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The impact of the human factor on the functioning of the quality management system in the enterprise

Mariusz Sroka

https://orcid.org/0000-0002-4314-1482

Częstochowa University of Technology
69 J.H. Dąbrowskiego St., 42-201 Częstochowa, Poland
e-mail: mariusz.sroka@pcz.pl

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Abstract

This article analyzes the expectations of the management board and managerial staff as opposed to the expectations and concerns of regular employees of the company. Communication between the decision-making and executive groups is presented as one of the key elements determining the proper operation of the quality management system in the enterprise. In the practical part, the results of the research covering the management and regular employees were presented and compared. The research is aimed at diagnosing the quality of information flow in the enterprise based on the quality management system in the assessment of both surveyed groups, determining the perception of the importance and scale of participation in the proposed corrective actions among the surveyed groups of respondents, and diagnosing the level of informing rank-and-file employees about the goals and importance of conducting internal and external audits. The research also covered the role of lower-level employees in the effective functioning of the company's quality management system. An attempt was made to analyze the degree of participation of regular employees in the functioning of the quality management system in the enterprise. The article ends with the conclusions and proposals for future research.

Introduction

In every enterprise, regardless of whether it is a small or large enterprise, either with a production, commercial, or service profile, the introduction of a quality management system and the obtaining of an ISO certificate is a very serious and costly undertaking. The decision to obtain a quality certificate may be caused by the desire to move the business to a "higher level" in terms of quality standards (it is easier to gain the trust of a new customer if the company can present the ISO certificate at first contact, thus documenting the high level of its services) or it may be simply forced by circumstances. Often concluding a long-term contract with an important client is conditional on holding such a certificate.

Obviously, obtaining a certificate of quality is associated with meeting a number of specific requirements by the company and it is never easy to attain. This is regardless of the fact whether the company has already had a dynamic quality department, or it is just trying to organize everything from the beginning in accordance with requirements (Barbosa, Oliveira & Santos, 2018).

In this article, we draw attention to the often-underestimated factor on which the entire success of a difficult undertaking depends, which is making the quality management system in the company to

not only have good-looking documentation, but also a great tool that facilitates work, which allows an elimination of errors or mistakes in production processes, customer service, or in the management of warehouse resources, and – or perhaps most importantly – in saving funds.

Such a factor is the human factor, that is simply the people employed in the company and their attitude – at all levels, from the management team and ending with the production workers or security services. The basic mistake resulting from the fact that the quality management system is dedicated to the managerial staff, and not regular employees, is their omission and marginalization of their role in the process of implementing the quality management system. Such a situation leads to a hypothesis that the human factor is one of the key elements inhibiting the process of implementing the quality management system in the enterprise. The aim of the article is to verify this hypothesis in practical terms, based on the actual realities of the functioning of the quality management system in enterprises that are not only theoretical, which often use idealized assumptions (Nováková, Čekanová & Pauliková, 2016; Bravi, Murmura & Santos, 2019).

Expectations and fears of the management staff versus expectations and fears of employees

Speaking of the expectations as to the usefulness of the quality management system itself and the concerns related to its introduction and certification, the division is very traditional: management versus lower-level employees. In the process of introducing a quality management system, one should be aware of the most important fact faced by anyone who has ever managed a team, no matter if it is big or small: people do not like change. It is a psychological condition that cannot be fought against, but that can be "tamed" and sometimes even used to achieve the intended goals.

While the expectations of the management staff result from various sources (better organization of work, easier customer acquisition, higher prestige of the company etc.), the fears are always related to the same thing: costs. The costs are caused by the fees related to certification and work related to the preparation of documentation and training of employees, as well as the implementation and commissioning of the system.

On the other hand, when it comes to employees, especially at lower levels, there are considerably more fears than the expected benefits. These include: anxiety related to the fear of increasing the obligations related to the introduction of new documentation, new guidelines as to how to perform work, and reluctance to training, which is often completely inappropriate to the audience and usually does not explain too much to lower-level employees. This situation creates a barrier that is difficult to overcome. Experienced managers that manage teams of employees should, in principle, be able to prevent such situations. Nevertheless, this article may be helpful for them when trying to solve problems during the implementation of the quality management system in the enterprise (Zgodavova, Hudec & Palfy, 2017).

