

Best Paper Award

ANQ Congress 2007, Incheon, Korea: Quality of Higher Education The Vietnam experience

Ngo Van Nhon

01st Vice-Chairman, Secretary General,
Vietnam Quality Association of Ho Chi Minh City (VQAH)
Director, Bureau For Trade Development (BTD), Ministry of Industry and Trade
vqa.hcm@gmail.com

Abstract. Today, customers expect quality in all aspects of their lives. Companies are reengineering to assure the customers of high quality of their products and services. In light of this fact, education is no exception. The customer wants to be assured that educational institutions provide quality service. The customers of the university should have confidence that their requirements for quality are met on a continuous basis, and that the students will have the required knowledge when they graduate.

Any breakthrough in enhancing the quality of higher education must be based on the renovation of thought, starting with that of education administration. Many remarks and judgments have been made and many recommendations for reform have been put forward, but these judgments about the quality of the country's higher education are not based on commonly accepted criteria. So they made little contribution to the administration of education and do not give society a right look on the quality of our higher education system. Basing Code 92 of GATS/WTO (General Agreement on Trade in Services) about educational services included: Primary education services, secondary education services, higher education services; adult education and other education services. Education services leading to a university degree or equivalent.

The impact of the QMS (Quality management system) standards worldwide has been so extensive, that it is now virtually impossible to bid for international contracts if a company is not ISO 9000 registered. Considering the fact that ISO 9001:2000 standards are generic in nature, they should be applicable to service organizations, such as software companies, health care and Higher-Education.

1. Some aspects of in higher education quality

1.1 The four following aspects of the country's higher education system

1. Concept of higher education quality.
2. The role of higher education administration.
3. State administration of higher education quality.
4. International integration trend and commercialization of higher education.

To enhance the quality of higher education administration, it is necessary to work out both immediate and long-term measures based on the combination of theoretical research and practice.

Although higher-education are considered as service organizations, this paper views the university as a manufacturing system. Final customers of the university are organizations the graduated students work for. The customers specify quality characteristics, such as employability, ability of students to solve engineering problems and ability to upgrade their knowledge.

In order to understand the university as a manufacturing system, we could accept the new name of higher-education is University Manufacturing System (UMS), we need to understand its products: student knowledge, courses and research output, as well as its basic processes: learning, teaching and research. The following Table 1 will address these in detail, as well as display a summary of analogies between a university and a manufacturing. (See Table 1).

Best Paper Award

Table 1. Summary of Analogies

| MANUFACTURING | UNIVERSITY: Faculty of Engineering (For Example) |
|--------------------------|--|
| Products | <ul style="list-style-type: none"> a. Students knowledge, experience & skills b. Courses c. Research Output |
| Customers | <ul style="list-style-type: none"> a. Industry & Society b. Professional engineers c. Graduated Students |
| Suppliers | The University |
| Subcontractors | High-Schools Colleges |
| Executive Management | <ul style="list-style-type: none"> 1. The dean, & department heads 2. Boards, councils, committees |
| Design Plan | Industrial Engineering Program, Mechanical engineering Program, MSc. program, etc. |
| Designer | Professor |
| Process Plan | Course outline |
| Raw Material | Students knowledge of basic sciences before entering the faculty |
| Value Adding to Material | Value adding to students knowledge |
| Manufacturing Process | Teaching / Learning /Research process |
| Lead Time | 4 years |
| Part | Students knowledge accumulated in a course |
| Operation/Tool | Lecture |
| Machine/Technology | "Learning Opportunity" |
| Operator | Teacher, Teaching Assistant |
| Part Specification | Course Specification in General Calendar |
| Inspection | Exams, Tests, Assignments |

1.2 Quality Characteristics

The quality of university's products is measurable. Each product encompasses certain quality characteristics, which can be measured against specifications. The following are examples of the three product characteristics in the engineering faculty:

a. STUDENT KNOWLEDGE:

Employability of graduated students, measured by:

- the percentage of recent graduates employed
- the average starting salary

Ability of graduates to successfully solve engineering problems

- percentage of graduates registered as professional engineers
- number of awards received by students in engineering competitions

b. COURSES

Attractiveness to students

- student evaluation

Best Paper Award

- failure rate
- Availability of resources
- professor to student ratio
 - percentage of faculty registered as professionals engineers

c. RESEARCH OUTPUT

Contributions to existing theories and/or practices

- number of papers published in refereed journals and/or conferences
- number of patents

Reputation

- reputation rank by academics and practicing engineers
- research funds received from the government, industry and society

