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**REGARDING THE POSSIBILITIES OF CONNECTIONS BETWEEN
THE TRANSFER OF TECHNOLOGIES, KNOWLEDGE AND
PRODUCTION OF KNOWLEDGE AND INFORMATION IN THE AREA
OF DEVELOPMENT AND MANAGERIAL SKILLS' ENHANCEMENT**

Abstract:

The quality and level of managers' managerial skills significantly influences the competitiveness of the company. They present a qualitative, acquired entity in educational process, which has to be constantly developed within educational programmes and improved within social interactions. In the recent period, a massive input of information and communication technologies, mostly social media, which enable an effective connection of the transfer of technologies and knowledge with the production of knowledge and information in the educational process of managers, can be observed in the process of managerial skills' improvement and development. The article deals with the knowledge and information about the possibilities of managerial skills' development using information communication technologies in companies acting in the Slovak Republic. It compares the results of the monitoring obtained within the project APVV SK-CZ -0108-09 with the results of the research, which was carried out in 2018-2019 within the project VEGA 1/0309/18.

Keywords:

Managerial skills, information communication technologies, social media, social networks, education of managers

JEL Classification: I25, M21

1 Introduction

Managerial skills, their formation, reinforcement and development, make a key to prosperity and success of each company. As shown by current knowledge, in a turbulent entrepreneurial environment only those companies survive, whose management is qualified and professionally capable to handle standard and non-standard situations, which are nowadays an accompanying and long-term acting sign of the ongoing globalization and integration processes, which are extending not only to economic, but also to social, psychological and cultural spheres of the society's life. The impacts of globalization and integrational processes, of which an accompanying sign are various range crisis on financial markets, goods markets and labour markets, demands higher requirements on the preparation of managers and companies' managements, on their reacting skills in relation to external environment, in which the company is operating and developing its entrepreneurial activities, as well as in relation to internal/intracompany environment, where the subjects are presented by intracompany processes, human resources, their management in the context of the companies' objectives and interests.

The quality of managerial skills is a result of a learning process in the level of acquiring theoretical knowledge, as well as in the level of acquiring practical knowledge and experience. Acquiring of theoretical knowledge, which create one of the basic elements of managerial skills can happen and it usually happens through classical forms of learning, which often use cognitive processes, thinking, memory and imagination. Acquiring and verification of practical knowledge, which create the second, not less important element of managerial skills, happens in social interactions. It assumes training, practicing in simulated, artificially created conditions, which are largely enabled by information communication technologies.

2 Managerial skills

Managerial skills forms a part of skills, which are connected with the management of an organization/company. They are linked with decision making processes carried out by the company's manager just in financial, organizational, personal or ethical area, while in most cases during problem solving there is an overlap between these areas. The complexity, by which the managerial skills are characterized, is reflected also in the fact, that they are subject of investigation by more scientific disciplines. They are studied by management, applied psychological scientific disciplines, mainly by management psychology, social psychology, psychology of personality, psychology of work and pedagogical psychology, as well as by sociologic sciences and economical applied disciplines, with the aim to reach a more qualitative work stereotype of employees necessary for the company's cost reduction and profit increase. An interdisciplinary approach to the investigation of the skills in general as well as separately managerial gives a variety of definitions and meanings in the domestic and also in the foreign literature.

On the basis of the studied literature, managerial skills can be generally defined as specific skills, which may be acquired by learning and training in specific environment, which initiates and supports their creation, formation and development (Majtán et.al., 2008). Managerial skills therefore don't arise in any environment. They arise and are formed only in the environment, which requires them and in which without their application the company can't proceed in the

entrepreneurial activities and achieve profits. From this perspective are the managerial skills also perceived by individual scientific disciplines studying them. In management, as well as in applied psychological disciplines, the managerial skills are defined as an addition to the basic skills in the area of (self) control, (self) organization and communication. They are defined as acquired by learning and specific abilities verified by practice, which enable the individual, who dispose with them, to manage, organize and communicate to people in favour of the company's objectives, or in favour of the company's entrepreneurial interests. At the same time, the skills in general, not only managerial skills, are not perceived in the expert literature as an usual and natural part of the individual's personality (Szarková, 2016). They are perceived as a specific development and improvement of personal dispositions, as a certain addition, which the individual/manager acquires either in life or through the working process, i.e. continuously, or within the educational process, nowadays most often by various active forms of practice and training process (Szarková, Andrejčák, Matkovčíková, 2014). Following this, managerial skills can be formed and developed only, when the individual gets into an environment, which stimulates by its nature their development. Such space is currently provided except for classic forms of education and classic communication tools by social media, mainly social networks.

