

Synergy of creativity as a process of communications and development of case study vocational education

Agnieszka Rzepka¹ and Andrzej Olak²

¹Lublin University of Technology, Lublin, Poland. ²The B.Markiewicz State Higher School of Technology and Economics

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ABSTRACT

The aim of this article is to show the meaning of the chosen aspects of management, which is based on creativity synergy and innovation, understood as a process of communication determining vocational education. Stressing the substantial factors, from the point of view of organization development, it indicates the need of interdisciplinary treatment of this process, with a particular emphasis on the meaning of methods and ways of communicating.

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Introduction

Changes appearing in the area cause that modern organization has to face uncertainty and new challenges. Pressures to introduce new solutions in every spheres of activities: production, education, marketing and management, appear from every side. In order to adjust itself to external changes, an organization, inside, must also introduce different modifying changes and innovations, or convert its character and nature, destroy existing order and tidiness and introduce new ones, which allow to fulfill its functions as far as surrounding area is concerned. By introducing different, smaller or bigger changes, an organization makes an attempt to fight for survival, maintenance or improvement of its strategic position on the market. Majority of these changes is external in character. Its source are pressures from the outside which inspire or force to changes introduction. Most companies focus their efforts on marketing and neglect innovations. They forget that a company, which wants to develop and prosper well, must constantly bring products, technological processes to perfection. What comes after that, look for innovational solutions and put them into practice all the time.

Creativity and innovativeness as a synergy

An organization's successes, no matter what its kind or structure is, nowadays, depend on their susceptibilities to innovations. Innovations become a crucial factor, which decides, not only about an individual's development and its expansion but most of all about its survival. In general, innovations can be understood as an introduction of new things, ideas or ways of behaviour to use [Kalinowski, 2010, s. 13]. innovations (...), understood as making predicatively and deliberately changes, which depend on replacing previous states with others - judged positively as far as criteria of a given organization are concerned - and composing of its growth and progress in management. It is the best to develop the innovation process in an irregular way, inconsistent with conventions, and above all cheerful. Without it, we will hardly ever have energy or firmness to question status quo, to bear hard attempts of delivering a new idea to clients [Westland,

2008, s.37]. This undoubtedly difficult process depends on, among others, "skillful reading" of information from the outside and inside of an organization. In order to develop, an organization must read signals coming from the surroundings, interpret facts and events, build useful knowledge for itself from the data and information taken from other external sources [Morawski, 2009, s.17]. Nowadays innovations are introduced by all organizations, not only by new and enterprising, wanting to get new markets, or new clients, but also stabilized, well prospering ones. Enterprises, which do not introduce any innovations, fall into a trap, in which inability to innovations weakens competitiveness, it is harmful to its marketing position and profitability.

A present organization must be "a space" of innovation, open to novelties, perceiving problems from different perspectives, sensitive to signals and market challenges and ready to introduce different adjustable changes. It must develop its innovation then, by ensuring professional management and making attractive conditions for people who have tendency to it. Innovation is the key to competition strategy and its attitude, these days. The speed of introducing new products to the market is frenetic now, but the failure rate - high [Kotler, 2004, s. 34]. This concept depends on building a community of employees who not only understand each other well, but also are creative partners. This implies bringing structures into perfection and being closer to meet expectations. In such an organization the most important are immaterial resources, including mainly the knowledge which outstanding individuals have: highly qualified, possessed by the passion of acting, energetic and ambitious, acting according to professional standards and rules [Perechuda,

2005, s. 103]. Intelligence of a company has always a big influence on abilities of using and creating innovations. It is understood as a collection of creative professionals. It decides about the way of using possessed by a company, possibilities and opportunities, abilities to adapt to new situations, creating and introducing brave concepts and solutions which meet the needs of the surrounding area. Above, a quite moderate threshold value IQ=120, intelligence is no longer correlated to

Tele:

E-mail address: agarz@wp.pl; a.rzepka@pollub.pl

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creativity. When looking for creative people, intelligence tests, average grades, or other similar measuring instruments must be used carefully [Luecke, 2005, s.121].

