THE ROLE OF INFORMATION SYSTEMS IN THE PROCESS OF MOTIVATION. CASE STUDY: ADMINISTRATIVE SERVICES OF THE TECHNOLOGICAL EDUCATIONAL INSTITUTE OF WESTERN GREECE

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ABSTRACT: *The human factor is the most important capital of an organization, since its abilities, qualifications and performance can contribute to achieving its goals. The effort of executives to motivate workers to increase their work performance is more pressing than ever given the drop in workforce. The aim of this paper is to highlight the contribution of Human Resources Information Systems (HRIS) to the motivation of the administrative staff of the Technological Educational Institution (TEI) of Western Greece. The quantitative method was used, while the research was conducted by using closed-type questionnaires which were distributed to the administrative staff of the TEI of Western Greece. According to the findings of the research, HRIS support the motivation process and help strengthen the role of leading executives in this direction. The importance of HRIS is perceived by employees as they manage to improve working conditions, strengthen collaboration and communication among employees, provide job satisfaction and eventually motivate employees.*

KEYWORDS: Motivation, motivation methods and techniques, Human Resources Information Systems.

INTRODUCTION

The most competitive advantage of an organization is its human resources, which is distinguished for their intellectual and emotional intelligence, dedication, experience, skills and learning ability. It is the most demanding element of an organization's input into management (Terzidis & Tzortzakis, 2004). However, irrespective of the kind and methods of work involved, appropriate encouragement and motivation of the employees of an organization is required in order to achieve the desired results. There is a wealth of theories and a strong research interest in ways of motivating workers, as it is directly related to their effectiveness and efficiency. Leadership is an important factor in activating workers, which can be achieved through a variety of techniques and methods, but also through the use of appropriate Information Systems (IS), such as human resource management systems. To this end, the contribution of information systems, and in particular of HRIS, to an organization, and how these become tools in the hands of leaders, is being studied, so that there is an efficient conciliation between organizations and workers (Maditheti & Gomes, 2017).

Reducing the number of recruits and increasing the percentage of staff retiring from the agencies make it imperative to make use of the existing human resources. Beyond the amount of administrative procedures as a quantitative dimension, work tasks are characterized by complexity and particular requirements. Often, employee motivation techniques, as bibliographically described, are not sufficient on their own. So they can be modernized and

perform better with the help of IS, which are part of the everyday reality of organizations and with unlimited capabilities when they are used properly (Laudon & Laudon, 2014-2015).

THEORETICAL UNDERPINNING

Incitation and Motivation in the workplace

Incitation could be defined as an internal impulse that is based on values, stimulated by psycho-biological stimuli, activates human behavior towards oneself, the other and the environment, and furthermore supports the inherent satisfaction of the basic human drives and the desired goals (Moody & Pesut, 2006). The concept of incitation includes tension, direction and persistence. The intensity determines the extent to which the effort is being made to achieve the goal, the direction indicates the course of the individual's effort, while the persistence characterizes the duration of the individual's effort to achieve the goal (Robbins, Decenzo & Coulter, 2012).

Accordingly, in the working environment, incitation is considered to be all the actions, on the part of the administration, that provoke and maintain the worker's willingness to behave in a specific way (Perry & Wise, 1990). Employees in their efforts to meet their needs activate their abilities to meet the goals set by the organization. The type of work and its content affects the degree of motivation. However, incitation is a technique that is learned and this must be known to any organization that wants to be effective (Linder, 1998).

According to the equation of individual performance, its main components are: Performance = Individual Characteristics X Work Attendance X Organizational Support (Bourantas, 2002). Therefore, in addition to the specificities of the working environment, the application of motivation methods will do little if the knowledge and skills of the workers are not sufficient (Chytiris, 2001). In addition, organizations hire the person's time and skills, but the employees will not do the utmost if they do not wish to do it by themselves. Thus, executives are urged to activate workers' mood by shaping the necessary conditions. The third element of the equation concerns the support that the organization offers to each employee. This support relates to the appropriate equipment and to the possibility of taking initiatives by the subordinates (Bourantas, 2002).

