The Importance of Visual Management as a Motivator of Human Capital and Optimization of the Results of the Productive System

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Author’s contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

ABSTRACT

This paper presents new achievements in people management that allow for the increase of competitive edge of organizations. It also points out the importance of the implementation of new production methods such as process automation or agility and shows the need of employees’ participation and their value within the organization, demonstrating the fundamental importance of people for business growth and development. By this article the management of human resources is highlighted and the resulting optimization of the production system through the visual management and its quality tools is shown. In this sense, a conceptual approach to talent guidance based on management and productive control was used in this article. Modern corporations pursue results through production management system improvements, automation of production lines and advancement of technological skills. The development of production techniques such as Just-in-Time and Kanban supports decision making, facilitates process management and benefits human assets. Retaining of brains has become the prime issue for the success of corporations. These profound changes have given rise to a new society, the knowledge society. It is demonstrated that human capital in organizations has the individual as the main character and generator of knowledge, being a differential in the establishment of indicators and in obtaining results to achieve new goals and the success of the organization. Recent studies have shown relevant results in relation to the influence of the companies favorable organizational climate on the motivation of its employees and in interviews conducted in these studies, the percentages are observed above 73%. The study of the strategies used by the companies shows as results the valorization of the talent as competitive differential and stimulator of the process of innovation of the team and of the project management, besides having a strategic vision of the business in which the organization is inserted.
Keywords: Human capital; visual management; production systems; motivation; optimization.

1. INTRODUCTION

From the beginning of humanity man participates directly in production in general. In the past, industries were dominated by knowledge and capital holders, who used this power against the less enlightened and limited the reasoning capacity of their employees, making them submissive and executing tasks totally subordinate to their superiors, with no prospect of change of scenario, where with the passage of time the vision of the machine and the executioner of tasks were losing force. Without a human capital management, the company loses its strength in the market, because its main assets are its employees, and where the road to success will be traced.

Organizations need professionals who know how to make decisions, coordinate multiple activities, relate well to people, perceive their company in an integrated way and get their knowledge across to their team. It is important to be dynamic, flexible, creative, visionary and entrepreneurial, “as discussed by Filard [1]”.

The evolution of machines and their control processes were extremely important for companies. A product may become obsolete in a short time and must have a well aligned process so that great losses are avoided.

The production manager needs to be constantly aware of changes and technological innovations, seeking to quickly develop new products and processes or to update existing ones so as not to risk being absorbed by the market and its demands.

The implantation of new technologies and information systems gave to the managers important production tools that allow improvement of quality and productivity.

Nowadays, the speed of information compels companies, embedded in an increasingly competitive market to a rampant pursuit of cost reduction. If not successful, the result is the closing down of many traditional, bureaucratic, heavy and inefficient organizations that not adapted new administration procedures.

Technological advancements have optimized production processes with computerized, automated, and robotic systems, enabling the management by great talent in place of the former task executor. There are deep changes from a static, uninspired and fruitless reengineering, to a flexible, efficient, productive technological model with thinking mentality and management acumen for the process. This era of knowledge compelled a need to change the vision and prioritize the assessment of the main wealth of the companies: their employees. Recognizing the value of human capital and of the individual as a knowledge-generating character in organizations, has become fundamental for the survival of the company in the market.

The objective of this article was to study the importance of human capital management in the optimization of the results of the production system by means of the visual management and its quality tools.

The research method chosen was one that allowed better observance to the objective of motivation and presented tools for its achievement in relation to human capital management in the organizations as well as answers to the questions that guided the study. The management of human capital was considered as an independent variable and the optimization of the results of the productive system through the visual management as a dependent variable.

To identify what motivates the people in their work environment, a bibliographical research was carried out. There the concepts of motivation through the vision of several authors were revised. Also, the behavior of the individuals related to the company and the analysis of several theories as well as experiments realized by the authors who applied visual management methods were studied.

With this study we hope to contribute to the existing knowledge base and show how important is the investment in human capital as a motivator for improvement of professional performance based on visual management.

2. MANAGEMENT OF HUMAN CAPITAL

The organization that consolidates in the market through the success in the productive area is characterized by the efficient production of its products with a low cost. With this change of
market, there was a need to remodel the manufacturing structure, turning to intangible assets as a differential in the quality of production, that is, in the management of human capital.

The emphasis on the study of intangible assets began in the mid-1980s where their occurrences in the business area were recorded by elements of the intellectual capital. The focus was on human capital (competencies of individuals), organization (innovation, brand and image of the company) and relationship (relation with clients), “as discussed by Vaz [2]”.

Research shows that the productivity index can reach 70% in companies in which the professionals are motivated, against a scarce 8% for a demotivated team, “as discussed by Laruccia [3]”.