Nowadays, innovations and creativity become one of the most important weapons in competition fight, basic element of a strategy of well managed organizations and the element of offensive actions relying on entering new areas, defensive acting protecting it against the danger from real and potential competitors. The strategy of such organization is characterized by so called innovational dynamism, which is understood as an openness to every kind of novelties, constant search for new ideas and solutions and putting them into practice quickly. Do not limit to what existed before. Be different and look for novelties to get a significant advantage on the market [Hollins, 2009, s. 149]. Innovations, not only are favorable to strategy realization, which focuses on the value growth but also enable reaching efficient and stable development and stabilize the condition of a subject, especially in conditions of economic crisis [Nowacki, Adamska, 2010, s. 47]. Any crisis phenomena stimulate creativity by creating mentioned synergy and innovation. Additionally, attempts concerning communications barriers may make it difficult to create and activate innovations.

Communication as a constant process

Communicating can be and should be understood as a complex process, thanks to which people try to pass meanings with the use of symbolic statements. Perfect communication takes place when in its effect two identical images, in a recipient's mind and in a sender's mind, appear. These different ways are oral (verbal) and wordless(nonverbal) communication. Important to an organization, in which team work is the basis, becomes the ability of its members to recognize and understand personal qualities and behaviours connected to them. Thanks to this skill, substantial problems are solved more efficiently, better decisions are made and individuals' achievements with team aims are better coordinated. It also influences the ability of doing a reflective analysis of one's own and other people's behaviours. It increases effectiveness in communication with others. In short, we communicate with others in a better way, even though, this process does not belong to the easy ones. In connection to the fact that communication processes only concern passing information, they will be dependent on people's personalities. These complicated internal processes of valuing information are determined by a number of changeable individualistics (psychological), social, economical and cultural, which create the mechanism of market behaviours [Blythe, 2002, s.24-25].

We are building our own existence by understanding each other. Our subjectivity appears during a conversation, which activates emotional space [Potocki, Winkler, Żbikowska, 2003, s. 81]. All types of work require some kind of communication – speaking, listening, writing and passing information – listening takes up most of the time [Morreale, Spitzberg, Barge, 2007, s. 213]. It has essential meaning in all organizations, no matter what structure or profile they have. Modern world becomes the world where economy based on knowledge plays the key role. The knowledge understood as a number of reliable pieces of information about reality, along with an ability of their usage in order to elaborate more precise and perfect answers to the questions, which this reality generates [Penc, 2007, s. 14]. Knowledge should be treated then, as an appropriate access to information and its skillful usage. Taking into consideration the fact that people live in

more and more complicated surroundings, including the closer and the further ones, knowledge becomes especially valuable [Szalkowski, 2008, s. 7]. Directing education to the market allows to look at education and economic resources which are subjected to economical criteria. They, in turn, determine the level of their effectiveness because expenses on all practical kinds of social businesses, are qualified as economic resources.

The research of this kind of management would not be possible without the increase of the meaning of knowledge and its transfer. Knowledge management, in general, depends on gaining adequate means, elaboration and control of the conditions usage, methods and techniques which enable the processes connected to knowledge [Potocki, 2011, s. 59].

Synergy of creativity and innovation as a process of communication and vocational education development in the light of empirical researches

In the following chapter empirical verification of chosen aspects of communication, understood as synergy of creativity and innovation on the example of The Vocational Education center in Stalowa Wola town, in podkarpackie voivodeship, has been presented. The research procedure, research tools and the results of the carried out analysis has been shown. The most important research tool has been the questionnaire.

The analysis carried out in this chapter will serve as the basis to check the research hypotheses. In the researches the following hypotheses have been done:

- Synergy of creativity and innovation as a factor of a change of social mentality change

Public opinion poll was done in January and February 2012. The head teacher prepared the list of students and teachers and on its basis the respondents were chosen (independent lottery-drawing –without returning).