Communication in the enterprise as a way of detecting problems

As mentioned before – people do not like changes, even if these changes in principle lead to the improvement of the situation of these people, to make their work easier, or to increase their effectiveness and efficiency. It is obvious that taking steps to introduce a quality management system in a company must be preceded by the management noticing the expected benefits.

While the management staff, in most cases, sees the obvious benefits of introducing the system and the difficulties and costs associated with the preparation of the entire process, it usually neglects the most important aspect in managing human teams: proper communication. Such an approach leads to a situation where the quality management system remains only a paper certificate, and the troublesome supplementation of documentation just before the expected external audit and the state of general panic before this audit creates difficulties, while the essence of the quality management system itself is completely different: simplifying work and eliminating potential errors.

A very important question needs to be asked: why is this happening? The diagram shown in Figure 1 may be helpful in answering this question. As shown in this figure, the scope of competences is clearly defined: the management board has the largest one, then the representative for the quality management system, who is responsible for the preparation of documentation regarding the processes taking place in the company and the functioning of the system itself, and the leaders of individual processes. These are the people with decision-making competences – they make decisions about the process itself, prepare

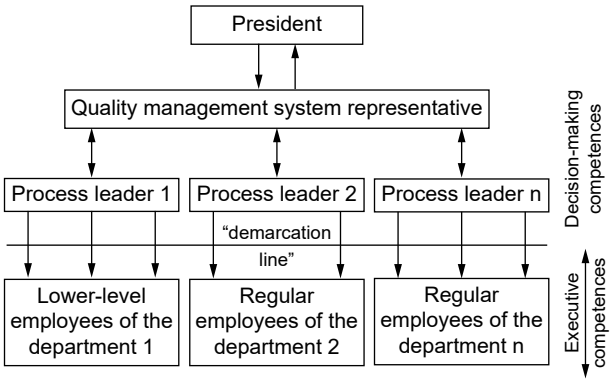

Figure 1. Decision scheme for the implementation and subsequent operation of the ISO system

documentation, define its form, dates, and course of internal audits, records documentation regarding changes or corrective actions, and take part in external audits. On the other hand, people with executive competences are employees of particular departments: e.g., production workers, warehouse workers, and maintenance workers.

The division between persons with decision-making competences and persons with executive competences, shown in Figure 1, has been marked as "demarcation line" – not by accident. As simple surveys show, the role of the human factor as a supporting or inhibiting factor is clearly underestimated: the flow of information is not fluid.

The first rank in the company's hierarchy, which is both the most decisive unit and the one that can turn into the strongest factor inhibiting correct actions, is the company's management. The management board is also responsible for organizing internal and external training for employees, including not only general information on the quality management system and ISO standards, but also outlining the benefits of introducing such a system and certification (Marques et al., 2018).

For the purposes of this article, the position of the quality management system representative was retained because, although since 2015 such a position is no longer required, for pragmatic reasons it still functions in most companies that have an implemented quality management system. This position may have different names, e.g., director of internal audit and certification. Such an employee still watches the dates of audits, supervises the documentation, has responsibly for contacts with the certification body, and removes non-conformities in the system, maintaining its integrity. Process leaders are responsible for the correct (i.e., compliant with the quality management system) course of work in a given department, for keeping systematic records in the documentation and reporting inaccuracies.

Unfortunately, while these three levels – management board, quality management system representative, and process leaders – have quite close contact with each other and information usually flows between them, without major problems, all three levels usually forget that communication with employees should be equally smooth, or maybe even more efficient. It is the employees at the lower level that most of the problems with the correct application of the quality management system lie (Pacana & Ulewicz, 2020).

