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The development of creative thinking of primary school students at the English lessons in Kazakhstan

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Abstract

In this article we consider different viewpoints on the terms "creative thinking" and "creativity", the concept of creativity of primary school pupils. We highlight the main important components of child's creativity and creative thinking. This article looks at the creative methods which allow building conditions for student's communicative interaction and solving communicative problems with the help of creative thinking in English Language Teaching as a foreign language and the benefits and downsides. The main aim of this article is to examine the impact of creative thinking development on improving speaking skills, creative approach to problem solving and expression of ideas of primary school students. Due to the fact that in Kazakhstan there is an artificial language environment in foreign language learning, our experimental research showed that the work at creative thinking at the English lessons can contribute to the development of the ability to think in the target language. It focuses on a particular class (English as a foreign language), at Kazakhstani primary school.

Keywords: Creativity; creative thinking, creative activity; creative personality; problem solving method.

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1. Introduction

Human individuality is intimately connected with creativity. The development of creativity of individuals as a subject of scientific research has a unique specificity, because scientific description of "creativity" is associated with prerequisites to creativity, general and special abilities and potential.

Studying creativity as a universal ability to be creative, we should keep in mind the specifics of its manifestation at different age stages and the dynamics of age development of the personality, it is necessary to pay attention to the ontogenetic aspect of the problem. Ontogeny explores the development of the individual psyche over the life of the individual. The scope of the ontogenesis of creativity includes the study of age peculiarities of the development of creative individuality and the disclosure of regularities of the individual in the creative process.

2. The meaning of "creativity"

D. Simpson (1922), who used the term "creativity" for the first time, understood it as "the ability of people to abandon stereotypical ways of thinking". Later after considering creativity as a higher thought process, R. Mei noted that creative processes combined intellectual, volitional and emotional functions; and a significant indicator of creativity here was a realistic solution to the problem.

According to J. P. Guilford (1965) the creativity as "the ability to generate many original ideas in non-standard conditions, the ability of creative thinking to create something new in the experience, generate original ideas in terms of setting new challenges". J. P. Guilford identified four parameters of creativity: 1) originality — the ability to produce remote associations, unusual responses; 2) semantic flexibility — the ability to identify basic property of the object and to propose a new way to use it; 3) shaped adaptive flexibility — the ability to change the shape of incentive, so that to be able to see in it new features and capabilities for use; 4) semantic spontaneous flexibility — ability to produce diverse ideas in an unstructured situation.

Creating a three-dimensional model of intelligence, which main dimensions are content, operations, results, J. Guilford pointed out the fundamental differences between two types of thinking: convergent (to find one most matched decision in multiple condition) and divergent (based on the search possible solutions under the same conditions, characterized by fluency, flexibility, originality and accuracy). However, some researchers of intelligence have come to the conclusion about weak connection between creative abilities and learning abilities, intelligence (L. Thurstone), because creative thinking is not limited to divergent thinking, it also involves sensitivity to problems and ability to override.

E. P. Torrance (1964) defined creativity as the ability to percept gaps, lacks of knowledge, disharmony and inconsistency. The researcher emphasized the perception of problems, solutions, emergences, formulations of hypotheses, testing of hypotheses, and finding the results in the structure of the creative act. According to E. P. Torrance, creativity means the process of underlining problems, difficulties, gaps in information, missing elements and hypotheses concerning these elements, monitoring and evaluation of these hypotheses; their review and verification, summing up the outcomes. Consequently, creativity is the ability to be creative; the ability to recognize problems and contradictions; the rejection of the stereotypical ways of thinking; the ability to produce new ideas and finding unconventional ways of solving problems; the ability to formulate hypotheses about missing elements of situations.

"The threshold hypothesis" is most common in E. P. Torrance's researche of the concept of "creativity". If IQ is below 115-120, creativity and intelligence belong to one factor; if IQ is above 120 – creativity becomes independent from the factor of intelligence. The result of the research of E. P. Torrance was the system of measuring creative abilities. The author found that genetic potential was not the most important indicator of future creative productivity, as follows the influence of family and school will contribute the development of creativity, and it is experimentally proved that the decline in the development of creativity can be removed by special training.

