Creativity and Innovation in Business and Education

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THE ESSENCE AND CONDITIONS OF CREATIVITY IN MODERN ORGANIZATIONS

ABSTRACT

All organizations operating in the complex and turbulent market should make continuous changes in many areas of their operation. A key factor enabling the starting of innovative solutions is the creativity of people. The purpose of this article is to present the essence, definitions and conditions of the creativity, the main problems of employees and methods of stimulation.

Keywords: creativity, modern organizations.

1. INTRODUCTION

Creativity, innovation and entrepreneurship are the foundation that allows you to make changes. These changes are focused on modernity and efficiency of the functioning of all modern organizations (non-governmental, public, and especially business). The very notion of creativity (described in Chapter 2) is defined as a way of creative thinking aimed to break the existing schemes and the use of knowledge in the process of generating new ideas. Creative attitude implies the creation of both new ideas and products and services that bring many tangible benefits to organizations and their environment. It is therefore important to define the problems associated with creativity among employees who work in intelligent innovative organizations, and then select the appropriate methods of stimulation. This will allow for the creation and fast-paced implementation of creative changes of intense competitiveness and modernity, which in turn will be appreciated among customers. It is worth noting the link between creativity and innovation and entrepreneurship defined as „the process of discovering and shaping opportunities for creating new value through innovation, acquisition of necessary resources and management of value process" (Targalski, Francik 2009: 19).

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2. DEFINITIONS OF CREATIVITY AND CREATIONS

Below, the authors of this article present the summary list of definitions of creation and creativity, taking into account the available sources of foreign and Polish literature, and attempt to differentiate them according to the criteria mentioned by Wojtczuk-Turek.

Table 1. Definitions of creativity and creations

Differentiation criteria	Definition	Author
Organisational approach – analysis at the level of behaviour and competence; reference to innovativeness	Creativity „is treated as a causative agent of innovativeness and its occurrence is a function of the existence of professional knowledge, task motivation and creative abilities" (Amabile 1988: 123–16.)	T. M. Amabile
Organisational approach – reference to creation and innovativeness	„Human behaviour, consisting in generating new and valuable artefacts, which aims to satisfy the needs or solve problems" (Brzeziński 2009: 14)	M. Brzeziński
Organisational approach – category of process and action	Analysis of the issue of creativity, distinguishing the three mutually determined dimensions of creation: understood as a creative process; as a personality trait; as a product/cre-ation/ piece of work (Dyrda 2000: 21)	B. Dyrda
Organisational approach – reference to creation and innovativeness	Creativity is interpreted as „an individual's ability to generate new ideas or a new perspective on ideas already existing" (Griffin 2004: 504)	R. W. Griffin
Personality approach – associated with personality traits: sensitivity, motivation, openness, and attitude and creative skills	Creativity „is presented as an individualistic potential to achieve significant results in terms of creation" (Karwowski 2009: 27)	M. Karwowski

Differentiation criteria	Definition	Author
Environmental approach – perception of reality not in terms of finality but as an option possible to be modified	Creativity is the „willingness and capacity (ability) to appoint alternatives for the current (existing) solutions" (Nalaskowski 1994: 64)	A. Nalaskowski
Organisational approach – reference to problem solving and innovativeness	Creativity is understood as „a set of operations, leading to the formation of a new and valuable idea (…) so that the effects of the process of thinking were new for a specific problem in a given situation" (Nęcka 2005: 41)	E. Nęcka
Organisational approach – creating innovations	The four elements of the creativity: „1. It always requires creative thinking or action; 2. creative activities are targeted; 3. they must lead to something original; 4. the final result must be valuable" (Trompenaars 2010: 25)	F. Trompenaars
Personality approach – creative attitude elements associated with creating new solutions	„The creative attitude man, connected with a willingness to transform the world of things, phenomena, and also own personality, characterized by: openness to experience, perceiving a variety of possible solutions to a given problem and reflexivity, which causes behaviour deviating from the schemes" (Zborowski 1986: 26)	J. Zborowski

Source: own study based on the sources listed in the table.

Definitions presented by the researchers, and thereby definitions functioning in terms of research on creativity (creation) may be based on a single criterion (e.g. in organisational approach: creating innovation), or can be recognized based on the two dimensions (e.g. in organisational approach: reference to problem solving and innovativeness), as well as there exist those which contain at least three criteria. The selection of definition aimed at full characterization of the issue, largely depends on the selection of criteria. On this basis, they may have organizational, environmental or personality nature.

3. MAIN PROBLEMS CONNECTED WITH THE CREATIVITY AMONGST EMPLOYEES

Creativity is a state of mind that can be learned and some people may have the specific predispositions for it (Proctor 2003: 66). At present, amongst entrepreneurs one can see the tendency to improve the creativity in their employees. Organisations which are deciding on such steps still remain in the minority; it will be possible to notice their comprehensive attitude in:

- training programmes,
- courses.

