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QUALITY MANAGEMENT SYSTEM AS A SIGNIFICANT PILLAR OF THE MILITARY EDUCATION PLATFORM

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Abstract: *The author in her contribution focuses on the interesting issue for the needs of the Slovak Armed Forces - implementation of quality management system in terms of state university in the Slovak Republic. The author is concerned with standardized conceptions of quality management and specific quality management systems in the field of military education.*

Keywords: *quality management systems and their implementation in military education, principles of creating quality policy, implementation of quality objectives, quality management system and the Slovak Armed Forces.*

1. INTRODUCTION

Nowadays it is not disputed that a company should be directed and managed in a systematic and transparent way in order to achieve its successful management and functionality. Among others, the success of the company can be significantly influenced by implementation and maintenance of selected quality management – company management activities, quality policy, objectives and responsibilities of individual company actors. All this can be realized in quality planning and management, securing and continuous quality improvement in each organization including military organization /although a military organization has its own specific features/. Despite various initiatives from the Ministry of Education of the Slovak Republic the educational institutions have refused a range of quality management systems. Nowadays the quality management system in education has been represented by the phrase – system: educational and administrative processes and the resources of the educational institution which interact /i.e. Management – determining

the organization direction and targeted creating and allocation of resources through activities of managing employees; quality – a perceived value produced by fulfillment of requirements. From the history of individual countries emerges that the company wide quality was the most promoted in Japan where also the base for modern quality systems was born. A range of various standards has been gradually developed, e.g. a Directive for quality assurance in the NATO marked as AQAP (Allied Quality Assurance Publication). The elaboration of standards based on company or sector specific standards in the eighties of the twentieth century was a reaction to Japanese competition. The first standards ISO 9000 for company processes were published in 1987 and since then they have been revised for several times. In the area of quality management the philosophy TQM (Total Quality Management) has been currently the most applied. This philosophy originated from Japanese company wide quality control (CWQC) and it has been developed dynamically. It was also a basis for quality awards. The quality is, therefore,

considered to be one of the most significant tools for establishing the company's stable position in the market. However, the opinions on quality are changing over the course of the market economy existence.

2. THE DEFINITION OF THE QUALITY AND QUALITY MANAGEMENT

2.1 The definition of quality. The word quality (grade) represents a complex category and capability of the product to perform its functions, i.e. to meet customer expectations. It includes following features of the product: the product life, the product reliability and use, the product safety, functionality and performance, etc. However, quality is not understood only as the highest level, something best or most expensive. In short: quality should be understood as "the rate at which a set of intrinsic characteristics meet the requirements." "Quality is a summary of the product characteristics which contribute to its capability to meet the requirements." It follows from the above that quality can refer to both the product and the customer.

2.2 The quality management. There exist some genesis in the development of this term (quality management, quality control, grade control are part of company management). According to the standard STN EE ISO 8402/1996 the quality management is defined as all activities of overall management function which determine the quality policy, objectives and responsibilities and which are applied in the quality system through quality planning, operative quality management, and quality assurance and improvement. The objective of quality management is optimalization of work procedures or manufacturing processes which takes into account material and time resources, expected product final quality and the envisaged future company's growth and development. The quality system includes organizational chart, procedures, processes and resources required for application of quality management. It has been proved that quality management leads to: improving economic performance, higher interest in customer requirements, development of culture and leadership of the

company, significant changes in personality growth of the company employees.¹

2.3 The quality management systems. The quality management system is understood as the system determining quality policy and objectives. These strategic intentions for the attainment of the objectives in the educational institution represent a target position which determines "what and how" the organization aims to achieve by its performance. To sum up, the quality management system consists of these activities: **quality planning** (elaboration of quality objectives, specification of processes required for quality objectives attainment, identification and allocation of resources to meet the objectives) ; **quality control** (intended to meet the quality requirements); **quality assurance** (activities aiming at providing confidence so that the quality requirements will be fulfilled); **quality improvement** (enhancing the ability to meet the quality requirements). The proposal and implementation of the quality management system in each organization is influenced by various needs, specific objectives, products, used procedures, company size and structure.

