

EDUCATION OF EMPLOYEES LIKE A BASIC TASK OF QUALITY MANAGEMENT SYSTEM

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Abstract

The article deals about the task of human factor in quality management. The basic topics of meaning of human sources in quality management is education and modern form of employees education like e-learning which with the use of virtual environment and information technologies in combination with daily present form of study creates for students an alternative to gain as much available information as possible.

Key words: quality management system, human resource, employees, education, e-learning.

Classification JEL: M12 – Personnel Management

1. Introduction

In a modern, innovative management education organization creates real preconditions for the success of even the most business activities, whether in terms of strengthening the market position, increasing its performance or other difficult targets.

Education must be an unremitting component of organizations strategy and the same is valid in quality management. Quality creating people therefore success of each organization is conditioned to people and their abilities, knowledge's, skills, talent and their helpfulness of working for organization. These are asset of intellectual capacity of each organization.

2. The nature and importance of education in terms of needs and quality management

Training employees can be characterized as a continuous process in which adaptation occurs and change work behaviour, knowledge, skills and motivation of employees that they learn by using different methods (Galajdová, Blašková, Vetráková, Hitka, Kuchárová Mačková, Potkány, Lejsková, 2007, p. 92). The result is a reduction in the difference between the actual competence of employees and requirements that are imposed on them.

The basic aim of education is through targeted permanent shaping of labour potential to create conditions for the effective performance of the tasks of the organization and its competitiveness in the market. Thus, the aim of education is to care for, that the organization should have the quality people it needs to achieve its objectives of improving its performance and its growth area. These objectives can be achieved by ensuring that as far as possible, everyone in the organization had the knowledge and reached the level of skills that are important to carry out their work effectively and that the performance of individuals and teams improve.

Investing in human resources, leading to an overall assessment which is specifically manifested through:

- increase employee performance and level of services provided,
- increase the competitiveness of organizations,
- increase confidence and satisfaction of employees, their loyalty to organizations,
- saving time and money in deployment of staff (in the orientation in the working procedure, transferring, etc.).

The human factor in quality management is closely linked with education staff because the repeated experience of successful companies clearly show that a comprehensive and systemic approach to knowledge and skills of employees and their training and development is one of the

determining factors of quality management of corporate efficiency. Effective human resource management in the field of corporate training should take care to ensure that the knowledge and skills of employees in organizations not only accumulated but that is mainly used in the rational interest of achieving the objectives, not themselves better designed model of quality management system can not be effective if are not acquired by employees of the organization.

The **role of each organization in the field of education** which has an effective quality management system is:

- identify the competencies required of employees who perform affecting quality,
- provide training that ensures the competence,
- evaluate the effectiveness of training,
- ensure that organization employees are aware of the seriousness and importance of its activities and its contribution to achieving the quality objectives (Meňovský, 2001, p. 4).

Organization to achieve its objectives must provide training to employees. This has to accept the importance of fulfilling the requirements and needs of customers and other stakeholders. It has also includes the possible consequences for the organization and its employees if the requirements are not fulfilled. Therefore, any organization with an established quality management system must constantly analyze the needs of developing all its employees. This will provide their employees with the knowledge and skills, together with experience leading to high-quality performance at each location.

The lack of educational programs in the field of quality is one of the serious lack of quality systems. Low levels of knowledge workers in the sphere of production quality, makes the creation of many problems associated with low quality of the products and services. Therefore, education is a limiting factor in improving the quality and one of the most important tools of strategic quality management.

The **basic requirements** for education from the perspective of quality management include the need:

- be a permanent part of personnel management and quality management, to avoid creating disagreements and to change the attitude of employees in quality,
- underpinning of all employees from top management of the ordinary workers,
- become a mandatory part of the activity for all employees, and training of staff are irreplaceable importance, because they are based on the notion of quality for other staff.