These actions point for strong understanding of the potential behind which stands a creative employee. Unfortunately, in spite of investing money into educating employees, the employers forget about the climate in the organization and the labour culture. If trainings are not going hand in hand with the climate of the organization, the creativity has no chance to flourish.

Problems with the creativity on the Polish market are very complex. The organization is a system:

- Very often, observing the company's management board's trend for trainings in practising creativity, taking up a several days' training, the employer assumes that upon completing it, the employees immediately will think one hundred percent creatively. It is impossible, since even a few months of work and understanding are needed, penetrating into the climate of the organization, in order to have a real influence on the creative attitude of employees.
- It also happens that the company expects the changes but does not care about the involvement of employees at various levels. The only way that workers begin to act creatively is the involvement of superiors, supported by a strong motivation. Supervisors should provide their subordinates with tasks where they can be creative about; time to time acquired competence is a kind of automated.

A trained worker is ready and willing to use what he learned during the training of creativity, but when the organizations do not provide the fundamental support, at such a person's motivation for creative thinking is falling. In addition, more often than before, the acquisition of new competencies starts to work mechanically and schematically.

Internal problems at the company:

- The lack of the leader causes the impossibility of implementing changes in the organization. In case of implementing changes three levels are very important: System level – which is responding to creating the strategy and implementing changes for its processing. Team level – that is capable of building interdisciplinary teams, which are functioning in the support of

methods of creative thinking. Individual level – in which the leader is preparing the employee for innovative actions, and simultaneously he is tearing him away from the so-called internal critic and is giving him techniques for creative thinking.

Employee:

- Workers often do not see the benefits in creative thinking. Here, a guide to understanding the potential carried by creative thinking is the coach who acts and provides relevant tools. Creativity is therapeutic and relaxing, gets rid of problems and keeps away frustration (Chaffee 2001).
- Laziness, which blocks the desire for education and the acquisition of knowledge and new competencies.
- Little time as an excuse from the change. Any change in the status of human disturbs comfort, because very often people prefer to stay in what they know despite being aware that it does not necessarily serve them, than to choose a change that will bring a fresh breeze in their lives. However, creativity is associated with courage, or making changes in their lives. Hence, learning the creative attitudes has an impact not only on our career, but also on other aspects of our lives. In such a situation, the best way to make changes is the period of time shortly after completing the training. Unfortunately, in organizations, the opposite happens. An employee who returns from training needs to catch up on current affairs, and making changes leaves for later, which often never comes.

Schematic thinking improves thinking, gives it mechanization, but its value is average. Creativity brings high-quality results.

4. METHODS OF STIMULATING CEATIVITY

Creativity training influences: resistance to stress, coping with criticism and ridicule, independence, non-conformism, openness to new ideas, ability to perceive problems, formulating questions, acceptance of ambiguity, questioning too obvious and admission of ignorance (Matwiejów 1995).

Creativity is influenced by many factors:

- atmosphere of childhood,
- the impact of school,
- atmosphere at work,
- the type of team,
- visual environment at work.

With many of the methods of creative thinking, worth recommending are:

- Brainstorming – created by Osborn; Method-toned triumphs. One of the most popular methods of collaborative problem solving. This method is characterized by the separation stage of reinventing ideas assessed by the

team. It is not allowed to criticise submitted ideas. In principle, team members report the greatest number of ideas, even those that at first glance seem unrealistic or unenforceable, so not to bind creative thinking, but in the multitude of ideas to find those that are most interesting and best to use. It is important to present ideas, improve and connect but never reject or criticize. Sometimes the best solutions arise from the modifications of the most irrational ones.

Brainstorming session consists of four steps:
1. Presentation of the problem.
2. Redefinition of the problem.
3. Specific brainstorm.
4. Evaluation of proposals.

The main point of brainstorming is a „proper brainstorming". At this stage, there are discussions moderated by a leader. Each player throws one idea, which is then written on the blackboard in a prominent place for the whole team to see. The Moderator controls the situation so that no one criticizes the reported ideas, but tries to give floor in order to elicit another statement alluding to the previous idea. The Moderator incites the atmosphere of brainstorming and oversees compliance with the rules. This part is followed by a grouping of ideas and their evaluation. Solutions selected by the panel are forwarded for further fine-tuning.

- Synectics, created by Gordon; this method consists in combining different elements from different fields that seemingly have nothing in common.

Stages of synectics:
1. Determining the problem to be solved; a detailed description of the problem and indicating the places to apply analogy.
2. Through analogy; this step is aimed at creating and collecting ideas.
3. Analyzing the presented ideas; this stage is characterized by the ratio of often strange ideas to reality.
4. Development of the solution; the last step is to combine ideas together to get a solution.

