SYNECTICS WORKSHOP FOR STIMULATING THE CREATIVE IMAGINATION OF STUDENTS[1]

Abstract: *In the creation act, imagination interacts closely with productive or divergent thinking, which is defined through the production of multiple solutions for the same problem. Imagination processes a various cognitive material formed of conceptualized images, significant ideas. The imagination process valorizes all the combinations occurring in the sphere of subconsciousness and unconsciousness, amplifying its creative potentialities. Synectics is among the didactic methods to individual or group training for the purpose of creatively solving problems and stimulating creative imagination.*

Key words: *creative imagination, divergent thinking, synectics.*

Introduction

Each of the creativity theories notices, according to the psychological school it represents, certain aspects of the creative potential, of the processuality of the creative act, of performance or of creative personality. In this context, according to behaviorism, creativity is an operant, trainable behavior, at the level of which learning has a special role. As a complex process of creative learning of ideas and resources, of reconceptualization and reclassification of concepts and information, purpose-centered critical thinking may generate a creative process. The representatives of cognitive psychology applied to the social sector distinguish between innovative learning, creative learning and maintenance learning. Creative learning is the basis of the creative training at the level of basic components of personality. According to Edward De Bono (1973), creative training supposes the development of such components as: general and specific creativity habits, the most important being deemed to be creative operation habits.

Divergent thinking, the most important element of creativity (J.P. Guilford, 1954) has important characteristics: mental flexibility, originality, fluency and inventiveness. In the act of creation, imagination closely interacts to productive or divergent thinking defined through the production of multiple solutions for the same problem.

The imagination process valorizes all the combinations appearing in the subconsciousness and unconsciousness sphere, amplifying its creative potentialities. In Henri Piéron's opinion (2001) creative imagination designates the capacity of an individual to perform a creative activity, often generalized to the entire inventive capacity.

Synectics (W. Gordon, 1952) is also among the didactic methods of individual or group training for the purpose of creatively solving problems and stimulating creative imagination. Through synectics, we intended to stimulate students' creativity in a productive, systematic and deliberate manner. During synectics workshops, each student issued ideas, made idea associations, continued the ideas of others, made critical appreciations of the generated ideas and solutions to the raised problems.

Purpose of the Study

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This study highlights the virtues of synectics in stimulating the creative imagination of philologist students at the level of specific workshops.

Methodology

25 de students of the Pitesti University from the Faculty of Letters in the IIIrd year of study, in the teaching practice probationary stage, participated in the study.

As an instrument to research and collect data, a questionnaire regarding the identification of perceptions of the students in the synectics group on the use of the methods to stimulate creativity in the didactic act (in the teaching practice) was drafted and applied.

The collected data were statistically processed by means of the SPSS 10 program.

Results

The article presents the preliminary results of experimenting synectics as a method of stimulating and developing the voluntary creative imagination of students at the level of workshops.

In the first (finding) stage of synectics workshops, by means of the questionnaire, the perceptions of philologist students on the familiarization with the creativity concept and on the use of the methods to stimulate creativity in teaching practice were investigated.

Table 1. Students' answers to the question "*How close are the following definitions of creativity to your personal conception*? "

	N	Minimum	Maximum	Mean	Std. Deviation
Definition 1	25	1.00	3.00	1.8400	.80000
Definition 2	25	1.00	3.00	2.1200	.66583
Definition 3	25	1.00	3.00	1.9200	.81240
Definition 4	25	1.00	3.00	2.0400	.84063
Definition 5	25	1.00	3.00	1.8800	.92736
Definition 6	25	1.00	3.00	2.0400	.78951
Definition 7	25	1.00	3.00	2.0400	.88882
Definition 8	25	1.00	3.00	1.9200	.90921
Definition 9	25	1.00	3.00	1.8800	.88129

To the question *"How close are the following definitions of creativity to your personal conception?"*, most of the students opted in their preference order for:

- definition 2: "*the ability of being creative and of creating new and significant ideas, forms, methods, interpretations, relations, connections, models, devices, objects etc.* " *(Britannica Encyclopedia, 2009)*
- definition 4: *"the production of new and useful ideas in any field.* " *(Teresa M.Amabile*, 1996)
- definition 6: *"an imaginative activity adapted so as to produce results which are both original and valuable* "
- *definition 7: "the skill of making original and efficient ensembles starting from preexisting element* " *(Jaoui H., p.70).*

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From students' answers, we can see that they noticed the basic characteristic of creativity: originality, *i.e.* producing and generating new ideas.