For each activity, which affects the performance of an organization is in the business of education first phase identification of the necessary competencies. The term competence is the power fails, respectively, authorization but the required level of skills, knowledge and skills for the performance of the activity (Meňovský, 2001, p. 5).

Identification should be based on an analysis of current and expected aims, which are compared with existing levels of competence of all employees in the organization. It is actually the notion of what education should be met, thus defining the difference as the staff knows and can do and what would know and be able to do in order to meet business objectives and achieve customer satisfaction. It should be noted that, in this case not only for disclosure of “deficit”, which means that education is not regarded as a process that gives order to do what is inadequate, defective (in terms of quality management system to the non-compliance). Training employees is a much broader scope. It should deal with the recognition and satisfying development needs, increasing the flexibility of qualifications, etc. It is important to ensure that employees are aware of the seriousness and importance of their activities and their contribution to achieving the quality objectives and to be prepared in case of default of the requirements set

assume a higher level of accountability (Gejdoš, 2004, p. 181). The identification of training needs is shown in Figure 1.

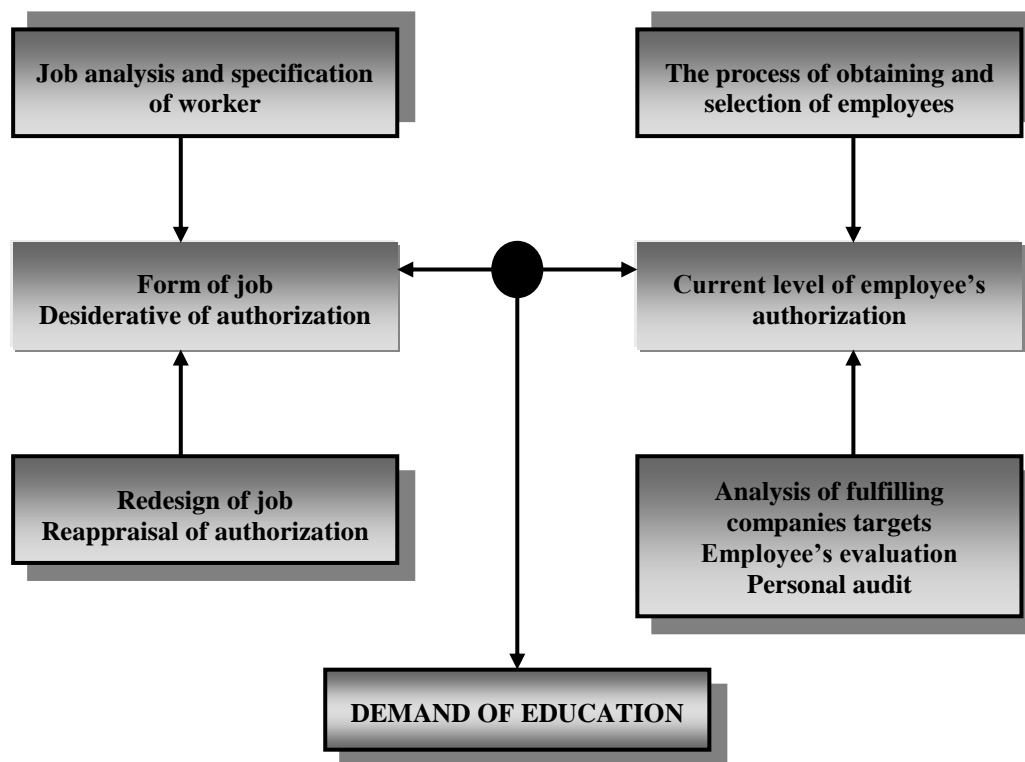


Figure 1: Identification of training needs

Source: Meňovský, 2001, p. 5

Education must fit into the overall human resources management and, therefore, each organization has adopted a philosophy of education, which reflects the significance and importance of learning in organizations. **Approaches to learning organizations are different:**

