

KNOWLEDGE WORKERS' MANAGEMENT

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The empirical research of this paper deals with knowledge workers in Romanian organizations from different fields of activity, with the purpose of distinguishing them from other types of employees and clarifying their profile and individual characteristics. Also, the paper presents the most important challenges concerning the knowledge workers' management: identifying, developing and evaluating knowledge workers, motivating and rewarding them, as well as describing specific structure of the organizations that rely mostly on knowledgeable workforce. The findings of the research represent an important factor in developing future efficient human resources strategies and practices regarding workers that fuel the knowledge economy.

Keywords: human resource management, knowledge worker characteristics, challenges, motivation

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1. Introduction

The fast-changing global economy generates the organization's need of differentiation and, as practice shows, this can be achieved through possessing resources and competencies that are difficult to imitate. In this context, when it comes to building and maintaining a competitive advantage, organizations need to focus their attention on knowledge creation.

Knowledge as the main resource of the century poses a large series of changes, from the way the economy and its' forces work, to the need of developing new management systems, to the way in which a worker thinks. The new era could be far more productive than the previous one, but in the same time can lead to certain confusion in respect with the changes that need to take place in order to get to the necessary performance level that guarantees survival and success.

Knowledge which is in the possession of human capital generates the added value that makes the importance of intangible assets significantly exceed the one of any other tangible assets. It has been asserted that, in order to deliver success, organizations need to acknowledge the importance of knowledge workers and that of their ability to synthesize theoretical and empirical knowledge, and apply it to design proper solutions and achieve the organization's objectives. As the knowledge based society becomes a reality for East-European countries, there have been a series of debates concerning the different types of workers and the way in which they have to be managed, especially when confronted with the phenomenon of brain-drain. In the new context, Romanian organizations have to undertake a series of transformations that require a reassessment of the traditional practices regarding the human resource management.

The paper gives readers insight into Romanian manager's approach in relation to the most important type of resource, the knowledge worker. Technological developments in recent years allow "workers to perform interconnected work through computer infrastructure", creating a community that Holsapple and Whinston define as knowledge-based organization. Peter Drucker considers the knowledge-based company as the organizational model of the XXIst century and draws its main characteristics: *composition dominated by professionals, small number of intermediate levels of hierarchical leadership and coordination ensured by means of non-authoritative style (standards, procedures, rules of cooperation and so on).*

Even since 1959, when he introduced us to the term of "knowledge worker", Peter Drucker became aware of the fact that applying the same "personnel management theories" on all the employees of an organization will lead no success. This is a problem that finally caught up with us and we need to develop new ways of creating different strategies for the most important resources.

2. Knowledge workers - a desired challenge

In order to research the management of knowledge work it is important to understand what knowledge workers are (Paton S., 2013). Since its' first mention, the knowledge worker became more and more embedded in our vocabulary and in the researches of many specialists that offer a wide range of definition to the term. In table no. 1 there is a summary of the most well-known and commonly accepted definitions:

There are many definitions for this special kind of resource and all of them acknowledge the fact that knowledge workers are employees that posses and handle knowledge on a daily basis. The differences appear when referring to the type of knowledge they have, the way in which they handle it and the outcomes of that.

Table 1. Most well-known accepted definitions for knowledge worker

Specialists	Definition of knowledge workers
Drucker	<p>☞ <i>Individuals who carry knowledge as a powerful resource which they, rather than the organization, own.</i></p> <p>☞ <i>High-level employees who apply theoretical and analytical knowledge, acquired through formal education, to develop new products or services.</i></p>
Vogt	☞ <i>Persons with the motivation and capacity to co-create new insights and the capability to communicate, coach and facilitate the implementation of new ideas.</i>
Horvath	☞ <i>Anyone who works for a living at the tasks of developing or using knowledge.</i>
Abbasi	☞ <i>Those employees who add value to the organization because of what they know.</i>
Davenport and Prusak	☞ <i>Those who create knowledge, such as product development engineers, or as those whose use of knowledge is a dominant aspect of their work, such as financial auditors.</i>
Griffin	<p>☞ <i>Workers who use information technology in creating new products or new business processes</i></p> <p>☞ <i>Those whose contribution to the organization in which they work is based on the knowledge that they possess</i></p>

Regarding the first aspect, Peter Drucker states that knowledge of the knowledge workers is acquired through formal education, whereas Nickols develops the idea that a great portion of that knowledge could also come from informal sources of education, like experience in a very specialized area, organizational knowledge and access to external knowledge.