Table 2. Students' answers to the question "*To what extent do you know the didactic methods for stimulating creativity from the modern language didactics courses and seminars?*"

	N	Minimum	Maximum	Mean	Std. Deviation
Panel discussion	25	3.00	5.00	4.7200	.61373
Phillips 6-6	25	1.00	5.00	3.2800	1.40000
6-3-5 method	25	1.00	5.00	3.1600	1.43411
Brainstorming	25	1.00	5.00	3.0800	1.44106
Synectics	25	1.00	5.00	2.4800	1.29486
Brainwriting	25	1.00	5.00	3.2400	1.20000
Creative controversy	25	1.00	5.00	2.7600	1.39284
FRISCO method	25	1.00	5.00	3.2400	1.36260
Thinking hats method	25	1.00	5.00	3.2400	1.20000
Lotus technique	25	1.00	5.00	2.6800	1.24900
Star exposition technique	25	1.00	5.00	2.3200	1.40594
Valid N (listwise)	25				

As a didactic method, synectics is less known and applied by students in courses and seminars. During synectics workshops, a better knowledge of the specific nature of applying this method, favorable to the state of creation, was pursued. During synectics workshops, students indulged their imagination and creative skills. Such stimulating environment inspired them and generated valuable ideas and analogies.

To the question "*In your opinion, the creativity of a modern language teacher is manifested through* ": 32% of the questioned students mentioned among the qualities of a creative teacher: intelligence, the easiness in composing lyrics, inspiration, while a percentage of 68% put on the first places as definitive elements of the creative teacher: creative imagination, originality, spontaneity, expressivity and talent.

Table 3. Students' answers to the question "*To what extent did you apply the didactic methods for stimulate creativity to teaching practice in the didactic activity with pupils?*"

	N	Minimum	Maximum	Mean	Std. Deviation
Panel discussion	25	3.00	5.00	4.2000	.81650
Phillips 6-6	25	1.00	5.00	3.1200	1.26886
6-3-5 method	25	1.00	5.00	2.7600	1.23423
Brainstorming	25	1.00	5.00	2.7600	1.12842
Synectics	25	1.00	5.00	2.4400	1.04403
Brainwriting	25	1.00	5.00	2.4800	1.19443
Galaxy technique	25	1.00	5.00	2.8800	.88129
Creative controversy	25	1.00	5.00	2.9200	1.07703
FRISCO method	25	1.00	5.00	2.7600	1.12842
Thinking hats method	25	1.00	5.00	2.7600	1.23423
Lotus technique	25	1.00	5.00	2.8000	1.32288

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Star explosion technique	25	1.00	4.00	2.3200	1.06927
Valid N (listwise)	25				

An increased interest is established for exercising synectics as a didactic method in the teaching practice with pupils. During the teaching practice probationary stages, students were used as didactic methods to stimulate creativity, in different learning sequences, panel discussion, philips 6.6., the 3-6-5 method and brainstorming. These options are also due to the fact that during modern language didactics seminars they were encouraged to adopt cooperation and work in group as forms of organizing the activity with pupils, and to find solutions to consult, negotiate results, analyze the problem from all possible points of view, notice similarities and analogies, etc.

The second (experimental) phase of synectics workshops started by the setting of the application stages of synectics as a didactic method with important virtues of increasing pupils' creativity.

Steps in applying the synectics method	**Brief description /application manners**
1. Problem identification	General enunciation of the problem
2. Problem analysis	Problem description and occurrence of immediate solutions to the presented problem. The definition of the new ideas as principle ideas, fundamental ideas or pilot ideas.
3. Personal analogy technique	Identification of the person with the study object, using emotions and feelings on the analyzed entity
4. Direct analogy technique	Referencing the researched object to another, in a neighboring field, to which it may seem to have a similarity, making another object with a use value and with functions different from those of the initial object.
5. Symbolic analogy technique	Use of objective and personal images to describe a problem
6. Fantastic analogy technique	Relation between creating thinking and satisfaction of needs, between the real world, as perceived by the group, and an imaginary world, where anything is possible.
7. Application of the analogy technique in other contexts	Elaboration of the model, experimentation and confrontation to practice, to reality.
8.Generation of possible solutions	Inventorying the possible ways of building relations between the apparently irrelevant ideas and the given elements of the problem, through introducing new ideas.

Table 4. Steps in applying the synectics method

Concurrently with presenting synectics as a method, over the period of the 6 workshop months (November 2011 - April 2012) the following instruments were applied:

- Work sheets with exercises for evaluating the most important intellectual factors of creativity: ideational fluency, verbal fluency, thinking flexibility, originality.
- Torrance tests of creative thinking measuring the expression of creativity in two fundamental hypostases: a hypostasis in which the reactions to stimuli are collected from the persons evaluated in a verbal form and one in which reactions are collected in a figural form, in drawings.
- Brainstorming games meant to reduce the inhibitions occurring in groups and stimulate the generation of new ideas.