In accordance with Feldman and Sawyer (2003) creativity is "a phenomenon that is successfully researched and understood at its high level, less frequently as exhibited by average people and

children". At best, children can be given a secondary role, at the periphery of creative expression, and be acknowledged for their "low-range creativity" or students may achieve goals but without durable effect on their knowledge and skills (Morelock, Feldman & Sawyer).

The psychologist R. Sternberg (2012) pointed out that creativity is crucial component of "successful intelligence", which means the balance between choice, change, and adaptation to real-world contexts, including strong analytical skills (judgment, evaluation, analysis) and practical abilities (action, creation, implementation). This intelligence involves the balance between selection and formation of the environment and adaptation of it to achieve social and personal goals and qualities that reflect the persistence in achieving the goal. It is used to believe that creativity is a social process, since it always occurs in a social context of pupils, colleagues and co-workers (R.K. Sawyer, 2012). While A. Craft (2011) stresses the influence of the culture on creativity, arguing that '…no one can be creative in relation to anything" pointing to the role of education in promoting creativity.

2.1. Concepts of "creativity" and "tvorchestvo"

Soviet and Russian scholars differentiated the concepts of "creativity" and "tvorchestvo". Both terms are translated into English as one word "creativity". However, the concept of "tvorchestvo" is understood as "a situational unstimulated activity" (the desire to go beyond of the given problems) and introduces the concept of "creative activity of personality" inherent in the creative personality type (D. B. Bogoyavlenskaya, 2002). The main indicator of "tvorchestvo", according to the scholar is an intellectual activity that combines two components: cognitive (general mental abilities) and motivation. The criterion for the existence of "tvorchestvo" is the manner of people to do thinking tasks. The author described "creativity" as one of the main components of "tvorchestvo". Therefore, we may conclude that "tvorchestvo" is broader because it is not limited by skills. As for similarities and differences between the two concepts, it should be noted that:

- 1) they can be considered as "synonyms" general creativity" (Lebedeva, 2004);
- 2) "tvorchestvo" is wider, as it includes both general and special abilities (Bogoyavlenskaya, 2002);
- 3) "creativity" is defined as a characteristic of any ability to work. It is a meaningful component of different kinds of abilities (Kovalchuk, 2005).

As for European scholars, creativity was divided into "Big C Creativity" and "small c creativity". "Big C Creativity" refers to the fundamental change in a certain area. For example, master pieces of Albert Einstein in physics. The other form of creativity is "small c creativity", which is manifested in an unusual decision, which may come every person in daily life. (Gardner, 1993).

- K. V. Taylor (1988) considered creativity as "solving a problem" and identified the following groups of creativity:
 - 1) creating a new integrity.
 - 2) "final product", or the production of something new;
- 3) self-expression (the ability to think in an unexplored region without being restricted by past experience);
 - 4) the interaction of "Id", "Ego" and "Superego";
 - 5) "thinking focused on the decision", which emphasizes the thinking process itself;
 - 6) and a variety of other definitions that do not fit in any of the above listed

Therefore, we may sum up that "tvorchestvo" has a closer meaning to the concept of "Big C Creativity" that in turn means "outstanding famous masterpieces of art, music, opera and literature" (Simonton, Kaufman, Beghetto). And the meaning of "creativity" is similar to the notion of "small c creativity" that means everyday creative activities (Richards, Kinney, Benet & Merzel), or "novel and personally meaningful interaction experiences, actions and events" (Kaufman & Beghetto).

One of essential parts of "Creativity" and "creativity" is creative thinking, which is "necessary condition of personality development" (Brushlinsky, 1995). Theory of L. Newell, J. S. Shaw and G. A.

Simon (1990) studies general questions of psychology of thinking and describes creative thinking as the highest form of thinking identified by special properties: high resistance (intensity, duration), tasks to determine the nature of the problem. Creative thinking is treated as a sensuous thinking (G. Rugg), intuitive (J. Bruner), figural, flexible, picturesque (Godefroid).