In determining the process focused on the development of managerial skills, a significant importance plays also the classification of managerial skills, which is offered nowadays by pedagogical scientific disciplines, as well as by pedagogical psychology. These are based on the premise, that skills in general and managerial skills specifically are abilities acquired by learning in logical sequence: skills are first formed as basic and then by learning, training and targeted practicing are developed and transformed into specific capabilities. Based on this, they are classified into 3 groups: basic, specific and intersectional. While the content of basic managerial skills is formed by basic knowledge from management theory and ability to apply them in management practice standard situations. Specific managerial skills are perceived as additional skills and they contain manager's abilities to solve and handle non-standard/crisis situations, which can arise in the process of managing human resources. The content of intersectional managerial skills comprises mainly the manager's communication skills. The current results of researches in the area of managerial skills research and their impact on the effectiveness of employees and overall company's profit confirm, that the extent and level of professional managerial communication is an important attribute of each managerial skill (Szarková, 2008). In the research we focused on specifying the role and task of information communication tools in the process of managerial skills enhancement and development, while applying classification of managerial skills to basic, specific and intersectional as basic assumption.

3 Results of the research

To examine the possibilities of the use of information and communication tools and technologies, mostly social media in order to connect the transfer of technologies and knowledge with the production of knowledge and information in the area of managerial skills enhancement and development in companies acting in the Slovak Republic, commercial banks operating in Slovakia were chosen, mainly from 3 reasons. Firstly, the banking sector in the Slovak Republic is formed mainly by subsidiaries of transnational banking institutions, which dedicate high effort to their employees' education, primarily managers, having elaborated diagnostic systems in details and consequently systems for managerial skills enhancement and development based on the newest knowledge and information. Secondly, the commercial banks in Slovakia are equipped with

communication tools above the standard, considering Slovak conditions, and their managers are forced to use these communication tools also in the educational process focused on their managerial skills enhancement and development. Thirdly, the banking houses acting in the Slovak Republic operate in a relatively quickly changing strong competitive environment, which creates pressure on managers to constantly improve and develop their managerial skills and adjust their managerial work stereotypes to the newly emerged conditions and situations. This forces the managers to use in their educational process such tools and forms, which enable them to acquire the necessary information and also guidance for solving new work tasks. Mainly, the intersectional managerial skills are under pressure, which consist in choosing such communication tools to ensure quick gaining, processing and reacting on the new information objectively in the internal, as well as in the external communication environment of given subjects. Not a less important reason for choosing commercial banks acting in the Slovak Republic as the object of research was the fact, that commercial banks are a significant part of the two-step banking system currently functioning in Slovakia, which takes around 20 000 of vacancies on the labour market that are occupied by mostly employees with academic education, while 67% of them are employees with academic education in the area of economics. The selection of commercial banks as the object of research was determined by the structure of the banking sector in the Slovak Republic.

The main target of the research was to find out, which communication tools are used for the development of managerial skills in the banking sector of Slovakia, which are their advantages, disadvantages and risks. The sample of the respondents was presented by top managers of 14 commercial banks acting in Slovakia, out of which 3 were savings banks and 1 was a specialized bank. All addressed commercial banks but two were subsidiaries of transnational financial institutions. All addressed commercial banks regularly educate their managers in the intentions of educational programs, in which the managerial skills enhancement and development formed a significant part. In the educational programmes, a higher attention was paid on intersectional managerial skills – communication, mainly to 3 areas: skill to communicate through all communication tools in the bank, skill to communicate in intercultural environment and skill to handle communication conflicts.

The target of the research was also to find out, which information communication technologies and tools are used in the educational process and social interactions focused on the managerial skills development.

In the primary and secondary research, basic scientific methods were used, mainly the method of descriptive and content analysis, method of synthesis, comparison and classification. For data collection also several methods were used, the method of questionnaires offering answer possibilities, method of structural interview and method of observation. The questionnaire and data collection was carried out electronically. For evaluation of the obtained results, besides the basic statistical methods, also T-tests, non-parametrical Mann-Whitney test, table calculator MS Excel and statistical software IBM SPSS Statistics were used. Furthermore method of boxplots and factor analysis, on the basis of which causal relations were identified between individual variables, were applied.