Research methodology

The subject of the research centers on the opinions of the management staff and the regular employees regarding the processes related to the functioning of the quality management system in the company. The aim of the conducted research was to:

- determine the discrepancy between the expectations and concerns of the management staff and the expectations and concerns of regular employees regarding the functioning of the quality management system in the company;
- diagnose the flow of information in the enterprise for the quality management system in the assessment of both surveyed groups;
- examine the perception of the importance and scale of participation in the proposed corrective actions among the surveyed groups of respondents;
- diagnose the level of information about the goals and importance of conducting an external audit in the surveyed employee groups;
- determine the frequency of informing rank-and-file employees about the results and conclusions of the external audit.

The pilot studies were carried out by means of a direct telephone interview or instant messaging that enabled connections to mobile numbers. It was assumed that the interview would be conducted in 50 enterprises, six for each enterprise (two interviews with the management staff and four interviews with the rank-and-file employees of randomly selected departments). The selection of the research sample was deliberately from a group of small and medium-sized enterprises. The questionnaire was completed by the interviewer on the basis of the respondents' answers. Each questionnaire was given a unique code to correlate the responses of the management and rank-and-file employees of the company. The research, with the consent of all respondents,

was conducted in March and April 2022. 25 companies, including 15 from Poland and 10 from abroad, from countries such as the Netherlands, Turkey, France, and Italy, expressed their willingness to participate in the survey. Considering only the pilot nature of the research, it was found that it would be a sufficient research sample.

The companies participating in the study represented a production, commercial or service profile, and the main criterion was that they needed to have a quality management system implemented. The questionnaire contained 10 closed questions and the possible answers were within the forced-choice scale. This allowed an omission of the neutral point in the responses (the error of the central tendency was eliminated) and, thus, more adequate results were obtained. After counting all the answers, the percentages were assigned, and rounded up to integer values. The obtained results are presented in charts or tables.

Presentation of research results

The first question in the questionnaire concerned the organization of training (internal and external) in the field of the quality management system for the company's employees. Almost the entire management staff (95%) indicated that such trainings were conducted. Only 5% of the management did not know about conducting such trainings. On the other hand, the employees' answers indicate that 27% knew about the trainings conducted, 50% are not aware that such trainings are organized, and 23% say that they are not organized. The answers obtained for this question are presented in Figure 2.

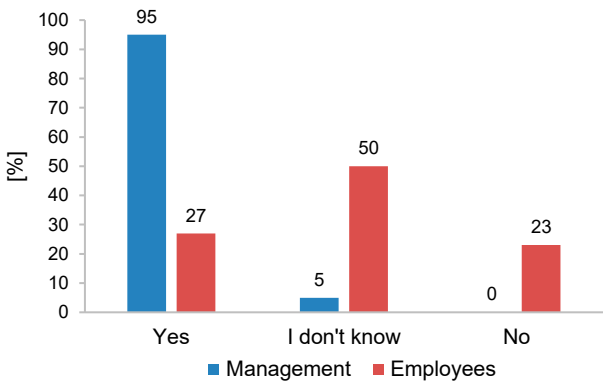

Figure 2. Organization of training (internal and external) on the quality management system

In the next questionnaire, the respondents were asked to evaluate the organized training (internal and external) in the field of ISO quality standards. A four-level grading scale was adopted, from very good to unsatisfactory. The management staff assessed the training as very good (50%) or good (30%); 10% assess them as sufficient and only 5% as insufficient. On the other hand, only 10% of employees assess the training very well, 35% as good, and 40% as satisfactory. 15% of regular employees judged the training as insufficient. The responses obtained for this part of the questionnaire are shown in Figure 3.

