as follows:

- Organizing to evaluate lecturers and managers through students is good; and organizing for lecturers' self-evaluation also reaches a relatively good level.

- Building criteria to evaluate academic staff; organizing to evaluate lecturers through managers and handling evaluation results are assessed at the average.

- Organizing to mutually evaluate colleagues is so poor.

2.2.3.5. *Reality of policies remunerating academic staff*

Leaders are concerned about the remuneration policy to motivate academic staff strive to improve the competency of task implementation. However, teaching and scientific research facilities are limited; paying on seniority and regular staff policies are ineffective and do not motivate academic staff to strive to enhance competency of task implementation. Results of the evaluation of teachers and managers are as follows:

- Giving lecturers and managers opportunities to get promotions are well assessed.

- Rewarding; adding more facilities to help teaching, scientific researching and making colleague environment in the colleges are on average.

- Under 30 years old, lecturers and those have been working less than 5 years assessing current remuneration policy below average.

2.3. Some main shortcomings in the academic staff development at Colleges of Transport sector

(1) The ratio of lecturer per student is under national standard: The ratio 01 lecturer/28.3 students is too low in comparison with "Regulations on enrollment target determination, registration process, enrollment target notification, checking and treating implementation of the regulation on enrollment targets determination of post-graduate, university, college and vocational school" attached to Decision No.795/QĐ-BGDĐT 27th February, 2010 of the Minister of Education and Training.

(2) The academic staff structure is imbalanced: The academic staff structure is imbalanced between lecturers teaching theory and practice, especially the structure of qualifications, professions and ages. Top experts and cadres lack in most major specialties.

(3) The academic staff's quality does not meet the requirements: Lecturers with PhD degrees and MA are low compared with the average of universities and colleges inner and outer. The academic staff's quality is limited shown in their professional competency and skills.

(4) The academic staff development does not approach "human resource management", but it is greatly influenced by the "personnel staff management". So it is not long-term strategic and not practically efficient, shown in some following stages:

+ The academic staff development planning is really inappropriate, the development plan only solves the short-term problems, but not long-term.

+ Recruiting and employing academic staff based on competency do not make standardized processes, lack of initiative of department and group, not motivate lecturers to strive and not promote the potential available of academic staff. On the other hand, employing lecturers to teach more class-hours limits their scientific research.

+ The training and retraining to develop the academic staff by only focusing on upgrading lecturers' level to ensure the criteria of lecturers with MA and PhD, but not focusing on upgrading their competency. Some academic staff's activities of competency development are not held regularly or rarely. On the other hand, there is the division between lecturers teaching theory and practice. Therefore, lecturers teaching theory, who refuse to practice your skills, cannot apply new technology to teach students because they are far from the practice.

+ Evaluating academic staff has been implemented but not really effective because of evaluation towards lecturers' competency not implemented; evaluating and screening academic staff are superficial, reverence, flippant; the evaluation criteria are general and unspecific, in which the themes, experienced ideas, articles, contributions to science have not been appreciated in the Transport sector.

+ The academic staff's remuneration policy becomes outdated due to remunerating academic staff towards their competency not implemented. The lecturers' wage is paid based on the number of periods taught in class and their seniority, but not based on their

merits and devotement abilities. Therefore, lecturers are not motivated to strive for improving their task implementation competency.

Conclusion Chapter 2

Chapter 2 has been conducted the survey activities and assessed comprehensive reality of academic staff and academic staff development of the colleges and universities in Transport sector under human resource management approach. Through the methods of studying records, documents, interviews, surveys by questionnaire, analysis, synthesis ..., the thesis has found out and analyzed the limitations of academic staff; pointed out the shortcomings and limitations of academic staff development, as a premise to study and propose solutions to academic staff development at the colleges in Transport sector presented in the next chapter.

<h3 style="text-align:center">Chapter 3</h3>

<h3 style="text-align:center">SOLUTIONS TO ACADEMIC STAFF DEVELOPMENT APPROACHING HUMAN RESOURCE MANAGEMENT AT COLLEGES UNDER TRANSPORT SECTOR</h3>

Chapter 3 is presented in 42 pages (pp.126-167), including:

3.1. Some issues of the Transport sector development strategy and missions of the Colleges of Transport

3.1.1. *Some issues of the development strategy of the Transport Sector*

Development goals by 2020, Transport system in our country to meet the basic needs of society for transport, increasingly high quality assurance, reasonable price; restraint, proceed to reduce traffic accidents and limit environmental pollution. Forming, synchronously developing and step-by-step modernizing a rational system of Transport between modes of transport is to contribute to our country to become an industrialized country towards modern by 2020.

