

# Mentoring Practice on Behalf of Knowledge Sharing in the light of Education

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*Abstract: The question of knowledge management has become a highlighted issue in the companies' everyday life. Knowledge itself is the most important capital of organizations and acquiring, developing and preserving it means a lot of tasks and requirements for the companies. The complex activities of the knowledge management system appear with different priorities in the practice of companies, which depend on the company's circle of activities, its organizational structure, its innovative willingness, the content of HR, leadership approach and on the organizational culture, etc. However, it is a fact that preservation and sharing of employees' knowledge, and to find the most successful methods are the most emphasized areas of a knowledge management system in companies. On the basis of the above mentioned facts, our research was motivated by the following question: how do the employees want to share their knowledge and what features influence them? We observed whether the most traditional method, mentor practice as a corporate practice aiming knowledge sharing is widespread and what opinion the questioned people have about the method. Last year a survey was conducted by the combination of qualitative and quantitative methods and its results show that a mentoring system is a well-known and often used method in companies' practice, but its effect is debatable. Employees' willingness to share their knowledge – independently from the used methods – is influenced by the employees' age, attitude and corporate culture. Thus the mentoring activity as a knowledge sharing method is influenced by the above mentioned employees' features, which determine the success of this method.*

*Keywords: knowledge; knowledge capital; knowledge sharing; knowledge management; knowledge loss; mentoring practice*

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## 1 Introduction

Management researchers have emphasized for a long time that human capital and knowledge capital are the biggest value of a company. A conception and a practice of a knowledge management system are a strategic area of most companies, but in some cases it is not a well-defined and a well-shaped protocol.

Theoretical and practical surveys of knowledge management systems (KMS) have become extremely popular recently and there are lots of essays, studies, and papers published concerning numerous fields in different qualities and in different depths. Our study, which discusses a not too often deliberated but very significant part of knowledge management analyses belongs to this group as well. Knowledge management elements appear in every part of corporate life, which are used unknowingly. These methods have been applied for a long time, but they are not built into the organizational mentality at a strategic level or in the system thinking level. The list of applied methods is long, but the purpose of this paper is different. We focus only on one element – namely on a support system - which encourages starters, talents, stressed carrier ways, etc. It is the mentoring system.

The next chapter overviews the justification of a knowledge management system operation and the necessity of mentor practice in a company practice. The additional chapters show the conduction of empirical research and their results.

## **2 Justification of a Knowledge Management System**

Scientific literature gives a lot of definitions of this relatively young, but very exciting area of management science. From these definitions a summary is pointed out. Knowledge management is calculated as a system of creating, preserving, sharing, and utilization of knowledge capital in order to have successful operation of companies and to strengthen their competitiveness.

Knowledge management system in the organizational operation (KMS) means the common management of technique, organization and humans. Polányi's works [37; 38] are considered to be basic for the interpretation of the henceforth used concepts (knowledge sharing, tacit knowledge, knowledge capital, knowledge base) in the study and which also serves as reference in works of other noted researchers (Nonaka – Takeuchi) [34].

As knowledge is a very complex notion, (explicit and/or tacit as well), complex learning and development systems are needed in companies, but management does not pay enough attention to every element of knowledge management systems. To preserve, transfer, and acquire new knowledge are activities and program systems, which require elaborated practice for successful operation and to avoid or minimize the loss of knowledge. This problem appears when employees leave an organization temporarily or permanently. In this case the key question is how employees share their knowledge with their colleagues who stay at the company or what knowledge elements employees carry with themselves.

According to Alavi [1] there are three motivating powers which motivate companies to build a knowledge management system, so that it should become a strategic area, in order to increase the effective operation and the value of a company. These motivating powers are:

- Changeability of a business environment,
- Globalization,
- Knowledge based services and products.

