

## Distance Learning of Reengineering and Application

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**ABSTRACT:** *We live in the knowledge society where great changes are continually in progress, especially in the character of the work. The working conditions and technological processes are changing and gradating. We are part of the global economy with growing competitive ability and this fact has substantial impact on the labour market.*

*In the nearest future we will not speak about poor and wealthy nations any more but about the nations that are highly or less educated.*

*Future appears as the world of chaos where can get his way is only the one who can innovate or can quit the automatic ways, the one who will be able of brisk and correct response on unexpected changes, the one who will forget the usual certainty.*

*Information in the education and the directed informal cooperation between a student and a teacher, present the head presumption for educating of individuals who can stand themselves well on the job market in global economy.*

### INFORMATION SOCIETY

The Information Society is the objective reality. We cannot ignore this fact. The using of IS/IT, the communication equipment and new type of thinking of the investors has the critical influence for our daily life. We have to change our style of thinking.

We usually speak about the Information Society as a society where the quality of life and the perspective of social changing and economic development are depend of information and the right using of the information.

The Information Society call for important change of the thinking of the owners, developers, managers and workers too. The information society call for important change of the thinking of the teachers and students, scientist, owners, developers, managers and workers, too. Information knowledge are resource with specific attributes because it is renewable source. It is the resource what is not consumed. The key carrier of the changes in the Information Society are information and knowledge. Information and knowledge in the Information Society are the source of the power and the fortune. Who is owner of the information and knowledge sources is in the advantage. The owner must to dispose of the abilities to interpret – transform data to information to knowledge.

In the Knowledge Society everyone has to accept the fact of instantly rising importance of information and knowledge. Information and knowledge are becoming prior not only in decision making but also in creating of values.

In this society the usage of knowledge presents more significant advantage then the land property, resources or cheap working power. We are no longer speaking about rich and poor nations-countries, but about more or less educated countries.

The enterprise exists in real time and so must be the managing of the companies. All this that has been true so far in technological processes, is now valued also in company management. The basis are the changes that have inevitably have taken place. Those changes must be immediately and necessarily answered by reaction.

Only that structure will be successful that will meet those impulses, and the management that will be capable of running the company in those conditions. Management must act with the exact steps, instant decisions. Those steps present in those days the only real creation of the future [1]-[6].

## EDUCATION

To be capable of satisfying conditions of "high productivity" and "low costs", the conditions aiming us to reach our place on the global market, it is necessary to start from the gaining knowledge, we can say to start from the education.

Education is no longer possible to run in a traditional way. Education does not end up by reaching the university degree. It must move more into the centre of the individual interest. And more than that, new technologies such as Internet must be employed those days as well. So it is essential to modify a form of education especially in the sense of time and location limitations. This is a great obstacle, speaking mainly about distant type of courses.

New education technologies present basic building stone for the creation of new curriculum.

If we observe the tertiary sphere of education, university education, in the Czech Republic, the lack of its offer to the graduates is striking. Not even mentioning the possibilities of using new technologies. Unfortunately, still prevailing remains the traditional way: lectures in the great hall, practice, again at the university and again oral and written exam which takes place at the same place. Everything depends at the maximum scale on the presence of both: a student and a professor.

The very group which distant form of education addresses are indeed the graduates who are in the process of whole life education. Under the label of distant studies cannot be hidden traditional model of a dominant professor. Here a student also has the course syllabus cumulated weekly into one or two days. The aim should be for a student to decide about the speed of learning according to his actual needs and dispositions. The only proof of education is then the demonstrated knowledge. It shows as the fact of no importance, how a student gained certain knowledge.

Distant form of education has been recently one of the major world wide topics. This is connected with the effort of ministries to find less expensive methods of education.

Reengineering – education – application

We choose very effective teaching method and made application of this to the very effective management method – reengineering.

First of all, it is necessary to explain the reasons, which lead us to accept this method. I can say that reengineering is the method which needs for managers to have some experience and knowledge of management, the method which needs educated people and the method which needs for teachers and experts to use distance learning as the successful method of teaching. We choose the textile factory for application.

Such effort brought about reduction in cost bellow the 1993 values, increase in productivity of labour by approximately 48%, general expenses saving and further positive results. The company was approaching its maximum during the restructuring, which resulted in a positive economic upshot after years of stagnation. Nonetheless, the results were not in correspondence with the efforts taken to achieve them.

For this reason we began to consider a qualitatively higher method during the last stage of reengineering. It was necessary to find such a method, which would, in a competitive world, lead to our margin or draw level with advanced competition before it disappears forever. It was a matter of finding such procedures, which would be able to simplify the seemingly complicated complex.

Reengineering is the tool, which is able to help in such conditions, where it is impossible to reach the necessary improvement within the existing process conditions. We had to withdraw from this idea due to a several-month recess in the production of a relatively stable company. We resumed in the second half of 1999, when the adoption of this method was inevitable due to the critical situation of the company, which could not be handled by means of the existing techniques. The situation also proved that there are many changes going on in the world.

