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PROBLEMS AND WAYS TO IMPROVE PRODUCT QUALITY IN MODERN CONDITIONS

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ANNOTATION

The article deals with the problem of increasing the quality of products, which is considered important for any organization, especially at the present stage. The main factors influencing the quality of products and ways to improve the quality of products in modern conditions are identified.

Keywords: quality; promotion; products; expenses; problem; organization; efficiency; competitiveness; technologies.

INTRODUCTION

In modern conditions of high competition, the state of small and medium-sized organizations in the market is completely dependent on the quality of their products. The quality of products is the most important indicator of the enterprise, as it largely determines its survival in the market. Producing quality products is one of the surest ways for a firm to secure a path to achieving and maintaining high profits.

The urgency of the problem of improving product quality is growing at the present stage because:

The demands of scientific and technological progress have increased, which establish fundamental high-quality configurations in all areas of scientific and production work.

The requirements for the characteristics and properties of products are becoming higher, namely, reliability, economy in use, aesthetics, and so on. Improving the quality of finished products also requires an increase in the quality of raw materials, components, materials, the introduction of new modern technologies and ways of organizing manufacturing and labor. In this regard, the task of increasing the quality of products becomes complex, affecting all areas of industry.

1) There is an upcoming deepening of social division, as well as labor cooperation, this leads to difficulties in intra-sectoral, interstate, inter-sectoral and industrial relations.
2) Over time, in quantitative terms, the need for means of production and consumer goods is satisfied (the time in which quantity played a practically decisive role has unfortunately passed), their high-quality properties come to the fore. Since there are natural, one might even say, strict limits for quantitative use. To increase quality means to manufacture products from the same number of raw materials that best meet social needs.
3) Trade and economic relations with other states are expanding and growing, which gives a constant increase in product quality (competition for the sales market). Successfully sell their own products to enterprises whose product quality is higher.
4) Increasing the quality of products solves both technical, economic and social problems.

The problem of increasing the quality of products is concerned in all countries of the world. Research in this area shows that the solution of problematic issues of ensuring the growth of product quality in almost all countries of the world is a national movement. So, for example, in the USA, Italy, Japan, Great Britain, Germany, France, product quality management is at the state level. In many states there are associations for the implementation of product quality control in industry, National Councils for Quality and Reliability, Statistical Quality Management, standards associations and other organizations.

At the moment, the Gosstandart of the Russian Federation in the field of quality management is assisting Russian manufacturers in the introduction of international standards ISO 9000 family, which assume the highest degree of formation of the science of quality management.

The quality of products is one of the main factors for increasing the efficiency of production and the active growth of the economy as a whole.