In globalized societies, human resources have become more and more the centre of managers' thinking, therefore companies evaluate their knowledge capital rather than their work force. Such factors have become stressed as trust, reliability, appreciation, motivation, and knowledge sharing influences the operation of companies and infiltrate into organizational culture.

The idea of knowledge management expands, it means not only a rational operation of companies managed by knowledge, but it also means HR management as well. The question is what knowledge is possessed by individuals and what its value is. On the basis of Nonaka and Takeuchi's [34] idea the explicit knowledge can be expressed by words or numbers and it can be shared in different forms. But tacit knowledge cannot be codified, it is built on experience and abilities of activities. It is attained in a long series of years, it is formulated with difficulties, it is not structured, and it is acquired by observation and practice. From these features, it can be seen that tacit knowledge is personalized and it is more difficult to acquire and communicate, therefore its sharing is very complicated.

Although Singh and Premarajan [45] refer to opposite opinions about tacit knowledge sharing from scientific literature. They refer to Nonaka – Takeuchi model, which shows tacit knowledge sharing in a 4 step circulation (SECI model).

Knowledge acquisition and learning processes are influenced by more factors in an organization. They are identified in three different dimensions as supporting and/or limiting factors.

- At an individual level, (how open an individual is to new ideas, what problem solving abilities he/she has, how sensitive he/she is, etc.),
- In the organizational culture (the role of trust, willingness to innovate, etc.),
- Additional organizational features (leaders' attitude, supporting systems, protocols, etc.), which significantly influence knowledge sharing [30].

According to Argote and Ingram [2] knowledge sharing and transfer among individuals and groups are the basis of the competitiveness of companies.

Tacit knowledge is different depending on employees' positions and functions. The cause of this difference is professional skills, competences, experience, etc. Researchers [42]; [43]; [44] emphasize that the synergy of individuals, groups and organizations develop knowledge transfer and management processes. The results of knowledge sharing are manifested in a knowledge bank, in a successful situation organizational memory, has to be made available for examples for the new comers.

It is a fact that organizations should cope with a lot of tasks and difficulties during knowledge sharing, especially in the case of learning of a new task [6]; [14]; [24].

In scientific literature and in the companies' practice, there are a lot of methods of knowledge transfer/sharing. Mathew and Kavitha [27] list the following possibilities:

- Induction,
- Employees' rotation,
- Training and development,
- Team learning,
- Advisory method which is called a mentor process.

Knowledge sharing should serve both types of knowledge (explicit and tacit) which is a difficult problem of companies. The best method to solve this problem, is to create a mentoring system sharing explicit and tacit knowledge at the same time [45]; [17].

This paper allows an inspection into the mentor system practice, on the basis of a theoretical overview and our practical survey.

### **3 Theoretical Approach of Mentoring System**

The mentoring system came to the focus of management research in the last 30 years. During that period a lot of definitions were born about what a mentoring system and its processes mean. Kram [22] in his classic work in 1985 reckoned the mentoring system as a set of activities involving teaching, supporting, protection and which is given by a highly qualified leader to his/her mentored persons. His opinion is that a mentor helps his/her mentored in two different ways. One of them is helping in their career and the other is helping in their psycho – social development. Career supporting means a lot of things, starting from coaching, through evolving personality until protecting, etc. In case of the process of psycho – social development a mentor appears as a friend and as a behaviour sample [12]; [18].

In 1997 Russel and Adams [40] defined the process of mentoring as a process of exchange between two people with strong personalities, where one of them is a senior, experienced colleague and the other is a junior co-worker. During the process of mentoring, the mentor provides support to the other person and helps him in his/her career and personality development.

According to Ehigie *et al.* [15] a mentoring process is an informal relationship which aims for tuition, a development of a supported colleague. Although the main aim of mentoring is educating. The authors emphasize that this process

influences some other features in an organization. For example: leadership, culture, performance of organization, etc.

According to Bell [4] a mentor is a teacher or a leader, supporting a mentored colleague who develops and spreads his/her abilities and knowledge.

