

CHOSEN QUALITY MANAGEMENT TOOLS USING IN THE ORGANIZATION MANAGEMENT IMPROVEMENT

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ABSTRACT

Contemporary organizations perceive the quality management concept as the one of the efficient method of today organization conflict management. Identification of factors that affects on the conflict occurrence in the organization plays significant role also in the organization improvement management. Paper presents research findings related to managers' problems connected with the organization management improvement. Analysis of the selected problems in the organization conflict management was a basis for conflict solving in the analyzed enterprise. As a result of the research analysis it was suggested to persuade managers to focus on the work environment analysis and building corporate values that affects not only on the organization improvement but also on the final product quality.

KEY WORDS

conflict, quality management, improvement, Ishikawa diagram, Pareto-Lorenz diagram

INTRODUCTION

In today's global world, managers seek ways to implement appropriate methods that can be applied not only in the organization conflicts solving, but also in the organization improvement. Quality Management field searches for new ways to improve organizational performance (Linderman et al 2004).

The quality management in the organizations is related with some theories on the organization improvement. Taylor (1911) suggested improvement that is occurred by standardizing workers' tasks and providing incentives. Taguchi (1986) underlined the product and the process design importance in managing variation. Ishikawa (1985) promoted the use of teams or quality circles and applying of the quality tools in the organization performance improvement. Other quality management practitioners seek to create change and improve organizational performance (Deming, 1986, Feigenbaum, 1991 and Juran and Godfrey, 1999). Linderman (2004) suggests integrating quality management practices with organizational knowledge concepts that can provide insights into how quality management lead to improved performance. And it is also suggested that improvement activities are connected with creation of a new knowledge for the organization in the form of corrective or preventive activities. As Deming (1994) stated, that "best efforts and hard work, not guided by new knowledge, only dig deeper the pit we are already in". It underlines the importance of knowledge role in the organizational improvement activities.

Implementation of the quality management allows identifying common problems of the management staff connected with the product and processes improvement (Oakland, 2014 and Gimenez-Espin et al. 2013). Problems of the management staff are common in the sphere of interpersonal relations in all enterprises. This phenomenon is extremely diverse and complex, affecting the attitude, behaviour and

effects of both management and individual units of labour.

A common and significant problem faced by managers is inadequate human resources management in organizations, mainly with the planning staff, recruitment and selection of candidates as well as appropriate incentive system. Today, there is a major change and new trends in both theory and practice of the organization and management (Stachová and Stacho, 2012). These are methods and techniques of management, marketing methods, operations research and information – decision processes. Conventional theory and practice of the organization and management is currently experiencing its great renaissance, created by the new conditions resulting from the transition. These changes are due to the high demand for managerial staff, prepared for conflict resolution.

Quality management theory provides also theory on task conflict that refers to task-related disagreements which, as well as having detrimental effects, may encourage the exchange of ideas and improve decision quality (Jehn & Mannix, 2001, Paulová and Míkva, 2007). Relationship conflict describes personalized disagreements that divert attention away from the task and invariably harm team performance (Janssen et al. 1999; Simons & Peterson, 2000). Task and relationship conflicts are highly correlated, so teams can rarely reap the potential benefits that task conflicts may bring (Peterson & Behfar, 2003).

The aim of the study presented in the paper is to analyze selected problems of management in connection with the resolution of conflicts that affect products/services quality and to provide preventive measures that should contribute to the management system improvement. There was stated a thesis on the problem causes identification in the field of the human resources management in the chosen manufacturing company in the employment level planning stage, initial recruitment and selection of the staff and an appropriate method of staff

motivating will contribute to the formulation of improvement activities by applying selected quality management tools.

MATERIAL AND METHODS

The problem connected in the presented paper is connected with the conflict that result from the decision taken by managers in the employment level planning stage, initial recruitment and selection of the staff.

Problem is defined as a type of task (situation) that cannot be only solved with the own knowledge base. The solution is possible due productive thinking that leads to the enrichment of knowledge on a given subject. The problem can also be understood as an issue expressed in the form of question. Its solution, which is the correct answer to the question, is sometimes not currently known and it requires appropriate research efforts, such as: observation, analysis, reflection, discussion. Problematic situation occurs when an entity has a clear goal and it has no knowledge how to transform the initial state to the desired end state. Otherwise a problem situation requires using of resources, both intellectual and often physical, that can contribute to the transition from the existing state to the intended aim (Cameron and Green, 2015).