Vision by 2030, transportation network is basically completed in the country, ensuring connection and logical development between transport modes. The quality of transport and services is enhanced, ensuring "fast, safe, and convenient".

3.1.2. *The missions of colleges in human resource training to implement strategy of Transport sector*

To successfully implement the strategic objectives requires many elements of human, capital, machinery and modern technology, in which the quality of human resources has always been considered a key factor. Universities and colleges under Transport sector innovate strongly, fundamentally and comprehensively to train the technical staff that is good at practice and know to set up, apply advanced technology, exploit and use machinery and modern equipments ... to serve industrialization and modernization of the Transport sector in the new period.

3.2. Solutions to academic staff development approaching human resource management at colleges under Transport sector

3.2.1. *The principles of building solutions*

Solutions to academic staff development should be built on the basis of human resource management approach to ensure long-term strategic direction; enhance the responsibility of individual lecturer; unity for the college's common benefit; the individual lecturer's commitment with the college's common strategy, management methods and manager's autonomy; maximize department and group manager's role.

3.2.1.1. *Principle of ensuring purpose:* Solutions' purpose to academic staff development of Transport Colleges is to successfully implement the development strategy objectives of Transport sector and the development strategy objectives of Transport Colleges.

3.2.1.2. *The principle of ensuring practicality*: Solutions to academic staff development should come from reality of academic staff and academic staff development work in Colleges of Transport sector, in order to overcome the shortcomings and limitations of academic staff's competency to implement tasks and academic staff development work.

3.2.1.3. *The principle of ensuring the viability:* Solutions to academic staff development have to comply with the law, in accordance with political, economic, cultural, social conditions of the country and Transport sector and conditions, practical competency of each college.

3.2.1.4. *Principle of ensuring system:* Solutions with common objectives to develop academic staff determined on the basis of common core axis is human resource development (planning, recruitment, employment, training, retraining, evaluation, screening, remuneration). The proposed solution should be closely related, consistent with each other, impact on management process simultaneously.

3.2.2. *The solution to academic staff development approaching human resource management at Transport Colleges*

3.2.2.1. *Solution 1: Academic staff development planning*

The objectives of the solution: Maintain the adequate and stable number of academic staff, students/teachers ratio following the regulation; teachers do not teach too many periods so they can spend time learning and researching to enhance professional competency; academic staff is consistent and balanced with age, gender, qualifications, careers helping academic staff structure more complete, consistent and applicable to the request and missions of the colleges; academic staff ensured about qualification, competency, quality required by regulation to meet the educational objectives of the colleges; create continuity between lecturer generations and not be deprived of quality.

Content and how to implement:

- Forecast the short-term, medium-term and long-term needs of number of lecturers; forecast and determine the source of recruitment.

- Plan age structure; level structure; sex structure; career structure; structure of lecturers teaching theory and practice; adjunct and long-term lecturer structure.

- Train standard lecturers to plan the staff development: standard of training qualifications; standard of professional knowledge; standard of knowledge supplement; standard of teaching competency; standard of scientific research competency; standard of management capacity and community service; standard of professional ethics, basing on assessment of academic staff reality compared with standard of regulations to build plan of academic staff development .

Table 3.4: *Planning of academic staff level in Transport Colleges in the period of 2013- 2020*

Periods College	2013-2015		2016-2020		Sau 2020	
	MA	Dr	MA	Dr	MA	Dr
University of Transport Technology	70%	>50%	>90%	>75%	100%	>75%
Transport colleges	50%	10%	>70%	20%	100%	>20%

- *The necessary conditions:* (1) The planning of academic staff development must be strategic; (2) forecasting must be accurate, scale based on annual enrollment and fact data of human resource development in Transport sector and each Transport College; (3) promoting the autonomy and responsibilities of faculty, department of the staff planning.

3.2.2.2. *Solution 2: Innovation of recruiting and employing academic staff*

The objective of the solution: Attracting and *recruiting* lecturers with high expertise, well-organized competency of educational activities, professional ethics; employing the lecturers' suitable competency and forte to maximize their potential in implementing educational objectives.

Content and how to implement: Innovating planning, process, recruitment criteria, enhancing lecturers' competency to perform the tasks; enhancing the recruitment attraction enhanced; appreciating the autonomy role of department and group of recruiting, employing, assigning tasks according to lecturers' competency; rotating, appointing reasonably to motivate staff's competency; checking annually, evaluating , employing lecturers to get experienced in the next school year .