Mcshane and Glinow [30] refers to a mentoring process as a learning process in which a mentored person learns the conventions of the organizational life.

Two basic forms of mentoring must be mentioned.

In case of formal mentoring we talk about a supported and controlled process in which a senior leader works together with a less experienced co-worker to develop the mentored person.

Informal mentoring process is not offered by an organization, but a spontaneous, voluntary form of a mentoring process. During this process an experienced leader works together with a less experienced person who is not only taught by the leader, but he/she is supported in his/her career and in his/her prosperity in an organization [2]; [24]; [17].

However, in the last 10 years, some new forms of mentoring processes have appeared. One of them is when not an older and experienced colleague becomes a mentor, but on the contrary, the young colleagues become mentors. For example, in this case, these young colleagues try to have new technologies understood by elder colleagues [20]; [24]. This reversed or contrary mentoring process is called into life by the globalization and by very fast technological development, by the necessity of fast decisions and answers to market requirements. Harvey et al. [20] mentions that students who finish their studies at colleges and universities have high competencies in using the Internet, computers, and other web based technologies. They are very enthusiastic to share their knowledge with others. The question is how the senior colleagues can be motivated to accept help from a younger person, or a new colleague and how they should accept him/her as a mentor [11].

In recent literature, there is another new method of mentoring processes, which is called reciprocal solution. This idea originates from a concept that a mentoring process has a positive impact on both members of the mentoring process. Acquiring information and information transfer are reckoned as a reciprocal process. Harvey et al. [20] draw the attention that these new networks construct basic structures to information change and the focus of mentoring process will be formed into strategic information for organizations.

The different types of mentoring processes are summarized in the following table (Table 1), according to the above mentioned authors. [2]; [9]; [20]; [21]; [28].

Independently from types of mentoring processes, a mentoring system has a lot of functions. According to Fajana and Gbajumo-Sheriff [16] – as mentioned above - career and psycho – social functions, must be mentioned. They separated 5

additional characteristic functions inside career function: supporting, making visible, coaching, protection and work challenges. Inside the psycho – social function they separated 5 different functions as well: modelling, accepting, reinforcing, advising and friendship.

Table 1  
The different types of mentoring processes

Features	Traditional mentoring	Reversed mentoring	Reciprocal mentoring
Definition	A connection between a senior and a junior colleague to support the junior's organizational development.	A senior organizational member learns from a junior organizational member.	Networks to double information changes.
Emphasis	A new colleague's progress in the career. A new colleague's organizational socialization. Introducing a new colleague into a professional circle.	Familiarize with senior leaders, with new technologies and present trends.	Information changes among participants of networks.
Mentor's role	Coaching, friend, advisor, supporter, role modelling, etc.	Development of web pages. Internet support. Ensuring the newest analysing tools.	Continuous information changes. Psychological support. Promoting organizational learning.
Outcomes	Career advice and acquiring the existing organizational knowledge. Supporting a progress. Recommendation to professional circles. Internal career. Joining networks.	Acquiring a technical knowledge. Cross cultural, global prospect.	Acquiring internal knowledge and acquiring knowledge which is among organizations.

During the mentoring process both participants have to be active in order to have a successful cooperation. Catling and Davies [12] have listed 10 features which facilitate success.

- Humility - in which both participants have to encourage, accept, and use criticism.
- Open spirit - there are not fixed ideas about mentoring process.
- Willingness - to pay attention in silence and receive the advisors' ideas.
- Curiosity - it is necessary to be curious constantly, when, how, why and where things happen.

- Parallel way of thinking - if they hear something, they should think over where they can use the information as well.
- Calmness - as building a fair mentoring relationship is time consuming.
- Persistence - to have a continuous relationship between the mentor and mentored.
- Integrity - which is a critical point of the mentoring relationship. It is respect and acceptance of others' rights.
- Honesty - disclose the complete truth before the mentor.
- Time - which is an investment, not only for mentored persons, but for the organizations as well. But the question is how this investment contributes to outcomes.