Other specialists have focused on distinguishing between different types of knowledge workers. The literature provides many examples in this sense, classifications that use different criteria like provenance of the knowledge (how did they obtain that knowledge?), percentage of usage (all tasks they perform imply transformation of knowledge?), the type of task and its' level of creativity, the position in the organization etc.

Dove proposes a tree class differentiation of knowledge workers, depending on the type of outcome they create. The first category consists in the knowledge workers that are characterized by *portable knowledge work*. These workers possess knowledge that they can apply in a general manner and use it in various scenarios, using previously designed tools to do their job. Knowledge workers that use knowledge and create something new, innovative based on it, without doing a pre-established task, but rather defining and achieving a certain task for the very first time, are in the second category, being the *creators*. What they have done is used by other knowledge workers in order to perform their jobs. *Speciality knowledge workers* are the ones that are considered experts at what they do, and possess knowledge in applications that are specific to the task they do and their knowledge is not easily transferable to other areas.

Brelade and Harman propose a five level model hierarchy of the modern knowledge workers, as shown in figure no.1.

The first level of the pyramid refers to knowledge handlers or users. These are the employees that use knowledge in order to generate routine outputs.

The second level consists in knowledge experts which are qualified individuals in a professional role (Brelade S., Harman C.). The knowledge experts are often confused with knowledge managers, the next level in the pyramid. The latter category describes knowledge workers that ensure that knowledge and resource inputs are coordinated; they manage a combination of people, systems and technology (Brelade S., Harman C.).

The last two levels of the model are reserved for knowledge creators and knowledge capitalisers. As also stated by Dove, knowledge creators are the ones that use knowledge in order to develop new ideas and products, in an innovative manner. The last level is given to those that convert knowledge into finance. This is a difficult task because besides being specialists, knowledge workers need to possess also the ability of transforming this in money.



Figure 1. **Five level model hierarchy of the modern knowledge workers (Brelade and Harman)**

In reality, there is no such precise classification between the above mentioned categories. Actually, according to the model's creators, there is high chance that at least the last three levels will mix.

When talking about knowledge workers' characteristics, the literature offers a wide range of opinions but in essence, the traits of these special kind of employee that we should keep in mind, have been summarized by Drucker (Drucker P., 2002):

- Knowledge workers are paid for ideas, not hours.
- To knowledge workers, judgment is far more important than measurements in assessing performance.
- Knowledge workers are focused on outputs, results, and value, not on inputs, efforts, activities, and costs.
- Knowledge workers recognize that individuals, not jobs, have value.
- Knowledge workers need to have autonomy, and that entails responsibility.
- Knowledge workers want to be engaged, challenged, and valued.

No matter which kind of definition or classification of knowledge worker they consider the best, the economic reality determines managers to assess the employees they have, their possession of knowledge and willingness of using it in order to achieve the organization's objectives.

3. Knowledge organizations and management in Romania

Until a few years ago, in Romania, the knowledge economy was something that defined a theoretical economy, without having solid proof of its existing in practice. Nowadays the situation has changed and we can notice the struggle of managers for keeping up with the transformations needed in order to assure an organization's success. Of course, there is still much to be done in order to get to European and international standards.

A research conducted in 2010 on 1988 specialists, entitled "The health stage of Romanian management- diagnosis and solutions" draws some very sad conclusions about the gap between the type of management practiced in Romania, compared to the European one. Although we have access to information and the science of management has more than 300 systems, Romanian managers use just a

few of these. Another big problem is the fact that Romanians still use in a very high proportion an authoritarian management style, a kind that inhibits progress and communication.