There are theoretical (cognitive) and practical (empirical) problems. The essence of theoretical problem is knowledge searching. Trying to solve a problem, there is need to respond to following questions: what is this?, how does it look?, what factors affect it ?, why is this happening ?, what is it reveals?

To solve a problem there are generally applied empirical methods of the acquisition and analysis system. The empirical study is based on careful observation of events or phenomena. It is the type of research that is based on data collection. There are the following stages of the research: initial formulation of the problem, specification of the topic, the choice and justification of the research hypotheses, operationalization of research issues (choice of the community in which they carried out the study, the choice of techniques and research methods), preparation of research tools, sampling, implementation of empirical research, verification of the collected empirical material, analysis of the empirical material, testing of hypotheses and research results, writing the final study report. Particularly difficult problematic situation sets objectives. Practical problem solution can be reduced to two phases: cognitive phase (What is it? What are the symptoms? Why it is that ?), improvement phase or the so-called creative phase (fig. 1). Figure 1 is a sample diagram of practical problem solving, which is applicable in manufacturing companies.

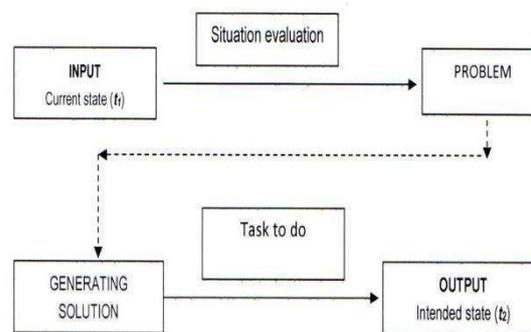


Fig. 1. A sample diagram of practical problem solving in the manufacturing companies.

Source: based on Proctor 2002 and Łasiński 2007

Improvement and creative action can be related to various aspects of the practice and it can be classified as, for example:

- kind of action- "What can be changed?"
- subject of action - "who has done"
- way of action - "how to do it?"
- due date - "when you do this?"
- place - "where it is to be done?"

Classification of the managers' problems is shown in Figure 2

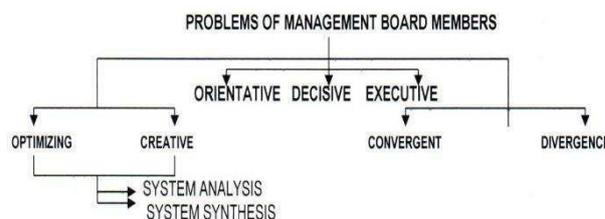


Fig. 2. Classification of the management board members problems.

Source: based on Proctor 2002.

There are system analysis and synthesis system which are applied in solving of the optimization and creative problems (PROCTOR 2002):

- system analysis (diagnostic), which is based on the concept of change, is a detailed analysis of the components of the current system.
- system synthesis (an overview), where the starting point is the concept of the new solution, most often completely different from the existing one. In the beginning stages of that analysis, the existing system is ignored and objectives of the new system are taking into account.

Considering a number of possible solutions, convergent and divergent problems are

distinguished. Convergent problems are those for which there is only one correct solution, which results from the fact that in the initial situation are given all the necessary information, and the solution to the problem is only in making the correct combination. In the other case, the initial data may be partially unavailable, but the goal clearly defines the situation final. Divergent problems have many possible solutions. Initial situation may contain all necessary information or only partially available. The mindset convergent and divergent, can be considered as the basis of creativity (creativity).

Conflicts in the work environment, which is a psychological phenomenon, can be described as an encounter of conflicting interests on the basis of two non-contradictory needs not giving to satisfy, at the same time stimulating and inhibiting the action of individuals. These needs are often the manifestation of the nature of the entity. Conflict relations are characterized by the negative psychological assessment and emotional antagonistic attitude toward a partner, that is joint with the desire to harm partner, denying partner's achievements and his/her social position. Conflicts exploding in the workplace can not be without adverse consequences for the labour process, its rhythm, product quality and without any negative impact on other employees who witness a conflict between two persons. This is undoubtedly a negative impact on the atmosphere of work, interpersonal relations in the workplace.