A lot of researches deal with the positive outcomes of a mentoring process [21] [22] [33] [40]. These are for example:

- Mentoring processes motivate the accepting of organizational values;
- A mentored person becomes suitable to handle stress which comes together with the career;
- Mentors give a role model which results in respect between a mentor and a mentored.

This process ensures that only those values are transferred which fit the organizational strategic purposes in the future.

Harvey et al. [20] mentions there are numerous the positive career consequences of the mentoring process for the mentored.

- Move forward in a hierarchy;
- Bigger career satisfaction;
- Bigger mobility.

Bencsik [6] expound that some earlier researches confirmed a positive correlation among mentoring support, employees' costs, satisfaction with career, willingness to change, behaviour at work places, etc.. Their own survey at Chinese companies has confirmed that the individual learning process is a positive and significant connection with the mentoring process. When we examine globalized companies, a mentoring system should be viewed as an investment to increase organizational socialization, organizational commitment and satisfaction. Payne and Huff [36] report that their survey found that emotional commitment was on a higher level in case of employees who participated in a mentoring program.

The theoretical essays in scientific literatures do not differentiate between ideas and practices of mentoring processes in the companies and institutions, but most case studies are about positive examples in practices of the companies.

Mlinarics and Juhász [32] show international practices of business life, the educational practices, and supporting employment in their study. European examples confirm that mentoring processes support the students' teaching and their adaptation into the educational structure at the primary and secondary schools as well. According to their experience mentoring systems operate well in the higher educational institutes, too.

These above shown reports were about positive connections, but we have to see causes which hinder the right operation of a mentoring system. There are just a few researches which deal with these problems. Scandura [41] summarizes the surveys which reveal mistakes appearing in the mentoring processes. According to Burke and Mckeen [10] a big problem is if the pairing of a mentor and a mentored does not work. A disharmonized relationship leads to anger, suspicion, dissatisfaction, hurt, etc. [3]; [9]; [31]; [34].

### **Research questions**

When we think over a critical step of knowledge management, a knowledge sharing process and operation of a mentoring system, we form questions as a basis of our practical research.

- 1) What role is filled by educational institutions in a process which strengthens the mentoring practice, its popularity, and the expected behaviour as a tool in a KMS in companies?
- 2) How does an existing (or not existing) mentoring system influence the new and young employees' behaviour and their way of thinking in an educational institute?
- 3) Does mentoring practice serve the aims of knowledge sharing?

In order to answer these questions we used the results of international research, which was carried out in the framework of secondary, qualitative research. After that in a quantitative survey (by questionnaires) respondents' opinions were identified about the knowledge management and mentoring practice in companies on the basis of their own experience. By mixing several different theoretical approaches of mentoring systems in our researches we consider those practises supportive and helping knowledge-sharing from the system of knowledge-management where the experienced and the less experienced fellow-workers are cooperating and helping each other mutually for a long period of time in order to improve the level of their activities to be fulfilled in favour of the company. The tacit elements of knowledge are also handed over during cooperation, thus becoming part of the everyday practice of the organization. The question asked in the study was composed by drawing attention to these principles.

## 4 Method of Research

### 4.1 Sampling

The basis of our qualitative research was served by comments to a scientific topic on the Internet. A member of Teaching Professor Group on the website of LinkedIn launched a topic about the mentoring practice. This professor asked group members about their experience of the mentoring practice in their own institutions. The question was the following: Do you have a formal or informal mentoring program at your institution? Eighty respondents have written their experience down from all over the world. They have reported about students' mentoring and about the mentoring practice of their own work (as employees). The answer to the question happened on the surface of LinkedIn in the form of usual comments. The comments of almost all the respondents were examined in the process of evaluation.