2.3.1 The basic conceptions of quality management. There exist three basic conceptions of quality management, e.g.: conception of corporate standards, conception of quality management according to ISO, and conception of total quality management. The standardized conceptions are based on standards defining requirements or recommendations for quality management system. The quality management is based on general principles for management of organizations of any type – so called ISO Standards (educational institutions): **1. customer orientation** (educational institutions depend on their students and employers of the students), **2. leadership** (leaders determine unity and direction in educational institutions, university top management and guarantors of courses of study play a prominent leader role), **3. commitment and involvement of employees** (full involvement of employees means that employees are qualified and **aware** of their duties, they **can**, they are experts with competence, they **want** and are committed and interested, **4. process orientation – process approach** (the desired outcome can be more



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effectively achieved if educational activities and related sources are managed through processes, that is, an educational institution is able to identify processes in order to produce the desired outcomes), **5. systemic approach to management** (systemic identification, understanding and control of interrelated processes contribute to the efficiency and force of an educational institution in achieving its objectives), **6. permanent improvement – continuous improvement** (continuous performance improvement of an educational institution should be its permanent objective), **7. decisions based on the facts available** (effective decisions are based on analysis of data and information specifically obtained particularly from identification of requirements, performance measurements and determining satisfaction of the educational institution and its parties involved), **8. mutually beneficial relationships with suppliers** (an educational institutions and its suppliers – secondary schools, providers of information technologies, suppliers of didactic technologies, other equipment and laboratory equipment depend on each other and their mutually beneficial relationship helps to create a value for both institutions).² The original ISO standards have been amended by the standards ISO 9000:2000. These standards Slovakia adopted in April 2001. The ISO 9001:2000 (Quality Management Systems) can be considered basic international standard.

2.3.2 Conception of Total Quality Management (TQM). In comparison with standardized conceptions the conception of Total Quality Management is based on approaches that can be freely implemented. They are of philosophical nature rather than of clearly defined recommendations or requirements. The concept is broader in scope and it focuses on customers, company

employees, processes, working environment, company, objectives and results. The basic principles of Total Quality Management applied to educational institutions are as follows: customer orientation, leadership and stability of intentions, development and commitment/involvement of employees, process management based on facts available, responsibility towards the public, continuous learning, innovation and improvement, results orientation and their measurement, development of partnership. In comparison with conceptions based on the ISO series of standards this conception represents an open system in which it is possible to integrate all that could be useful for enhancing satisfaction of customers, operation of an organization, minimization of costs of failures and all that contributes to the organization (university) development. It provides for maximizing the profit, enhancing the company competitiveness, and minimizing the costs related to "poor quality". The conception of Total Quality Management can also be applied to universities (EFQM- Excellence model) which was developed in cooperation with the founders of the European Foundation for Quality Management (EFQM) in 1988. The main motive was the ambition to renew and strengthen the competitiveness of European companies against American and Japanese companies in the global market. There were nine criteria developed which serve as the base for long-term success and the "excellence model" was declared. The CAF (Common Assessment Framework) model was designed for the needs of public administration and public educational institutions. It works on an assumption that an organization wants to achieve exceptional performance in relation to citizens/customers, employees and society on the basis of leadership, strategy and planning

as well as in relation to workers, partnerships, and processes. This model views an organization from different angles and at the same time it analyzes organization's performance from a holistic point of view. The CAF model is provided to public-sector organization across Europe as a simple tool of applying quality management practices for the purpose of improving performance. It also provides a self-assessment system.

2.4 Specific quality management systems for education field. Besides all the previously mentioned basic quality management conceptions and systems, when it comes to the field of education we can also make use of other systems. The IWA2 was developed in October 2002 in Mexico and it was approved in Korea in 2003 as a quality management system providing an educational institution with a possibility to control and check its activities in order to fulfill needs and expectations of the parties involved. With a view to react to urgent market needs, ISO prepared international workshop agreements, so called IWA which are not in contradiction with the already existing ISO standards. This agreement was developed to provide educational institutions all over the world with a unified approach to quality management and to translate technical language of the then ISO 9001:2000 into educational institutions. It is appropriate for educational institutions providing primary as well as secondary education. On the basis of the IWA2 content, they gradually developed a new American standard ASO/ANSI Z1.11 which is designated for people who teach, prepare or administer educational activities. This norm sets requirements for educational management systems and it also serves for certification purposes. ISO 29990, an international standard is devoted to important area of services such as further education and especially to services provided within the scope of informal education. It deals with individual phases of a service lifecycle, requirements regarding finance and risk HR management and communication management. Special stress is laid upon identification of adult learners' needs, monitoring and assessment process of educational service and review of management system within key competencies of education

services providers. In 2010, the CAF model was implemented into the field of education in public educational institutions via the CAF and Education model. The CAF model already has its 2012 version, which is based on the previous models and it was developed for the educational sector in general, from kindergarten to higher education.