The organizational culture of organization is one of the four fundamental factors that determine attractiveness of an employer and the product/service quality. In the study presented in the paper related to the organizational climate and employee opinion author was focused on a number of factors identified in Ishikawa diagram (1985) that is based in the brain storming method. It was assumed that solving the management problems identified in the production company with applying Ishikawa diagram will contribute to the product quality improvement.

Ishikawa diagram is to introduce graphical presentation of interrelationships causes analysis for a specific problem. This knowledge is necessary to eliminate or reduce the scale of the problem and improve the quality of relations in the enterprise that affects the final product quality [Ulewicz and Blaskova 2016].

The research analysis includes also the other a quality management tool (Pareto – Lorenz diagram) that allows detecting and identifying negative phenomena with the greatest frequency of occurrence and cause higher costs in the company. Determination of the main reasons enables to take preventive steps in the future, what influence on the costs and quality level.

Research findings and discussion

The research findings have been obtained during the survey with workers of the chosen Polish production company dealing with: production and regeneration of spare parts and metallurgical equipment, maintaining the main production lines and repair specialist, design and realization of investments. The analyzed company has modern technical equipment, technological opportunities and efficient management system which enables the organization to realize different orders for the production, service and repairs. The core business of the company is:

- full range of machining (chip and grinding), including machine CNC tools,
- cutting, bending, shaping and welding related to the fabrication of steel structures,
- heat and thermo - chemical treatment,
- repairs workshop,
- processing rollers,
- additional services such as acceptance tests, sharpening of cutting tools and training welders.

On the basis of information gathered from the production company, the main problem is the human resources management related to organization improvement management in the field of the final product quality management that was determined to identify different groups of factors affecting identified problem such as: management, employees, work organization, information, managers. The research period concerns first half of 2015 (January - July). Analysis of these factors is shown in Figure 3.

Analyzing Ishikawa diagram (Figure 3), it can be observed that the work organization (25%) and management (30%) have the greatest impact on the problem of the human resources planning management. Insufficient cooperation between departments, which is the result of a lack of agreement, causes conflicts through which new problems arise, and thus are taken wrong decisions.

The excess of workers and supervisors responsibilities as well as haste, make working atmosphere becomes tense, which increases mistakes' number and taking a wrong decisions. Improperly conducted recruitment and selection of candidates causes employment of insufficient qualified workers, without prior experience. The reason for this deficiency is not properly carried out the planning system personnel. Therefore, staff problems often arise what should be immediately eliminated and there should be implemented preventive actions because each oversight and lack of adequate response entail additional costs. Lack of adequate incentive system makes employees treat their tasks indifferently what influence on the quality level of products and services.

One of the analysed problem area is related to workers' group (15%) that is connected with lack of their qualifications what affects on the analysed problem occurrence partially. Unqualified personnel cannot manage with identification of problems concerning the product quality improvement what results from improper product quality assessment. Quantification of the product quality problems is crucial for identification of personnel problems with production tasks and quality organization improvement in the context of human resources management. This situation is a source of the conflict in the organization.

The most important issue which should be addressed to managers is inappropriate matching employees with regard to their qualification, which is the result of inadequate planning of human

resources in the analyzed manufacturing company. An employee who clearly will be presented to the allocation of responsibilities, which will have a clearly defined career path and provided an adequate incentive system, will be satisfied with their work and thus will raise the quality of the company.

In order to improve the methods of proper planning staff, their respective qualifications and how to motivate employees, managers should conduct more frequent inspections, as well as the continuous improvement of workers' skills and qualifications of those who are responsible for these processes in the enterprise. Qualified employees and human management improvement will certainly contribute to the improvement of labour productivity, ingenuity, which ultimately lead to the proper organization of the work and exemplary management process.

