

Knowledge Management in Romanian Young SMEs (Part 1)

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Abstract

XXI century economy is based on knowledge-intensive, they represent the "core" of assessing the competence of organizations. An effective management consists in making the right decisions in a timely manner, this being possible by the acquisition of knowledge by individuals of the organization, one of the prerequisites for knowledge management. The organization requires capturing and representing knowledge, exchange and reuse them for different processes and applications, virtually creating an appropriate environment that stimulate the transfer and use of knowledge.

This paper aims to make known the results of an empirical research on knowledge management in Romanian young SMEs, defined as companies established no more than 5 years ago. The study is based on a quantitative research conducted on 161 enterprises. Data collection was conducted by the author, both by face to face interviews and online questionnaire. Analysing KM in a specific type of SMEs is important because it was not performed before, filling a gap in practical research on a crucial sector of Romanian economy.

Keywords: *knowledge, knowledge management, Romanian organizations.*

JEL classification: M13, M21, D83.

1. Literature review

Learning and knowledge have become crucial success factors for many companies. Competitive struggle between companies increasingly shift from acquiring and using tangible resources to intangible ones. In terms of intangible resources, knowledge and systematic structures designed to use it (knowledge management) are among the most important. Generation, acquisition and use of knowledge - to name just a few of the transformations knowledge are facing- are extremely important for sustainable economic, social and cultural development (Ceptureanu, 2015). As a result, modern organizations cannot compete without skilled managers and employees. Therefore, methods that companies use to manage and exploit knowledge, processes and technologies specific to their

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activity, including computer technology, are extremely important (Nicolescu O., Nicolescu C., Popa, Ceptureanu S., Ceptureanu, E. 2009).

Knowledge management is the main element in the transition of many economies to knowledge based economy status at macroeconomic level and knowledge-based organizations at micro economic level. Worldwide, according to their content and those who promote them, there are several accepted definitions for the concept.

Michael Lester (Lester, 2001) regards it as a key process by which companies, industries and ultimately, countries achieve superior economic performance for the population by capitalizing full earnings of potential transformations generated by digital technologies and the Internet (Nicolescu O. Nicolescu, C., 2011)

According to Clarke and Rollo (Clarke, Rollo, 2001) argues that knowledge management is about dedication of organizations to develop production and flow of knowledge, to transmit and use knowledge to create economic value (Ceptureanu S. I., 2015). This approach is relevant because it highlights the existence of specific processes of knowledge, viewed as a whole, and the purpose of knowledge management: economic value creation.

Abell and Oxbrow management considers knowledge management as a scientific discipline that promotes a comprehensive approach for creation, capture, organization, access and use intellectual capital of the company. In their opinion the core of knowledge management is acting upon the intellectual capital. The same authors (Abell, Oxbrow 2002) believes that KM can be treated as an economic practice that consists in the acquisition, sharing and use of knowledge in organized, including learning and information system (Ceptureanu S. I., Ceptureanu E.G., Zgubea, Tudorache, 2012).

Ferguson (Ferguson, 1998) focuses especially on the economic content of knowledge processes and highlights the dependence of KM to human factor, connecting knowledge and intellectual capital and highlights the multidimensional nature of processes, economic, cultural.

There are other approaches that have highlighted the relationship between national economies, companies and knowledge management. For example, Watson (Watson, 2002) believes that knowledge management involves the acquisition, storage, retrieval, use, generate and review knowledge assets of the firm in a controlled manner.

Knowledge management is a point of great interest lately for entrepreneurs and practitioners due to its extraordinary potential to provide competitive advantage and substantial increase in organizational efficiency in the long term.

The recognition of knowledge as an organizational resource aroused considerable interest in recent years, acknowledging the fact that the development of a knowledge-based economy clearly depends on knowledge creation process within companies.

KM is considered the result of the necessities of organizations to get strategic competitive advantage and differentiation in terms of globalization and information explosion, becoming a valuable tool for success.

Knowledge management gives organizations increased skills in the exploitation of intangible assets, recognizing the value of intellectual property, as well as being an internal tool to increase operational efficiency in any organization and has the potential to revolutionize company strategic approach (Căldăraru, 2010).