According to J. Guilford (1968), there are six parameters of creative thinking, which we want to develop in or students:

- 1) the capacity for detection and identication of problem;
- 2) the ability to generate numerous ideas;
- 3) flexibility or ability to create a variety of ideas;
- 4) originality or ability to work outside the box;
- 5) ability to improve object, adding details;
- 6) ability to solve problems, analyze and synthesize.

2.2 Creativity and creative thinking of primary school students

Creativity is "a natural characteristic of self-actualized person, where the self-actualization understands as the full use of talents, abilities, and capabilities of the individual or the process of self-realization of human potential (Maslow, 1992). Consequently, creativity is potentially present in every human, but most of people lose this quality during the life, therefore permanent creativity should be started to develop from the early childhood". The author divided creativity into primary (inherent in everyone) or the stage of inspired creativity and secondary - the process of detailing the creative product and giving it concrete form. Central idea of A. H. Maslow's theory on creativity is the concept of motivation, which he described according to the needs of individuals: the higher a person can rise in the hierarchy of needs, the greater individuality and creative possibilities he will develop. Creativity, as the ability to wonder and learn, to find solutions in unusual situations, to open something new and the capacity for deep analysis, was offered by E. Fromm (1990). Here the criterion of creativity is not the quality of the result, but the characteristics and processes creative productivity activation.

One of the urgent problems of pedagogy, which is particularly acute for primary school teachers is formation and further development of children's abilities to be creative. Since the abilities to think, to reason, to be creative in problem resolving start to develop at this age. Here a set of properties and qualities of personality necessary for the successful implementation of creative activities, finding original, innovative solutions in different species is understood as kids ' creativity.

Jean Piaget said "children of primary school age appear more clearly expressed the desire to take new, more mature position in life and to execute new and important activities as for them so for the surrounding. It is implemented in the pursuit of social status of a student and learning new socially significant activities. Constant contact of primary school-age children with all sorts of concepts of adult world leads to naive and actable relation to gaining knowledge. They do not tend to think about any complexities and difficulties".

The psychologist L. S. Vygotsky (2005) thought creativity was the norm of children's development and was inherent to every child. However, a pupil can act in a certain pattern (passive-imitative activity), or can select one of many proposed activities (active-mimetic), and, finally, can create a new solution of creative activity. According to Vygotsky, the meaning of the whole ontogenetic development is that a child gradually becomes a personality, a creator of human experience that produces material and spiritual values, which compose new wealth of the human soul. "Creative activity is any kind of activity that creates something new and original, moreover it stimulates the development of its author, history, science, art (Rubinstein, 2000).

Psychologists and educators consider an objective consequence of personality development as internal need for creative activity. Achievement of personhood should be contemplated as attainment of individual freedom. The process of formation of the child's personality is gradual

liberation from direct environment influence and transformation of a child into the active converter and the environment, and his own personality.

Younger school age is a sensitive period for the development of creative activity, as child is active and curious by nature. Therefore, it is important to develop creative activity of pupils as the highest level of all activities at primary school age. Since abilities to work outside the box are formed in elementary school. Creative abilities of student are manifested in the strength of unconventional approach to solute questions, refusal from standard templates, taking initiative, being active and independent (Kravtsova, 1996). Elementary school aged children easily master complicated mental skills, which indicates huge reserves of children's susceptibility and lot of scope of formal, game approach to the environment (Kunanbayeva, 2005).

According to E.E. Kravtsova main components of the creative personality are:

- 1. creative direction (need of motivational orientation on creative self-expression, goals on personal and socially significant results);
- 2. creative potential (the combination of intellectual and practical knowledge, abilities and skills to apply them in problems formulation and finding solutions);
- 3. individual psychological uniqueness (strong-willed character traits, emotional stability in difficulties' overcoming, self-organization, self-critique, rave experience success, awareness of himself as a creator of material and spiritual values).

Primary school includes children of I-IV classes from 6 to 10 years old in Kazakhstan. Each age stage is characterized by a particular position of child in the system of social relations. In this regard, life of different aged children is filled with specific content: relationship with others and leading activity to the current stage of development—game. There is also a system of rights that child uses, and responsibilities that it should take at each age stage.

