ENHANCING STUDENTS' CREATIVITY

Bogdan O.V., Agapova T.V.
Krasnoyarsk state agrarian university, Krasnoyarsk, Russia

Abstract: *Creative thinking and behaviour of individuals are greatly demanded nowadays in all spheres of human activity, so creativity and inventiveness should be widely promoted in the modern educational environment. The article is devoted to some essential issues related to the process of forming and developing students' creative skills: the abilities required for creative work, the factors that can encourage or discourage students' creativity, the approaches, methods and techniques that can help teachers to stimulate learners' creative potential.*
Key words: *creativity, innovation, creative abilities, creative environment, factors.*

ФОРМИРОВАНИЕ И РАЗВИТИЕ ТВОРЧЕСКИХ СПОСОБНОСТЕЙ У СТУДЕНТОВ

Богдан О.В., Агапова Т.В.
Красноярский государственный аграрный университет, Красноярск, Россия

Аннотация: *в настоящее время во всех сферах человеческой деятельности востребованы творческое мышление и поведение индивидов, так что творчество и изобретательность должны быть представлены в современной образовательной среде. Статья посвящена некоторым важным вопросам, связанным с процессом формирования и развития творческих способностей, необходимых для творческой работы учащихся.*
Ключевые слова: *креативность, инновации, творческие способности, творческая среда, факторы.*

Creativity represents an indispensable condition of the progress of learning and the world's transformation. It's one of the major demands of the modern age, and one of the most fascinating ones. Today, we're facing major challenges in our global economy, environment, and social issues. The need for creative ideas has never been greater. Modern thinking is becoming more and more creative, and modern people have to be more and more inventive and adaptable to changes. "Our society today needs young people who are flexible, creative, and proactive – young people who can solve problems, make decisions, think critically, communicate ideas effectively and work efficiently within teams and groups." [1,2]

Thus, creativity should be a necessary attribute of any modern individual, since creative abilities represent driving potential of prosperity. That's why appeal for more creativity and innovation in education has come, not from the education community but from a global economical emergency, technological advancement and the urgent

need for change. Creativity and inventiveness are more and more promoted in the educational environment, giving rise to new educational paradigms and they should not be forgotten while teaching students of any level.

Stimulating students' creativity represents not only a task of higher education but also an important aspect of their personal development. Intellectual development at this age is closely connected with creative development. It is demonstrated through the tendency and capacity not only to acquire new knowledge but there is the greatest demand to use it in order to create something new.

Thus, higher education should contribute to discovering and realizing students' creative potential. Creativity is not just about special people doing special things. Everybody has the potential to be creative. So, it's a skill that needs to be developed. Creativity can and must be educated and cultivated, as it isn't always something that just happens. It is a skill that everyone can develop and learn. It empowers people by adding strength to their natural abilities which improves individual work, teamwork and productivity.

According to Robert J. Sternberg, an American psychologist specializing in cognitive psychology, creative work requires applying and balancing three abilities that all can be developed [8]: Synthetic ability – the ability to generate novel and interesting ideas, to see problems in new ways and to escape the bounds of conventional thinking. Often creative persons are particularly good synthetic thinkers who make connections between the things that other people don't recognize spontaneously.

Analytic ability – the ability to recognize which of one's ideas are worth pursuing and which aren't. It is typically considered to be critical thinking ability. Everyone has better and worse ideas. Without well-developed analytic ability, creative thinkers are as likely to pursue bad ideas as to pursue good ones. Practical ability – the ability to translate theory into practice and abstract ideas into practical accomplishments. Good ideas do not "sell" themselves. Creative persons use practical ability to convince other people that an idea is worthy, a new suggestion/solution is better than the old one.

It is necessary to develop all these three abilities as their confluence is important. Creativity requires balance among them. The person who is only synthetic may come up with innovative ideas, but cannot recognize or "sell" them. The person who is only analytic may be an excellent critic of other people's ideas, but is not likely to generate own ones. Practical ability in the absence of the other two skills may result in societal acceptance of ideas not because they are good, but rather, because they have been well and powerfully presented. Thus, it's necessary to encourage and develop creativity by teaching students to find a balance among synthetic, analytic and practical thinking.

Development of creativity and creative techniques is a process that is accepted and promoted as being necessary in the academic world. It goes without saying that education system should intensively use creative techniques. According to R. S. Nickerson, an American Research Professor of Psychology, some of the creative techniques, developed by both academic and business world, are the following [4]: establishing purpose and intention; building basic skills; encouraging acquisition of

domain-specific knowledge; stimulating and rewarding curiosity and exploration; building motivation, especially internal one; encouraging confidence and willingness to take risks; focusing on mastery and self-competition; promoting supportable beliefs about creativity; providing opportunities for choice and discovery; developing selfmanagement (metacognitive skills); teaching techniques and strategies for facilitating creative performance.