2. Knowledge management in SMEs

It is an accepted thing that all successful companies generate and use knowledge. Whilst many new start-up entrepreneurs will simply hire highly specialized employees and leave them work, research have indicated that successful knowledge initiatives not only address this processes but also focus on the team structure and internally on the working circumstances to develop knowledge (Nicolescu, Nicolescu, 2011). SMEs faced with new technologic opportunities such as the Internet or biotechnologies still find it very difficult to find the organizational structures to face them. SMEs are traditionally less involved than LSEs in knowledge management related activities, in the production of internal knowledge resources and in the access to external ones. For instance, in European Union, 9.5% of innovative SMEs cooperate with other partners, with higher percentages in the leading innovative countries like Denmark, Finland or Germany (European Commission, 2013).

On the other hand, research on knowledge management mostly focus on large companies, even though an increasing part of literature start to analyse the positive aspects of implementing knowledge management in SMEs (Gassmann and Keupp, 2007, Van de Vrande et al., 2009)). Moreover, empirical studies (Lichtenthaler, 2008) show that SMEs in industrial or service sectors are more and more open to cooperation, in search for external sources of knowledge. Recent data reveals that the collaboration of European SMEs in innovation is growing at an annual rate of 7.8% and becomes a driving force of the EU innovation performance (European Commission, 2013).

In the managerial processes of SMEs, forecast is usually less intense compared with LSEs, especially regarding long term decisions. From the three types of the forecast – prognostic, plans and programs – entrepreneurs use with a higher frequency programs. Plans are usually designed for at least one year, but only by a limited part of the entrepreneurs, and the prognostics are designed occasionally, mainly in medium sized firms. The most frequent form of plan is the business plan (Ceptureanu, 2015). Decisions with respect to forecast have an economic focus and they mostly refer to profit, sales figure, and credits. They are based mainly on accounting information and marketing. Frequently, these decisions are also based on the talent and intuition of entrepreneurs, and managerial forecast methods and skills are just sometimes used. Forecast elements are based mostly on internal and scarce information, usually from the market but,

in order to manage all the existing information entrepreneurs use specialized software, especially those for accounting (Ceptureanu, 2015). Usually, these softs supply and process information of accounting, financial and human resources nature. The inferior level of forecasting in SMEs is being partially compensated by speed of forecasting and especially implementation. The entrepreneur has prompt reactions, especially when decisions have to be taken quickly, in a less formal approach.

In knowledge management context, forecast is the most important managerial function, with new and improved credentials, and it is used more often than in a classic organization. In the forecast process, it can be noticed that new forecast methods and techniques are used. In this sense, data bases, data knowledge become vital, data mining and megaconversations become useful tools for forecasting the future (Ceptureanu, 2015). On the other hand, the information flow and all the knowledge that is necessary for forecasting it's more substantial, given that the environment in which the SME operates is becoming increasingly difficult to predict. Thus, entrepreneurs need more information and knowledge about competition, business conditions, potential partners, but also the mechanisms of verification, validation, storage etc. Even though a small company likely does not have many resources to spend on specialized areas of business, the trend of using employees or consultants specialized in forecasting is visible, nowadays with the involvement of knowledge specialists. Stakeholders are, in terms of knowledge management, a key, and not just optional for business success. New types of forecasts should not be neglected. If the classic business focus is predominantly oriented toward quantifiable elements - turnover, profit etc., knowledge management change this issue focusing on knowledge, intellectual capital, etc. A form of forecast is the organizational strategy. In terms of knowledge management, strategies have many changes, which can take two major forms (Ceptureanu, Ceptureanu, 2012): a) the development of specific knowledge strategies n; b) implementation of classic strategies but integrating knowledge as a component.

Organization represents one of the most important managerial functions in a SME. Specific to this kind of firms is that people that are working there report directly to the entrepreneur and have usually simple hierarchies. The advantage of these structures is the simplicity, which means they have an outstanding flexibility compared to LSEs. The micro organizational structure is rarely reflected in the establishment and descriptions of positions. Sometimes using a simplistic form of post-list description of the main tasks and responsibilities of the employee. This form has been eliminated in recent years, following the completion of the job requirement by authorized bodies. In medium-sized companies, especially in high-tech fields of industry, there is more emphasis on organizational documents. They typically use hierarchical functional structures in which people frequently occurring or organization profiled compartment. In addition, widespread that recorded in recent decades system quality standards ISO, is reflected in the proliferation of standardized documentation related, some of which, working procedures, have a strong organization.

