



## Developing Creative Thinking of Economical Sciences Students

### KEYWORDS

creativity, education, compressive strength, teaching methods interactivity

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**ABSTRACT** *Creativity or the ability to generate new ideas, is present in every human being – in spite of the theories founded on elitist theories that states that only some individuals would prove creative capacities – but such abilities are different for different individuals under the influences brought by various factors, of which education is one of the most important. The paper aims to define creativity, to identify traits of its presence in individuals and to provide a possible framework for using creativity development teaching methods. In order to provide arguments for using creativity-enhancing teaching methods, results of a research project coordinated by the author are presented, proving that such methods are not only productive, but also highly appreciated by economical sciences students in Lucian Blaga University of Sibiu.*

### INTRODUCTION

Creative capacities refer to the ability of generating new ideas out of existent knowledge. The importance of creativity for the development of society is obvious but traditionally this human personality trait used to be related to arts, technical advances, highly specialized scientific domains. Evolution of the economical life – and severe crises that we have witnessed – have proven that creativity is also required in management and economics.

Creativity is a concept that relates to the Multiple Intelligence Theory of Howard Gardner (1983), which proves that creativity needs special endowment of individuals. The concept is also present in the studies related to the lateral thinking of Edward de Bono (1967), proving that creativity can be developed by conscious and sustained effort. Creativity is no longer the defining trait of artists, technical fields' innovators and mathematicians; it is required in developing business solutions, in pertinent decision-making processes in clear and innovative analysis – capacities that economists of the new society need and have to develop continuously.

Daniel Goleman (2006) takes the next step by defining social intelligence and proposing intervention ways to improve capabilities related to social intelligence. Thus, the best education for the specialists in economical fields of competence and especially in management should include development of social intelligence skills such as: cooperation, team-work, efficient communication skills should be thoroughly considered in academic education of future managers and economists.

Academic staff involved in educating economical studies specialists-to-be should focus on adapting teaching methods to such requests of the professional and personal development of their students. Academic teaching means not only transfer of information or knowledge; it mostly means development of autonomous thinking, creativity and social intelligence of students. This process also involves recognizing creativity potential, which seems to be a major issue of most of the educational systems worldwide. As Mark Phillips, educational journalist noted (2012) "Our schools are reasonably good at identifying intellectually gifted kids but still fall far short in understanding, reaching and strengthening creative kids who are defiant or unreachable". The situation is somewhat similar at the academic level of education. So, the key variable might prove to be not methodology, but rather teacher attitude and the ability to genuinely care about creative students and willingness to adapt teaching techniques to scientific context and students' needs.

### CREATIVITY, CREATIVE INDIVIDUALS, TEACHING METHODS DEVELOPING CREATIVITY

#### • Creativity symptoms

Individuals proving an appreciable creative capacity can be recognized by the way they are thinking and acting. The most frequent symptoms of creativity are as follows (Nicolescu & Verboncu, 1999): sensitivity to problems (in terms of availability and ability to search the situations, phenomena and information in order to modify their obvious appearance); flexibility of thinking operations (the ease and current use of operating with concepts and information regardless of stereotype solving models); acceptance of new experiences; strong motivation for success and persuading force, manifested by consequence in achievement of new ideas; capability to accept pressure and/or even conflict from those defending established situational status.

#### • Developing creativity by creative teaching

Academic teaching should focus on rules aiming to develop innovation and enhance creative potential of students. Such rules should refer to: maintaining permanent contact with the students, recognizing and supporting creative potentials of students, maintaining of a flexible study ambiance, encouraging new ideas and protecting self-confidence of creative individuals, providing independent work opportunities, quick and correct evaluation of new ideas and adequate motivation of the creativity expressed by students. Motivation is a major component of creativity management; thus, educational processes are more efficient if the curricula is matching the students' professional and educational needs, the issues approached are interesting the students who will later have the freedom and competence to use such competence acquired. All these provided, students will get satisfaction in their work which will provide motivation to successfully use information, knowledge and new abilities.

Considering the competences area of economical sciences, a wide range of teaching methods are available in order to generate creative thinking and develop creative approaches of economical phenomena and new solutions for economical problems. Case studies, projects, conceptual maps, problem-solving and debates are traditionally methods in the economical studies domain, but newer methods as investigational learning and de Bono's Six Thinking Hats method steadily gain importance in the academic education of the future economists.