The necessary conditions: (1) The colleges should be autonomous and self-responsible for the organizational structure, staffing and finance; the suitable policy of reforming salaries to attract and recruit lecturers with high level, academic titles and degrees; (2) The finance ensured to meets salary, wages, allowances; health insurance, social insurance, training, retraining expenditure and other expenditure as prescribed by

law; (3) implementing decentralization, strengthening the autonomy role of department and group of recruiting, employing academic staff.

3.2.2.3. *Solution 3: Pushing up training and retraining academic staff's competency to implement the tasks*

The objective of the solution: Overcoming the shortcomings and limitations of professional qualifications, teaching and scientific research competency, management and community service of academic staff will contribute to improve the quality of education and training.

Content and how to implement: Identify training needs, retraining suits the strategic objectives of the college and aspirations of each lecturer; build plan to train and retrain lecturers; build curriculum and content of training and retraining modernly meeting the requirements of practical teaching and suiting the needs of individual teachers; diversify of forms of training, retraining and maintain them often; actively integrate and strengthen international cooperation in training and retraining academic staff; encourage lecturers to self-learn and employing lecturers logically after training and retraining them; check, evaluate results of training and retraining to get experienced in the next year.

The necessary conditions: (1) Strategy in training and retraining academic staff's competency to perform the tasks; personally approaching and subordinate responsibility; (2) having funds to meet the demand of training, retraining, and upgrading competency to perform the tasks for academic staff; (3) cooperating international well in education, scientific research and technology transfer; (4) having the facilities, workshops, key laboratory under the key areas of each college.

3.2.2.4. *Solution 4: Pushing up checking and evaluating academic staff's competency to implement their tasks*

The objective of the solution: Helping principals and managers to grasp the reality of academic staff to adjust the management activities much more efficiently; academic staff gets objective feedback to help them improve the performance of tasks and contribute to improving the quality of training.

Content and how to implement: Building checking and evaluating plans; building and specifying the criteria evaluating lecturers based on competency requirements and goals; checking and regularly evaluating lecturers; checking, periodically evaluating

lecturers through various means such as: Checking the competency and levels of lecturers; organizing class observation, teaching competition...; evaluating lecturers by the students' learning outcomes and activity movements of class they manage; evaluating lecturers by the lecturers' and students' scientific research; getting the students' feedback of teachers; teachers evaluate themselves; processing assessment results objectively and scientifically, thoroughly overcoming the reverence and dodge situations.

The necessary conditions: (1) Being fully aware of the meaning and importance of the competency evaluation to perform the tasks of academic staff; (2) principal advised the on the examination and evaluation by lecturers and managers with high competency, experience and prestige; (3) the evaluation measurement criteria accurately and objectively reflecting the competency to perform the tasks of each lecturers and entire academic staff.

3.2.2.5. *Solution 5: Implement policies on treatment, motivation to improve the competency of the teaching staff*

The objective of the solution: Giving lecturers stable life, convenient working environment to maximize their competency and forte; attracting good lecturers in the education and training development of colleges.

Content and how to implement: Reforming remuneration policy for teachers, scientifically and rationally ensuring a wage system; clearly defining objectives achieved by individual lecturer; innovating remuneration policy for lecturers according to their abilities, position and dedication; acknowledging the progress and creating opportunities to get high position for lecturers; building effective working environment; recognizing the contributions of lecturers; caring and defending the legitimate rights and interests of academic staff;

The necessary conditions: Being aware of the meaning and importance of dynamics system for the individual competency development of each lecturers; financial resources to meet the requirements; rationally reward and punished regulations; systems of remuneration and policy for lecturers to ensure democracy, fair, openness.

3.3. Testing and Surveying the relevance and feasibility of the solutions

3.3.1. *Getting opinions from experts and managers*

Conducting a survey by questioned lecturers and managers the relevance and feasibility of the proposed solution in the universities and colleges under Ministry of Transport. Results show that the relevance and feasibility of the proposed five solutions assessed by lecturers and managers with a variety of ages, levels, subjects are necessary and feasible or more.

3.3.2. *Testing some contents*

During implementing thesis, the author cannot experiment all solutions of academic staff development in Transport Colleges, the authors only focused on the solution 3 "Retraining academic staff competency of scientific research" proposed in section 3.2.2.3.

3.3.2.1. *Testing goal*: Confirming the science and practice of solutions to academic staff development in Transport Colleges proposed in the thesis.

3.3.2.2. *Testing hypothesis:* According to the survey results, academic staff's scientific research competency of Transport Colleges is limited. If training program is suitable and there are sufficient conditions, academic staff's scientific research competency is upgraded comprehensively.