In terms of knowledge management, SMEs is influenced by changes in work processes within the organization (Ceptureanu et al., 2012). The first feature is the emergence of a variety of structural and organizational choices, giving to SMEs the much needed flexibility in carrying out their activities. Network firms, clusters, virtual organization, are notable choices. Simultaneously, due to reconsideration of human factor, employees' roles are substantially emphasized, the involvement of each employee in organization - individual goals, tasks, powers, responsibilities, working methods and techniques – being discussed. Often these issues are negotiated so that organizational structure becomes more fluid. At the same time, new forms of informal organization - knowledge-based communities, Ba groups etc emerges, where collaboration is often on a voluntary basis, without hierarchies.

Organizational changes are reflected in the development of the information system, also. Following an increasing accessibility of computers in terms of costs and knowledge, a large proportion of SMEs use computers and software related to costs, inventory etc. These elements lead to an increased number of computer specialists.

In procedural terms, the five classical functions of the organization - research and development, commercial, manufacturing, financial, accounting and human resources - and activities component is modified by the emergence of duties and tasks related to knowledge, on the one hand and the emergence of a new functions, the knowledge one.

Also within the organization there are two trends: participatory, found less in the form of participative management bodies but rather the increasingly involvement employees in decision-making process, establishing and negotiating objectives, expanding the use of delegation etc. and decentralization, in the sense that organizations has an increasingly number of more autonomous centers interrelated, with top management having mainly a major role in their coordination. Also, we must not neglect the emergence of two new categories of employees: independent knowledge specialist and telecommuters.

Due to the reduced size and complexity of SMEs, which translates into less intense use of forecasting and organization, there is a high enforcement for coordination and motivation functions.

Coordination involves a managerial toolkit made of methods and management techniques less sensitive than the two functions mentioned above, based on a considerably higher extent on human relations, entrepreneurial flair and discernment from the entrepreneurs. All this explains the wide use of coordination, a small businesses important feature. From the methodological point of view, there is usually a reduced occurrence of meetings, the predominant method of coordination in large firms, of dashboards, graphs, managerial methods etc. In compensation, the entrepreneurs use their coordination based on bilateral discussions with his employees. This type of coordination, costly in terms of time consumption, enables a good communication and proves particularly effective. In family firms, and generally in micro companies coordination through bilateral

discussions is predominant. Unfortunately, harmonization of decisions is significantly reduced due to the concentration of decision-making processes at the entrepreneur (Ceptureanu, 2015). Another important feature of the coordination of small and medium enterprises is strong touch of informality, which often have a considerable emotional load.

From knowledge management perspective, a first feature of coordination is given by the focus on scientific part. Coordination, like motivation, depends decisively by the talent of entrepreneurs. This is not the case anymore in knowledge management context. Of course, entrepreneur talent will continue to be important, but when they have to work with specialists and employees often better prepared than them, the scientific aspect becomes paramount. So coordination is based on a greater extent on the skill of persons involved and to a lesser extent on talent. Coordination intensity will increase given that managers will be more participative. Tools such meeting are no longer optional, but are required to coordinate teams of highly qualified semi-autonomous and autonomous employees. This correlates with the expansion of virtual coordination - conferencing, VoIP, online platforms, etc. The basis of coordination is communication. In knowledge management, communication becomes simultaneously intense and multidimensional. Both "ordinary" managers and the knowledge managers (T-managers) will have to solve two problems: adaptation to various types of communication behavior of their employees and identify the most effective communication channels. In terms of using virtual value chain coordination, it will be done not only within the organization but also outside it, which will make it more complex. Moreover, managers are faced with will see not only coordinate their subordinates, but also new categories of employees – knowledge brokers, stewards and researchers.

Motivation is, paradoxically, while less sophisticated than LSEs, intense and very effective in SMEs (Nicolescu, Ceptureanu, 2009). As with the previous functions of management, entrepreneur has a strong on it. The way in which the entrepreneur works and behaves has a decisive influence on the degree of motivation and involvement of its employees, personal example being usually decisive. Its strong individual motivation that led entrepreneur to assume the risks associated with the business, his intensive efforts and the prospect of substantially winning make the entrepreneur to be permanently motivated for quality and performance and, by extension, motivating others.