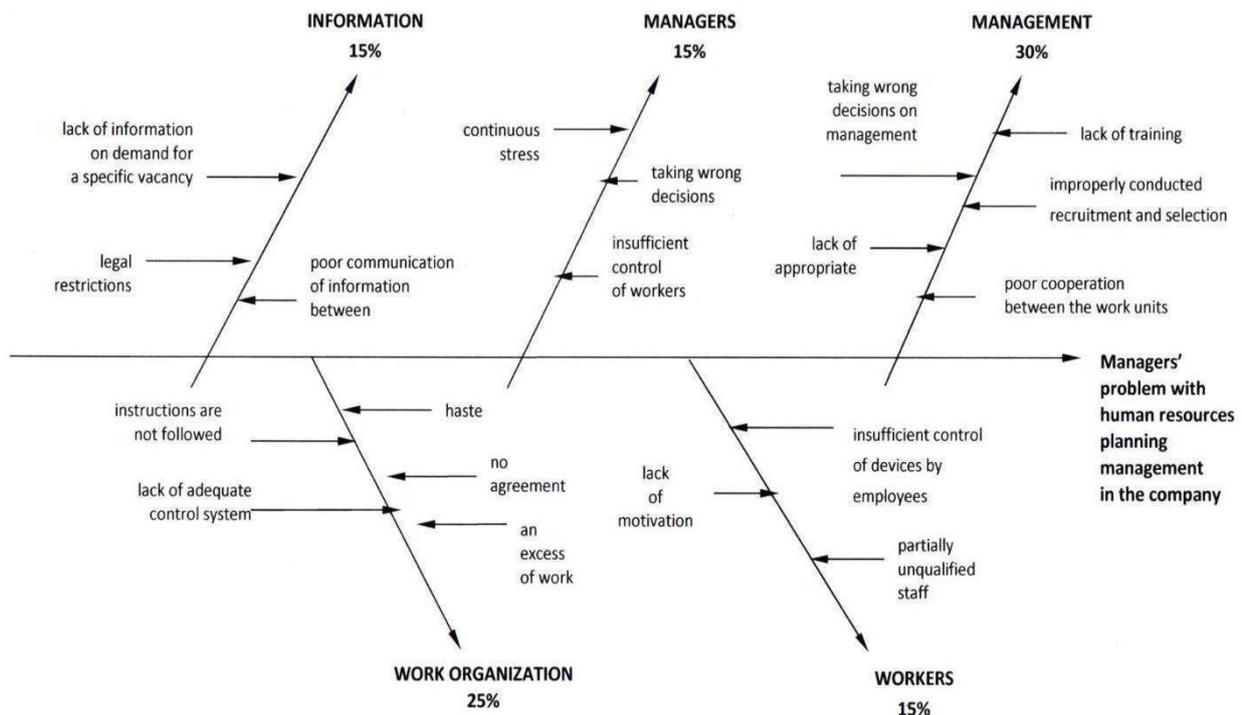


Fig. 3. Graphical presentation of Ishikawa diagram for identification of the organization management problems.
Source: own elaboration

The next stage of the research findings analysis is an analysis of factors (problem's causes) that influence on the problem occurrence. There are six reasons that have been identified as the most significant for the problem occurrence in the analyzed enterprise. Table 1 presents data on the major factors that contribute to formation of the problem concerning the human resources planning. Division of the factors was assigned according to the

problem's cause (identified in Ishikawa diagram) and its occurrence frequency identification related illustrated by a particular symbol. In order to analyze problem's causes, identified factors have been ranked in order of its occurrence frequency in the study period (Fig. 4). Their percentage and cumulative percentage have been presented in Table 1

Table 1. Factors influencing problems identified in the human resources planning management

Factors' symbol	Factor (cause of the problem)	Occurrence frequency	Occurrence percentage share [%]	Occurrence accumulated percentage share [%]
N1	incentive system	180	26,9	26,9
N5	improperly conducted recruitment and selection	130	24,4	51,3
N3	inadequate employment planning	110	20,4	71,7
N4	work in a stress	80	11,9	83,6
N6	unqualified staff	65	9	92,6
N2	lack of adequate control system	40	7,4	100

Source: own elaboration

Factors that affects analysed problem occurrence results were presented in Figure 4 that was have been analysed with using Pareto principle and elaborated based on data show In Table 1.