3.3.2.3. *Organizing test*

a) Testing content: At the request of leaders, the curriculum is planned to teach in 45 periods (30 periods in theory; 15 periods in practice and discussion) with content on research methodology in order to give students the knowledge and skills to perform research.

b) Testing period:

Select the subjects: Due to limited time and space, the author randomly selected 69 teachers from the University of Transport Technology for the experiment. The training course started on 11th October 2014 finished on October 26th, 2014.

Lecturer: Assoc. Prof. Vu Cao Dam - Chairman of Research and Training Council, Institute of Policy and Management under the University of Social Sciences and Humanities, Vietnam National University, Hanoi.

Document: Retraining lecturers scientific research methodology taught by Assoc. Prof. Vu Cao Dam, including theoretical lectures and practical exercises.

Tool assessing results: The questionnaires (Appendix 4 and 5) to compare pre-test and post-test results

c) Testing results: Pre-test and post-test results showed that academic staff's scientific research competency was improved significantly after the test. Average result of competency increased from (2.77) to (3.71). This difference is expressed quite clearly in the following competency: (1) Designing research issues (4:24); (2) Building research plan (4:33); (3) Choosing and using research methods (4:19); (4) Collecting data and processing information (4:04); (5) Analysing, synthesing and evaluating data (4:14). The other competency (6) Writing reports, scientific initiatives; (7) Writing articles and participating in scientific conferences; (8) Organizing scientific research activities for students improved but not much, due to limited time, the students acquired knowledge of theory but not practice.

Statistical Package for the Social Sciences method is applied to test hypotheses of the difference between pre-test and post-test results. 69 lecturers' scientific research competency participating in the experiment retraining course "Enhancing scientific research competency for lecturers" shown in Figure 3.6:

Figure 3.6: *Pre-test and post-test results of lecturers' scientific research competency*
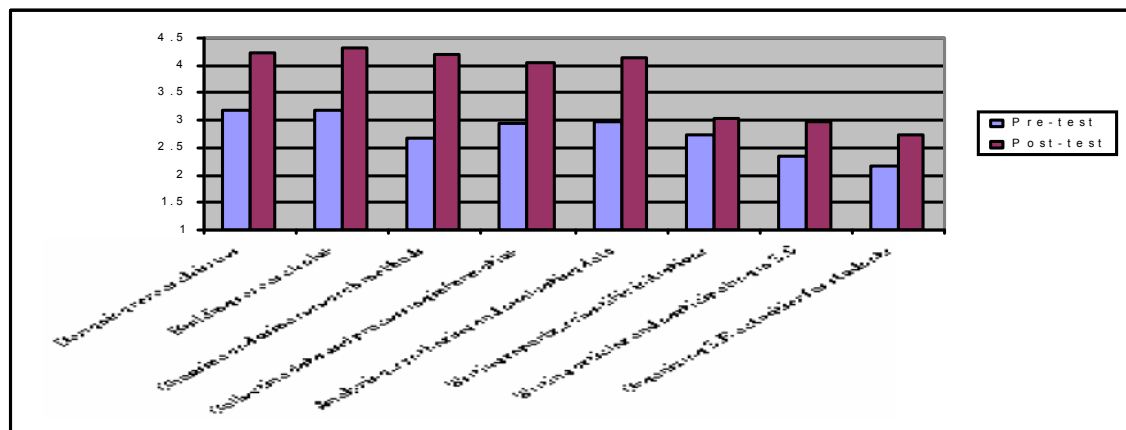
Note: Scores on a scale of 5 (1 - Very Poor, 5 - very good)

The conclusion may come from the experimental results mentioned above: Academic staff's scientific research competency is improved if the program content, training and retraining methods appropriate to academic staff's needs.

Conclusion Chapter 3

Based on the theoretical framework and the survey results, assessing the reality of competency to implement the academic staff's mission and the reality of staff development, the thesis has suggested 5 solutions to develop academic staff of Transport

colleges and universities under the human resource management approach to meet the requirements of the industrialization, modernization and international integration period , in Viet Nam, including: (1) Academic staff development planning Innovation of recruiting and employing academic staff; (2) Innovation of recruiting and employing academic staff; (3) Pushing up training and retraining academic staff's competency to implement the tasks; (4) Pushing up checking and evaluating academic staff's competency to implement their tasks; (5) Implement policies on treatment, motivation to improve the competency of the teaching staff

Lecturers' and managers' referendum about 5 academic staff development solutions in the universities and colleges in Transport sector to meet the requirements of industrialization, modernization and international integration period questioned by questionnaires is the high agreement with both necessity and feasibility of the solution.