Although there are elements of motivation less precisely determined - except salary - motivating employees is intense because of the permanence of the entrepreneur in the company and his personal example. All these elements determined the use of many elements of moral and spiritual nature, such as praise, verbal admonition, group celebrating special events, direct talks between enterprise and employees, frequent consultation with staff on way of solving problems, flexibility of working hours etc. However, intuitively, the entrepreneur pays special attention to some of the key stakeholders of the SME.

All these factors lead a strong motivation of employees and part of the other stakeholders, which is reflected in the high efficiency of the activities of the small and medium enterprises. In knowledge management context, motivation retain the same reputation as in traditional firms: the most difficult to exert managerial function. Its importance increases given that organizations become dependent on human resource in the generation, use, sharing and codification of knowledge.

3. Research Methodology

Research has a clear methodology, covering all stages, namely research design, setting up goals, questionnaire, survey, data collection and analysis, interpretation and conclusions.

The research methodology was based on a questionnaire applied to entrepreneurs of young SMEs, namely SMEs established no more than 5 years ago.

The questionnaire was designed to allow gathering relevant information regarding the main objectives of the research, rules regarding the questionnaire design and sequencing of questions being met. The survey did not use a sampling method because the number of SMEs is much dispersed across industries and geographically.

The study is based on a quantitative research conducted in 161 young enterprises. Data collection was conducted by the author, 73.91% of the cases through face to face interviews and in 26.09% of cases online on e-mail distribution.

The questionnaire is divided into seven areas:

1. *Introduction*, emphasizing awareness of the knowledge economy and knowledge management, perception of entrepreneurs about knowledge management and the opportunities emerging from its implementation;

2. *Internal environment and strategies of young SMEs*, examining the internal environment of young SMEs, main organizational objectives, types of implemented strategies, competitive advantages held, use of knowledge and KM management systems;

3. *Organizational learning and intellectual capital*, focused on organizational learning with all its components in young companies, the training and the frequency with which it is performed, analyzing the importance of intellectual capital;

4. *Innovation in young companies*, examining focus on investment in innovation, the financial results of innovative products and use of ICT technologies;

5. *Elements of KM in young SMEs*, targeting identification of elements of KM and their level of intensity (major, medium, low not at all) within each investigated young SMEs.

4. Results

We chose to present the 3rd part of the research, concerning organizational learning and intellectual capital, considering the number of days of training, its predominance by department and the importance given to intellectual capital.

a. Criteria for assessment of knowledge workers

A very important part of the analysis includes elements of human resource management such as assessment criteria for knowledge workers. We find out that experience (80.12%), learning capability (98.14%), specialized knowledge and skills and competence (both 100%) are appreciated by Romanian entrepreneurs.

Table 1

No.	Assesment criteria for knowledge workers	Percentage %
1	Intelligence	82.61%
2	Experience	80.12%
3	Knowledge and specialized abilities	100.00%
4	Studies	51.55%
5	Ability to work in teams	46.58%
6	Learning capability	98.14%
7	Loyalty to company	56.52%
8	Competence	100.00%
9	Level of involvement	81.37%
10	Consistency, conscientiousness	77.64%
11	Responsibility	86.34%
12	Recommendations	16.77%

This ranking is positive because employees need to be motivated and rewarded in terms of these performance factors for the development of their knowledge, facilitating knowledge transfer within the company, the ability and the learning outcomes.

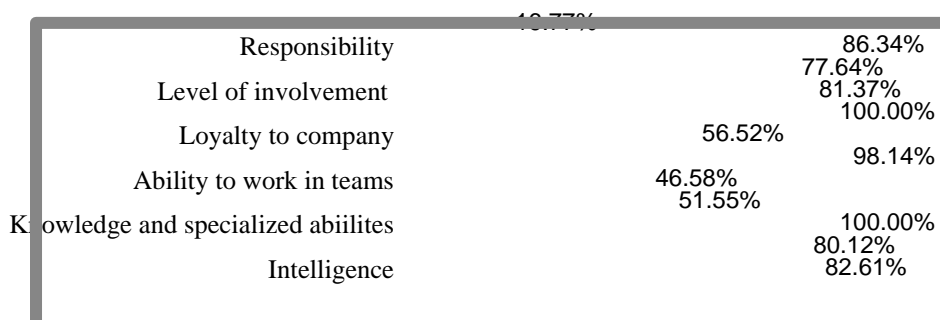


Figure 1. Assesment criteria for knowledge based workers

Source: own research

Young entrepreneurs consider an important criteria sense of responsibility (86.34%), intelligence (82.61%) and involvement in company (81.37%). Least cited assessment criteria is recommendations, with only 16.77% of them opting for it.