Quality characteristics are considered to be crucial for measuring “quality”. Universities should define what the critical quality characteristics are in their quality policy statement. The concept of higher education quality is following the terminology (See Table 2)

Table 2. Terminology

| TERM | EXPLANATION |
|-----------------------|---|
| Quality Policy | The overall quality intentions and direction of faculty as regards quality as formally expressed by the dean. |
| Quality Management | The aspect of the overall faculty management that determines and implements the quality policy. |
| Quality Assurance | All those planned and systematic actions necessary to provide adequate confidence to the customers & faculty management that the product will satisfy given requirements of quality. |
| Quality Control | The operational techniques and activities that are used to fulfill requirements for quality at the faculty level (ISO 9001:2000) |
| Quality System | Organizational structure, procedures, processes, responsibilities and resources for implementing quality management (ISO 9001:2000). |
| Management Review | Management review includes: (1) Internal Quality Audits (2) An overview & analysis of quality policy (3) The analysis of customers requirements and their relationship to the policy/objectives. |
| Quality System Review | A formal evaluation by the dean and department heads of the status and adequacy of the quality system in relation to quality policy and new objectives resulting from changing circumstances. |
| Design Review | A formal evaluation by the department heads of the course design to evaluate course requirements and the capability of the courses to meet these requirements. |
| Inspection | That aspect of the faculty-wide quality control that measures examines and tests one or more characteristic of the service and compares these with specified requirements to determine conformity. |
| Non-conformity | The non-fulfillment of specified requirements (ISO 9001:2000) Examples: student failure, course failure, and research project failure. |
| Defect | The absence of one or more quality characteristics from intended specifications. |

Best Paper Award

2. Methodology

Our planned basic research subjects include:

1. Renovation of Vietnam's higher education quality administration by means of associated training and research with overseas famous universities as breakthrough measure for regional and world integration.
2. Application of quality management system model with a view to QMS ISO 9001:2000 in Vietnam higher education administration.

3. Significance

Vietnam's higher education reform must be focused on the reform of administration. This can be carried out through turning state run universities into universities of that have legally in dependent establishments, opening of private universities or colleges operating according to market economy laws, the valuation of universities (1st party) must be audited by a second organization (2nd party), and accredited by a third organization (3rd party) according to the rule of three parties (See Fig. 1)..

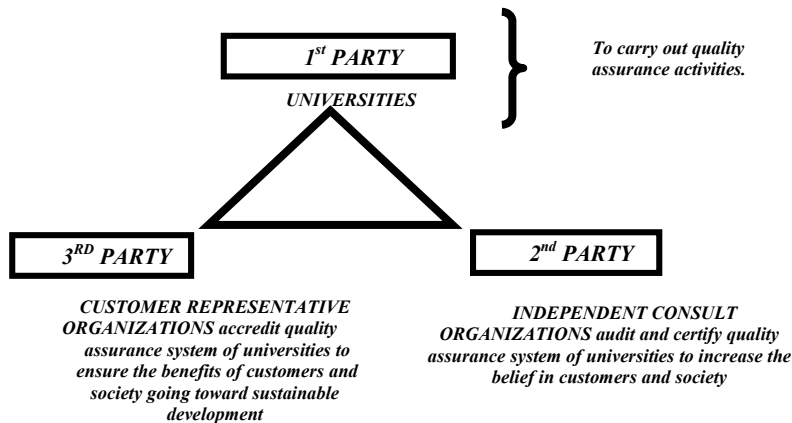


Fig 1. The ruler of three parties

4. Evaluation and Dissemination

A view to having scientific criteria for examining the four following aspects of the country's higher education system: Concept of higher education quality; The role of higher education administration; State administration of higher education quality; and International integration trend and commercialization of higher education. The quality assurance model in SEAMEO (Southeast Asian Minister of Education Organization) is compatible with stage 3 and part of stage 4 of EFQM model (European Foundation for Quality Management of Higher Education) or with the QMS ISO 9001:2000 model. Over 5000 training establishments in the world successfully apply the ISO 9001:2000 in education administration. For reference we wish to present 5 stages of development of higher education management system based on EFQM model as follows (See Fig. 2):