According to the same research, human resource management is one of the areas that seems "to have been left behind, in the communist era". The biggest problems identified are the following:

- Low capacity of motivating human resources due to low importance given to training and lack of resources;
- The insufficient preoccupation given to recruiting the proper human resources;
- The incapability of using foreign know-how when it comes to attracting and retaining the most qualified persons;
- The lack of adaptation of the strategies to the external environment;
- The lack of strategies and policies for employees, especially in small and medium enterprises;
- The insufficient usage of the informatics resources.

To the above mentioned problems, we would add the lack of motivation of managers and human resource managers for developing strategies and for fighting in order to attract more capital in the human resource departments.

On the bright side, we do possess the human capital needed to progress, we just need to find a way of embracing foreign good practices and adapt them in a proper way to the Romanian context.

4. The challenges of managing knowledge workers

Changing knowledge management practices and global convergence of technology has redefined the nature of work (Horwitz F., 2003). Knowledge work is less tangible than manual work and workers' brains are the ones that comprise the means of production (Davenport, 2002).

The special group of workers, entitled knowledge workers, possesses particular skills that represent the competitive advantage of the organizations they belong to. Nowadays they are in high demand, but attracting them is not so simple. They are autonomous people who enjoy occupational advancement and mobility and resist a traditional command and control culture, therefore, new human resource systems and skills are required in order to employ them. (Horwitz F., 2003).

Factors such as changing workforce demographics have important effects on the nature of work and on human resource planning. The new human resource practices pose attraction and retention challenges for the younger, more mobile knowledge workers, and could cause a productivity decline if there is a failure to transfer valued knowledge from one generation to another or a failure to create an innovative organizational culture as the organizations change, and could result in lower competitiveness if such organizations are unable to retain their knowledge workers (Alvesson, 2000). Peter Drucker has foreseen this situation and he stated that "making knowledge workers productive will be the great management task of this century". This is the great challenge that human resources managers are confronted with nowadays.

Due to the immense importance of knowledge workers as the main resource of the modern society, the organizations must not only be designed to accept the knowledge worker but, more radically, be designed with the worker as the consideration around which the rest of the organization must fit (Paton S., 2013). Also, the processes of the organization must focus on communication and coordination rather than command and control because direct supervision of knowledge workers is difficult, so implementing an organizational design that relies upon a vertical hierarchy is impractical. Therefore a hierarchical structure must be replaced by a flat structure that is enabled (not controlled) by high levels of communication. Knowledge workers must be empowered to use the knowledge that they possess and be able to act autonomously or the value of their knowledge will never be unlocked.

The first step in a proper management for knowledge workers is identifying them. Most knowledge workers have spent their lifetime as all other employees. However, unlike other workers, knowledge workers are the owners of the most important resource, their knowledge. Managers need to identify these special workers because they are people who are looking for challenges and respond to them by creating new solutions or improvements. By doing this, they contribute to the development of the company in which they are employed, but at the same time they fulfill their passion and personal objectives. Providing knowledge workers with training, development, and succession planning, security and rewards to employees in exchange for their diminished interest in mobility is a necessary investment (Bartlett & Ghoshal, 2002).

The difficult task is to get to know them and recognize which are the areas and type of work they are most interested in. This is the best way of keeping them motivated. A McKinsey & Company study has concluded that for people with satisfactory salaries, some nonfinancial motivators are more effective than extra cash in building long-term employee engagement in most sectors, job functions, and business

contexts. Many financial rewards mainly generate short-term boosts of energy, which can have damaging unintended consequences. The economic crisis, with its imperative to reduce costs, gives business leaders a great opportunity to reassess the combination of financial and nonfinancial incentives that will serve their organizations.

When leaving an organization, other types of workers leave machines and equipment behind, but when knowledge workers leave an organization, they take the most precious resource, their knowledge. This is the main reason why there is an increased desire for finding the perfect way of managing knowledge workers. This task is one of complexity because the more complex the worker the more complex the task of identification, development and evaluation and consequently the more intricate motivation and rewards.

5. Methodology and findings

There is a large series of research focused on the attributes and work expectations of knowledge workers, but few of them present the point of view of HR practitioners. That is exactly the aim of the proposed article.