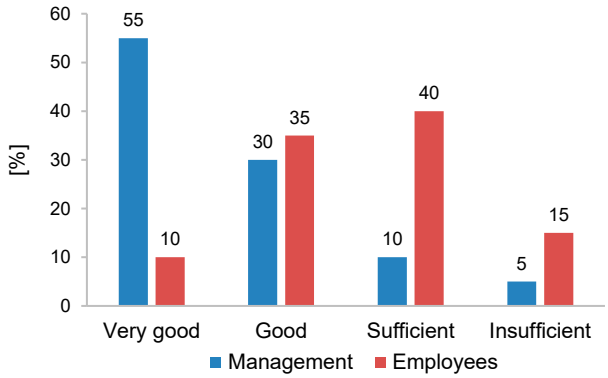

Figure 3. Assessment of the training courses (internal and external) conducted in the field of ISO quality standards

For the next question, the respondents were asked to indicate how often non-management employees participate in the process of preparing procedures functioning in the enterprise. More than half (55%) of management indicated that regular employees are never involved in the preparation of procedures. Similarly, as much as 60% declared that it "never" occurred among regular employees. In both groups, 30% answered "very rarely". None of the surveyed groups indicated "always" and only 2% of the management provided the answer "very often". The results of the answers to this survey question are summarized in Table 1.

Table 1. Frequency of participation of non-management personnel in the process of preparing procedures

Response	Indication [%]	
	Managers	Workers
Always	0	0
Very often	2	0
Often	3	2
Rarely	10	8
Very rarely	30	30
Never	55	60

In the next questionnaire, an attempt was made to determine how often non-management employees

participate in the process of preparing documentation on the quality management system in the enterprise. The overwhelming number of regular employees provided the answer "very rarely" (45%) or "rarely" (30%). The answers "always" and "very often" received no indications; the management team responded on a similar level. The results of the answers to this survey question are summarized in Table 2.

Table 2. Frequency of participation of employees who are not management staff, in the process of preparing documentation concerning the quality management system in the enterprise

Response	Indication [%]	
	Managers	Workers
Always	0	0
Very often	10	0
Often	20	5
Rarely	25	30
Very rarely	35	45
Never	10	20

The next survey question concerned the frequency with which the management team consults with regular employees on proposed corrective actions. None of the regular employees indicated the answer "always", while the answers "very rarely" and "never" were indicated, respectively, by 35% and 25% of the respondents from this group. On the other hand, the predominant responses in the group of executives were "very often" (27%). The answers to this question for individual respondent groups are presented in Table 3.

Table 3. Frequency of consultations by the management of the proposed corrective actions with employees

Response	Indication [%]	
	Managers	Workers
Always	13	0
Very often	27	5
Often	10	15
Rarely	20	20
Very rarely	20	35
Never	10	25

In the next question, the respondents were asked to indicate how often the rank-and-file are informed about the objectives of changes to the procedures and documentation existing in the company. Half of the rank-and-file stated that they are never informed about the purpose of changes to procedures and documentation in the company. In this group of respondents, no-one indicated the answers: "always" and "very often". The management staff, on the other hand, answered "always" (20%) and "very often" (15%). The same percentage of respondents in this group indicated "very rarely" and "never", respectively. The responses to this questionnaire for individual respondent groups are presented in Table 4.

Table 4. Frequency of informing employees about the goals of changes in procedures and documentation

Response	Indication [%]	
	Managers	Workers
Always	20	0
Very often	15	0
Often	22	10
Rarely	8	15
Very rarely	20	25
Never	15	50

The seventh question in the questionnaire was to answer whether the company had a formalized way of submitting proposals for changes by employees at all levels. 70% of executives replied yes and 25% said no, while 5% replied "I don't know". A reverse trend of responses occurred among the rank-and-file of employees. This group of respondents said (60%) that the company did not have a formal way of submitting proposals for changes, and only 5% said yes. A relatively high percentage (35%) of regular employees provided the answer "I don't know". The answers to this question for individual respondent groups are presented in Figure 4.