In the quantitative survey, a snowball method with online questionnaires was used. Thanks to the method, the respondents were of different age-groups and of different qualification. Two hundred twenty one respondents have answered the questions from all over the country. Two respondents were under 18, their answers were ignored, because their sample was too small to represent their age group. At the end, 219 questionnaires were evaluated.

### 4.2. Methods of Analysis

In case of the qualitative research, the comments were processed which appeared on the electronic webpage by content analysis, by Excel table, and Wordaizer program. During the analysis additional background materials (available results of previous researches, as secondary data, documents of own institution, corporate data) were used which were worked out by a document analysis method.

Evaluating the results of the questionnaire was carried out with the help of one- and multiple-variable statistical methods. The one-variable methods were frequency, average, and standard deviation procedures, while the multiple-variable methods included cross-table analysis, ANOVA and independent 2 sample t-test. The data were evaluated by an SPSS statistical program. The cross-table analysis made it possible to show the similarities and differences between the nominal variables, while in case of the ANOVA-studies, one- and multiple-way analysis were done. With the help of the latter, the effect of the nominal variables and their interaction could be examined on the metric variables (5-point Likert scales).

The questionnaire examined 3 different subject matters, on the basis of 30 questions. The questionnaire in its complete extent is not part of the present study, the main question types were summarized in favour of perspicuity. The personal data among others served the interests of statistical identification. The question groups are summarized – partially – in the following table (Table 2).

Table 2  
The structure of questionnaire

<b>Specified by participant</b>	<b>Willingness of knowledge sharing and the expected compensations</b>	<b>Mentoring practice and experience about it</b>
Gender	What knowledge is possessed by examined respondents?	Have you ever been a participant in a mentoring process?
Age	In which situation do the respondents want to share their knowledge? (What kind of knowledge?)	What relationship did you have with the mentor?
Material status	In which situation do the respondents want to help others to acquire knowledge?	What kind of features has influenced the mentoring practice?
Residence	What kind of expectations do they have as compensation in return for knowledge sharing?	What help did you expect during the knowledge sharing process?
Present function		
Highest qualification		

## 5 Research Results

### 5.1 Results of Qualitative Research

During the examination we looked for similarities and differences among educational institutions from the view of mentoring practice. (The institutions – similarly to the variegation of the respondents – were from all over the world. According to the country, university or college where the responding professor is teaching. For instance some countries were: USA, England, India, Japan, Nigeria, Australia, South Africa, China, Germany, Neatherland, etc.). You can see the following results.

- 1) The institutions which participated in the research reported a classical form of mentoring practice. On the basis of their answers, we could identify formal and informal mentoring programs in the institutions.
- 2) In the frame of formal mentoring, institutions worked out a regulated mentoring protocol, which aim was to familiarize students with the operation of institutes, with their culture, technologies, with the teaching methods, and aim to introduce students generally into the institutes. Later mentors help students' work and study. The period of the mentoring process is variable. In some cases it is only some months, weeks or days, but there were institutions where this period is more years (2-3 years) long. There were institutions where the rules are in written form as a handbook which contains the mentors' tasks and behavioural, ethical rules for the students and mentors as well.
- 3) The respondents reported that the mentors are experienced and qualified persons who are colleagues, heads of departments, or an upper year student.

There were higher educational institutions where the rules impose a lot of criteria on mentors, for example ethical behaviour, perfect communication skills, good organizational skills, leadership abilities, 3 years of employment, etc.

- 4) A lot of institutions do not have a formal mentoring program, in these cases the relationship between the mentors and students or colleagues are formed ad hoc. Here the masters give advice to students or colleagues about the life of the institutions and work during a shorter or a longer period. You can see that these relationships operate among staff members who work together at a department, or relationships can be formed between teachers and students or between students and students as well.
- 5) The lack of mentoring programs was explained by respondents that students who would have been in these programs, did not want to be participants, they did not require this help.
- 6) As a summary, from this research we could see that mentoring practice in the higher educational institutions follows the companies' traditional mentoring practice. There are formal and ad hoc programs, but in case of knowledge sharing the reciprocal mentoring processes operate rather which are two-sided information and knowledge streams which can mean positive outcomes for both participants.