It was necessary to define the procedures of individual stages in the first stage. In the duration of the works it was necessary to focus on the analysis of individual procedures in the company and to change or even replace the inefficient processes. The company's concern had to focus primarily on the customer satisfaction. To achieve this it is inevitable to readjust and optimise individual processes within the company during the individual stages.

This involved the introduction of a company management conception by means, which try to fully focus their attention to „doing the right thing“. Thus we eliminated the processes and activities, which, although done „correctly“, are unnecessary for the operation of the company.

It was proved worth to divide the processes as follows: A/ according to type: essential, creating added value, supporting (controlling, enabling), B/ according to level: main processes, processes, sub-processes, action. We made application of the next steps see literature.

It was necessary to constantly bear in mind that:

1. It is only the process that creates value,
2. It is necessary to improve the process,
3. Each process has its own customer and the customers must be satisfied with their processes and the values of the processes.

Therefore we did not focus on operations, the individual components of process, as the TQM approach suggests. It did not matter whether we speed up, improve, or cheapen the individual components. From experience we know that the least necessary or needless operations are the easiest to improve (the running of a cafeteria etc.). Therefore we asked several important questions: Which operations are worth executing? Which operations are worthless executing? Why improve something what adds no value? Why improve something we should not be doing at all?

To carry out reengineering can be successful only when done according to a clearly defined, customer and future oriented strategy. This is the only way to choose the principal processes, which are important in enterprise, and which must be followed preferentially. Thus while enforcing the reengineering approach we had to create such organisational environment, which would adjust to these changes and which will also support these. Moreover staff will also participate as well and thus accept the changes more easily. These are so far the most difficult problems of the transition to the procedural management. The change is only possible with the help of special seminars for interested persons, who, as members of the team, will take part in the individual stages of reengineering. The stages are these processes: identification, prioritisation, diagnose, redesign, implementation of changes.

I can say that we were successful in the whole project, we choose very good and effective method of teaching – distance learning. By this method our students – managers got new knowledge. This knowledge we together used and made application in the real project. The same steps we used in the other two projects and we were successful, too. There were engineering firms. Well, the external conditions of the market together with the very low economic develop and the general government conditions of support export of the foreign firms have had to our projects main influence. In the end of 1999 the productivity was going down end the profit, too. We have felt what is it global market. The situation in the all our project was the same. We focused on the changes in the marketing strategy and business policy.

During the work on these projects we met with these internal problems: The TOP managers was mainly oriented to the production and marketing and business was something redundant, only new theory etc. They had very low knowledge of new methods of management, if they had then they was not able to made application of these. The workers were very proceeded to the changes. The problems started when we endangered their social certainties. The profitability of the company was on the second stage for ever employer. The external problems: Very bad support f. e. of the export from government (compare with the EU countries), very good social conditions, high taxes, growing up administration.

## **CONCLUSION**

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## REFERENCES

- [1] Schindler, J. et al. *Systém dlouhodobého sledování vývoje nabídky a poptávky pro VŠ kvalifikaci na trhu práce*, Závěrečná zpráva rozvojového projektu FR VŠ č. 1310/1998, Ostrava
- [2] Koliba, F., Vaněk, J. & Wolf, P. Analýza potřeb MSP v oblasti zavádění informačních systémů v SM regionu, In *Sborník výzkumných prací Ústavu malého a středního podnikání*. Karviná 1998, Slezská univerzita Opava, OPF v Karviné, ISBN 80-85879-38-7
- [3] Wolf, P. & Drastich, L. Implementation of Information System Within Czech Corporations in the Transformation Period of the Czech Economy. In *Proceeding of the 7<sup>th</sup> International Symposium on Mine Planning and Equipment Selection*. Calgary, 6.- 9. October 1998, Canada, ISBN 9058090116
- [4] Wolf, P. The Enterprises Education System in the Process of the Economics Transformation in the Czech Republic. In *Proceeding of International Conference on Engineering Education 1998, ICEE '98*, August 17.- 20. 1998, Rio de Janeiro, Brazil
- [5] Wolf, P. The Curricula on the Technical Universities and the Position of Graduates on the Labour Market in the Czech Republic. In *International Conference on Engineering Education. ICEE '99*, August 10.-14.1999. VŠB – Technical University of Ostrava, Czech Technical University in Prague, Ostrava-Prague.
- [6] Wolf, P. The experiences of the procedural management. ICCC'2002. In *Proceedings of 3<sup>th</sup> International Carpathian Control Conference*. Ostrava-Beskydy, Czech Republic, May 27-30, 2002, ISBN 80-248-0089-6.
- [7] Wolf, P. Procedural management in the wool-works company. In *Proceeding of the 2<sup>th</sup> International Symposium Transition Countries Joining European Union*. Silesian University Opava, Czech Republic, June 17-19, 2002