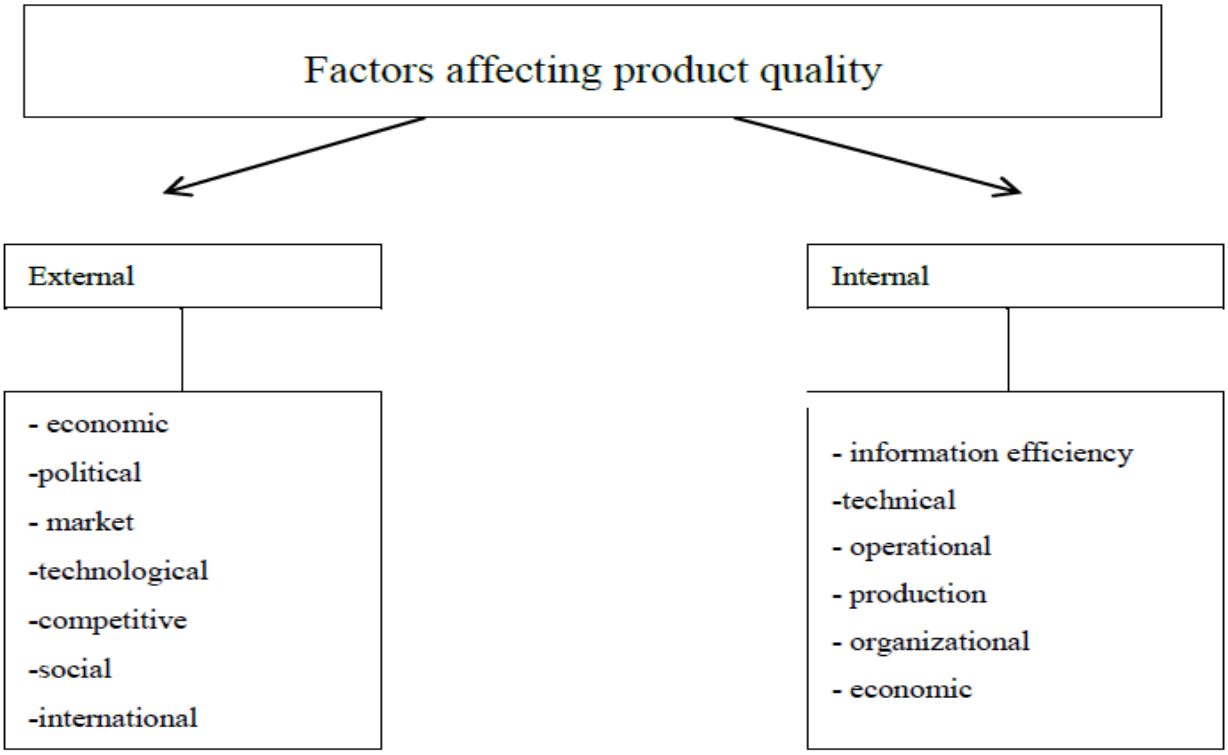
The quality of products is influenced by a large number of factors.

In the work of E.A. Shatsky factors affecting product quality are presented in the form of 2 large blocks: external factors and internal factors (Figure 1).

Environmental factors are the basis for the formation of quality in the conditions of market relations. Of particular importance among these factors are competitive ones, which should be given close attention at enterprises.

The enterprise cannot influence the factors of the external environment; however, timely taking into account their actions in order to predict possible fluctuations can ensure a faster adaptation of the organization in a competitive environment.

- The author provides a more detailed description for internal factors:
- The technical factor is the foundation of product quality. It involves the introduction of new equipment and technology, the use of the latest materials, which are the basis for the production of competitive products.
- Organizational factor - a factor associated with the solution of issues in production, which include the organization of labor and management, increasing responsibility for the quality of products, operational production planning, ensuring a culture of production, staff development, etc.



Picture 1 - Factors affecting product quality [3]

- economic factors are determined by the costs of production and sale of products, to ensure the required level of product quality, the pricing policy and the system of economic incentives for personnel for the production of high-quality products, the liability of employees for the production of low-quality products;
- social factors characterize the qualifications of employees, the level of their education, the socio-psychological climate in the team, the professional structure of personnel, advanced training, personnel motivation, etc.;
- operational factors - factors affecting the quality of the product during its operation. These are the factors of current, planned and overhauls, routine maintenance, compliance with technical documentation;
- production factors - factors that arise in the production process and aspects of their prompt elimination;
- the factor of information efficiency is a factor designed to ensure the timely receipt of all necessary information by persons designed to prevent the occurrence of marriage [3].

The division of factors into external and internal allows a more comprehensive approach to the issue of studying and minimizing their possible negative impact on product quality.

This approach in general terms represents the totality of factors that can influence the level of quality of products.

In this regard, each manufactured product must meet the requirements of customers, otherwise, the enterprise is doomed.

In a market economy, high-quality products are the key to a long and successful operation of an enterprise.

Quality improvement is ensured through complex, interrelated, ongoing quality management measures.

The quality management systems used at enterprises should be aimed at establishing, ensuring and maintaining the required level of product quality during its design, manufacture, circulation and consumption (operation).