Description of the research object – The Vocational Education Center in Stalowa Wola

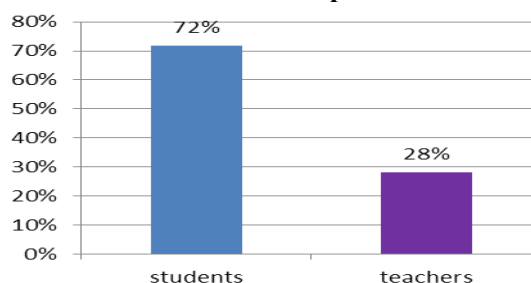
The Vocational Education Center (CEZ) is an educational institution of didactic education existing from 1.09.2008. It was created in the result of the Practical Education Center (it existed since the year 2000) and the School number 4 (existed since the year 1958) connection.

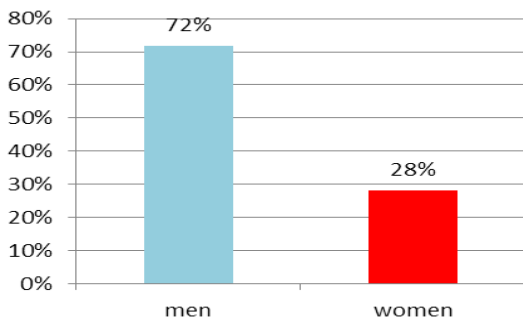
16- 20 year-old attend the CEZ in Stalowa Wola. Classes are organized during vocational courses for adults too. The Aviation Valley Association „Aviation Valley” with its central office in Rzeszow, <http://dolinalotnicza.pl/>, took patronage over the CEZ. The CEZ educates professionals as far as information technology, machining, welding, metalwork and since 2010/11 aviation technician are concerned, for the aviation industry needs. The CEZ does training projects financed by the European Union Funds.

Characterization of the surveyed group

The research was carried out in the group of 167 respondents.

Drawing 1. The kind of researched group and the sex division of the respondents



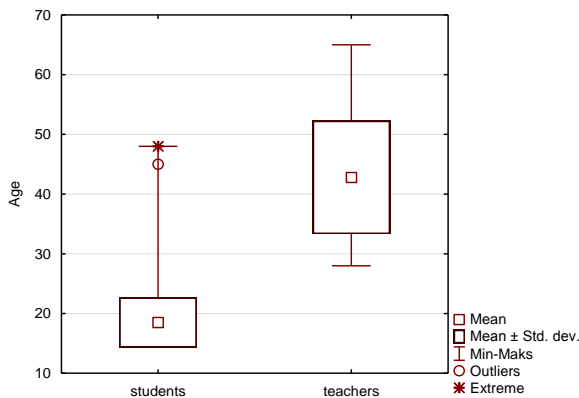


The source: my own elaboration

In the group questioned, most of the respondents were students (72%) and the rest of them were teachers (about 30%). Similar results appear as far as sex is concerned. 72% of men took part in the survey and one-third were women.

In the group of students, 116 revealed how old they were. The average age was 18,5 years old. The youngest student was 16 and the oldest 48. The half of the people questioned, was younger than 18, the other half was older. Every fourth questioned was younger than 17 and every other fourth older than 19 years old. The space (32 years), standard deviation (about 4 years) and the changeability factor 9 about 23% prove that the age differentiated in the students' group.

Drawing 2. Frame diagram of the respondents' age, students and teachers division

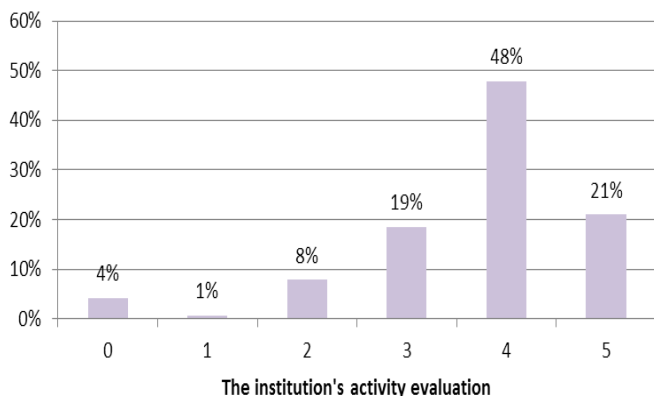


The source: my own elaboration..