2.4.1 ESG Standards and Directives for universities. They were primarily designed for education at universities and they should present a source of inspiration for lower education, eventually for the area of informal education. These standards and directives are divided into 7 areas: **quality assurance policy** (standard of educational programs and academic titles conferring, relation between teaching and conducting research, strategy and the quality assurance system, reliability of individual departments, institutes, faculties, integration of students, policy and fulfillment of objectives monitoring); **educational programs assessment system** (elaborated and published set educational results, mechanism for curriculum and educational programs development, specific needs of different education forms, accessibility of appropriate educational resources, educational growth and students' results, educational programs assessment, employers' feedback, labor market); **students' assessment system** (measurement, publishing, diagnosing criteria for marking, rules concerning student absence, assessment strategies); **assurance system of pedagogical staff quality** (well-established procedure of teachers' competence and qualification, ability to accept feedback on their performance, provision of optimal gradual growth, an opportunity to develop and widen their teaching capacity, to evaluate their abilities in teaching, to develop proper mechanism for teachers who have been insufficient in the long term); **educational resources and supporting resources for students** (to assure appropriateness of available resources for each educational program offered, to develop literary and technical resources supporting education and to make them available, to provide tutors, assistants and other consultants, to implement students' feedback when completing supporting materials, to monitor, revise and



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improve efficiency of supporting services for students on a regular basis); **information systems** (to ensure gathering, analysis and use of relevant information for effective management of educational programs, graduates' employability, students' satisfaction with a program, teachers' efficiency, students' population profile and key indicators for comparing to other universities); **system of information publishing** (every university should regularly publish current, impartial and objective information about educational programs, expected results of study and educational assessment while putting emphasis on impartiality and objectivity of released information). Implementation of this internal quality assurance system by means of the ESG standards mentioned above also includes an obligation of submitting an evaluative report on regulations of students' assessment within the bounds of our higher education act. Based on what have been mentioned above it is evident that one of the key processes regarding quality management system for educational institutions is choosing the most appropriate model. When choosing a model it is proper to respect the following procedure: to create a set of comparative criteria; to introduce and verify criteria; consider criteria by university management representatives and to use methods of multi-criteria analysis of choosing the most appropriate quality management model.

3.3 QUALITY MANAGEMENT SYSTEM IN THE ARMED FORCES

In the Armed Forces of the Slovak Republic the quality management is mainly applied in acquisition process within the defense system life cycle. The acquisition process represents one of many ongoing

processes in the Ministry of Defense of the SR and it fulfills a specialized function (purchase). The acquisition process in the Armed Forces of the SR is the part of a distribution and logistics chain. Its main task is to ensure that every product is acquired in compliance with statutory provisions, for a planned price and that it is delivered as required, within predefined time and to pre-agreed place. Practical experience show that quality is best achieved through an approach which is based on utilizing an integrated system through the life cycle. The NATO policy on an integrated systems approach to quality through the life cycle is included in the SOŠ AQAP 2000 (Slovak Defense Standard) from 2005, which is an implementation of the AQAP 2000: 2003 allied publication (NATO Policy on an integrated systems approach to quality through the life cycle) into our practice. For one thing, it confirms the fact that quality management is a continuous process involving a great number of participants. And for another, it contributes to the development of support, supply and it also contributes to maintenance of the armed forces capacity from a proposal to liquidation. The intention of this policy is to gain products, which fulfill requirements consequent on life cycle perspective. Products intended for the armed forces needs are of highly specific nature. That's the reason why, within the SR Armed Forces, products quality assurance has been put at the level of state quality assurance by means of a Act No. 11/2004 Coll. Defense Standardization. Quality verification comes under the competence of a public body called "The Office for Defense Standardization, Codification and State Quality Assurance". With respect to what has been mentioned above, one can say that also the Armed Forces Academy of General Milan Rastislav Štefánik in Liptovský Mikuláš is standing at the

crossroad and it will have to choose the right direction of its further orientation. Innovation of the existing education strategy, elaboration of the strategy regarding scientific, research, innovation, expert activities and personnel as well as elaboration of strategy on marketing and external relations will be necessary. In connection with the mentioned strategies it will be also necessary to completely rework a long-term plan of the Armed Forces Academy in accordance with the Higher Education Act amendment and the SR White Papers on Defence.

REFERENCES

1. Belan E. and col: Manažment, Liptovský Mikuláš, 2011, ISBN 978-80-8440-434-5
In Frianová V.: Manažment kvality page 178.
2. Hrnčiar, M.: Systémy manažérstva kvality vo vzdelávaní, Ružomberok, Verbum – vydavateľstvo KU, 2012, ISBN 978-80-8084-909-2, page 10-11
3. Normy a smernice na zabezpečovanie kvality v európskom priestore vysokoškolského vzdelávania. Slovenská rektorská konferencia 2010 ISBN 952-5539-04-0
4. Westerheijden, D. F., Stensaker, B., Rosa, M., J.: Quality Assurance in Higher Educations. New York: Springer, 2010, 264 s., ISBN 978-9-048-17503-1