- a) **Zero option** – all learning activities are confined to the compulsory training that result from legal provisions and technical regulations. Maintaining or training is entirely left to the initiative of employees.
- b) **Random access** – staff training are planned, subject only to the current needs. Courses are chosen randomly according to advertisements or tender leaves of various educational agencies and therefore the training can be effective.
- c) **Organized approach** – educational activities are planned for the courses and requirements specified by the requirements and needs of the organization. This approach already is directed to effective learning.
- d) **Targeted approach** – education provides permanently and systematically on the basis of identified needs. In the management of education are involved, except the department of human resources management and all the lines and ensure that managers of educational activities is being addressed through cooperation with various external agencies, but strongly supports the learning at work in the organizations.
- e) **The concept of a learning organization** – education takes a new character where attention focuses on the self, respectively. Mean by the focus on trying out various facts in dealing with new issues and that education must be supported by manager's at all organizational

levels (Galajdová, Blašková, Vetráková, Hitka, Kuchárová Mačkayová, Potkány, Lejsková, 2007, p. 93 – 94).

3. The methods and forms an effective way of learning

According to the law on universities No. 131/2002 Z. z. Higher Education and amending some laws as amended are in our educational space in general seen and defined by **two separate streams (or forms) of education**:

1. **Full-time** – the now commonly used as a preferred system of education, which is, of course, physical contact with the training to be a teacher. Information handed to tutor students at the lectures, or in various seminars. The feedback is carried out on the exercises.
2. **Distant form** – distance education requires a minimum or very limited physical contact with a student teacher. An essential element for the introduction of distance learning technology which allows students to learn independently and through material (such as special textbooks, exercise books, multimedia packages, etc.).

The methods of classical education as we know it can be broken even by the location where the training methods for learning in the workplace and methods of education outside the workplace, according to the object for which the training focused on methods aimed at the individual, the group of workers, and combined methods, etc. These methods are, however, in terms of providing effective education system inadequate and a change is needed if the outcome of education other than at present. Education today requires a number of fundamental changes in the educational process.

The first change is the change in the **way of teaching**. The former way of teaching the principle of reproduction of educational content by teachers in the classical school. The audience will learn the basic skills that make use of its next active life. The current pace of developments in information and communication technology allows for a fundamental change in the educational process by providing opportunities to create not only pages of text, but also the presentation in the form of multimedia courses. The issue of allowing study material absorb faster and better than in the classical form of interpretation.

Another change is that **multimedia training courses** may be available through the communications network, which allows to obtain the actual content from multiple sources, at any time and any place. This can be changed in part or in some cases, quite the character of the service provision of education in e-learning. Access to educational multimedia courses through a communications network enables continuous education of people without having to interrupt his duties. This method of training in the rapidly changing conditions of work necessary. At the same time to expand the circle of those who will use the established rates.

The third change is the **change of track workers** providing learning process. Until now the teacher was the creator of information content, speakers and creators of learning materials, creation of multimedia courses will require a special profession of teamwork necessary for experts from different fields. Responsibility of teachers for the current level of knowledge is passed on to the listeners themselves. The teacher thus becomes a trainer and consultant in obtaining the required knowledge (Gejdoš, Potkány, 2006, p. 152).

Changes in the educational process required to address the following areas:

- a) information and communication technologies for education,
- b) pedagogical practices respecting the use of information and communication technologies,
- c) socio-cultural problems of education.

One of the ways to effectively provide a process of continuous learning is e-learning. E-learning is an integrated, continuous access to education based on the creation, delivery and management of education through electronic media. It allows the trainer to incorporate education

into the element of adaptability, which will provide an interactive learning process. E-learning is a process involving the creation and distribution of off-line and on-line courses, management training and the subsequent feedback. In general, e-learning is regarded as a highly effective method of providing education permanent access to information and their application to practice and measurability of results and ultimately reduce investment in the education process, despite the fact that input costs are relatively high. E-learning not only to educate, to the professional field, but they also learn to use information technology in daily work and personal life (Kravčáková, 2006, p. 115).