b. Share of employees with higher education in young SMEs

In young companies intellectualization and training are high due to significant share of employees with higher education, over 50% of all investigated SMEs employing higher education graduates. SMEs having a 50-60% share of employees with higher education is only 6.21%, 16.77% of investigated SMEs employ 61-70% of total staff with higher education, 30.43% of SMEs have employed only individuals owing at least a bachelor degree while SMEs accounting for 71-80% of employees with higher education represent 26.09 % of investigated young companies.

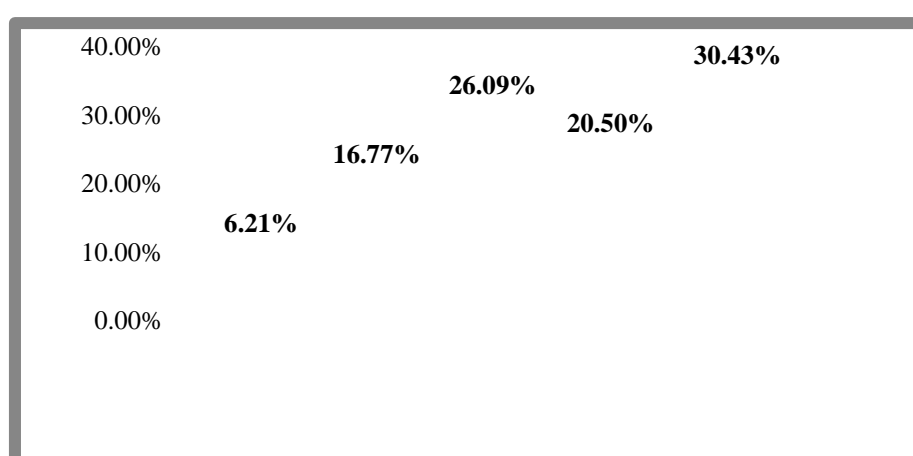


Figure 2. Share of employees with higher education situation
Source: own research

b. Organizational learning methods within young SMEs

Table 2

No.	Organizational learning	Percentage %
1	Training	55.28%
2	Individual learning	36.65%
3	E-learning	16.15%
4	Experience of other colleagues	21.74%
5	Good practice transfer outside company	8.07%
6	Intra organizational knowledge transfer	16.77%
7	Internal procedures, guides and rules	13.04%

Trainings are the most usual learning method, followed by individual learning (36.65%). Only some SMEs use e-learning platforms (16,15%), while for many the experience of other colleagues is an important factor in learning. Internal knowledge transfer is more intense than outside, the latter being the least used by employees. So, it seems young SMEs focus more on using existing knowledge, disseminating it within company while being much more reluctant to outside knowledge.

