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MISSING INFORMATION IN DECISION-MAKING: CONSEQUENCES AND SOLUTIONS

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1 Introduction

One of the most important processes in any type of organization, also in education, is the communication process, and one of the most important functions is decision-making, but none of them takes place without information. In the communication process, information is exchanged, created, completed, and transmitted using various communication channels and tools. Decision-making is also based on the available information, the ability to select, organize, and base decisions on it. For these reasons, the role and importance of information, or rather, its quantity and quality, in these processes is more than obvious. The quality of information and information management skills can have a decisive influence not only on a specific decision, but - through the decisions made - on the entire organization, its microclimate, image, or reputation. Theoretically, this idea is best supported by the methodology of evidence-based practice or decision-making, which identifies improper information management and missing information in decision-making processes as one of the key problems. In order to theoretically and empirically substantiate the importance and role of information, its quantity and quality, and its proper management in decision-making, a research (survey and focus group discussion) was conducted, the results of which enabled us to determine what are the main reasons for improper information management and missing information in decision-making, what role, in the absence of information, stereotypes about, for example, certain individuals, their characteristics,

competencies, situations, etc. play, what impact the lack of information (or the lack of appropriate, relevant information) and missing information has on decisions made, etc. The article also provides suggestions on how to properly manage information in decision-making, analyses what competencies are needed for successful information management and decision-making, even using AI, and how those skills and competencies could be developed in higher education institutions.

The main goals are the following:

- On the basis of theoretical and empirical analysis to describe the main causes of misinformation in an organization;
- To show what are the consequences of relying on stereotypes, lack of information or overloaded information or other types of misinformation in decision-making,
- To find out what could be the ways to overcome it, what competences do we need for successful information management and decision-making

2 Theoretical Framework

The quantity and quality of information can have a decisive influence not only on a particular decision, but also on the organization as a whole, its microclimate, image or reputation. (Tucker, Melewar, 2005). This is clear in theory, but there are many facts of misinformation in fact. All evidence-based methodology is the best validation of this idea. According to that methodology

(EBSCO's Evidence-Based Methodology, 2025).

As already mentioned, one of the most important processes in any type of organization is the communication process.

Effective communication is important for all organizational activities. It can be said that "effective communication is the basis of successful organizations", and effective communication is unthinkable without quality and appropriate information (Importance of Communication in an Organization, 2025).

The importance of communication in an organization can be summarized as follows (Importance of Communication in an Organization, (2025) :

- Communication promotes employee motivation and involvement by informing and explaining to them the task, the method of its performance and how to improve their performance if it does not meet the requirements.
- Communication is a source of information for organizational members in the decision-making process, as it helps to identify and evaluate alternative courses of action.
- Communication also plays a crucial role in changing the attitude of an individual. A well-informed person will have a better attitude than a less informed one. Organizational journals, diaries, meetings and various other forms of oral and written communication help shape the attitude of employees.
- Communication also helps in socialization. In today's life, the mere presence of another person promotes communication. It is also said that you cannot survive without communication.
- As mentioned earlier, communication also helps in various ways to control and monitor processes and the behaviour of organizational members.
- There are various levels of hierarchy in an organization and certain principles and guidelines that employees must follow. They

must adhere to the organization's policies, perform their duties effectively, and report any work problems and complaints to their managers.

The importance of communication, especially in problem-solving, decision-making processes, could be confirmed also analyzing it in crisis in an organization. As Ch. M. Pearson and I. Mitroff (1993) state, if during any crisis we do not have high-quality communication, then we can talk about a double crisis, i.e. such a crisis when the primary crisis is also overtaken by a communication crisis. And, if the organization is unable to manage communication processes, it will not manage the primary crisis either (Johansen, Frandsen, 2007).