3. Evaluation of the success of e-learning form of education in the field of Quality management at the Faculty of Wood Science and Technology Technical University in Zvolen

In order to fouting trend in education spending and certain benefits options that use e-learning in the educational process provides the team of workers Department of Business Economy Technical University in Zvolen decided to implement e-learning in the form of full-time university study. On the basis of the selected e-learning system of education was in the course of four semesters of study conducted a survey among students to support e-learning e learning. The survey was intended to work with the system itself, as well as the effectiveness of its use. The survey involved 718 students from two faculties which together form the seven study focus. Students were addressed directly to the training for the teachers, and ensure 100% on the rate of return while minimizing financial costs. The inquiry itself was conducted using the **questionnaire method** and were divided into three parts, which describe the field of framing:

- general information* (putting academic orientation, and the possible use of some form of e-learning),
- use of e-ducation as support for full-time study at university* (with the assessment of the work by e-ducation, its use and design of the system itself),
- during the course of evaluation in electronic form* (a comparative assessment of the attractiveness of the study through e-learning vs. Full-time study, to assess their own learning outcomes and addressing possible negative circumstances of its application).

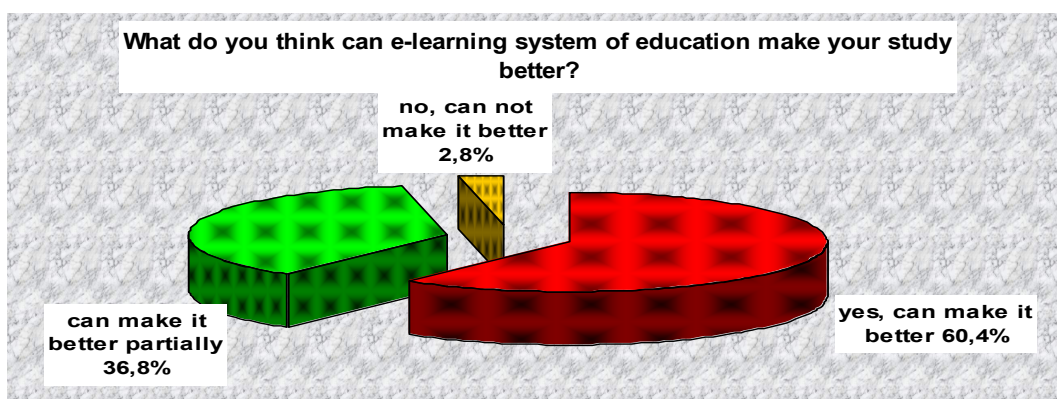


Figure 2: Chart improving learning opportunities through e-learning