4 Analysis of the structure of information communication tools used in the educational process focused on the managerial skills enhancement and

development to connect the transfer of technologies and knowledge with the production of knowledge and information

The performed analysis of the structure of communication tools used in the educational process focused on the managerial skills enhancement and development together with theoretical knowledge formed the basic assumption on the monitoring of communication tools and information technologies used to connect the transfer of technologies and knowledge with the production of knowledge and information in the banking houses acting in the Slovak Republic. The research was oriented on detecting educational forms, application of communication tools and information technologies in the educational process of the investigated subjects. The sample of respondents consisted of randomly selected top managers of banking houses – subsidiaries acting in Slovakia. With the questionnaire method 210 top managers were contacted in 14 banking houses acting in Slovakia. The questionnaire was responded by 192 contacted respondents representing a 91,43%, out of which 12 women representing 6,25%. Six respondents didn't react to the questionnaire and 12 questionnaires were discarded from further processing due to their incompleteness. All the respondents were at the age range from 40 to 62 and employed at least 10 years, out of which at least 3 years working on the position of top manager. The research was carried out in the year 2019 and it proceeded from the research finalized in 2009.

On the basis of the data analysis obtained in the research focused on finding out the frequency of use of significance in the educational process of managerial skills enhancement and development, 9 most used information and communication technologies and tools were generated and ranked according to their importance. In comparison with 2009, the list was extended by a cell phone, of which the frequency of use in education, mainly in selfeducation rose noticeably due to mobile applications focused on managerial skills training. The frequency of use of social media also rose considerably, represented mainly by social networks, which also offer wide space on gaining information necessary for managerial skills enhancement and development.

In the second part of the research, the information load and the communication noise or the extent of information distortion, which arose in the educational process during their usage, was monitored by each selected communication tool. The results obtained through the questionnaire method and methods of structural interview with a sample of respondents, facilitated to define the following conclusions which can be found in the table below (table 1).

Table 1: Percentage of the use of each communication tool in relation to the transfer of information content and importance in the internal company communication system

Communication tool	Frequency (%)			Importance (%)			Information charge (%)			Communication noise (%)		
	2009	2019	Trend	2009	2019	Trend	2009	2019	Trend	2009	2019	Trend
Working meetings	90.5	91.3	→	73.44	74.32	→	65	64.5	→	31.1	28.5	→
Guidelines, Regulations, Directives	58.2	63.9	→	79.08	82.40	→	57.9	58.7	→	8.5	6.3	→
Personal conversation, Personal contact	49.8	47.9	→	84.36	75.32	→	36.5	32.8	→	13.1	12.6	→
Noticeboards, Bulletinboards	20.2	10.9	↓	6.72	3.25	↓	9.5	2.5	↓	49.2	35.8	↓
In-house telephone	15.8	5.3	↓	26.16	3.5	↓	3.1	2.8	→	25.5	34.5	→
Mobile phone	6.5	97.4	↑	65.7	94.45	↑	59.8	75.5	↑	16.9	17.5	→
Intranet/internet (e-mail)	12.1	89.5	↑	9.24	78.54	↑	4	56.5	↑	6.7	7.3	→
In-house computer databases	8.16	17.7	↑	6.72	16.25	↑	5	13.5	↑	3.2	2.3	→
Company newspapers and Magazines	3.96	1.26	↓	4.08	2.35	↓	5.5	1.5	↓	15.6	17.5	↓
Other (Social media, Social networks)	0.6	2.5	↑	0.60	1.35	↑	0.5	0.75	→	23.9	34.2	↑
Trend: ↑ - rising, ↓ - decreasing, → static												