### CASE STUDY

The author coordinated the present study; data was collect-

ed and interpreted by an economical sciences master studies graduate. The study covering a wider area of interest, the present paper will only discuss relevant results referring to enhancing creativity by teaching strategies and techniques. The research intended to solve a real problem of the Lucian Blaga University of Sibiu: teaching methods used in the Economical Sciences Faculty do not always focus on creativity stimulation. The aim of the research was to identify the degree of using creativity development teaching techniques as well as reaching for students and teachers' opinions on the benefits of such methods. The decisional problem referred to introducing creativity enhancing methods and techniques in order to generate greater interest and productive participation of students in their own professional development.

The main objectives of the study referred to the problems as follows: a)establishing the weight of creativity developing methods in the teaching methodology; b)types of activity that might provide a more active participation of students in the teaching activities; c)teaching techniques and methods preferred by teachers and those preferred by students; d)assessment techniques and methods for the utility of creativity development methods used and e)types of activity that involved creative response of students.

The source of the research: 122 students and 18 teachers of the Economical Sciences Faculty, Lucian Blaga University of Sibiu have answered questionnaires related to the objectives of the study, considering both perspectives: teachers and students' point of view. The relevant results of the study prove important facts, such as:

- I. The main activities involving direct and active participation of students, conducted in the Faculty of Economical Sciences include: discussions or debates (71%), group activities stimulating teamwork (60%), projects presented (52%) and methods involving creativity (43%).
- II. the creativity-enhancing methods preferred by students, according to the study rank the use of the methods as follows: debates (68%), projects (49%), investigative learning and the Six Thinking Hats method (17% each), problem-solving (12%), essays (11%), conceptual maps (4%). Meanwhile, the most used methods prove that teachers do not always meet their students' expectations, generating a distribution of preferences as shown in Figure 1 below. Teachers seem to prefer investigation (88%), the Six Thinking Hats method (85%), portfolio (70.4%), problem solving (64%), case studies (57%) and dialogues (55.2%). Students are expecting from their teachers to use most frequently stimulating methods such as investigation, brainstorming, conceptual maps and essays.

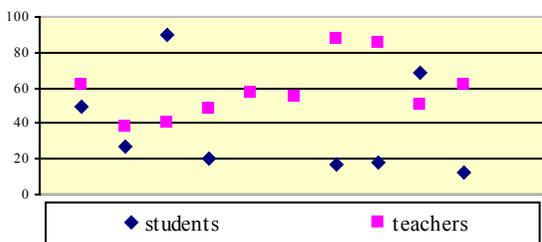


Figure 1: Teaching methods mostly used/preferred  
Sources: collected data, Bardasuc, 2012

- III. Teachers have searched for feed-back of using such methods and they have identified major benefits such as

increasing of students attention, increasing interest for themes presented, active participation of their students, a faster assimilation of knowledge and development of new abilities. Answers were ranked according to the weight of each benefit perceived – 1 being the most frequent and 5 the least benefit – and results are shown in table 1.

- IV. Students' motivation also depends on the benefits they gain further to the use of interactive and stimulating teaching methods. The most important benefits identified by students are attention spam and interest generated by use of certain teaching method, other benefits such as use of personal abilities, obtaining new information and developing new abilities being not perceived as very important for the students. The results show that current use of such methods really bring benefits to students' motivation and creative learning (results as in Table 1)

V. TABLE – 1 PERCEIVED BENEFITS OF METHODS USED

Benefits	Answers	Ranking
		Teachers Students
Attention spam	300	3,7 2.479338843
Interest	264	4 2.181818182
Abilities	355	3 2.933884298
New information	344	3,6 2.842975207
New abilities	358	3 2.958677686
Non-answering	1	1

Source: collected data, Bardasuc, 2012

CONCLUSIONS

Research has provided information on most used/preferred methods used to develop students' creativity, such as projects and debates, producing a greater involvement of students in their own education; still, both students and teachers agree upon the fact that practical aspects of their education are not sufficiently covered by curricula. Teachers' response to this situation is the use of practical approaches of the existent curricula, by means of teaching methods that also provide challenging response of their students, such as business plan simulations, brainstorming, role-playing.

The university should be the main sponsor of creativity for its students, not only by means of teaching techniques but mostly by the general attitude of the teaching staff and the vision of its educational programs. Providing a creative study environment for its students, providing experiences that positively reshape their attitude and creativity will bring long-term benefits not only for the students and graduates, but also for the University as a dynamic and adapted institution. As far as economical studies are concerned, the main objective of educational programs should be development of entrepreneurial thinking, abilities and attitude – which is to be achieved mainly by focusing on creative teaching for creative students.

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