It is advisable to divide the quality improvement process into six stages.

1. Identification of the key problem. The first step is to select those processes or process characteristics that are primarily in need of improvement. This problem will always be quite acute. Indeed, almost all processes can be improved. And the resources of time, people and money are always limited. To identify priority areas, there is its own analytical toolkit. The results of this stage will be: highlighting the process and the characteristics of the process that need to be improved in the first place.
2. Measurement of the current quality level of the process. After selecting the process to be improved, it is necessary to fix the current quality level of the process. This will help digitize the improvement goal and provide a basis for evaluating the impact of the process improvement actions taken. The difficulty lies in the fact that there are about 20 different ways to measure the quality of a process. The result of this stage will be the choice of a certain indicator and the assessment of the current level of process quality using this indicator.
3. Identification and analysis of the factors that determine the quality of the process The cornerstone of the entire process of improvement is the understanding of the root causes of the unsatisfactory state of the process. The first two stages are rather preparatory, they narrow down the goal of improvements. The whole point of process analysis is focused on the current stage. It is the analysis of factors that generates decisions to improve the process. The complexity of this stage generates a large number of analytical tools aimed at solving it. The result of this stage is the selection of a set of factors that affect the quality of the process, as well as an assessment of the strength of the influence of these factors.
4. Designing and Implementing Improvements This phase is highly creative and relies heavily on understanding the real and unobtainable opportunities for improvement. However, despite the creative nature, there is a special set of analytical methods aimed at finding optimal solutions. The result of the stage is the implementation of measures to improve the quality of the process.
5. Evaluation of the effectiveness of improvements. In order to determine the effect of improvements, it is very often not enough to compare two numbers (before and after). It is necessary to collect data for a period (sample) and analyze using special statistical methods. The result of the stage is a comparison of the initial and achieved indicators of the quality of the process.
6. Stabilization of the achieved effect The effect of improvements should not be one-time, but permanent. A typical problem with improvement initiatives is the inability to sustain the impact achieved. In order to make sure that the effect achieved is consistent, you can use a specific set of analytical tools. The result of this stage will be confirmation of the stability of the achieved state of process quality.

In this regard, the problem of improving quality is a complex problem that is solved on the basis of improving product designs, using new materials, introducing new advanced technology, improving the skills of personnel, improving the system of cooperative relations, etc.

Thus, product quality is a multi-level, systemic category that reflects the ability of an organization to meet the needs of all parties interested in its activities, while achieving sustainable development in an ever-changing competitive environment. Growing requirements for the quality of manufactured products is one of the characteristic features of not only the Russian, but also the world market. Therefore, in a competitive environment, only those enterprises that carry out competent management of product quality will be able to successfully develop, since it is one of the key elements of the competitiveness of goods and services.

LITERATURE

1. Ермолаева Е.О. Контроль качества продукции и услуг: учебное пособие / Е.О. Ермолаева; Кемеровский технологический институт пищевой промышленности. – Кемерово, 2009. – 160 с.
2. Прохоров Ю.К. Управление качеством: Учебное пособие. – СПб: СПбГУИТМО, 2007. – 144 с.
3. Шацких Е.А. Факторы, влияющие на качество продукции в промышленном производстве // Альманах современной науки и образования. Тамбов: Грамота, 2014. № 12. С. 140-142.
4. Шевелёва Г.И. Контроль качества продукции: Учебный комплекс. – Кемеровский технологический институт пищевой промышленности. – Кемерово, 2004. – 140с.
5. Tursunov Shavkat Serabovich // Analysis Of Existing Designs Of Crushers For Crushing Municipal Solid Waste // International Journal for Innovative Engineering and Management Research(IJIEMR) // 2021 // https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=iWBoU9QAAAAJ&citation_for_view=iWBoU9QAAAAJ:e5wmG9Sq2KIC