Best Paper Award

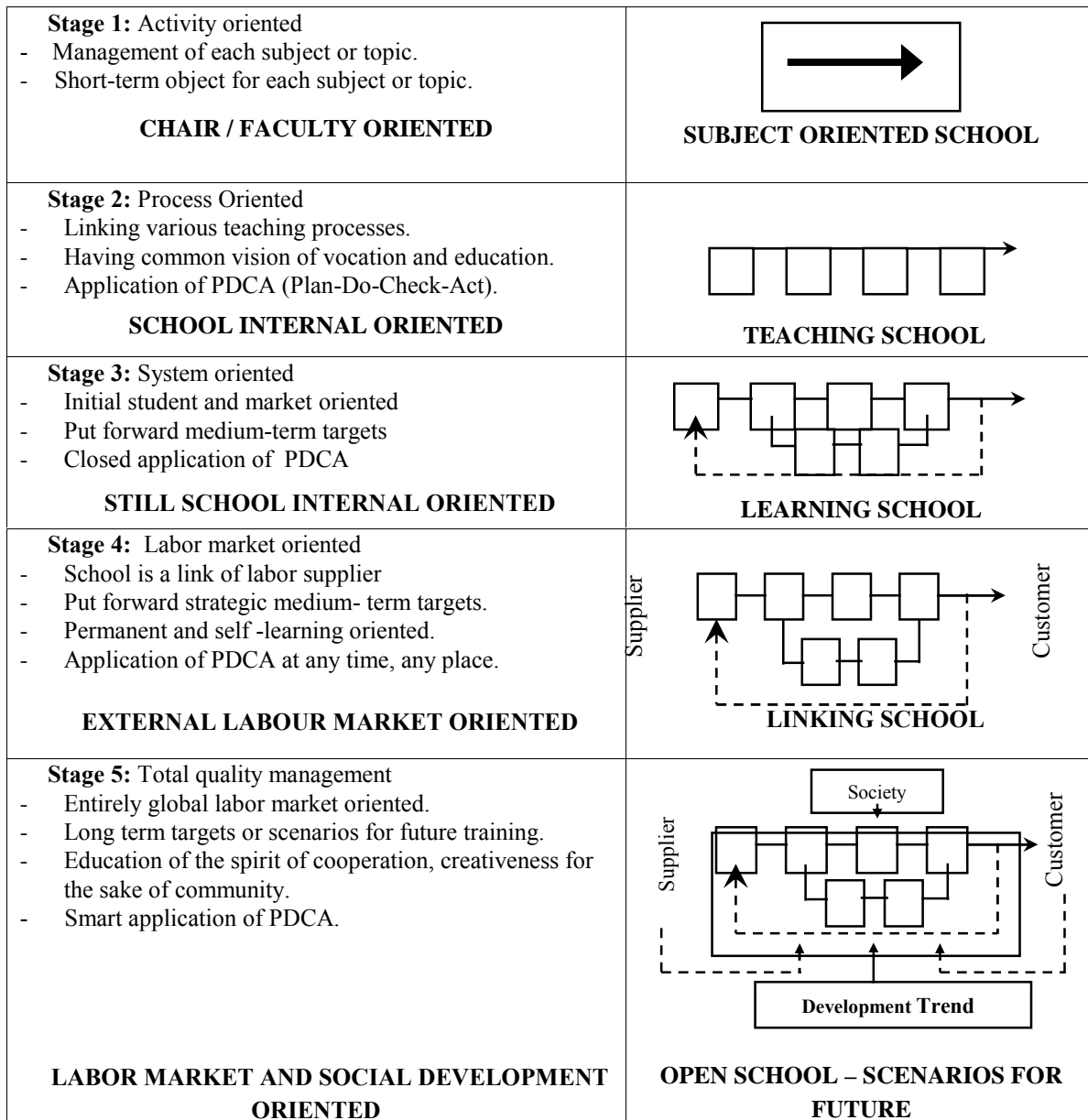


Fig 2. Five stages of development of higher education management system based on EFQM model

5. The Vietnam Experience & Case Study

The application of quality management and the establishing of quality systems for the educational domain at Vietnam universities were proposed the first time in 2003. The assessment of the educational quality especially at universities and the application of the feed back for the contents and realization of lectures and courses are very important.

Especially the new ISO 9000 international standards with its orientation to processes gave a useful frame for the development of quality management systems. Fig. 3 shows the model that can be used for building up a "Process-based Quality Management System".