Types of analogies:
1. Personal analogy – identification of the problem.
2. Direct analogy – taking back to the nature.
3. Symbolic analogy – referring to the symbols.
4. Fantastic analogy – build on fantasy.
   – The Buzan's Mind Map; this method was based on two facts:
1. Analytical skills and capacity of human memory are endless.
2. Access to collections in memory occurs when associative keywords appear in a certain context.
   – Rules of Mind Map:
1. The image of the topic is drawn in the center of the paper using a minimum of three colors.

2. Images and symbols are used to describe concepts.
3. The words are evaluated by writing them using large or small letters.
4. On the same line may be only one word.
5. Lines are coming out from the image center, and are connected together. The farther the lines are from the central image the thinner they become.
6. The lines are of the same length as words.
7. Colors are used.
8. Characteristics common for different symbols are highlighted.
9. Radial layout and numbering provides transparency.
   – Creating a mind map:
1. Horizontal arrangement of A3cards.
2. Preparation of pens and pencils that will be used.
3. The choice of topic for Mind Map.
4. In the middle there should be a drawing of the subject.
5. The drawing should attract attention and bring about the appropriate associations.
6. The lines are the thickest in the middle; they should change to the thinnest, the farther from the center. Closest to the center there are the words most general and they become more detailed as the distance grows bigger.
7. Drawn lines should be the same length as drawings.
8. The use of colour to extract words and drawings.

De Bono's six hats; in this method, participants wear hats in specific colors. Having headgear can of course be an agreement, it is important that the person wearing a hat in a given color respectively plays the assigned role. The debate in the hats of thinking allows for looking at the problem from different perspectives, detecting weaknesses and strengths of ideas.

The meaning of the thinking hats' colors:

1. Red hat – emotionality – a hat associated with the expression of emotions, passions, emotional exaggeration of reality. The person playing the red hat as the most important aspect takes the feelings, emotions, intuition.
2. White hat – objectivity – is the opposite of the red hat, and indicates the logic and facts. White hat thinking is like computer operations. The algorithm of thinking is devoid of feelings and emotions, focused on presenting dry and measurable facts.
3. Black hat – pessimist – who is nitpicking or discovering and showing weaknesses of the idea. At any price investigates, asks questions and indicates that someone is, however, wrong.
4. Yellow hat – optimism – this hat has a great joy and in everything he sees strengths. Yellow hat is the opposite of black, is interesting and looking for fun. The person accepting the role of yellow hat refers to the benefits, but not only these practical, but also the dreams and hopes.

5. The green hat – creator – is full of ideas and solutions. The person playing the green hat shows new horizons, new opportunities. Looking for new roads, but does not have to follow the logic. It works differently than dictate designs and grated solutions.
6. Blue hat – the moderator – a role in which the participant is not involved in the discussion, his job is to control the observance of rules and discipline discussion. Blue hat organizes and defines the limits and sets the boundaries.

To sum up, choice of methods stimulating the creativity is large, but it is worthwhile choosing the ones which are advantageous. The method most often used is brainstorming. Many people think that it is the straightest and most effective method of creating ideas. Nothing more erroneous. The brainstorming should be applied in the case of brains trust; otherwise it will become a joyful game or turn into a lively discussion which will bring to life a lot of ideas which will stay in the sphere of idea and nothing else. The method of brainstorming is best for working with specialist staff, but most importantly, with people who present themselves with great respect. Unfortunately, in this method it is easy to discourage somebody from being creative. Very often, a person, who really has an excellent idea, is shouted down by those who have more self-confidence. Apart from that, every person is attached to his/her idea and not always willingly shares it. One's likes and dislikes should also be taken into consideration, if they are playing one of the key roles, and then there is no question of finding a better solution.

A very good method, out of the above-mentioned, is de Bono's method of six hats. The team can learn how to separate thinking into six functions and roles. By mentally wearing and switching „hats", you can easily focus or redirect thoughts, the conversation, or the meeting. Therefore, a worthy and interesting method, out of the above-mentioned, for use in a variety of organizations is: six hats. Among the methods listed in this section it is the most versatile one and strongly showing the users various points of view on the same issue.

5. SUMMARY

Enterprises operating in a turbulent and global environment are forced to take into account surprising changes that require from them unconventional measures. The success of contemporary organizations with intensifying competition activities and ever new challenges (both now and in the near future) is dictated by the capacity to adapt to many modern solutions – technological, technical, managerial and organizational, and rapid manufacturing. It is these properties that represent a major creative force of the company, associated with the innovative activity of the areas of its core business. More complex organizations generate far bigger problems to solve, evoking the need for creative thinking.

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Creativity is now an exposed trait. This is due to the high need for innovation, original and useful solutions that serve the development of the organization, their effective market entry and long-term survival. This publication is a collection of papers prepared under The First National Conference „CREATIVE VIBES. Kreatywnością napędzamy gospodarkę", whose aim was to stir issues concerning the significance of creativity from the point of view of the development of innovative economy, as well as to draw attention to the role of creativity in the education process of students and its impact on the development of professional competence.

CREATIVE
VIBES