Among the comments there were not any Hungarian ones, that is why we wanted to complete our research with a Hungarian sample. We would have liked to know if there are mentoring practices in Hungarian institutions or not. On behalf of this aim, we compared our earlier research results with international research results and national scientific documents and regulations. The following practices are identified in Hungary.

In Hungarian institutions talent management programs operate with means to develop students and scientific student research. Institutions want to make students love scientific work and this can be considered as the basis of mentoring work [13].

A special form of mentoring programs is for disadvantageous students and for students who are at an accumulated disadvantage. In these programs, students get help in their studies. These programs are supported by the Hungarian Ministry of Human Resources and the practical realization of these programs have to be carried out by National Conference of Student Self-Government. The aim of this program is that a mentor should support his mentored student for a year giving him all the necessary help so he will be able to cope with all the arising problems in his university years.

The aim of this program points beyond university life or work, because it aims to increase the students' chance on the labour market as well.

According to the statistical reports the number of students mentored is shown by the following table (Table 3).

Table 3  
The number of mentored

Study year	2009/2010	2010/2011	2011/2012	2012/2013
Number of mentored	1100	1288	1244	1057

A bit of a decrease can be seen, because the number of students in higher education was lower than earlier. 180 mentors coordinated the students' lives during those periods.

The base of the comparison in our research was the international experiences (see answers of the professors), and the results of our former researches. The results of the questionnaire serve as the starting point of composing such suggestions which show the decision-makers a training structure to be developed emphasizing the good and incomplete character of the present training-especially in higher education- by focusing mainly on mentoring activity.

## 5.2 Results of Quantitative Research

During a non - representative survey the motivation of respondents was examined. Our intention was to reveal participants' attitude in the mentoring programme regarding knowledge sharing in a formal process in an organization or in an informal process. Although the sample is not representative, the number of questionnaires gives a chance to create a picture of the mentors' and the mentored persons' behaviour and their way of thinking.

The first part of the questionnaire focused on the specifying of the sample. The following table shows the main features (Table 4).

Table 4  
The main features of respondents' specifications

Gender		Age			Marital status	
Men	Women	18-22	23-26	27-39	Single	In connection
23.9	76.1	23.3	59.4	14.6	69.7	30.3
Highest qualification		Present function				
Middle	Upper	Student	Worker	Starter	Unemployed	
63.5	36.5	58.9	32.	8.7	0.5	

After specifying the sample, the respondents were examined from the view of knowledge sharing. The respondent had to sign their opinion on a 5 grades Likert – scale, how much a statement characterised them. The “definitely does not characterise me” is signed by 1 and “definitely characterises me” received 5. The

following table (Table 5) shows the averages and standard deviations in some cases.

Table 5  
Knowledge sharing willingness among respondents

Statements	N	Average	Deviation
I am confident in my knowledge at my work place/university/college.	219	3.69	0.831
I help everybody with pleasure if he/she asks me.	219	4.47	0.679
When I receive new information, I always share it with people who are involved.	219	3.83	0.848
I share my experiences regularly with others so that they can learn from them.	219	3.53	0.9
I have never held back any information for my own interest.	219	3.77	0.969

On the basis of averages and standard deviations the following establishment can be told.