In terms of motives, they are the ones that direct the behavior of individuals and push them to realize their goals. They can be distinguished in primary, general and secondary. Primary are related to basic human needs (hunger, thirst, avoidance of pain), while general motives are inherent and not determined by biological human needs. This category includes incentives stemming from the need to create, control and handle the environment. Finally, secondary incentives are acquired by individuals in the course of their lives and are influenced by the environment. They are the motives of success, social inclusion, prestige, influence (Luthans, 1992). Research shows that the key incentives, which improve the motivation of employees, are those of acquisition, bond, understanding and defense. In addition, transparency and fair distribution of resources among workers contributes to the satisfaction of the defense incentive (Nohria, Groysberg & ElingLee, 2008). Positive incentives include, in addition, safe working conditions, opportunities for initiative and creativity, satisfactory remuneration and other benefits. However, there are also negative motives such as inappropriate work environment and inadequate equipment (Xirotyri-Koufidou, 2001).

Information Systems: Functions and Types

Information Systems are a set of interrelated elements that collect, process, store and distribute information that supports decision-making and control over an organization (Laudon & Laudon, 2014-2015). They give flexibility to the management of organizations and contribute to their smooth and efficient operation. They are essentially a mechanism that serves the information needs of an organization and supports its activities, both at management and operating level, as well as in planning and decision making (Avital, 2003). A key dimension of their role is that, through them and the new technologies, better coordination of the work and communication between employees and employers can be achieved, while simultaneously the information necessary for the decision making is being provided (Laudon & Laudon, 2014-2015).

There are various IT systems, as a single system cannot provide all the information that is needed in an organization. In particular, transaction processing systems (TPS) provide the organization with information on all its activities and transactions, such as sales, receipts, payroll, credit granting. Business Intelligence Systems (BIS) analyze and provide data that provides comprehensive knowledge of situations in order to make the right administrative decisions. These systems cover the needs of all tiers of the administrative hierarchy. For middle managers they are particularly useful to monitor, control, make decisions, and perform administrative tasks.

Management Information Systems (MIS) is a category of Information Systems that provide information to middle managers, giving them reports on the organization's current performance, a component needed to control the organization, and to predict its future performance. MIS respond to daily real-life questions of the organization such as quarterly consumption of some kind, annual sales through simple summaries and comparisons rather than using sophisticated mathematical models. Their characteristics do not include flexibility and increased analytical capabilities (Laudon & Laudon, 2014-2015).

Decision Support Systems (DSS) provide decision-making on particular problems for which there is no predetermined solution process, such as how the timing of production will be affected if sales increase. These systems derive information from TPS and MIS while they can also use data from external sources (current stock prices). Then, Executive Support Systems (ESS) display graphs and data with the help of an interface that is usually used by senior management to make decisions. Now such systems include business intelligence analysis methods to be able to distinguish trends, forecast and decipher the data as closely as possible (Laudon & Laudon, 2014-2015).

Additionally, Human Resources Information Systems (HRIS) exist, which are the evolution of human resources management systems and are capable of recording hours, presentations, licenses and assignments of projects (Jahan, 2014). These systems ensure that staff is appropriately allocated to meet the organization's needs. In addition, salary, overtime and bonuses are automatically calculated. Information is provided on consistent workers and for those who are late, the actual hours of employment of the organization's employees are recorded (Wallace, 2014). They also play an important role in increasing productivity through the selection of appropriate staff and the reduction of redundancies (Papalexandri & Bourantas, 2003). Another sub-system of HRIS is talent management applications, which draw on information from the organization's IT systems to identify talent-workers in order to strengthen with them departments with little experience. These subsystems focus on the employees'

lifecycle, with data from their appointment, evaluation reports, career development, pay, e-learning, and the succession process when they retire (Davarpanah & Mohamed, 2013; Wallace, 2014).

Finally, these systems are also linked to employee performance assessment, which is objectively motivated by employees, as they contain qualification scales for qualifications and competencies in fields of work. Organizations can adapt the criteria to their own data. When the evaluation is conducted, the system will score, compare, while the reviewers will be asked to confirm the score, allowing them to be open to discussions that interfere with employees from the initial evaluation and the reassessment of data that had probably not been considered up to that point (Papalexandri, Bourantas, 2003).