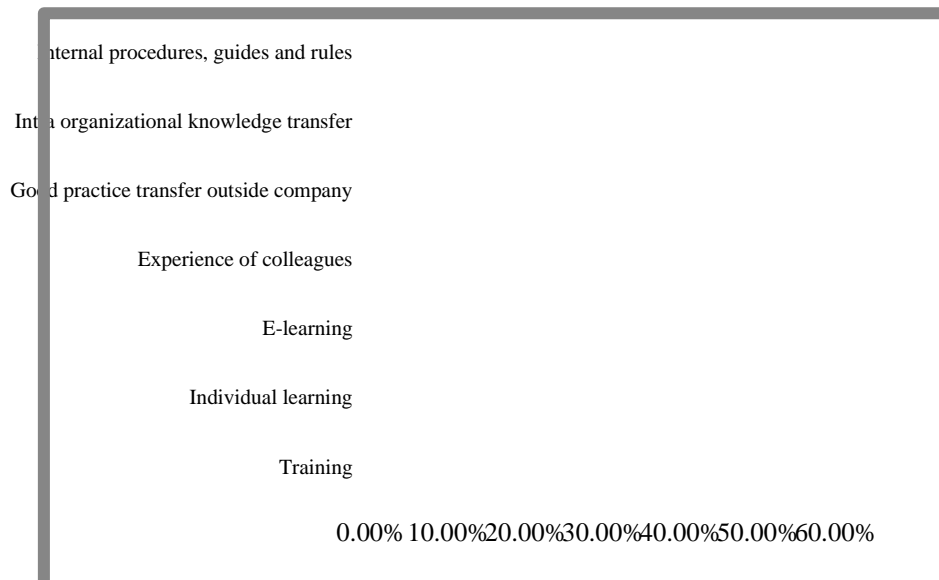


Figure 3. Organizational learning in young SMEs

Source: own research

d. Perception of the company as a learning organization

Another focus of the analysis was the respondents' perception of the company as a learning organization. More than half of entrepreneurs (52.17%) consider their organization is a learning one, while 47.83% of respondents disagrees, even though it uses knowledge management.

Although considering share of employees with higher education, use of processes from knowledge cycle, preponderance of assessment criteria such as learning ability of employees we can conclude that most young companies are or are transforming into learning organizations, perception of entrepreneurs is still reserved, nearly half of respondents stating differently.



Figure 4. Perception of company as a learning organization
Source: own research

e. The situation of the use of types of knowledge

Regarding types of knowledge that they are focused on, know-how knowledge ranks first (39.75%), followed by know-what, with a rate of 30.43%. A less positive aspect of the situation is revealed by position of know-who knowledge, only 18.01% of respondents addressing this knowledge in their companies.

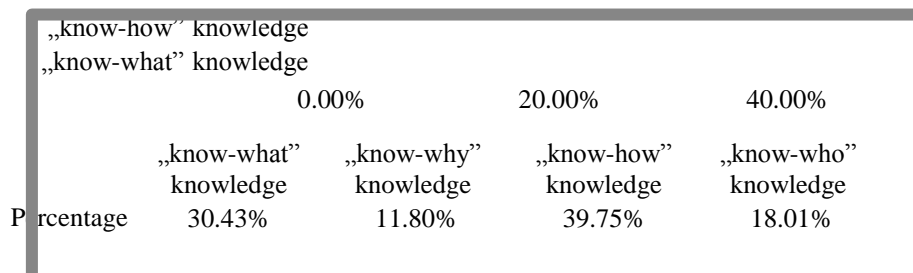


Figure 5. Knowledge use according to type
Source: own research

f. The percentage of employees receiving training in young SMEs

The conclusions drawn on the percentage of employees receiving training can be summarized as follows: the largest share (22.98%) is held by young SMEs which provide training for 0-40% of employees (SMEs who do not provide employee training at all are included here). However, about 60% of young SMEs in Romania educate more than half of employees by using trainings. SMEs providing training for 81-90% and 91-100% of employees are totalizing 25,47% of total sample but are first considering sales. We can conclude that turnover is linked to the degree of staff training.

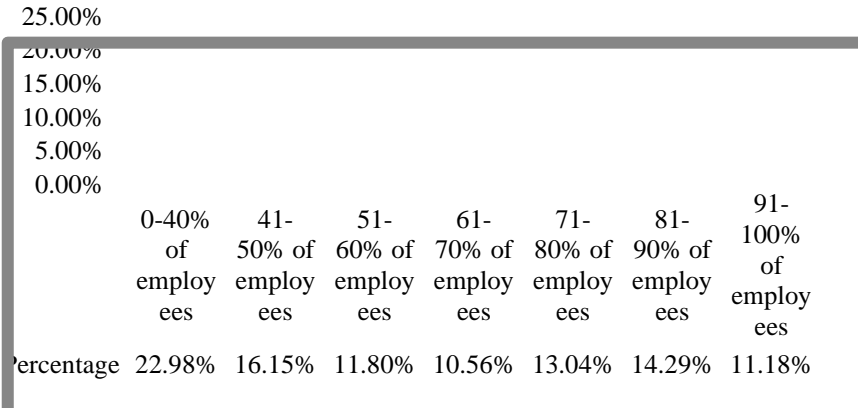


Figure 6. Percentage of employees receiving training

Source: own research

g. Structure of young SMEs considering average number of training days / employee