“As discussed by Silva [4]”, motivation, based on financial rewards and praise, influences and increases employee productivity.

The word motivation derives from the Latin “motifs, movere”, which means to move. To understand people’s behavior, it is necessary to know their motivation, “as discussed by Chiavenato [5]”.

Motivation can be defined as the process responsible for the intensity, direction and persistence of a person’s efforts to achieve a particular goal, “as discussed by Coelho [6]”.

Companies must maintain motivation as the main strategy to attract, retain, develop and make the most of human talent, that will increasingly become the main competitive advantage.

This context demands that the worker constantly updates, flexibilizes and adapts himself to the new demands of the global work environment. The employee is required to have a type of knowledge not restricted only to the technical-operational, but that involves attitude, communication skills and innovation, as well as teamwork.

It is understood that human capital ceased to be expense and became a great profit source. Investing in this resource should be a principle in companies. To them, to valorize the employee should be understood as a form of investment and not an outflow. It is necessary for organizations to realize that investing in their human capital will create greater financial earnings and that through this human capital they will have access to information and knowledge, tools that allow for competitive advantage, “as discussed by Moreira [7]”.

The motivation can be influenced by the context, in different situations the same incentive may not get the same result. The motivation must be continuous and not be an isolated act, otherwise the results will be only momentary, applying the same stimulus will not always have the same impact, nor the same intensity. It should not be assumed that employees will always work at top performance or that they will always be self-motivated, so it is necessary to create management strategies. Non-monetary compensation systems have gained importance over the years, some companies have redefined rewards schemes, trying to meet the individual needs of employees, aiming to boost their motivation, satisfaction and performance, “as discussed by Pinto [8]”.

Some success cases were obtained through motivational processes based on fitness programs. Some food producers of southern Brazil obtained 27% increase of productivity and 40% drop in work-related accidents. Xerox do Brasil and Cecrisa obtained productivity increases of 39% and 17%, respectively, “as discussed by Pinto [8]”.

Motivation can act as a driving force of human behavior and is an important element in any sphere of life, but it has a special value at the workplace because it is in this environment that a large part of life is spent. That’s why it must be positive and not alienated and oppressive, but rather a way to produce satisfaction “as discussed by Schadeck [9]”.

The results of a study carried out in the banking area confirmed that managers recognize human capital management as an important instrument to the organization’s success and the sustainability of its results, but they have difficulty in exploiting and managing it to optimize human capital. Collaborators also recognize the importance of human capital management in achieving the organization’s results, even though they consider that there is no optimization in the use of their competencies, “as discussed by Araújo [10]”.

“As discussed by Carmo [11]” a case study on the valuation of human capital was carried out and it was realized that practices that value
employees such as serving coffee, celebrating the anniversary of the store for all, year-end celebrations on company expense, autonomy to sell products, reminding employees and even their children anniversary among other actions, increased the motivation of 92% of employees to work in the company and 67% of employees consider that it is a growth factor for the company.

“As discussed by Pinto [8]”, in a survey carried out in a textile establishment, all employees said that daily recognition of the company is a motivational factor.

In this global scenario, marked by competition between organizations, it is noticed that the pressure on executive management to improve the efficiency of its operations has increased. Better management mechanisms aiming the improvement of productive performance are used. From that point, organizations began to direct their efforts to stimulate human capital more efficiently and to obtain positive results in their operations. The benefits policy is a tool used as a strategy by companies to retain talent and increase the motivation of their employees. However, measuring people management results in relation to organizational performance represents one of the greatest challenges in the 21st century, since it is a relationship that has already been shown, but for which there are still no obvious causal explanations, “as discussed by Silveira [12]”.

In the short term the increases in the quantity of products are due to the increase of the variable labor input. This way of raising production is subject to the declining income law, which implies the reduction of marginal labor productivity (RMLP) as labor needs expand.

Therefore, overcoming the declining income law requires firms to make investments that move the RMLP upwards. Specifically, the company can modify fixed capital levels, technological standards and the level of human capital. However, it is usually a much more complex decision to change technological standards or to change the scale of production because they involve more money and therefore more risk. Therefore, investments in human capital have been given great value because they increase the productivity without requiring large expenditures, as it would be in the case of investing in physical capital or increasing technology. Thus, in countries such as Brazil, where capital is really a scarce and expensive factor, firms must invest in raising the quality of work, through investments in training, formal and informal qualification of human resources, as well as in the motivation of their employees. “as discussed by Lima [13]”.

Contemporary changes in the organizational environment and new concepts in people management have driven discussions about the impact and role of management in the organizational environment and how to increase efficiency of organizations in terms of productivity, “as discussed by Silveira [14]”.