Information systems and motivation

The advantages of using the HRIS by an organization in connection with the motivation of employees include the following:

- Decrease in time for the implementation of the work.

- Improving the way people work, communicate and work together.

- Solving unscheduled problems.

- Creating accountability for people who implement the job.

- Large-scale data handling (Zavlanos, 2002).

All of the above except that they create better working conditions and therefore employee satisfaction, each act individually in their incitement. When the time required to complete a task is reduced, people are forced to do extra work they had not planned to do. Improving workflow, communication and collaboration create the conditions for building interpersonal relationships within the workplace that enhance the motivation of the bond and the positive working climate. The ability to solve unscheduled problems and the ease of manipulating the volume of data for large organizations creates self-confidence for employees and makes them work harder, causing them to cope with the most difficult problems. Increased professional responsibilities lead to quicker action (Gupta, 2013).

METHODOLOGY

Research aim

The purpose of this research is to investigate the contribution of HRIS to the motivation of the administrative staff of the TEI of Western Greece. In particular, we will investigate:

- What impact do the information systems have on the motivation of the employees of the TEI of Western Greece?

- Does the level of study of the employees of the TEI of Western Greece affect their view of the efficiency and speed of their work through the information systems?

- Are the information systems of the Technological Educational Institute of Western Greece creating conditions of motivation for the employees of Western Greece?

Research Sample

The research was attended by the administrative staff of TEI of Western Greece, serving either as permanent or private law for an indefinite period. The size of the sample is 123 administrators. The questionnaires were anonymous and distributed by the researcher to 137 administrators of the Technological Educational Institute. A total of 123 respondents were replied and returned (Response rate 89.78%).

Structure of the Questionnaire

The "Job satisfaction survey" (JSS, 1985) was selected to conduct the survey. This is a structured, weighted reliable questionnaire developed by Paul Spector, Professor of Psychology at South Florida University, and measures the main dimensions of work satisfaction. The questionnaire explores the professional satisfaction of participants in terms of salary, promotions, relationships with the boss, benefits (money or not), recognition, organization procedures, relations with colleagues, nature of work and communication. In the questionnaire of this paper, JSS questions were used, while there were also some questions added, based on a bibliographic review, to investigate the impact of the HRIS on motivation. The questionnaire is divided into three sections and includes fifty seven (57) questions. The first section deals with demographic data, the second is about motivation factors and administrative officers were asked to describe whether they agree or disagree with the forty-three (43) queries, all closed-ended, circling a number of one (1) to five (five-level Likert scale), with the following graduation: 1 = Absolutely disagree, 2 = Disagree, 3 = Neither agree nor disagree 4 = Agree 5 = Absolutely agree (Likert, 1932). The third section of the questionnaire, which is also a point of reference for this article, concerns the information systems of the institution and the investigation of their relationship to motivation. There are seven dichotomous questions.

Data analysis

The questionnaires were processed by SPSS for Windows (v. 9.0). As far as the reliability of the scale, the Cronbach's Alpha, the statistical index of internal consistency, as a whole was 0.867, which represents satisfactory quality of the measurement.

Research Results

Employees fully agree that information systems with the qualities of HRTIS would enhance the communication and collaboration of employees, identify their educational needs, assess the qualifications of the employees and, depending on their performance, they could also propose some kind of reward. In particular, 56% of employees fully agree and 38% simply agree that these information systems would help their job become faster and more efficient. 84% of employees agree that they could enhance cooperation and communication with each other, while only 4% disagree with this view (1% disagree strongly, 3% disagree). 48% of employees agree that information system is needed to evaluate their performance. With this view agree 29% of the participants, while only 5% disagree. In total, 88% believe that the information system should automatically inform staff on pay, leave days, etc., while 77% of surveyed employees believe there should be an information system that will identify training needs and will design the appropriate training program. 16% of respondents have a neutral attitude.

Finally, 95.1% of the respondents believe that there is no information system in their organization that suggests some kind of bonuses depending on the employee's performance. Also, 84.6% believe that there is no information system in their organization that automatically informs about personalized information issues. The corresponding percentage for the absence of a system for assessing the qualifications of the employees in their position is 97.6%. Then, 95.9% believe that there is no information system that identifies employees' educational needs and plans an appropriate training program. Similarly, 95.9% consider that there is no system that evaluates the performance of employees. 61% consider that there is no system to enhance communication and cooperation between employees. Finally, their 72.4% response to the question of whether there is an information system in the organization that helps to make their work faster and more efficient.