Based on the opinions of scientists, it is possible to allocate following characteristic features of creativity in primary school:

- Originality
- Passive imitative activity
- Active imitative activity
- Curiosity
- Care
- Imagination

The following traits of adult creativity can be developed at English classes using the problem solving method:

- search for original and innovative solutions;
- ability to produce diverse ideas;
- ability to percept drawbacks, lack of knowledge;
- target setting for personal and social meaningful results;
- emotional resilience in overcoming difficulties;
- self-organization;
- critical self-evaluation;
- awareness as a creator of material and spiritual values;
- · ability to work outside the box;
- reflection.

3. Problem solving method in developing creative thinking at English lessons

One of the most important pedagogical tasks of this period is to teach younger students to learn easily and successfully. The main value of education is not accumulation of knowledge, but its assimilation and improvement. Younger school students are often interested in their progress at subject, rather than in the contents and methods of teaching. Experience shows that traditional lessons of English rarely provide truly creative work for students, therefore, pupils don't train the ability to solve complex problems, and they often receive knowledge in ready form, remember and reproduce it.

Thus, we propose to develop creative thinking of students through one of most widespread creative teaching methods - problem solving, which is mainly addressed to cultivate independent thinking. In addition, this method is characterized by cognitive activity of students, close connection of theory and practice, cooperative ambiance and mutual assistance. Problem solving method is "an approach to education that encourages students to take a more active role in their learning. It simulates "real life" situations before students have been given the necessary information for solving a problem" (Sandra, 2008).

Problem solving method is the most effective technique on all stages of education from primary school, since, it decides upbringing, learning and development problems. The advantage of this method is the possibility to create specific problem situations taken from school, home, or family practice in the classroom. Students develop enthusiasm to participate in analysis of situations and to make best decisions, as the topics are very close and intuitive, and as a result interesting and relevant (Bozic & Williams, 2011).

In order to use this method we selected two forms of work with students, namely: individual and group, as we thought there were objective reasons of psychological plan. There were students who liked to work alone regardless of their level of training, and there were those who wanted to be supervised or helped. Grouping students into groups of multi-level abilities contributes overall work of self-learning of each pupil, the development of feeling mutual aid and responsibility for the common result. However, there are also disadvantages such as individual students do not quite conscientiously perform assigned tasks, thereby the evaluation of group work becomes lower, that is why sometimes there are friction and misunderstanding among pupils.

4. Experiment

Our classes of English at 4th grade were fundamentally different from traditional lessons by purpose and content, forms and methods because they were focused on advancement of creative thinking through the development of its qualities as quickness, flexibility, originality, accuracy, which in turn contribute development of abstract thinking, spatial perception, voluntary attention and speech. The following activities are addressed to the development of speed, flexibility, originality and precision of thinking of primary school children through the system of special tasks and games, where pupils express their point of view and defend own opinion. All the tasks were created as post-reading activities on the basis of fairy tale "Peter Rabbit" by English writer Beatrix Potter, that in turn involves students into English culture.

Exercise 1: Mathematical operation with a hidden word:

- a. sum +break srak+bellagio- gio =? (umbrella)
- b. cut + cute + member timber -t = ? (cucumber)
- c. free+light-let+en = ? (frighten)

Here children should decide the operation with words and find the answer. This type of exercise is great for warm-up activity. It contributes the development of analytical thinking and prepares students for further work in class.

Exercise 2: «Correct the mistakes»:

Tbu Teper, hwo aws ervy ugnahty, arn tsriaght waay to Mr. McGregor's gdenran, nad suqeezed nuder hte atge!

Ifrts he tae osem tuletces adn some Rfench bneas; nad tneh he ate some dishraes;

And then, lingfee rather sick, he tenw to look for some psarley.

There is part of the fairy tale with spelling mistakes and student should correct the errors and read the text. Such exercises develop attention and interest of students to reading classes as students are challenged to decipher the encoded text.