“As discussed by Lima [13]”, the objectives of an organization will only be achieved successfully if they are focused on the increase of human value through training and social integration of individuals, motivation, participation and decent remuneration. There is some consensus that an organization that does not provide its members with conditions to meet their needs will face serious performance and efficiency problems. In fact, the success of an organization is closely linked to the staff responsible for quality increase of its products and / or services as well as for its competitive efficiency in the market.

The results and productivity of the organization are the outcome of practices and actions of several functions, and not only of an isolated function. This generates a methodological complexity in identifying the specific contribution of employee management to productivity, “as discussed by Silveira [14]”.

“As discussed by Cercilier [15]” the results of people management practices on productivity of organizations have a mean relationship between investing in social benefits and raising the productivity index. Given this, it is suggested that there is not a single way to influence productivity in organizations, since there are several other factors that can explain this contribution. The results and productivity of an organization are not the product of a single function or department, as the management of human capital, but of several practices and actions that together will impact the outcome.

In this sense, new management techniques can influence the motivation of human capital, such as visual management and management by indicators.
3. VISUAL MANAGEMENT

“As discussed by De Oliveira [16]” the assessment of organizational performance is a preponderant factor to maintain the competitiveness of companies, functioning as an important tool to improve production and quality of services provided to customers and to achieve business excellence.

One of the tools for measuring organizational performance that can be worked with emphasis on the motivation of human capital is visual management. It is a tool able to increase productivity, improve quality, advance internal communication and motivation, enhance information flow and support decision making.

Visual Management is defined as a management system that allows improving organizational performance through the connection and alignment of vision, basic values, objectives and culture with other types of management, such as process-, stock-, production- and quality managements, etc., with participants, through stimuli, which directly address one or more of the five human senses such as sight, hearing, touch, smell and taste, “as discussed by Milnitz [17].”

The lean approach lectures that visual management assists in controlling deadlines and indicators without necessarily needing a software or high investments: it can be effective quite simply, “as discussed by Dal Forno [18].”

“As discussed by Silva [19]” the three main benefits that the visual management brings to the companies are:

• Data collected from the most diverse business processes are understood and printed simultaneously for different managers, who can monitor the performance of these processes in real time and when necessary, have the time to make critical decisions and correct any faults.
• The commitment of the entire staff and employees is increased by the simple fact that they become aware of goals and relevant information of the company and start to see management in a transparent and suitable way.
• With the implementation of visual management, a management culture based on credible facts and data is created, so that the professionals involved can better assimilate the motives and intentions of the decisions taken.

To visual management be effective, it is not enough that outside indicators are chosen and secured by the company, as this does not lead to any result, and may even lead to confusion. It is necessary to select the most appropriate indicators, organize them clearly and present them to the right people or put them in the right places. A company that works without management indicators or even works with uncertain indicators may be operating blindly, which can lead this company to work with higher costs and lower quality and so remove it from the modern and highly competitive markets. It can be said that “visual management” is used to inform, spread knowledge, integrate and motivate people and assist in decision making, “as discussed by Silva [20].”

In order to construct the sought-after management plan in a standardized and organized way, the 5W2H method can be used. This means what, why, who, where, when, how, how and how much, respectively. Through answers to these questions the group can plan the actions needed for structuring and implementing the visual management in a standardized and organized way, guaranteeing the execution of the activities as wanted by the group.

An example of a visual management is the kanban board that is used to track the movement and the replacement needs of items supplied by internal or external providers at a workstation.

The board enables the operators to be visually oriented on what is to be produced, assembled, ordered or moved, as well as to monitor the company’s inventory level.

Likewise, the seven quality tools (flowcharts, check list, Pareto chart, cause and effect diagrams, histograms, scatter diagrams and control charts) and the PDCA analysis methodology (Plan, Do, Check and Act) can be used in visual management so that the tools and methodology are exposed in visible dashboards within the company.

The flow chart is a graphical representation that demonstrates the development of the process and its stages, highlighting which operational phases are performed before others and which can be done in parallel.
The check list is the quality tool used to facilitate and organize the process of collecting and recording data and contribute to the optimization and the subsequent analysis of the data obtained.

The Pareto chart is a universal technique that helps to classify and prioritize problems, by separating them in two classes: the few vital and the many trivial ones. Efforts should be concentrated on identifying "vital" losses because once identified, it will be possible to eliminate almost all losses, leaving the "trivial" to a later solution.

The cause and effect diagram is a tool used to present the relationship between a result of a process (effect) and the factors (cause) of the process that, for technical reasons can disturb the considered result.

The histogram clearly shows how often a given value or group of values occurs.