Regarding the effect of the variable level of study on respondents' answers, 61% of secondary education graduates are totally in agreement, while 29.3% simply agree that there is a need for an Information System that would help their work become shorter and more efficient. 62.8% of graduates of Technological Educational Institutions also agree fully with this view, while 30.2% simply agree. At Universities Alumni, we see 36.4% agreeing totally and 63.6% just agree. Finally, the holders of a Master's degree agree 93.8 (I totally agree & agree). In total, only 4 people out of 123 disagree, while 4 people said that "I do not even disagree, nor agree."

DISCUSSION

According to the findings of the survey, interesting conclusions have emerged. The educational level of the employees does not differentiate the views regarding the efficiency and the acceleration of the time of their work through the information systems. Moreover, regardless of the level of study, all employees accept that IT systems are necessary, since they identify human needs and tend to satisfy them. Almost all employees (56% + 38%) agree that information systems would help their work be done more quickly and efficiently. Nevertheless, in the Technological Educational System, there are no computerized systems, such as HRIS, which reward high performance, enhance collaboration and communication, evaluate performance, identify learning needs, design training programs, evaluate the employees' qualifications, to inform about personalized information issues.

The theoretical part of the article presented the advantages offered by human resources management information systems in relation to motivation. These systems, among others, have rating scales for skills and competencies that organizations can adapt and enter criteria with their own data, enabling employees to evaluate performance. Evaluation is a method of motivation, since it determines the course and evolution of employees within the organization and can be implemented with the help of information systems (Laudon & Laudon, 2014-2015). In the present survey, the percentage of employees who find it necessary to have a system that would evaluate their performance is 48% for those who agree while 29% fully agree with this perspective.

Another method of motivation is the training of staff. HRIS can identify training needs for employees as well as design an appropriate training program. 77% of the TEI employees considers it necessary to have an information system that would identify its educational needs and would design an appropriate training program. Developing human resources skills and updating knowledge is necessary due to developments in new technologies and changing

working conditions. Training programs are a real proof that the organization is interested in the future of its employees.

Communication is one of the most important factors of motivation since, as has already been mentioned (Zavlanos, 2002), it contributes to the acceptance of organizations' goals and maximizes motivation. Employees surveyed agree to agree totally (42% and 42% respectively) to a total of 84% that they consider it necessary to have HRIS, which would enhance collaboration and communication between employees. A fact that would contribute to the creation of a pleasant work environment and to the creation of interpersonal relations within the workplace that strengthen the motivation of the bond.

From the above it can be concluded that appropriate information systems are valuable tools for the leaders of the Technological Educational Institute of Western Greece, since they can support the process of motivation and help to strengthen the role of executives in this direction. They provide important functions for each organization and should be used, as has been shown in this research. The ease of manipulating large volumes of data with the help of information systems creates self-confidence for employees and makes them work with zeal. In addition, they manage to improve working conditions, strengthen collaboration and communication among employees, provide job satisfaction and eventually motivate workers.

When employees feel that they are an integral part of the organization, by engaging in internal processes, commitment and commitment are ensured. The feeling of employee satisfaction is an incentive for motivation. Ensuring meritocracy, transparency, security, trust, and justice set the foundations for motivation (Moody & Pesut, 2006). Organizations 'administrations need to realize that they need to create conditions to meet their employees' needs, respecting their personality and giving them the opportunity to make the most of their abilities.

Future Research

Of particular interest would be research in the future between Higher Education Institutions that have and use IT systems and institutions that do not have them. By comparing efficiency and effectiveness between these Institutions, useful conclusions could be drawn for the incentive capacity of information systems and the emergence of information systems that are appropriate to serve the administrative functions of the Higher Institutions, which contribute to the achievement of the objectives and at the same time satisfy the employees who use them. Such research is considered necessary, given that HRIS is something new in Greece, and it is likely that their lack in most Higher Education Institutions.

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