The institution's activity evaluation

The greatest number of respondents, about a half (48%), gave the institution 4 points, and every other fifth gave it 5 points. There were people who did not assess the institution's activity positively. They belonged to 13% of the group questioned.

Drawing 3. The institution's activity evaluation



The source: my own elaboration.

The average assessment of the institution's activity evaluation was 3,68. However, the median equaled 4, which means that the layout of evaluation indicates that the asymmetry is left-sided. On the basis of this result, it can be said that most people who assessed the institution's activity, gave higher marks than the average.

DEPENDENCIES – it was checked if a group, education, place of living, district in which the respondents live and the age influence the views concerning success achievement and the development by a given institution.

The analysis includes the results in compared groups and the ANOVA Kruskal – Wallis test and the chi square of Pearson's independencies test, which will allow to assess if the dependencies (differences) between the evaluated variables (measurements) are statistically crucial.

The level of relevance $\alpha=0,05$ has been accepted to the research. It is has been established that:

- if $p < 0,05$, that means that statistically relevant dependency occurs (marked *);
- $p < 0,01$ is a highly crucial dependency (**);
- $p < 0,001$ is a very highly statistically crucial dependency (***)

Chi Test– the square (χ^2) Pearson's independencies. Chi independencies test – the square (χ^2) serves to comparing two or more groups. Observations are compared in the special table (its size depends on how many groups are being compared). Zero hypothesis, which is verified as follows: dependency does not exist between the qualities researched. If it turns out that H_0 about independency, it should be rejected in favor of alternative hypothesis, which means that there is probably statistically important dependency between the features researched. On the basis of the data from the questionnaires p can be calculated. It is co called test probability (computer level of relevance). If $p > \alpha$, there are no foundations to reject the zero hypothesis. If $p < \alpha$, zero hypothesis about researched qualities' independencies, should not be taken into consideration in favor of alternative hypothesis.

ANOVA Kruskal – Wallis test. The Kruskal-Wallis test is non-parametric equivalent of one-factor analysis of inconsistency. With the use of this test it can be checked if n of independent samples comes from the same population, or from the population with the same median. Individual samples do not have to appear in the same number. 10 groups can be compared at one time, maximum. Zero hypothesis (H_0) is equality distributor of divisions in compared populations, in other words there are no differences and dependencies between the variables researched.

Summary

Most of the people questioned were students (72%), living in the city (53%), with incomplete secondary education (55%), living in stalowowolski district (83%).

From the 167 respondents' group:

- 81% think that the way and clarity of communication at school were important to achieve success,
- 77% claim that team work among all subjects, who had influence on the innovation development and creativity contributed to the institution's development,
- 35% say that support institutions (local governments), which financially and essentially allow to support institutions development, played a crucial role in the development process,

- 47% that highly qualified staff, who understand the city and region`s needs was important to creativity and innovation stimulation,
- 35% that the success changed the way of thinking as far as future is concerned and caused bigger satisfaction and "broadened people`s minds",
- the average assessment of the institution`s activity was on the level of 3,68 in the scale 0 to 5 points,
- as the most frequently used advertising source , respondents chose the internet ((70%), the press (39%) and TV (26%) (with the possibility of a multiple choice, that is why percentage cannot be summed up to 100).

Hypothesis I

Synergy of creativity and innovation as a factor of the social mentality change Features defining the synergy of creativity and innovation are two questions: did the team work among all the subjects, who have influence on the innovation development and creativity contributed to the institution development and did the highly qualified staff, who understand the city and region`s needs have an important meaning to creativity and innovation stimulation, in your opinion. The question if the achieved success changed your way of thinking, concerning future, is responsible for the assessment of mentality change? , did it cause bigger satisfaction and did it broaden your mind?

It results from the conducted survey that there are no dependencies between the features researched.

Conclusion

Dependencies between the features researched and the group to which the respondents, the education, place of residence, age, belong have been identified.

- Sex and district in which the respondents live does not influence any presented views.
- A group influences the view concerning support institution, qualified staff and the mind broadening.
- Education influences the opinions concerning support institutions and qualified staff.
- Place of residence influences the view concerning qualified staff.
- Age influences the views concerning support institutions and qualified staff.

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