Source: Drábek, Potkány, Gejdoš, 2008, p. 39

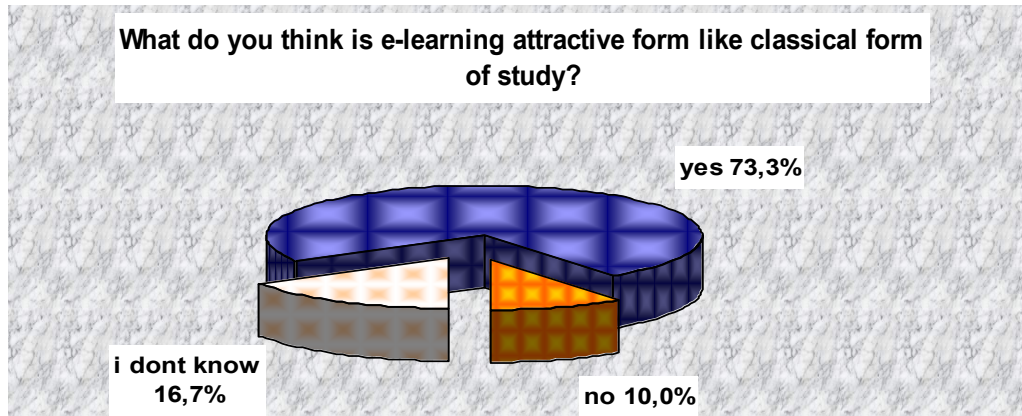


Figure 3: Chart assessment attractive e-learning education

Source: Drábek, Potkány, Gejdoš, 2008, p. 40

The issue of quality learning through the promotion of education and practice, electronic documents on-line teaching tests in the opinion of students at a higher level than in a traditional form of teaching. Only 60.4 % of students think that the e-learning system of education will certainly help them to improve learning in the study (Figure 2). Partial improvement of teaching is 36.8 % of respondents believe, while it is clear that the quality of teaching in their opinion, define other criteria such as mode of presentation of the issues, personality characteristics of teacher, etc.

Following the evaluation of the attractiveness of the study we have in our survey also focused on identifying factors that are the main benefits for students such education. Students could choose from the options offered, or to define their own benefit, while subjectively identified three main benefits with their own order of priority (1 highest benefit, 2 – 3 is progressively reduced benefits).

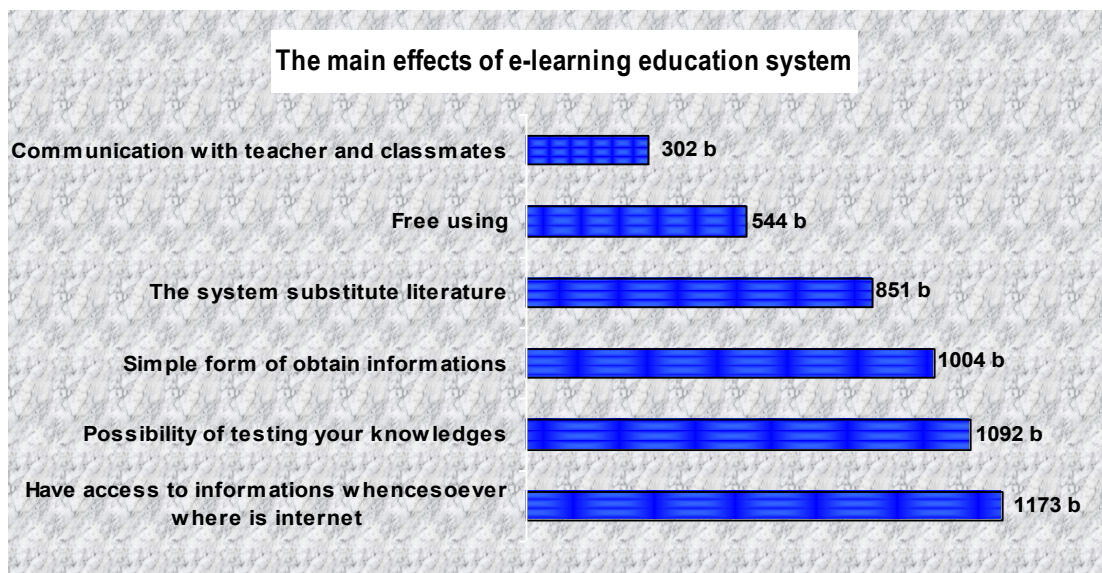


Figure 4: Image Chart identifying major benefits of e-learning support for education

Source: Drábek, Potkány, Gejdoš, 2008, p. 42

The main benefit of learning a combination of teaching and attendance forms by e-learning by students is access to the information provided from any location where Internet connection. An important area is the possibility of testing the level of knowledge acquired through practice, teaching a range of different tests. The third significant contribution is easier option of obtaining information.