Another aspect that contributes to stimulating and promoting creative potential is building creative environment, where people feel at ease expressing their ideas and where positive backing is given in the development of those ideas. Creative education environment is closely connected with the atmosphere created in the classroom by the teacher. There are some factors that can encourage or discourage students' creativity. Actually, students are in a creative environment when [4]:

- diversity of opinions/ideas/solutions/suggestions is solicited, welcomed, accepted and encouraged; they can suggest solutions to others without feeling they are interfering; they are encouraged to share their ideas/solutions and to consider those of others;

- their ideas are listened to and studied before judged; the teacher helps them turn their unformed ideas into reality by giving encouragement and suggestions and by asking helpful questions; they feel appreciated when suggesting new ideas, the generation of good ideas is rewarded (verbally or otherwise); they are given autonomy to work in their own way;

- they feel at ease talking with anyone in the classroom (both the teacher and groupmates);

- they are treated with respect and as someone who can contribute;

- everybody present in the classroom seeks first to understand, then to be understood; they are appreciated for what they do/say/suggest and for who they are.

"Evidently, along with the factors contributing to the development of students' creative potential, there are others that can hamper and block it. Stimulating students' creative behavior and thinking should be accompanied by eliminating some of the obstacles that can discourage them.

There are several types of barriers to utilizing creative potential, affecting both teachers and students. They can be categorized in the following way: [3] Psychological barriers. Being creative involves risk-taking, doing something different from the norm. That requires a high degree of confidence and a willingness to face an unpredictable outcome. This category also includes fear of making a mistake, looking foolish or being proved wrong, looking too extravagant or ridiculous, being in the minority or being criticized, difficulty in changing the habitual way of thinking, excessive dependence on the opinion of others, rapid discouragement, lack of selfconfidence, a shaky self-esteem, timidity, anxiety, etc.

Institutional barriers. Being creative often involves breaking rules, challenging assumptions, taking issue with convention, questioning tradition. By contrast, colleges and universities are greatly concerned with order and structure, represented by bells, timetables, assemblies, rules, etc. It is understandable why they have to function in this way, but it establishes a mind-set that makes it hard to step outside the norms, it may tend to suppress creativity, innovation and risk-taking activities.

Physical barriers. The spaces in which learning takes place set limits to the extent to which creativity can occur. The normal sized classroom, with standard desks and chairs, can prevent some types of teaching/learning that may require more open, flexible spaces and call for different types of furniture and equipment in order to encourage new behaviors and dynamics.

Cultural barriers: discouragement of individual self-expression and distinctiveness, conformity to social models of behavior and thinking, norms, old habits and expectations, stereotypic ways of thought and action, some rules and traditions that restrict, inhibit or prohibit personal initiative, exaggerated belief in statistics and past experience, too strict time-management, sticking to false disjunction between work and play, excessive exaltation of the group spirit, compliance to the ways people think others expect them to behave and fear of being different. These things can result in a loss of individuality and creativity.

Perceptual barriers. People are accustomed to perceiving things in their own ways, often making it difficult to see new meanings, relationships, and ideas. Such predisposition to perceive things in certain ways is a perceptual set, a mental set, or functional fixedness which is opposite to flexible and innovative thinking.

Resource barriers: shortage of people, money, time, supplies, and/or information, needed for creative thinking or for the implementation of creative ideas". [3] Taking into account all the above mentioned, it is very important both for teachers and students to identify the presence of these barriers, acknowledge the seriousness of these obstacles in order to reduce their negative effect on the creative process and innovative spirit.

Besides the barriers, which can lock students' creativity, there are many ways to inhibit creativity as well. Some of the creativity enablers are the following [4]: Collaboration and cooperative learning in classrooms.

Collaboration is commonly seen as a condition for creativity and innovation. One individual is rarely able to come up with original and valuable ideas without interaction and influence from other people. Therefore, one of the key conditions for more creative education process is more collaboration and cooperation both among teachers and students, leading to stronger social community, better interaction and more creative environment, where each individual through interaction with others will be able to create more novelty than they would do alone.

Risk-taking in the process of teaching and learning. Creativity and innovation require risk-taking. In the process of teaching and learning there shouldn't be any fear of trying new things or alternative ways of doing old things. It is only possible in an environment that is based on mutual trust, respect and honesty. That's why building creativity-friendly environment is vital for more creative teaching and learning [8]. Learning to be wrong. Being right is often considered to be one of the main goals of education. But it is not enough for success in an unpredictable and complex world. Creativity is often blocked by the fear of appearing strange or wrong. Consequently, it's necessary to provide learning environment free from this kind of fear, to establish trust that is a critical condition for creativity to flourish.