Experimenting the solution 3 "Enhancing the lecturers' scientific research competency" is carried out to ensure the requirements of the sample with *Statistical Package for the Social Sciences* method shows that lecturers' scientific research competency makes progress if retraining program is built accordingly. Consequently, the solutions to develop academic staff in the colleges in Transport sector meeting the requirements of industrialization, modernization and international integration period are proposed in the thesis to be suitable for the trend of higher education development in the current context.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

(1) The study on academic staff management and development in the universities and colleges is paid attention to in the world including Vietnam. The problems of position, role and function of lecturers; determining the standard to evaluate being the basis for the recruitment, retraining lecturers; improving the academic staff quality; academic staff development policy are the core of the dissertations.

(2) Basing on the scientific approach, the study has confirmed that, with a view to meet the training requirements of high quality human resources serving industrialization, modernization and international integration, in addition to interest academic staff development, management subject (school principals) should focus on the individual

lecturer development in which necessary competency is retrained to meet the requirements of performing the function and duty of the lecturers.

(3) Academic staff of universities and colleges in the Transport sector lacks quantity and structure is imbalanced, lecturers with PhD and MA level are lower than the required; competency in teaching practice and some other pedagogical skills is limited; lacking some scientific research competency skills, management skills, skills in applying research results and technologies in practical production and dissemination of scientific knowledge to the community.

(4) Assessing the academic staff development towards human resource management approach in the colleges under Transport sector states shortcomings in all fields: academic staff planning; recruitment, employing academic staff; training, retraining academic staff; evaluating and screening academic staff; remuneration policy... do not motivate lecturers to upgrade their competency.

(5) 5 solutions proposed to focusing mainly on innovation of the academic staff development planning with sufficient quantity; balanced and reasonable structure; standard and quality assurance; innovating recruitment and employment; enhancing training and retraining academic staff's competency to make good the their function: qualification, teaching, scientific research, management and community service; strengthening monitoring and evaluation and implement policies and remuneration for academic staff; motivating lecturers to strive their competency, maximizing competency, forte to serve education and training.

(6) The solutions academic staff development proposed are appreciated by experts, managers and lecturers and agree on the relevance and feasibility in universities, colleges in Transport sector. Experimental results shows that by human resource management and competency approach, solutions to academic staff development in the colleges under Transport sector to meet the requirements of modernization of the country and international integration period are scientific and in accordance with the practical requirements.

Recommendation

Recommendations for the state management sector of education

- Leaders of the Ministry of Education and Training direct the review and adjustment, addition of documents related to the standard of lecturers in universities and colleges; remunerations and policies for lecturers and academic staff managers.

- Ministry of Transport, Ministry of Education and Training, People's Committees of provinces and cities shall direct the implementation of state management decentralization of education, autonomy for colleges; clarify the necessary conditions to implement autonomy, define financial management mechanisms for colleges.

- Ministry of Transport in collaboration with the Ministry of Internal Affairs and the relevant units of study institutionalize the management of academic staff development in universities and colleges, fasten the lecturers' standard on appointing teaching civil servants of the colleges.

Recommendation to universities and colleges in Transport sector

- Applying human resource management and competency approach in the academic staff development.

- Periodically organizing scientific workshops on improving academic staff's quality.

- Strengthening co-operation between colleges and businesses in the fields of education, scientific research and technology transfer.

- Establishing application research center and technology transfer to bind implementation of the function of teaching with scientific research.

Recommendations for further research directions

- Going on studying and developing topics to apply for universities, colleges of careers and other forms of training.

- Going on experimenting to verify the solutions to academic staff development to confirm the scientific basis of the solutions.

- Going on study on employing competency approach to perfect professional standards of lecturers and the process to assess the higher education lecturers towards standardization.

- Going on study on the mechanisms and policies for academic staff in colleges in particular and higher education system in general to ensure the academic staff development effectively.

LIST OF THE AUTHOR'S SCIENTIFIC WORKS
RELATING TO THE THESIS PUBLISHED

1. Nguyen Van Lam (2010), "Building academic staff standard - the decisive factor to improve the education quality of universities and colleges in the Transport sector", Journal of Education (243, p. 63-65).

2. Nguyen Van Lam (2014), "Some perspectives and solutions to build and improve the academic staff quality of universities and colleges in the Transport sector", Journal of Education Science (Special Issue, May 1st 2014, p. 30-33).

3. Nguyen Van Lam (2014), "Improving academic staff quality of universities and colleges in the transport sector to meet the training requirements of human resources for industrialization, modernization and international integration", Journal of Education (Special Issue, May 9th 2014, p. 10-12, 50).

4. Nguyen Van Lam (2014), "The functions of lecturers at Vietnam universities and colleges in the context of radical and comprehensive innovation of education and training", Journal of Education (345, p. 9-11).