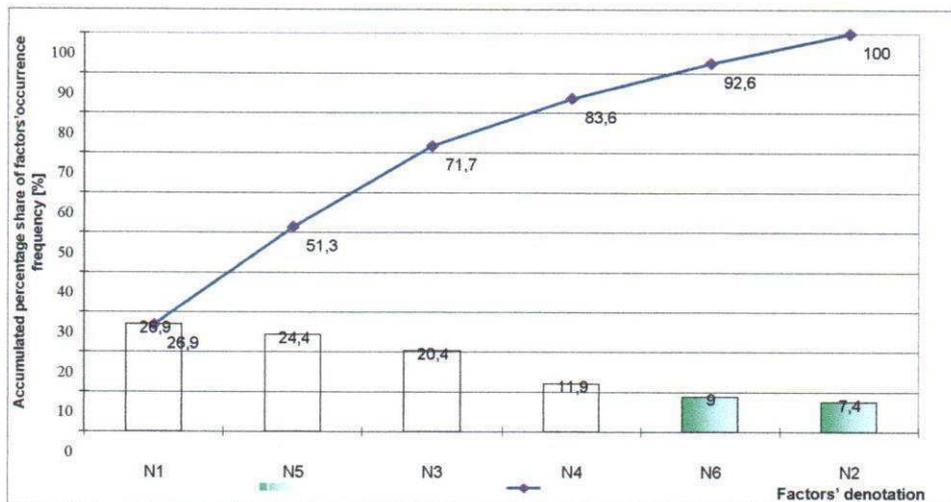


Fig. 4. Pareto-Lorenz diagram for identification of the organization management problems' hierarchy. Source: own elaboration.

As a result of the analysis using Pareto - Lorenz diagram, it was found that in the considered research period, the main causes responsible for occurrence of the human resources planning problems in the analyzed company are following:

- inadequate workers' incentive system,
- improperly conducted recruitment and selection of employees,
- improper planning staff.

The reasons that cause the problem formation are related mainly to forms of management. Inadequate qualifications of people planning staff demand and

inadequate forms and methods of the staff recruitment and selection, as well as lack of appropriate workers' incentive system, that would increase employee productivity and encouraged potential candidates to apply for a vacancy, are main problems that contributes to lowering company reputation and the product quality level.

As a result of the analysis and research findings interpretation author suggested some improvement actions to the planning and management of human resources in the analyzed production company.

Human resources are critical to the effective functioning of the entire organization. Effective human resource management has a very big influence on the results of the production company activity. Improper planning of human resources including staff recruitment result in the problems with finding new workers that is also related with some expenses like training.

Planning staff in the analyzed production company, should primarily focus on functions such as:

- preventing a situation resulting in formation of a staff excess or deficiency what is connected with an optimization of personnel costs,
- optimal use of resources, knowledge, skills and competencies of employees and selection of appropriate methods for the development and improvement of staff,
- development of adequate criteria for the personel evaluation to keep track of the employee suitability in the analyzed company and its development.

Planning may include all work environment stimulating trends or focusing only on some of them, the most important for the selected organization. Management should primarily focus on availability and current updating of information on job vacancies in the enterprise and the possibility of obtaining the candidates.

There is important detailed analysis of the work, which should define range of work duties on the chosen work position. Provide information is useful during the various stages preceding recruitment. It should be made on the basis of an interview with a person who previously occupied the post or of her colleagues.

Information regarding a scope of tasks assigned to the employee, workers' connections with other workers, as well as information on skills necessary to perform specific tasks should also be collected in performance of the recruitment process. Human Resources department may organize a recruitment and pre-selection of candidates, but the final selection is a taks of one of the managers who manages department in which the employee is to be hired.

Unconsidered salary systems do not allow to attract, retain and motivate good employees, and outdated practices in the field of a personnel choice and it may expose the company to expensive and quite embarrassing court complaint for discriminating against particular individuals or the whole group. That's why the director of the company for the personnel should be, as it is in most organizations, vice-president, who reports directly to the Chief Executive. The company develops strategic plans for human resources and integrates them with other activities within the framework of strategic planning.

Proper training of personnel and improvement of managers allow employees the proper execution of the work entrusted to them and to prepare for work in other positions in the future. Evaluation of results is essential to determine training needs, decisions about the increases, if any promotions and ensuring that workers receive feedback information. Managers should always remember about the problem of information value coming from this evaluation, because it is difficult to accurately assess the various aspects of efficiency and competence of the employee.

CONCLUSION

The culture level and social - educational value of the human collectives shouldn't be measured by the number of occurring conflicts and problems, but the culture of solving them. Hence the importance of actions preventing the conflicts occurrence. In the workplace, there couldn't be allowed formation of insoluble conflicts. Their existence can completely disorganize the work and poisoning the work atmosphere. In the context of the above, the most important suggestion is related not only to an appropriate conflict resolution, but primarily the elimination of the problems' formation sources. Each organization is characterized by a specific atmosphere for themselves, which has a substantial impact on the efficiency of its operation and effectiveness of the objectives set. The existence of a harmonious working environment affects the organization development. The working atmosphere is important not only for the quality of the work, but also for the image of the company.

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