The research regarding the knowledge worker's management in Romania was conducted on a sample of 15 CEOs and human resource managers from Sibiu, one of most well-developed cities in the country. The managers selected are part of organizations with more than 100 employees, belonging to industries considered to be centered on knowledge workers: telecommunication, education, financial, cultural, services and technology.

The survey was offered with the purpose of finding out the particularities of managing knowledge workers. The data were collected through a questionnaire and in general, the questions were developed in order to provide information regarding: the level of familiarity of the managers with the knowledge worker concept, identifying the main characteristics of knowledge workers and other particularities of their management.

Appropriate statistical methods have been used for data analysis, supported by the SPSS program.

The main objectives of this study are:

- to determine whether managers from Sibiu area are familiar with the concept of knowledge workers;
- to determine the most appropriate definition for knowledge workers, one according to the local reality;
- to identify the main characteristics of knowledge workers;
- to find out if managers have a distinct human resource strategy for knowledge workers;
- to determine the most important characteristics of knowledge workers during the selection process;
- to identify the most successful motivation stimuli for local knowledge workers;
- to find out how is encouraged the transformation of tacit knowledge in explicit knowledge;
- to find out which is the key to successfully managing knowledge workers, from the managers point of view.

The first part of the questionnaire was designed in order to determine whether managers are familiar with the concept of knowledge workers and to identify the most appropriate definition for them. Fortunately, all of the respondents have heard and read about the concept.

When asked about the most appropriate knowledge workers definition, from their experience, 74% of them chose the following definition: *"Knowledge workers are people that create new ideas and are engaged in communication and dissemination of knowledge which they use as a resource for development"*. This definition underlines some very important features of knowledge work. In the minds of the managers, knowledge workers are not just simple information handlers, they are also generating new ideas and besides that, they also have the job of communicating it so it could be used further as a resource of development. 26 % of the respondents chose another definition, slightly different from the previous one: *"Knowledge workers are those whose work consists in creation and utilization of knowledge with a high level of modernity by intensively using high technology"*. This definition brings us closer to what we would define a specialist and underlines the unbreakable relationship there is between knowledge society and technological developments.

When asked about the characteristics of the knowledge workers from their organization (figure no.2), most of them chose the fact that they are specialized workers, followed by the distinct feature that they are difficult to maintain in the organization. This is not surprising considering that literature suggests that knowledge workers are very dynamic and in constant need for something exciting that they feel passionate about. These features underline the need for a different human resource strategy for knowledge workers. Because of their specific traits, knowledge workers need to be offered constant

attention and the proper motivators in order to keep them productive, satisfied and retained in the organization. This needs to be a joint effort of top management and human resource department, supported by a strong organizational culture that provides the proper environment for communication and appreciation of achievements.

Another identified characteristic is the fact that knowledge workers are high educated. Knowledge workers, as highly specialized need to be educated, the curious aspect is the percentage for *highly experienced criteria* (26.7). This could mean that, although experience is relevant, education is of high importance, at least for the analyzed industries. This is important for the recruiting strategies for these very special employees and emphasizes the crucial role of the local university, as the main pool for future specialists.

A characteristic with a high percentage is the fact that knowledge workers are intensive users of informatics systems. Managers think that most of their knowledge workers have the ability of using informatics systems, fact that states once again that we cannot talk about knowledge society without mentioning the incredible technological developments that have occurred, not only from the perspective of the development of certain new domains of activity, but also from the point of view of intensifying the communication and perfecting the systems needed for knowledge storage.

As the percentage for the *younger than 35 years old* criteria is just of 6.7%, it seems that most knowledge workers were educated more than ten years ago. This situation could be explained by the fact that, on a local level, more and more graduates chose to relocate after finishing school, leaving the community without many options when it comes to recruiting young employees. This is another example of a local environment related aspect that influences the way in which the human resource strategy needs to be created, in order to avoid future staffing problems.