The dispersion diagram is a graph used to visualize the type of relationship between two variables, that is, the expected change in one of the variables, because of the changes undergone by the other variable.

The control chart is the visual representation of a quality characteristic measured or calculated for a sample of items, plotted according to the sample number or other time indicator variable (chronological order).

The development of visual management can become a fundamental part of the methodology of analysis and problem-solving Plan, Do, Check and Act (PDCA). Usually it is applied in quality management systems of the companies that aim for the improvement of activities, assuring the success of actions not related to any area or sector. In the “Plan” phase there are five steps: problem identification, goal setting, event investigation, analysis of causes and action plan. In step “Do” the stipulated goals and objectives should be applied in practice. In the “Check” phase, all the results obtained are recorded, carrying out the verification of previously performed actions. Finally, the “Act” step symbolizes the actions of prevention, improvement, correction of not planned items, also confirms that the taken actions were effective and should be standardized.

Just achieving good results is not enough, it is necessary to know why they were accomplished and to follow the variations, thus allowing a better alignment of internal processes. Good results are an important help and motivator for involved people who can have a vision of their segment as a business unit with goals to be reached.

“As discussed by Oliveira [21]" after the implantation of visual management tool in a company of machining balls and bearings several changes happened that can be clearly seen as improvements, as much in productivity, efficiency and organization, as in questions of workers socialization and satisfaction. Employees began to have a greater commitment to the company, feeling satisfied and valued when they meet their goals and give suggestions for the processes, participating in all stages. The production time and the number of balls and bearings produced improved 36.37% and 18.92%, respectively. From these results it is possible to prove the good performance of the tool in criteria of productivity, as well as regarding the organization of the company and increment of employee motivation. The implementation of the visual tool provided a cultural change in the organization, helping the visualization of cases in processes and decisions making. Everyone observed the goals, was committed to the process and cared about how information circulated within the company.

In an offshore engineering and shipbuilding services company, a visual management panel was created for indicator planning and evaluating team results. It was observed that the panel created a shared participation, that is, the routine of the panels brought a sense of ownership to the workers. Now they are more involved with the job and have a greater systemic vision of what happens in the area. The team panel highlighted how each person contributed to his sector and provided greater commitment and motivation of the employees, “as discussed by Amorim [22].”

“As discussed by Milnitz [17]” it was possible to realize that visual management changed people inside the factory, everyone was engaged and committed to the process and therefore concerned with the results and how information was being handled. In a practical application of a structured method using visual management in companies, the action was divided in five phases. First the construction of a consensus on the application of visual management, then defining the priority objectives of the application and choice of the visual devices was done. Planning the construction of this management
and building an initial layout that enabled the implementation of the improvement followed. Consequently, it was realized that visual management provided a cultural change, where information became understandable, objective and available at the right time. The facility of decision making allowed positive results for everyone in the organization.

Productivity improvements are a common result of the use of visual management. In an environment with this type of management, employees are constantly encouraged to improve their less developed skills and at the same time become aware of the activities over which they have more control. The use of right incentives can help and enhance the benefits of visual management as they empower employees to be responsible for their records and results, “as discussed by Moutinho [23]”.

4. CONCLUSION AND RECOMMENDATIONS

This paper presents the new market trends in people management as a competitive advantage and the importance of the implementation of new productive methods. Aiming at automation and agility of the processes also demonstrates the roles played by employees and their importance within organizations. The paper also shows that employees have become more important for the growth and development of enterprises and are fundamental to their operation.

The valuation of human capital is the great differential for institutions to stand out among their competitors. These institutions invest in training and seek to identify the profile of professionals of the "moment", who must be able to innovate processes, develop new products, manage teams and projects. Retention of these talents who must have strategic vision of the business in which the organization is inserted, should occur through motivation, training and knowledge enhancement, so minimizing the exodus of these brains from the company and seek their cooperation to achieve own objectives and that of the organization.

This new form of management has a strategic importance with the purpose to integrate not only technology to improve processes but also to identify and shape talents acting in a democratic and fair way. Within this context where everyone works in a friendly way and can produce more, securing the working institution and retaining that employee, benefits both parties and allows success of the organization.

The visual management is an excellent option for improving employees’ performance indicators and motivation. It can be used by lean manufacturing technique tools and methodologies, such as Kanban, seven quality tools and PDCA, where the results can be displayed on panels within several sectors of the company.

Quoted in literature review, visual management practices show extremely satisfactory results regarding performance and motivational indicators in various business sectors.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES


10. Araújo CF. A valorização do capital humano nos novos paradigmas do setor bancário: Um estudo de caso. Instituto politécnico de Lisboa; 2015.