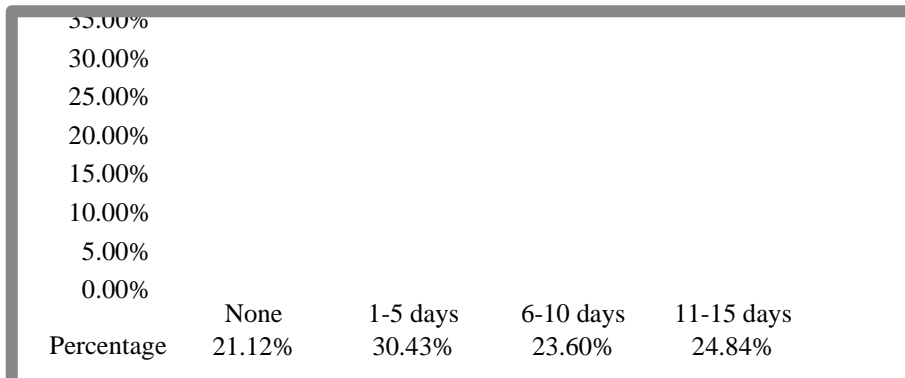


Figure 7. Average number of training days/employees

Source: own research

In terms of the number of days allocated to staff training, most companies (30.43%) allocate between 1 and 5 days of training, followed by intensive training oriented SMEs (24.84%) (11 to 15 days for training). 23.60% of the firms allocate 6 to 10 days of training / employee while there are SMEs that do not require training at all (21.12%). Overall, situation is good considering that 80% of all investigated young SMEs allocate days for training.

h. The frequency of alternating work from home work from the office

Analyzing rotation policy that allows alternative work from home and work from the office, we noticed that a very small proportion of these enterprises have implemented such a policy. Only 11.80% of SMEs employing knowledge

management allow staff to work from home, a less favorable situation. In the knowledge-based organization, work from home is promoted, especially considering equipment that allows videoconferencing, online communication with other employees and ICT technologies. This can have a bad effect on the other dimension of employees' life, the personal one, demotivating them and reducing productivity.

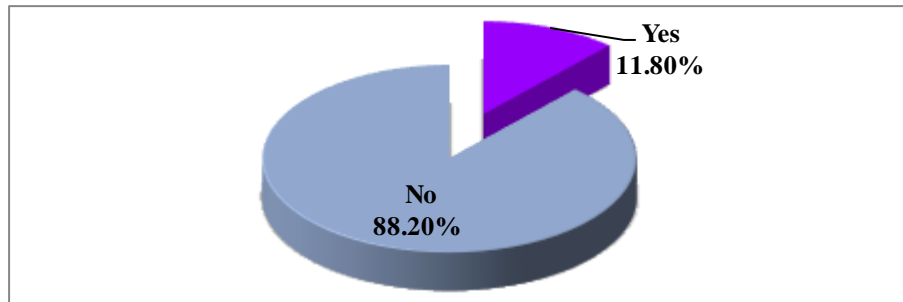


Figure 9. Frequency of alternating work from home and from office
Source: own research

i. The number of days approved for homework

After determining the percentage of SMEs which enable employees to work from home, we considered interesting to analyze which is the approved schedule to work from home. Most SMEs (79.85%) approve only 2-3 days a month to work from home, while 15.79% of them approved a week and only 5.26% two weeks.

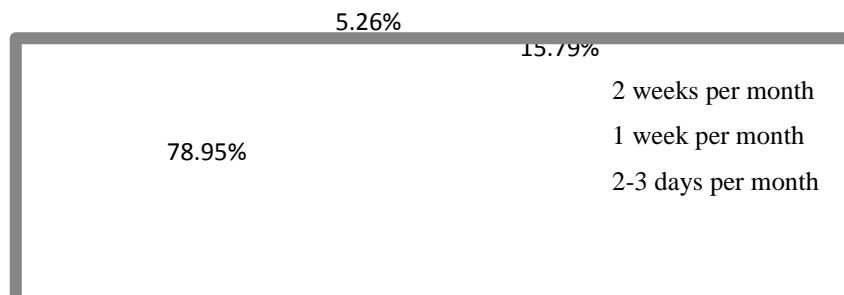


Figure 10. Number of approved days for home working
Source: own research

j. Awareness of the concept of intellectual capital

We considered interesting to analyze the respondents' awareness of the concept of intellectual capital. 31.06% of those interviewed has no knowledge on intellectual capital while almost the rest of respondents are aware of it. Among

these, 28.57% know only partially the concept and 40.37% stated that they fully known concept.