Moreover, throughout the communication process, at all its stages, it is important that the information we exchange and on the basis of which we make various decisions is of high quality and sufficient. The quantity and quality of information can have a decisive influence not only on a specific decision or the person who made it. This can also affect the situation, life, activities, reputation, etc. of many other people. And if, due to the lack of communication, we can talk about a double crisis, then the lack of information or its inadequate quality can further deepen that crisis, or maybe even become a third crisis. For this reason, the importance of information in decision-making is simply indisputable. It is not for nothing that it is stated that the ability to create, acquire, integrate, adapt, distribute knowledge and information is the main capacity of every organization. Naturally, successfully operating companies and organizations must not only purposefully and profitably use the knowledge and information they already have, but also invest in the constant search and creation of new knowledge, new information, which, in turn, determines their development opportunities and competitive advantage. (Woudstra, Van den Hooff, Schouten, 2015). The quantity and quality of information can have a decisive impact not only on a specific decision, but also

on the entire organization, its microclimate, image or reputation.

The same, apparently, could be said about a person. A person who has and/or is able to find sufficient and high-quality information will certainly be superior in both professional and personal life to those who are unable to do so. Moreover, he will be able to act more constructively in various situations and have more confidence in himself and his abilities.

It can be safely stated that all these observations are based not only on experience and its analysis, but also on science. All evidence-based methodology and methodology are the best confirmation of this idea. When making any decisions, evidence-based methodology suggests following these basic steps (Evidence-Based Methodology, 2020), which ensure that the information received and the decisions made on its basis will be high-quality and constructive. Steps proposed by the methodology:

1. Searching and finding evidence. This can be done by carefully analyzing already known, written, published information.
2. Selecting the best available evidence. This can be done by experts, focus group discussions, etc. can be used for this. The selected best available evidence has a significant impact on decision-making.
3. Critical evaluation. Aiming to avoid subjectivity and bias as much as possible, each fact, information or evidence must be evaluated objectively and critically.
4. Objectively presented evidence. This can be done using primary sources of facts, data, and information. It is not for nothing that we have a saying that the most reliable information is always "firsthand". In addition, when presenting evidence, it is worth paying attention to and naming certain risks, the limitations of evidence, the circumstances of its collection or receipt, the criteria for selecting information, etc. All this also enables us to form a more accurate picture of how reliable the information used is, and how objective decisions can be made based on it.

5. Synthesis of multiple pieces of evidence, information provided in different sources, data obtained in different ways. Objectively reporting the evidence of a specific study is necessary, but often this is not enough to obtain detailed information about a situation, phenomenon or situation. Even more so, it is not enough to make the right decision. It is necessary to compare and systematize evidence, facts, information obtained from various sources, collected in various ways. Especially if it is contradictory. When evaluating data obtained in different ways and ways, priority is always given to the reliability of the source and the quality of the data obtained and their completeness.

6. Evidence-based conclusions. Various data and facts and information are analyzed, systematized, summarized, and on their basis, appropriate conclusions are drawn, which already create the prerequisites for making certain decisions, providing certain recommendations, etc.

7. Daily update. The last step in the evidence-based methodology is the adjustment of conclusions, because new evidence, data, facts, new information should be constantly added to the existing, available evidence, and on the basis of the new data obtained, previous evidence should be revised and adjusted. How often this should be done depends on how quickly and fundamentally new data and information change. It is obvious that new evidence can appear every day, especially when it comes to highly changing, dynamic processes or situations. As soon as new evidence appears, an assessment is initiated using the six stages (steps) of systematic evidence processing. This process provides an opportunity to immediately and fully familiarize you with the best evidence as soon as it becomes available.

On the other hand, evidence-based practice will only be successful and effective when that evidence, i.e. those facts, data, information, is correct, and when there is enough of it. Otherwise, it is easy to make incorrect, hasty decisions that not only do not solve the

emerging problem situations, but only deepen them.

This is easy to see by applying such a method, which at first glance may seem very similar to a game, but the analysis of the choices and decisions made during it can be useful not only for getting to know the participants better, but also for learning to solve various problems, discuss, rely on evidence-based practice, etc. This method can also be useful in the teaching/learning process, simply by realizing how important it is to have enough information before making any decision - including in the field of teaching/learning.