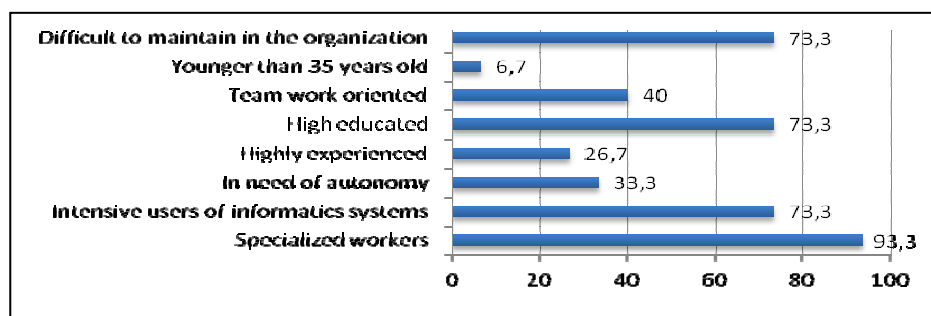


Figure 2. Characteristics of knowledge workers as identified by the managers

Further on, managers were asked if they have a special human resource strategy for knowledge workers and, unfortunately, in 66.7% of the cases the response is negative. Very few managers (5) stated that their organizations are developing special plans for their knowledge workers. This is consistent with the studies from a national level which point out the big gap there is between the European management and the Romanian one. The hope for a better situation in the future comes from the fact that more and more foreign organizations are interested in developing businesses in Sibiu area and this can act as a pressure factor for Romanian companies which need to adapt and become at least as attractive for knowledge workers as the foreign ones.

A five point semantic differential was employed in order to find out the importance of certain factors during the selection process of knowledge workers (figure no.3).

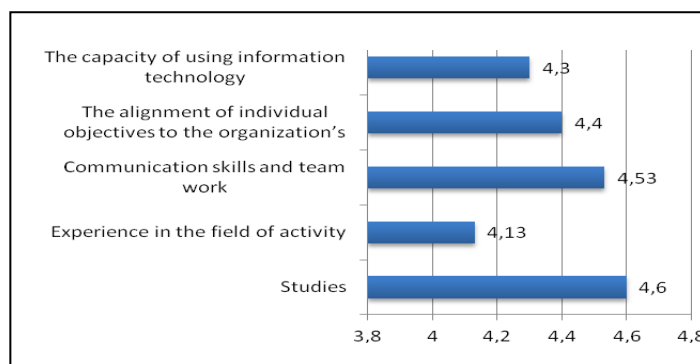


Figure 3. The means for the features of knowledge workers in the selection process

The highest mean, 4.6 was obtained, like expected after seeing the results from the main characteristics of knowledge workers, by *studies*. Communication skills and team work come as the second highest mean (4.53) and demonstrate the importance of having people skills, the kind that could be gained through formal, but also informal education. The alignment of personal objectives of the knowledge worker with the general objectives of the organization comes as another important factor to take into consideration when selecting knowledge workers. As one of the main goals of the human resource department is to retain these priceless workers in the organization, the assurance that their vision is consistent with the organization's becomes a key factor. As previously mentioned, knowledge workers are people usually hard to retain and this is why precautionary actions need to be taken in order to assure that they are fully engaged and that they are aware of all times about the targets of the company. Here is where career management and a good human resource planning system can make wonders for increasing the retention rate of knowledge workers.

Experience in the field of activity is the element with the lowest mean among all other criteria (4.13). This could be explained through the fact that managers prefer to attract high educated people and then nurture them in the organization. Modern actions like mentoring and coaching can come at this point as a substitute for experience.

The managers participating in the surveys were asked to assess the best motivation strategies for knowledge workers (figure no.4) through a five point semantic differential and none of the variables crossed the mean point of 3.27.