Rewarding effort and ideas, not only rewarding correct answers, is essential for promoting creativity. Thus, being prepared to be wrong is an important part of

developing creativity. It is difficult to imagine teaching that promotes creativity without the teaching methods themselves being creative. There is a number of things that can be done across the whole teaching and learning process to enhance students' creativity. Some of them are the following: Brainstorming, Thinking Hats, Plus-Minus-Interesting (PMI), Carousel, Hot Seating, Ideas Funnel, Jeopardy, Mind Maps, Mind Movies, Simulation, Drama Techniques, Snowballing, Debate, Think-Pair-Share, Five Questions, Heuristic Conversation, Stellar Explosion, etc.

These methods/techniques help teachers foster creativity by encouraging learners to think laterally and make associations between things that are not usually connected, reinterpret and apply learning in new contexts, look at things from different points of view and experiment with alternative approaches to solving problems. In this way teachers will help learners to see possibilities and challenges and be more creative and inventive [1].

One more important factor influencing development of students' creative potential is teacher's creativity. Teachers cannot develop the creative abilities of their students if their own creative abilities are undiscovered or suppressed. Without any doubt, creative learners need creative teachers that can be compared to "engines" launching students' creativity[5,7].

To do it effectively, they, first of all, need all the characteristics of good teaching, including high motivation and expectations, the ability to communicate and listen and the ability to interest, engage and inspire. Second, creative teachers need expertise and should be able to use the techniques that stimulate curiosity and raise self esteem and confidence. Third, they must recognize when encouragement is needed and confidence threatened. Finally, they must be able to balance structured learning with opportunities for self-direction, as well as to manage group work while giving attention to individuals as well. To encourage creativity, teachers should give students time to explore and do their best work, create an inviting and exciting classroom environment, provide an abundant supply of interesting and useful materials and resources, and create a classroom climate where students feel mistakes are acceptable and risk taking is encouraged. Teaching with creativity requires more time, resources and planning to generate and develop ideas, more confidence to improvise, experiment and risk. Of course, it is not an easy option, but it can be enjoyable and deeply fulfilling. [6]

The following approaches can help teachers to promote creativity in the classroom [3]: Ensuring that planning incorporates a range of teaching and learning styles. Providing regular opportunities for hands-on experimentation, problem solving, discussion, debating and collaborative work. Creating opportunities where students are encouraged to actively do the work and question what is going on. Making use of creative thinking and cooperative learning techniques. Sharing the learning intentions with students and providing them with opportunities for choosing how they are going to work. Encouraging students to question, make connections, explore various ideas, improvise, experiment and think outside the box. Facilitating open discussion, encouraging learners to share ideas with others and to talk about their progress [9].

Using failure or setbacks as opportunities to learn. Ensuring that assessment procedures reflect and reward creativity, enterprise and innovation. Making effective use of encouragement, praise and positive language. A lot can be done to make classes more creative and engaging and teachers should bear it in mind and use various techniques with their students.

References

1. Aysner L.Yu. Theoretical platform of ICT for teaching adults / L.Yu. Aysner, S.V. Bershadskaya, O.V. Bogdan // Журнал Сибирского федерального университета. Серия: Гуманитарные науки. 2015. Т. 8. № 11. С. 2212-2219.

2. Active learning and teaching methods for key stages 1&2. (2007). Retrieved from: http://www.nicurriculum.org.uk/docs/key_stages_1_and_2/altm-ks12.pdf

3. Fostering creativity. The journey to excellence. Retrieved from: http://www.journeytoexcellence.org.uk/resourcesandcpd/research/summaries/rsfosteringcreativity.asp

4. Hagemann, M. How to enhance creativity using innovative and advanced level of ICT tools? Retrieved from: http://openinn.eu/system/files/resources/howtoenhancecreativityusingict.pdf

5. Humes, W. (2005). Barriers to creativity in the classroom. Retrieved from: https://www.tes.co.uk/article.aspx? storycode=2113383

6. Morris, Wayne. (2006). Creativity. Its place in education. Retrieved from: http://www.creativejeffrey.com/ creative/Creativity_in_Education.pdf

7. Sahlberg, P. The role of education in promoting creativity: potential barriers and enabling factors. Retrieved from: www.greenschool.org/wp-content/uploads/2012/03/Pasi-Sahlberg.pdf

8. Sternberg, R. J. (2006). The nature of creativity. Creativity Research Journal, Vol.18, n.1, pp. 87-98. Retrieved from: http://www.cc.gatech.edu/classes/AY2013/cs7601_spring/papers/Sternberg_Nature-of-creativity.pdf

9. Sternberg, R. J., & Williams, W. M. (1996). How to develop student creativity. The Association for Supervision and Curriculum Development. Retrieved from: http://ozpk.tripod.com/000000creat