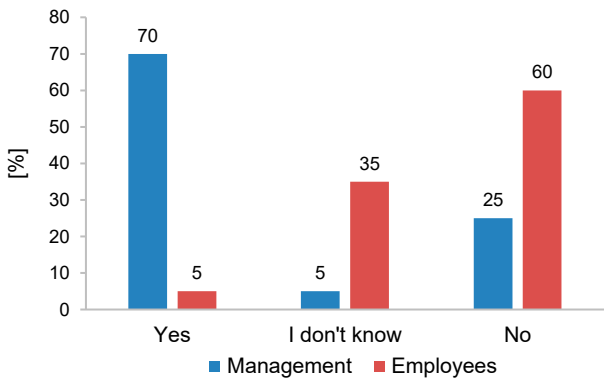

Figure 4. Existence of a formalized way of submitting proposals for changes by employees at all levels in the company

In the next questionnaire, the respondents' task was to assess the benefits of introducing ISO

standards to the enterprise on a four-level scale. Individual groups of respondents provided basically opposite answers to this question: the management team assessed the benefits of implementing ISO standards in the enterprise very highly or highly (55% and 40%, respectively), while the group of employees assessed the opposite (insufficient 50%, sufficient 35%). The answers to this question for individual respondent groups are presented in Figure 5.

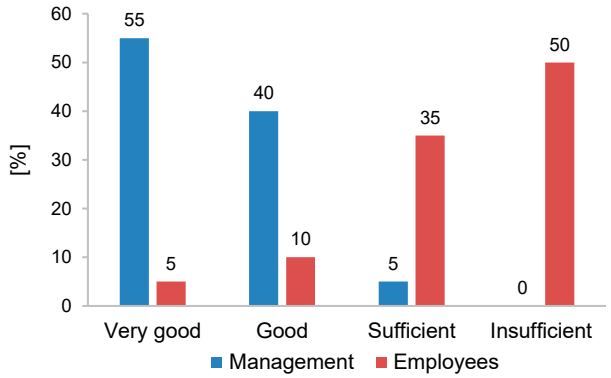

Figure 5. Assessment of the benefits of introducing ISO standards in the enterprise

The ninth survey question was to answer how often employees are informed about the objectives of the external audit. This question was most often answered by management staff "very often" (55%), while a quarter of regular employees indicated the answer "rarely" and one fifth as "very rarely". Detailed answers to this question for individual respondent groups are presented in Table 5.

Table 5. Frequency of informing employees about the objectives of the external audit

Response	Indication [%]	
	Managers	Workers
Always	10	0
Very often	55	12
Often	15	15
Rarely	10	25
Very rarely	10	20
Never	0	28

The last question in the survey questionnaire concerned the frequency of informing rank-and-file employees about the results of the external audit. More than a third of regular employees (35%) answered "never", a fifth (20%) "very rarely", and 25% answered "rarely". Similar results were obtained in the group of management, but the highest percentage of respondents (30%) indicated the answer "very rarely". Detailed answers to this question for individual respondent groups are presented in Table 6.

Table 6. Frequency of informing employees about the results of the external audit

Response	Indication [%]	
	Managers	Workers
Always	5	0
Very often	10	5
Often	15	15
Rarely	20	25
Very rarely	30	20
Never	20	35

Discussion

The questionnaire surveys regarding the organization of training in the field of the quality management system clearly indicate that the management staff had a different opinion from the regular employees. Managers are knowledgeable about the conducted trainings and evaluate them mostly very positively. Regular employees, on the other hand, do not have any knowledge of the conducted training and most often judge it as sufficient. This indicates an evident lack of proper information and a maladjustment of the scope of training addressed to specific groups of students (Araújo et al., 2019).

The role of rank-and-file employees in the process of preparing procedures is perceived by both surveyed groups in the same way. There is a convergence in the opinion that the role of rank-and-file employees is negligible or nonexistent. This clearly indicated that the potential of regular employees is not a significant element in the preparation and implementation of procedures in the enterprise. This phenomenon is by all means undesirable. Why not take advantage of their experience and competences when having qualified employees? Especially when the positions are filled by appropriately selected staff who know the process in practice (Micklewright, 2010; Santos & Milán, 2013).