- The respondents feel that they are confident in their knowledge, this knowledge is reliable for them, and the evaluation of this question was signed with high marks. It is the a reason why they share their knowledge with others with bigger motivation and more courage. In those cases the deviations were lower, namely the deviations from the average values were not too high, the opinions were relatively homogeneous.
- The questionnaire asked if respondents shared their (tacit) knowledge or (explicit) knowledge with more pleasure. The results show that the respondents are less open in case of tacit knowledge sharing, but the sample was heterogeneous. Withholding information is less characteristic for own interest, but the deviations were the highest in case of this question. The respondents' opinions were very heterogeneous.
- During the research it was examined if there were differences from the view of gender and qualification. The ANOVA analysis shows a connection in one case only: ' I share my experience regularly with others so that they should learn from them'. The results of this examination are the following: Levene-test: 1.056 df1: 3 df2: 215 sign.: .369 F: 3.831 sign.: .011  $p < 0.05$ . On the basis of average we can say that the age group of 40 year old shares their knowledge with more pleasure (average is: 4) opposite the age group of 20 and 30 year old. (Age group 23-26

average is: 3.60; age group 27-39 average: 3.66) From the view of qualifications there were no differences in the sample. There were almost the same opinions among the respondents with middle and upper qualifications. We examined the differences from the view of gender as well. The independent 2 - sample t-test shows differences in two cases: ' When I receive new information, I always share it with people who are involved and ' I have never held back any information for my own interest'. In both cases we confirm that women are more open to share their information.

- In this research we also examined if respondents did or did not expect any compensations for their knowledge sharing. The method of examination was the same than in the above shown case. We created statements about the expected compensations and the respondents had to evaluate their opinions in a 5 grades Likert - scale. The complete identification with the statements could be signed by 1 and the rejection had to be marked by 5. The following table summarizes the results. (Table 6)

Table 6  
Expected compensation in case of knowledge sharing

<b>Statements</b>	<b>N</b>	<b>Average</b>	<b>Deviation</b>
Do you expect any compensation for your help from friends or family members?	219	4.4	0.935
Do you expect any compensation for your help from known people, colleagues or mates?	219	3.7	1.116
Do you expect any compensation for your help from further people, with whom you do not have a daily connection?	219	3.68	1.204
Do you expect any compensation for your help from strangers? (for example, in the street, etc.)	219	4.55	0.889

From the results of the examination, we can draft the following conclusion:

- The respondents are most unselfish with their friends, family members and with strangers and they expect compensations from people with whom they are in a formal connection. In these cases the sample was very heterogeneous.
- We have examined that if there were differences or not, on the basis of age and qualification. The ANOVA analysis did not show any differences between the two independent variables.
- The examination of differences from the view of gender gave a significant difference in one case (in case of further people) by independent 2 - samples t-test. Women were much more unselfish with them than men.

- We asked the respondents to what extent they expect help during a task solving in his/her present position. The people answered (72.6%) that it depended on the task. 13.2% expected a minimal help, but 4.1% said that he/she liked to work alone and solve problems without help.
- On the basis of the cross-table analysis we can say that there are not differences between men's and women's opinion (Pearson Chi-square test: 1.943 df: 4 sign.: .746  $p > 0.05$ ).
- We have the same result in case of qualifications as well (Pearson Chi-square test: 4.037 df: 8 sign.: .854  $p > 0.05$ ).
- 19.6% of respondents demanded a mentor's help in a new or a prospective work place. They expected the mentor's help for a longer period (min. 6 months), 65.3% expected help for a shorter period, and 15.1% did not expect any help.
- From the view of gender, there are no differences between the opinions. The results of Pearson Chi-square test: .505 df: 2 sign.: .777  $p > 0.05$ , namely 13.5% of men and 15.7% of women would not like to get help. If they require help for a longer period, 20.5% of women and 17.3% of men require it.
- During the examination of qualifications, the Pearson Chi-square test shows differences, but the test was not reliable, because 33% of cells the expectable values were less than 5.
- 42% of respondents consider the mentoring system useful, but 55.3% have never been a participant in a such program and 2.7% do not feel this system is a good support. In that case when the respondents have worked with a mentor together, most of them were in a friendship with his/her mentor, (29.3%). According to 35.9% of respondents their relationship was supporting, and 8.7% answered that the relationship was very strict.
- Out of the respondents who have been participants in a mentor program, 64.8% reported that the mentor helped in every situation when they asked him/her, 24.2% answered that a mentor was helpful mostly, in the case of 9.9% a mentor helped sometimes and only 1 respondent said that the mentor was not supporting.
- The mentoring program ran for maximum 3 months in the case of 63.8% respondents, in 26.6% it was running between 3 and 12 months, when they were in close connection with each other. 8 persons signed that they worked together longer than a year and 1 person longer than 3 years.
- At the end the examination the usefulness of having a mentor was examined from the view of gender and qualifications. In this case we used a restricted sample, only those respondents who participated earlier in a mentor program were in the sample. The results show that from the view of gender and qualifications there are no differences, neither in the operation of mentoring system nor in the common work with a mentor.