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For example, we offer a synectics problem which constituted the work axis in workshop 2: imagine a mysterious journey and formulate a creative exercise with double finality which may be applied to gymnasium pupils at the didactic activities within the teaching practice probationary stage:

- The establishment by pupils of an imaginary travel route;
- The stimulation of pupils' communication on this theme, in English.

The solutions generated in the group of students participating in the synectics workshop were:

- Solution 1: Imagine a journey *On the track of Jules Verne*. Make through a group activity the route of the journey and a short dialogue in the English language among crew members.
- Solution 2: Prepare a journey *In polar areas*. Work in teams and dialogize among you in the English language.
- Solution 3: I invite you *In Lapland, the home of Santa Claus!* How will you get there and what will you say to Santa? Work in pairs.
- Solution 4: You are *In Sahara with the camel* and you are terribly thirsty! How will you manage to appease your thirst and continue your travel? Think alone and then share your impressions to your colleagues in English.
- Solution 5: If you are *In the world of stories,* what character would you choose to play? Formulate 3 lines in English.
- Solution 6: You intend to make a *Journey on another planet!* How do you prepare for it? Formulate 5 strict rules to obey during the travel, in English! Work in pairs.
- Solution 7. At 5 p.m., you have a *Meeting with an alien!* What will you say to the alien? Formulate a dialogue with the alien, in English.
- Solution 8: *Deep in the ocean* there are hidden treasures! How do you reach them? Speak in English to the colleague accompanying you in the travel.

Conclusions

The creative training of students through the synectics workshops reached its initially designed objectives: the shaping/development of the students' capacity to abstract, to completely approach a problem, to formulate ideas and test solutions, to work cooperatively in groups and to communicate with arguments.

On the other hand, students became aware of the real advantage of using synectics as a method as, in the synectics workshops, they evaluated their creative potential, were encouraged to indulge their imagination, composed exercises of stimulating pupils' imagination, found simple, original, surprising solutions to the launched problems. Also valorized other didactic methods to stimulate pupils' creativity by various training sequences specific to certain English language lessons and improved their pupil-centered teaching.

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Annex

Initial questionnaire on identifying the perceptions of the students in the synectics group on the methods to stimulate creativity

1. How close are the following definitions of creativity to your personal conception?

D 1: "*complex trait of human personality, consisting in the capacity to make something new, original and valuable.*" *(Roşca A., p.16).*
D 2: "*the ability of being creative and of creating new and significant ideas, forms, methods, interpretations, relations, connections, models, devices, objects etc.*" *(Britannic Encyclopedia, 2009)*
D 3: " *the power of producing something new, of finding new solutions, of discovering something new marking a progress of knowledge.*" *(The encyclopedic dictionary,1993)*
D 4: " *the production of new and useful ideas in any field.*" *(Teresa M.Amabile*, 1996)
D 5: "*strong ability of generating new ideas through the combination and re-combination of previously separated elements.*" *(Neacşu, Dumitru)*
D6: "*an imaginative activity adapted so as to produce results which are both original and valuable .*"
D 7: " *the skill of making original and efficient ensembles starting from preexisting elements.*" *(Jaoui H., p.70).*
D 8: "*general disposition of personality to the new, a certain organization of physical processes in the personality system.*" (P.P.Neveanu 1980, p.52)
D 9: "*an integrative manner of human personality expressing the ensemble of qualities resulting in the generation of the new, in originality.*" *(Bădulescu S., p.22)*

2. To what extent do you know the didactic methods for stimulating creativity from the modern language didactics courses and seminars?

- Brainstorming
- Brainwriting
- Synectics
- 6-3-5 method
- Phillips 6-6
- Panel discussion
- Creative controversy
- FRISCO method
- Thinking hats method
- Galaxy technique
- Lotus technique
- Star explosion technique

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3. In your opinion, the creativity of a modern language teacher is manifested through:
- intelligence
- the easiness to compose
- inspiration
- imagination
- originality
- spontaneity
- expressivity
- talent

4. To what extent did you apply the didactic methods to stimulate creativity to teaching practice in the didactic activity with pupils?
- Brainstorming
- Brainwriting
- Synectics
- 6-3-5 method
- Phillips 6-6
- Panel discussion
- Creative controversy
- FRISCO method
- Thinking hats method
- Galaxy technique
- Lotus technique
- Star explosion technique

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