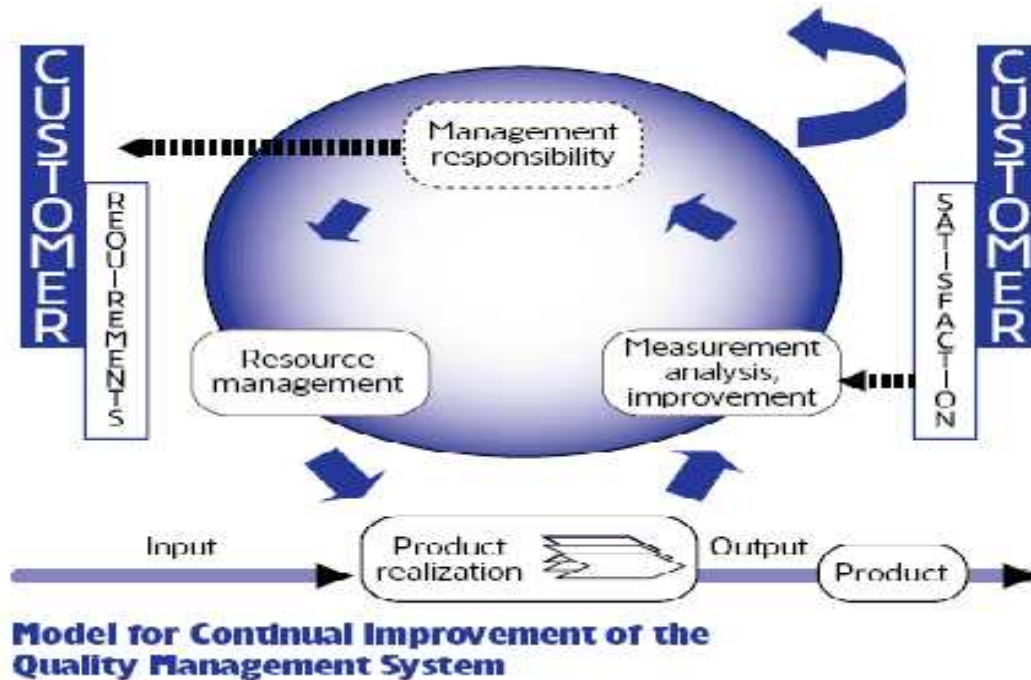


Fig. 3. Model of a Process-based Quality Management System

5.1 List of universities by certified ISO 9001:2000 in Vietnam

Quality Management System Certification is still new to Vietnam higher education. The International Quality Center (IQC) together with colleagues from consulting bodies will combine technical consultancy with local and foreign experiences to do internal audits and the certification bodies to do external audits for 17 universities in 3 year-period 2005 - 2007.

1. Business Administrative School, Hanoi National University, Hanoi City
2. Hanoi National University of Education, Hanoi City
3. Hanoi University of Industry, Hanoi City
4. National Economics University, Hanoi City
5. Hai Phong Maritime University, Hai Phong City
6. Hai Phong People-Founded University, Hai Phong City
7. Sao Do College of Industry, Hai Duong City
8. Hong Cam Mining Vocational College, Quang Ninh Province
9. Hong Duc University, Thanh Hoa Province
10. Dalat University, Lam Dong Province
11. Technical Pedagogic University of Ho Chi Minh City
12. University of Agriculture and Forestry of Ho Chi Minh City
13. Ho Chi Minh City University of Industry
14. Ton Duc Thang University, Ho Chi Minh City
15. Ho Chi Minh City Food Industry College
16. Hung Vuong University, Ho Chi Minh City
17. RMIT University, Australia, Ho Chi Minh City

At the present, more five universities are processing to gain ISO 9001:2000 in the end of 2008.

Best Paper Award

5.2 Quality Management Principles Implementation in the Vietnam universities

The scope and the structure of quality systems and also of quality management standards should be formed on the basis of an integrated system of quality principles as shown in Fig. 4.