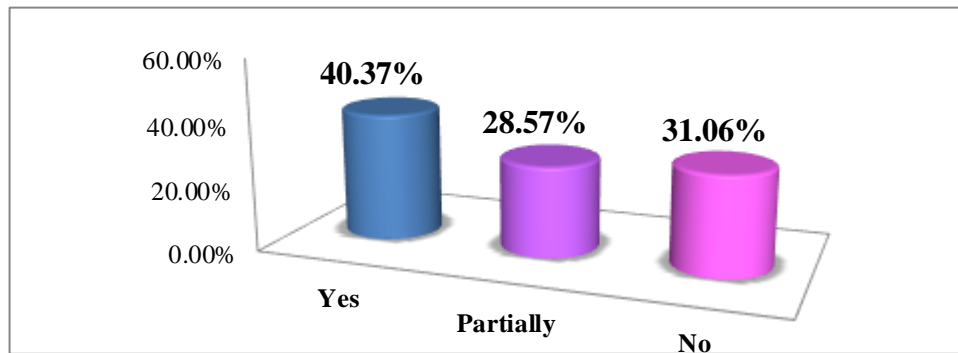


Figure 11. Awareness of intellectual capital concept
Source: own research

k. The importance of intellectual capital in companies that are aware of it

We previously found that 69.94% of young SMEs are aware of intellectual capital. But how important is for them? Less importance is recorded in 13.51% of the investigated companies, while most SMEs (35.14%) give intellectual capital greater importance. The situation is a positive one, as evidenced by the fact that 21.62% of SMEs give utmost importance to it (76-100%).

The situation shows an increase in focus on intellectual capital in young companies, over 50% of importance is given by 56.76% of the companies, young companies realizing the need for management development and enhancement of intellectual property.

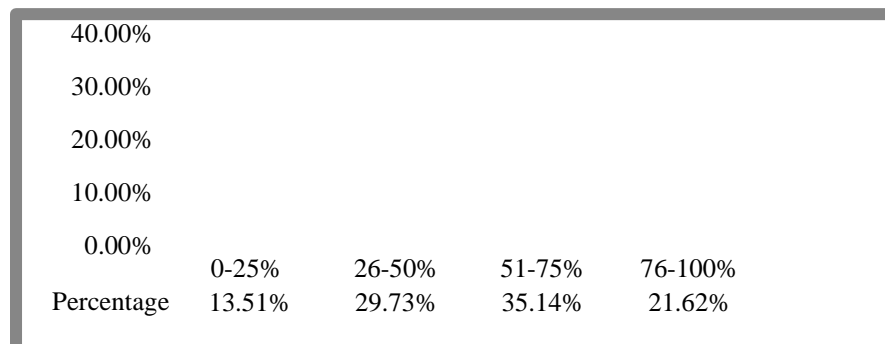


Figure 12. Importance of intellectual capital
Source: own research

5. Conclusions

- Experience (80.12%), learning capability (98.14%), specialized knowledge and skills and competence (both 100%) are appreciated as the most important criteria in assessing knowledge workers.
- Intellectualization and training are highly regarded due to significant share of employees with higher education, over 50% of all investigated SMEs employing higher education graduates.
- Trainings are the most usual learning method, followed by individual learning (36.65%). Only some SMEs use e-learning platforms (16,15%), while for many the experience of other colleagues is an important factor in learning.
- More than half of entrepreneurs (52.17%) consider their organization is a learning one.
- Regarding types of knowledge that they are focused on, know-how knowledge ranks first, followed by know-what knowledge.
- Most young SMEs provide training for 0-40% of employees.
- In terms of the number of days allocated to staff training, most companies (30.43%) allocate between 1 and 5 days of training.
- Only 11.80% of SMEs employing knowledge management allow staff to work from home.
- Most SMEs (35.14%) give intellectual capital greater importance while 21.62% considers it very important. The situation shows an increase in focus on intellectual capital in young companies.

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