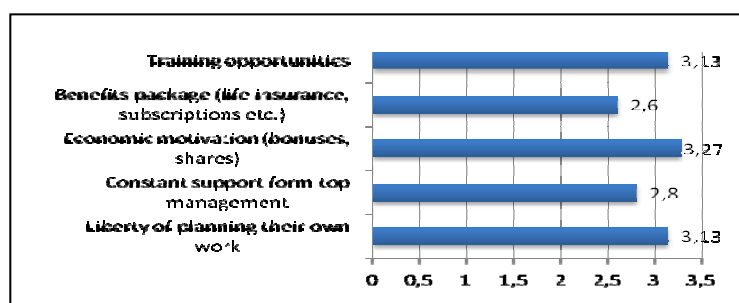


Figure 4. The means for the best motivation strategies

This could be an evidence that although with a certain significance, the mentioned strategies are not the most important when it comes to motivating knowledge workers. Since they are highly specialized and passionate, it is not unlikely that the best motivation is the work itself. This means a lot of work for the managers because they have to identify the best knowledge worker for a certain type of job, assuring that the work is appealing for him or her. Knowledge workers want to be engaged, challenged, and valued. If the organization doesn't give them that sense of purpose, the vision of achieving a better future, it will not capture their pride and their commitment (Baker, 2008).

The average mean of economic motivation variable is also consistent with the theory that financial motivators are important for motivation, but definitely not the most important for knowledge workers. Training opportunities and the liberty to plan their own work are aspects that shouldn't be ignored. The constant need for training is motivated also by the fact that most knowledge workers, as identified by the managers, have graduated more than 10 years ago, so they require constant ties with the new developments in different fields.

In the last part of the survey, managers were asked to answer to two open questions regarding the ways in which knowledge is transformed and about the key to a successful knowledge workers' management.

For the first question, *how is encouraged the transformation of tacit knowledge (held by knowledge workers) in explicit knowledge for the organization*, the manager's answers were similar and mentioned the crucial importance of informatics systems. These systems have a double role. First of all, they are the support for communication, for example intranet or other types of platforms where employees can share their experiences, and second of all, informatics systems are the tools with which we can store knowledge. Communication is the basis of this transformation and it has to be in the organization's policy and in its organizational culture. For a good transfer of information, it is recommended a combination of both formal and informal communication so that there will be established different types of working relationships which facilitate the exchange. Among other methods, it was mentioned the need of creating some specific documents for different tasks, like procedures. These type of documents need to be simple and their circuit has to be well-established.

Team work, the development of centers for regular meetings for people to share their experiences and brainstorming sessions are all very important actions that can be achieved without financial stress. In this way, knowledge workers will be provided with the needed environment for talking about their work. In order for this to happen, knowledge workers need to be sure that the knowledge that they possess is worth being shared and here is the point where appreciation from the top management is needed.

Regarding the key elements for successfully managing knowledge workers, the list below is a summary of all the ideas provided by the managers:

- A strong organizational culture focused on communication and acknowledgement of performances;
- A good communication between management and knowledge workers;
- An understanding of the concept of knowledge worker and development of a proper environment for knowledge creation, according to the individual needs of every knowledge worker;
- Emphasis on team work and creation of situations where knowledge workers are encouraged to share their experiences (regular meetings, different context, joined projects between departments etc.);
- Generating collection systems for procedures, best practices; emphasize the importance of these systems to generate real and lasting change to organization;
- A challenging work environment with learning and growth opportunities;
- Developing skills to coach and inspire knowledge workers to perform at peak levels;
- Finding the right type of work for a certain knowledge worker;
- Elimination of people who are not team players;
- Rewarding performance.

3. Conclusions

The acknowledgement of the importance of a proper human resource management for knowledge workers is imperative for any organization that aspires progress. A successful management in this sense is a big challenge for organizations since they have to priorities and find a way for attracting, motivating and retaining the keepers of their most precious assets.

No matter to which country or region they belong to, knowledge workers want to be engaged, challenged, and valued, according to their specific needs. If the organizations do not provide them with the sense of purpose, they will not capture their pride and their commitment (Baker, 2008).

Communication is the key to establishing a healthy and long relationship with knowledge workers. As Drucker stated, *"the one way to achieve leadership in the knowledge-based business is to spend time with the promising knowledge professionals: to get to know them and to be known by them; to mentor them and to listen to them; to challenge them and to encourage them."* This requires creating the proper set, an organizational culture that promotes, values, and rewards sharing knowledge that will enable employees to constantly achieve performance.

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