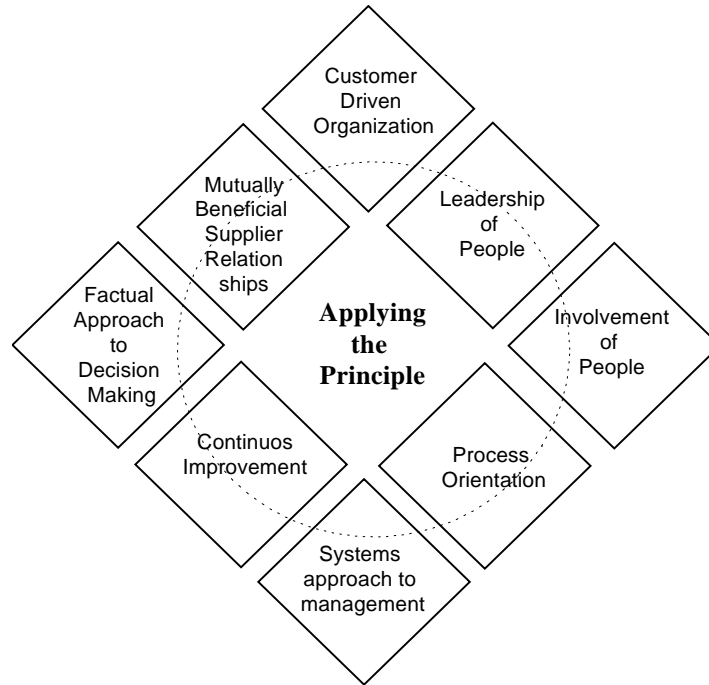


Fig. 4. Applying Eight Quality Management Principles to the Vietnam universities

5.3 Case Study: Applying QMS ISO 9001:2000 to Hanoi University of Industry (HaIU)

In the processing of implementation QMS ISO 9001:2000, HaIU hold 03 internal audit times. The contexts of audit included:

- Level of implementation of Quality Targets of every units and Board of Management;
- Level of implementation of issued documents;
- Level of implementation of corrective actions and preventive actions;
- Level of knowledge of staff in the processing of implementation QMS ISO 9001:2000.

Table 3. Satisfied Customer Level through the 2007 HaUI Survey

| No. | Survey item | 3 rd Internal Audit 2006 | 1 st Internal Audit 2007 | 2 nd Internal Audit 2007 |
|-----|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 | Satisfied level of students in subjects | 90% | 84% | 87% |
| 2 | Satisfied level of employers | 70.5% | -na- | -na- |
| 3 | Level of Quality of Management according to EFQM Model | 61.1% | 62.3% | 64.5% |
| 4 | Ratio students had conformity jobs with trained fields after graduated 6 months | -na- | -na- | 85,7% |

Best Paper Award

Brief of experiences of HaUI:

- Strongest commitment of leadership;
- Skill of staff;
- Level of technology and equipment
- Size and complex level of the university
- Prestigious and experienced consulting experts
- To select pilot units to apply QMS ISO 9001:2000.

CONCLUSION

The benefits of ISO Quality standard in higher education indicate its effect on the quality improvement in such institutions. The overall educational system has improved significantly and all the departments (teaching and non-teaching both) have improved in terms of their performance and efficiency. Customers, whether they are students, employees or those having interest in the system are satisfied. Because of the changes towards improvement in various departments the students are in a position to study with devotion and without any hectic resulting in a positive environment at universities. Yearly objectives and targets are noted to be another essential factor that helped improving the overall system.

ISO 9001:2000 has eight principals of QMS, one of the top principal is “CUSTOMER FOCUS”. We can say that when an university applies ISO seriously, its students will have four RIGHTS reality: To be assessed lectures from his/her subjects; to be solved requests one door and on time; to be controlled and to make a report of Teaching-Studying weekly; to be knew the achievements of students after they graduated from their university.

Key Words:

1. Quality assurance
2. Education services
3. Quality audits and reviews
4. Satisfied Customer Level

References

1. Lam Quang Thiep, Some solutions in order to quality assurance in higher education system, Higher Education and Vocational Education magazine No.3/1998, Hanoi, 1998
2. Pham Thanh Nghi, Quality Management in Higher Education, Vietnam National University, Hanoi Publishing House, Hanoi, 2000
3. Nguyen Quang Toan, ISO 9000 & TQM – To establish a management system focuses quality and customer focus, Vietnam National University, Ho Chi Minh City Publishing House, 8th Edition, Revised & Update Version, Ho Chi Minh City, 2001
4. Nguyen Duc Chinh (Chief Author), Quality Accreditation in Higher Education, Vietnam National University, Hanoi Publishing House, Hanoi, 2002
5. Vu Ngoc Hai, Tran Khanh Duc (Co-Chief Author), Modern Education Systems in the early years in 21st Century, Education Publishing House, Hanoi, 2003
6. S. Karapetrovic and others, The University Manufacturing System: ISO 9000 and Accreditation Issues, Canadian Engineering Accreditation Board (CEAB), Canada 1995
7. ISO, International Standard ISO 9001 - Quality management systems - Requirements, Switzerland 2000

Best Paper Award



ASIAN NETWORK FOR QUALITY

ANQ Congress 2007
Korea

Best Paper Award

is hereby presented to

Ngo Van Nhon

*Title: Quality of Higher Education - The Vietnam
Experience*

October 18, 2007

A handwritten signature in black ink, reading 'Yung-Ho Suh', is written over a horizontal line.

*Yung-Ho Suh, Ph.D., Chairperson
Asian Network for Quality*