3.1. Quantitative evaluation of the success of study for subject Quality management

One of the primary objectives of e-learning form of education in the form of full-time study was consistent transfer of certain types of additional information and divorcing the basic information listed in the recommended literature study, respectively. For lectures or for exercises. This is therefore an attractive and improve the learning process through e-learning as a complement to traditional teaching. The issue of quality learning in the subject is quantitatively measured at the output result of the level of knowledge gained through testing.

Based on the evaluation questionnaire investigation to 96 % the students think that e-learning system of education can improve learning in their field of study and appreciates the importance of such support learning. On that basis we decided to descriptive image analysis evaluation of the course of study in electronic form to extend the quantitative assessment of the success of the study before the implementation of e-learning education system and after its implementation, where we tried to evaluate the success of passing the selected study subjects. Basic criteria, we evaluated the quality of education were: the success of the credit test points, the success of trials in the first term and the overall average achieved by the evaluation of the test object (Table 1).

Table 1: Quantitative criteria for the evaluation of quality management, study focus of the Enterprise management

Quality management								
2004/05			2005/06			2006/07		
students 77/4*			students 69/10			students 83/16		
Successfulness of first term of exam	% credits successfulness	Ø evaluation of exam	Successfulness of first term of exam	% credits successfulness	Ø evaluation of exam	Successfulness of first term of exam	% credits successfulness	Ø evaluation of exam
students 70.1 %	76.4 %	C/81	students 58 %	74.7 %	C/76	students 67.5 %	67.7 %	C/76
Ø evaluation C/81			Ø evaluation C/78			Ø evaluation C/78		

* relationship between total number of students and students which didn't finish exam

Source: Drábek, Potkány, Gejdoš, 2008, p. 52

According to the results of analysis that are presented in Figures 5 and 6 can be seen that all the studied parameters showed exactly the opposite trend as we expect, where the implementation of e-learning education system, students achieve better learning outcomes. Credit the success of the tests decreased by about 10 %, slightly decreased the success of trials in the first term. In the overall assessment tests have been reported dramatic changes in the results of monitored parameters except the number of students who drop the subject. Before the implementation of the 77 students failed the subject completed 4 students, and after two years of implementation was of 83 students to 16 students.

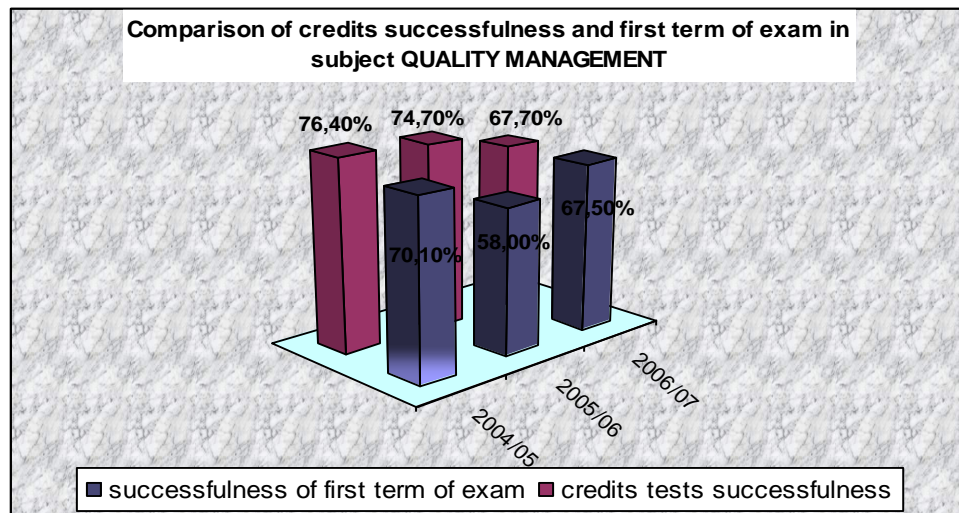


Figure 5: Chart success of credits and examinations on the first date for a study focus Enterprise management