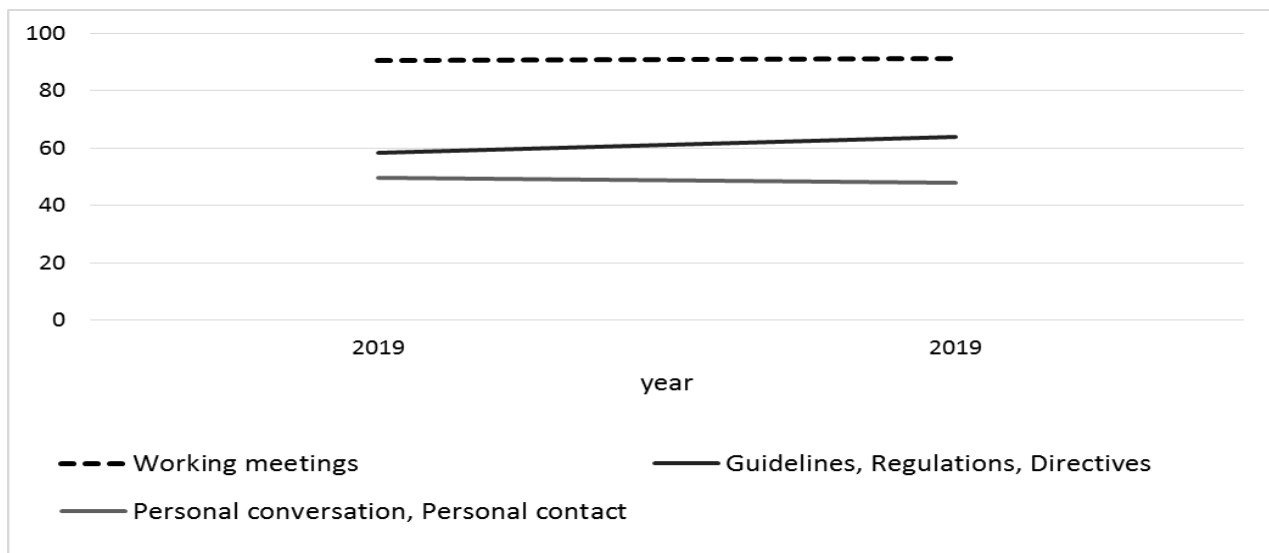
Source: own calculations

The data analysis showed, that the most important information and communication technologies and tools in the educational process focused on the managerial skills enhancement and development, a classical work meeting, instructions, regulations, guidelines and personal interview were considered by the respondents in 2009. There were no big statistically significant differences also in other features of the used information and communication technologies and tools, which were subject of the research. This result was largely influenced by the fact, that the attention in the educational process focused on the managerial skills enhancement and development was mainly paid to the improvement and progress of basic and specific managerial skills, which require individual approach. This result was reaffirmed by the research performed in 2019 despite that e-communication tools (such as internet/intranet, e-mail, intercompany databases, cell phones and social media) stepped into the process of managerial skills enhancement and development. Following this, one can assume that there was a quantitative shift in the development of primarily intersectional managerial skills – communication skill.

Within the research two substantial characteristics of individual information and communication technologies and tools used in the process of managerial skills development were investigated, which are information load and communication noise.

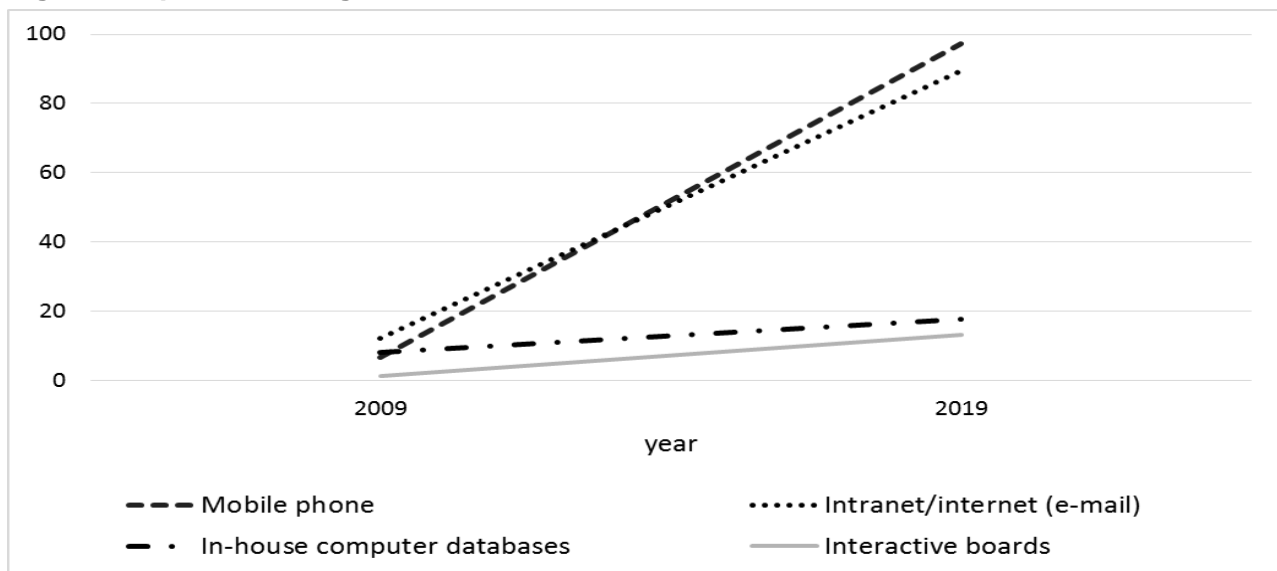
The analysis showed, that the biggest information load according to the respondents' replies in 2009 have traditional communication tools: work meetings, instructions, regulations, guidelines and personal work interviews, while the e-communication tools were not considered as too significant by the respondents from the perspective of information load. However, this data has undoubtedly changed for the past ten years. The obtained data from the research in 2019 show a massive shift of the use of information and communication technologies and tools in the process of managerial skills development, what may be derived from the enhancement of the intersectional skills – skill to communicate through information and communication technologies.