3 Methodological Procedures

To gather the empirical data there were used qualitative approach of the research and descriptive, exploratory type of research.

The main research methods were survey and focus group discussion as well as content analysis of theoretical discourse and case study.

Three focus groups of 9 different age, gender and occupation people in each participated in the research.

The respondents were provided with a situation and a list of 12 specific people, with information of varying scope and content about each individually. The main goal of the research was not the right decision and even not the decision at all. The focus of the research was to observe how the groups were discussing looking for the decision, what were the arguments for one or another person, what characteristics of them were the most important, how participants behaviour when there were lack of information and so on.

4 Partial or Final Results

In order to theoretically and empirically substantiate the importance and role of information, its quantity and quality, and proper management in decision-making, a study (survey and focus group discussion) was conducted, the results of which allowed us to determine what are the main reasons for

inadequate information management and lack of information in decision-making, what role, in the absence of information, stereotypes about, for example, certain individuals, their characteristics, competencies, situations, etc., play, what influence the lack of information (or lack of appropriate, relevant information) and lack of information, etc. have on the decisions made.

At the beginning of the research each participant was provided with a list of 12 individuals and a description of the situation.

First, each participant had to do this individually. After that, pairs of participants were randomly formed, and then groups of 4, 8, etc. people were formed from the pairs, until all the participants were united into one group. Working in pairs or groups, the participants, from the group of people they had already individually selected, had to create a common list of 6 people. This had to be done by following one very important rule. The participants in the pairs, and later in the groups, had to first transfer all the matching people from the existing lists to the common list, and had to discuss those who did not match. It was necessary to discuss and consider each different person until all the participants agreed on the choice of a specific person. To achieve such an agreement, the participants had to present arguments that convinced the other participants. It was necessary to discuss until all the participants in the group completely agreed on the list of 6 people. This means that during the discussion it was necessary to convince each other until all the participants agreed that this particular person should be included in the list.

However, the main purpose of the study was not the list, but the discussion of the participants. During the entire discussion, it was observed how the participants discussed, what arguments they presented for the selected individuals, what arguments they found convincing, etc.

It was this activity that very clearly showed how significant information and its volume are in decision-making in a qualitative sense.

Analyzing the list provided to the respondents, it is obvious that the information provided about all 12 persons is not the same. Moreover, it is quite uneven. For example, for some persons, more information is provided, but it is quite contradictory (e.g. “Woman, doctor, 66 years old, known as a member of some religious group” or “20-year-old medical student, homosexual”, etc.). Meanwhile, for some other persons, there is very little information, such as “Soldier”; “Member of Parliament”, “19-year-old young man” or “25-year-old girl”, etc. However, the most interesting thing is that the small amount of information was usually not an obstacle for the participants to choose precisely those persons. Moreover, the frequency of choosing these persons in various groups was even higher than for other persons, even those about whom a sufficient amount of information is provided.

Analysis of the discussions (as mentioned, this was the main object of observation) showed that respondents quite often chose “Soldier”, “Biochemist, female”, “Woman, athlete”, “20-year-old medical student, homosexual person”, “19-year-old young man” or “25-year-old girl”.

Interestingly, during the discussion, when presenting arguments to other group members, respondents added a lot of additional information to these individuals. A significant part of that information was quite stereotypical:

Table 1: Additional Information Added by Respondents as Motivations for Choosing Certain Individuals

Individuals	Information Added by Respondents
"Soldier"	Young (because soldiers are always young); strong (because soldiers are always strong and athletic), disciplined (because soldiers are taught order and discipline), organized (because soldiers are always taught organization), male (because soldiers are usually male)