The participation of regular employees in the process of preparing documentation, understood among others as all kinds of forms, product sheets, specimen lists, shipping documents, etc., is assessed as adequate. This phenomenon is disturbing, because it is at lower-level positions that the knowledge about what is needed for the efficient functioning of a given department of the company is located. The major

mistake of the management team is to 'give up' the possibility of acquiring this knowledge.

Equally rarely does the management consult with the rank-and-file employees on proposed corrective actions. However, in the opinion of the management it is much more frequent than in the opinion of regular employees. This may result from the incorrect assumption of the management that the actions they propose are optimal, so there is no need to consult them with regular employees.

When asking the question on the frequency of informing regular employees about the advisability of changes made in procedures and documentation, the research results clearly indicated that in the opinion of regular employees they never receive such information. The overwhelming majority of management say that such information is sufficiently communicated. This proved that the information provided by the management is given in an incomprehensible, insufficient, or inadequate manner.

As for the questions related to the frequency of informing lower-level employees about the objectives and results of the external audit, unfortunately regular employees mostly answered "very rarely", "rarely", and "never"; if the management staff replied "very often" about the objectives of the external audit, he does not see the need to inform rank-and-file employees about its results. Such a procedure could be harmful to the company because it does not lead to an improvement in its bravery and is demotivating for the employees (Caridade et al., 2017; Fonseca et al., 2017).

As the survey research shows, the assessment of the situation regarding the implementation of the quality management system and its functioning is diametrically different in both groups. Almost everywhere in which the management staff provided positive answers (very good, good, very often, and yes), we see negative answers from a group of regular employees (insufficiently, never, very rarely, and no). This discrepancy in the responses between the two groups of respondents may indicate that the expectations of the management board, and proxy and process leaders, do not coincide with the expectations of regular employees, and certainly not their concerns.

It is especially visible in the questions regarding the involvement of regular employees by the management (i.e., those responsible for the implementation of the quality management system), and the participation of these employees in the creation of procedures and documentation in the company (Boiral, 2011).

Conclusions

As the research has shown, there is no proper communication between the analyzed groups of regular employees and management. This results in a malfunction of the quality management system in the enterprise and, as a result, leads to a reduction in efficiency. One of the key examples may be the fact that, in the surveyed companies, there is still a person acting as a quality management system representative. Although according to the current ISO standards, such a function is no longer required. This change was caused by the hope for a greater activation of employees from all departments of the company in the quality management process, while such a policy not only did not obtain the expected results, but even led to a blurring of responsibility and practically a destruction in the quality management system.

This results in a situation in which the management board, and the person acting as the representative for the management of the quality system, still have decisive action and lower-level employees are not involved in the actual action. In such a situation, due to the lack of sufficient communication, lower-level employees are not able to perceive virtually any benefits of having a quality management certificate by the company. In extreme cases, employees treat it as a "whim" of the management board, unrelated to the actual work of the enterprise. They cannot see any other effects than the need to fill out additional documents, comply with new restrictions, and change existing habits.

Unfortunately, this approach discouraged people from working and because, as mentioned above, people generally do not like changes, they attempted to show that these modifications were not only unnecessary, but also harmful – and this already leads to a decrease in work efficiency and, as a result, a decline in the company's profitability. At best, the quality management system remains a dead recipe; the only function of process leaders is to fill out paperwork just before audits (especially external audits that extend the validity of the certificate) and provide unnecessary corrective actions.

It seems justified that it is enough to break the barrier of the lack of communication, trying to use both negative and positive information from lower-level personnel, which will help lead to a situation in which the quality management system in the company meets the assumed criteria. It should also be noted that this issue is rarely discussed in the scientific literature and, so far, has not seen either

broader, in-depth studies or practical solutions to this problem.

The results of these pilot studies induce the need to undertake further, extended questionnaire studies aimed at determining the relationship between the communication of lower-level employees and management staff that have a decisive impact on the optimization of processes, which involves reducing losses and costs and saving time. Such research allows for the pragmatic determination of the determinants of the functioning of the quality management system in the enterprise to enable a use of the available tools to the maximum.

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