Figure 1: Basic managerial skills



Source: own elaboration

Figure 2: Specific managerial skills



Source: own elaboration

Furthermore, the data analysis proves, that the biggest communication noise during the transfer of knowledge and experience in the process of managerial skills development was according to the respondents reached by the information and communication tools with minimal feedback – wallpapers, trainings, also work meetings and for example in 2019 also social media and social networks, which contain mainly false, incorrect or fake information. Afore mentioned findings highly correlates with other findings in the area of the information and communication tools usage in the process of managerial skills development. Moreover, in this area a significant shift occurred in 2019 in relation to the e-communication tools. The results of the analysis demonstrated in table 1 reflects the extent of communication tools usage according to its frequency and perception of

their importance in the intercompany communication system, and also the extent of information load and communication noise perceived by the respondents.

5 Conclusion

The current theory and practice of management confirm, that one of the most important conditions of the company's competitiveness is the quality of its management. The quality of the company's management is defined through the quality its basic, specific and intersectional managerial skills. The quality of managerial skills is conditional to constant and targeted managers' education focusing on the enhancement and development of their basic, specific, as well as intersectional managerial skills. To reach desirable results in the process of managers' education and enhancement of their managerial skills, not only modern methods and forms of education, but also technologies and tools, which enable effective transfer of information and knowledge, are more and more used. In other words, the process of education in the area of managerial skills should be linked with the process of the production of knowledge and information, respectively the transfer of technologies and knowledge should be linked with the production of knowledge and information. This objective can be, and eventually is achieved by information and communication technologies and tools. Classical and also modern information and communication technologies and tools intervene more massively in the educational process focused on the managerial skills enhancement and development, and they modify not only its course but also the methods, which are used in it. As it is documented through the obtained knowledge from the primary and secondary research of the mentioned problemacy, information and communication technologies and tools significantly influence the quality and level of the educational process focused on the managerial skills development. At the same time, they showed that in the past years of the educational process, the ratio of electronical information and communication tools, social media and social networks usage grows. The meaning of the latter has risen due to the fact, that they provide space for an exchange and transfer of knowledge and experience from crisis situations, which required flexible application of managerial skills, or their combination. Despite this, more respondents stated the risks, which are characteristic for social media and social networks and assigned them high ranks in the process of education in the area managerial skills enhancement and development. They highlighted the unlimited communication space, which is provided by social networks for swift, effective and real time information, knowledge and experience exchange, as well as sharing content of such information and knowledge and supporting the creativity of managerial work stereotypes and the managerial skills used in them.

At the same time the analysis proved, that the managerial skills aren't static and in the process of the individual's life they change, while it may happen that they can be further developed or either diminished. There is a whole range of methods and procedures, that serve this purpose, where the objective is to develop within the educational and training process those features of the managers' managerial skills, which are from the perspective of the company's needs the most significant. The social media and information and communication technologies, which enable to link the transfer of technologies and knowledge with the production of knowledge, play an outstanding role in this process.

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