Source: Drábek, Potkány, Gejdoš, 2008, p. 53

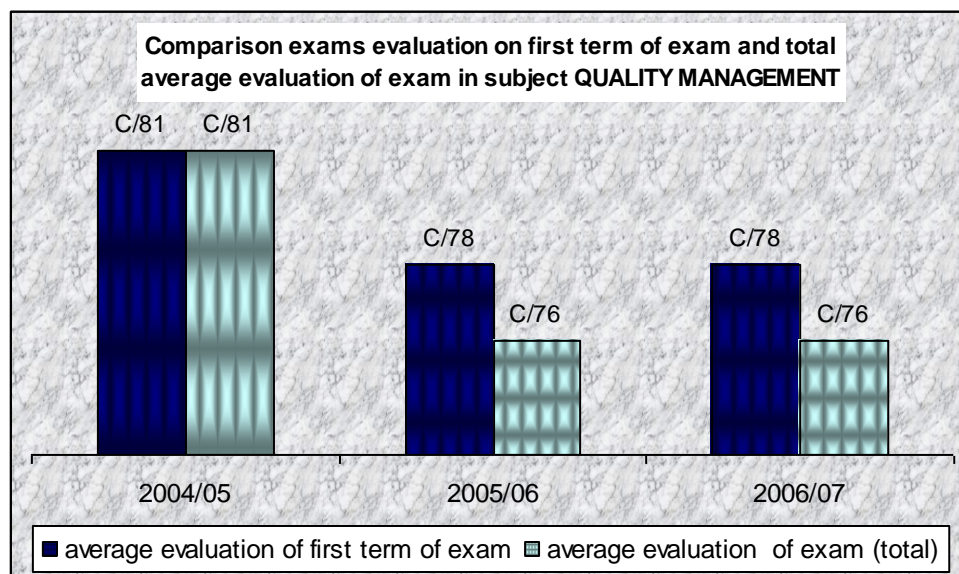


Figure 6: Image Chart comparison of average marks in the first term and a total focus on Enterprise management

Source: Drábek, Potkány, Gejdoš, 2008, p. 53

In the comparison of selected criteria, the average assessment test on the first date and the average total evaluation test were also to some decrease in the monitoring indicators. While the implementation of e-learning in the academic year 2004/05 amounted to an average value of these indicators C/81 well in the coming academic years decreased the average value of the test indicator to the first term of 3 % respectively average rating test a total of 5 %.

Again, therefore, there was a deterioration of various quantitative indicators of the quality of learning outcomes assessment in the subject, despite the great interest of this study support from the students and expressed their opinion about its attractiveness.

3.2. Possible causes of the deterioration of quantitative indicators

1. Deterioration in learning outcomes of students “Enterprise Management”, despite the improvement in the learning process by implementing e-learning was most likely due to the constantly decreasing interest of students on the study as well as the associated lower quality of students coming to the department of secondary schools.
2. The second factor behind the deterioration of learning outcomes is likely to complete orientation, the students only to support e-learning course, which should however only be a complement to the classic form of teaching presence. Although less interested in the lectures and exercises were not recorded, we found that students preferred a simpler way of searching and retrieving information (e-learning) before studying textbooks, university teaching texts, searching for materials in libraries and the like.
3. Another factor could be a change in the way of testing the level of knowledge during the semester using the on-line educational tests that students classified over time as more demanding form of assessment, whereas the results achieved semester test is included in the overall assessment.

4. Conclusion

Education is value, which means broader knowledge, more comprehensive view of the world, a better adaptability, and also better performance. The world is changing due to an explosive development and changes occurring have an impact on the education of man. One such change passes through the education of man, which affect changes in the economy, technology, nature, etc.

Information and communication technology now opens up new dimensions of education at all levels and help make education in the field of quality management but also in all other areas, really efficient and better quality, therefore it is necessary for the development of any organization regularly educate our employees with modern forms of training to be ready to absorb number of changes with which they are confronted every day.

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