## **Discussion and conclusion**

In the mirror of the results we can say that the respondents' willingness to share their knowledge is at a middle level, but the expectations about compensation for the transferred information are differentiated. These results are in harmony with other international research results [23]; [26]. Knowledge sharing operates with difficulties in every case which is supported by any form of compensations [7]; [8]; [19]; [41]. The estimation of mentor program is very positive, from the view of the participants, 93.8% of respondents answered that this type of knowledge sharing is very useful. Probably this opinion was formed by the earlier experience of the participants, namely they have received real support from their mentor when they were a member of a mentoring program and they could calculate with the mentors' supportive work. In this case we have the same results, as you can read in international research results. These results confirm that a mentoring system has justification and this knowledge sharing method contributes to the outcomes of companies. But we have to stress that a mentor program does not equal with the introduction and teaching of new employees' in their new workplaces. There is a lot of misunderstanding regarding this issue [4]; [5]; [22]; [40].

The results of this research show that there are significant differences in knowledge sharing willingness on the basis of gender and age. Basically, women are more un-selfish than men and the willingness to share their knowledge becomes more powerful, parallel with age. The qualifications did not show a significant influence in this sample. It is a natural human behaviour that as a person becomes older and older, he/she wants to share his/her knowledge with a bigger motivation [7]; [25]; [15]; [39]. Women's emotional intelligence is at a higher level than in case of men, that is why women are more helpful. It is true in case if they lose their work as well. In the estimation of mentoring systems, there are not significant differences from the view of gender, qualifications and age as independent variables. These results harmonize with international research results as well [20]; [22]; [29]; [35].

On the basis of our results we can say that mentoring systems were built in a lot of companies in the last few years, sometimes with productive, sometimes nonproductive practice. Managers primarily see the classical mentoring processes, as a possibility to educate young employees. This activity can support new colleagues to fit into the organizational culture, to reach a suitable career. It is very important for the companies, because they need committed employees who can identify themselves with organizational culture. As we mentioned above the reciprocal mentoring points beyond this idea. Beyond the classical training, supporting, motivating as mentoring activities, we have to handle this process as a key element of knowledge management where two - directional knowledge sharing happens. This common thinking can help to reach the strategic purposes of organizations, to accommodate market changes and to compete in a good position.

The mentoring practice appears in the international and in the domestic higher education as well (see the qualitative research results and our earlier results [7]) whose primary aim is talent management, to integrate new students into the organizations without problems so as to have an easier life in higher education and later in their career building. The Hungarian national initiation shows that a lot of students require this type of support possibility. This process has a power in community building and forming which strengthen the internal scientific, value creating processes in organizations.

If we realize these above written positive results, we will reach such a level of a mentoring system which Leonardo da Vinci dreamed.

'Pitiful is an apprentice who cannot surpass his/her master'

These research results are not representative, but they give a picture of the willingness of knowledge sharing and of mentoring systems from the view of respondents who participated in this research. These results confirm the necessity of a new research which will aim to map the real mentoring practice at companies. About their results we will report in a next paper.

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