"Biochemist, female"	Medical knowledge and skills (because biochemists need to know this), relatively young (because biochemistry is a relatively young science)20%
"Woman, athlete"	Strong (because she is an athlete. Athletes are always strong); healthy (sports are directly related to good health); discipline (sports are directly related to discipline and discipline); organized (sports are directly related to activity, ability to manage time, etc.); women are usually more organized than men
"20-year-old medical student, homosexual "	Young (all young people are strong and can have children); medical knowledge and skills (because they are studying medicine); male (even sexual orientation doesn't matter)
"19-year-old young man"	Strong (because young); healthy (because young); will be able to have children (because young)
"25-year-old girl"	Strong (because she is young); healthy (because she is young); will be able to have children (because she is young)

The initial analysis alone has shown that, when there is an insufficient amount of information, we tend to supplement it. In other words, we often tend not to be satisfied with the information provided, not to accept the information provided as a fact, i.e. not to read what is actually written in it, but to interpret or even supplement it with other, assumed, relevant to us, desired, acceptable information, which may be based on experience or existing knowledge, but, nevertheless, in a particular case, is incorrect or insufficient to make appropriate decisions.

Quite often, choices in such a situation are simply based on our stereotypes. For example, a soldier or athlete is attributed such qualities as “strong”, “healthy”, “hardened”, “able to overcome difficulties”, etc., but this is not necessarily true. Both an athlete and a soldier do not necessarily have to be healthy and strong at a given moment. They can equally be weak, injured, physically or spiritually weak

and not hardened, they themselves may need help and support. One short word “soldier” or “athlete” does not even allow us to decide what gender a person is, although respondents also tend to add additional information in terms of gender. After all, according to the rules of the Lithuanian language, the names of positions, specialties, etc., if they do not include the name or surname of a specific person, are written in the masculine gender. We cannot tell from one short word how old that person is, although respondents tended to choose stereotypical solutions here as well, supplementing the information provided.

The chosen research method perfectly illustrated what happens when information is lacking in decision-making. That is, if we lack information or it is too laconic, we are more likely to supplement the existing information by adding it to justify the decisions we make. However, the added information is not necessarily correct in that particular case. As a rule, it is more related to the stereotypes we have than to evidence or facts. That is why our decisions based on such information will also not be correct.

The application of this method to various groups of people of different ages, education, gender, etc. showed that the tendency to make a decision based not on the facts provided, but on assumed, unreasonably attributed characteristics is observed in almost all cases.

Thus, all this analysis clearly shows how important it is to have as much information as possible in order to make a correct decision based on real facts and data. And how important in this case is the sufficiency, accuracy and reliability of information, because only such information will enable us to make correct, evidence-based decisions.

On the other hand, the method can be used for other purposes as well. For example, the requirement to negotiate, discuss, and present persuasive arguments to each other is a great opportunity to develop argumentation, negotiation, creativity, non-

standard thinking, constructive dialogue, etc. skills.

The main solution to such a situation is to develop appropriate competencies that would enable those who possess them to properly deal with the information received, to rely on it when making evidence-based decisions, etc.

From this point of view, critical thinking is also particularly relevant, or rather critical thinking skills, the development of which requires sufficient attention, especially in today's society, where information flows are rapidly increasing and intensifying, where new information creators appear in the information flow, such as AI, especially generative AI. For all these reasons, information management competencies are general competencies necessary in all personal and professional activities.

5 Partial or Final Considerations

- Due to the lack of information or its poor quality, decisions are more often based not on evidence or facts, but on supplemented information, which is likely to be neither accurate nor of high quality, and can often even be wrong. Instead of searching for high-quality and appropriate information from appropriate and high-quality sources, decisions are based on stereotypes, implicit knowledge, or interpretations and generalizations that quite often do not reflect reality, and which do not enable appropriate, evidence-based decisions to be made.

- This once again confirms the importance of information in decision-making process. Present the reflections made so far, as well as the relevant aspects of the research (impacts, contributions, limitations, etc.).

- Information management skills and competencies become more general than professional competencies which are necessary in all personal and professional activities. And they should be developed in all the study programmes, in all schools as well as in all the higher education institutions, in formal and informal education.

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