Exercise 3: "Unconnected words/sentences":

- a) Lettuce, clothes, run, lock
- b) Jacket, speak, cat, wood
- c) Buttons, window, mouse, bring
- d) "Mrs. Rabbit bought a new jacket to Peter", "Mr. McGregor was running after Peter and almost caught him". The aim of a task is to develop the ability to students' skills to compare, to establish links between given words and phenomena, to think creatively, to create new holistic images of disparate piece and to explain how it all happened.

Exercise 4: "Common properties" teaches to find connections between objects, and learn the major and minor attributes of them. There are two poorly interrelated words and the task is to name as many as possible common features for these items.

Door - pea

Garden - hand

Idea – gate

Exercise 5: "They are alive": in this task students should think of different situations and describe them, when some things become alive.

Situations:

- A boy wants to cook, but fire, millet, pot become alive;
- 2. A girl is running after the bus and bus, legs. heart and head are alive
- 3. Father is going to hang a picture (heroes are hammer, nail, picture and wall)

Exercise 6: "Who lives there?" Pupils are given drawings of houses and they need to figure out who could live in each of these houses, describe the characters of those people and explain why they think so. The exercise is dedicated to establish internal relations between the images.



Figure 1. Who lives in these houses?

Exercise 7: "One letter story": Students make up a story where all words start with one letter. This activity can be used as a reflection task, which will improve target setting for personal and social meaningful results.

5. Analysis of the results and findings of experimental research

Problem solving learning teaches how to study at English lessons. The nature of teacher-student relationship is fundamentally changed by the need of cooperation and mutual aid, which allows to take a fresh look at optimization of educational process and to rethink existing methods of teaching

English. Therefore, we may note that problem solving method creates an atmosphere of easy communication.

We noticed that students were more actively working when problematic questions were addressed to pupils' and involve the use of their life experience (relationship in the family, hobbies, interests). Experience also showed that it is possible to create problematic issues close to real life conditions by increasing the novelty of information, which certainly piques children's interests.

Problem teaching at lessons of the English language also has practical importance in the formation of identity, as students discuss the problem. Our integrated lessons contributed holistic perception of the world: preparation of students for cultural, professional and personal contacts, development of imagination, fantasy and thinking, stimulated interest, maintained high motivation to learn foreign languages, acquainted with the cultural heritage and spiritual values of native speaking countries. Thus, problem solving method develops self-education of learners. In other words the method reflects a change in essence of education "from education for life to education through life"

The methodology of problem-based learning differs from traditional by putting undergraduates in a situation where they have to think actively and intensively, mobilizing their intellectual potential for solving problems and formation of theoretical output. We may outline that independently obtained theoretical conclusion has been more effectively acquired than the given one. And we helped our students to formulate and state problems and showing the logics of their decision, but not in the form of clues conclusions or answers.

So, problem training at our lessons complemented traditional illustrative and explanatory training. However it contributed destruction of old stereotypes of passive learning, made students to think, to search the answers to difficult questions together with teachers. In conclusion, it should be noted that problem solving method stimulates personal activity of pupils and ensures the active relation to knowledge, positive result in training and education.

We noticed that our students have become more sociable and mental; they started to subtly feel surrounding world, and be able to justify their point of view, find their way of expression of thoughts and feelings. They became interested and curious, calmer, more confident, more attentive, since learners lost fear, they began to ask questions. Their speech transformed from incoherent and monosyllabic into conscious language. While fulfilling practical tasks self-control was manifested .

6. Conclusion

During the period of our research we considered descriptions of terms "creativity", "tvorchestvo", "creative thinking" and "creative personality" given by European, Soviet and Kazakh scholars. And according to the made analysis, we may conclude that psychological factors of creative thinking development of primary school students are based on age individual sensitivity to the manifestation of creative thinking qualities.

We have traced the effectiveness of the identified conditions in the course of the experimental work carried out in the framework of primary school level. Our experimental tasks developed creativity, creative thinking and its qualities, as quickness, flexibility, originality and accuracy. At the lessons qualities of creative thinking were also developed by specially organized cognitive activities with problem solving exercises. The results showed that the effect of the identified psychological factors on the development of qualities of creative thinking was steadily working power of the studied phenomenon.

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