

CREATIVE EDUCATIONAL ENVIRONMENT FORMATION IN THE PROCESS OF TEACHING ENGLISH TO STUDENTS OF NON-LINGUISTIC SPECIALITIES

FORMAÇÃO DO AMBIENTE EDUCATIVO CRIATIVO NO PROCESSO DE ENSINO DE INGLÊS A ESTUDANTES DE ESPECIALIDADES NÃO LINGÜÍSTICAS

FORMACIÓN DEL AMBIENTE EDUCATIVO CREATIVO EN EL PROCESO DE ENSEÑANZA DEL INGLÉS A ESTUDIANTES DE ESPECIALIDADES NO LINGÜÍSTICAS

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ABSTRACT: The research aims to consider the conditions essential for the creative educational environment formation and the impact which this environment has on the creative potential of students mastering a foreign language for specific purposes. To achieve the set goals, we consider the technologies (problem-based, gaming, project technologies and case analysis) that contribute to implementing the creative environment. The paper reveals the results of the conducted on the site of Kazan Federal University experiment in organizing the process of teaching a foreign language in the conditions of a creative educational environment. Based on the systematization and generalization of foreign and national studies, we developed the following criteria for the effectiveness of the educational process: (1) the educational motivation level assessment; (2) the language proficiency level assessment; (3) the educational autonomy level assessment; and (4) the creativity level assessment.

KEYWORDS: Creative educational environment. Creativity. Creation. Foreign languages teaching. Educational Technologies.

RESUMO: *A pesquisa visa considerar as condições essenciais para a formação do ambiente educacional criativo e o impacto que esse ambiente tem no potencial criativo dos alunos que dominam uma língua estrangeira para fins específicos. Para atingir os objetivos definidos, consideramos as tecnologias (problemáticas, jogos, tecnologias de projeto e análise de casos) que contribuem para a implementação do ambiente criativo. O artigo revela os resultados da experiência realizada no site da Universidade Federal de Kazan na organização do processo de ensino de uma língua estrangeira nas condições de um ambiente educacional criativo. A partir da sistematização e generalização de estudos estrangeiros e nacionais, desenvolvemos os seguintes critérios para a efetividade do processo educativo: (1) a avaliação do nível de motivação educacional; (2) a avaliação do nível de proficiência linguística; (3) a avaliação do nível de autonomia educacional; (4) a avaliação do nível de criatividade.*

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PALAVRAS-CHAVE: Ambiente educacional criativo. Criatividade. Criação. Ensino de línguas estrangeiras. Tecnologias educacionais.

RESUMEN: La investigación tiene como objetivo considerar las condiciones esenciales para la formación del entorno educativo creativo y el impacto que este entorno tiene en el potencial creativo de los estudiantes que dominan una lengua extranjera para fines específicos. Para lograr los objetivos establecidos, consideramos las tecnologías (basadas en problemas, juegos, tecnologías de proyectos y análisis de casos) que contribuyen a implementar el entorno creativo. El documento revela los resultados del experimento realizado en el sitio de la Universidad Federal de Kazan en la organización del proceso de enseñanza de un idioma extranjero en las condiciones de un entorno educativo creativo. Con base en la sistematización y generalización de estudios extranjeros y nacionales, desarrollamos los siguientes criterios para la efectividad del proceso educativo: (1) la evaluación del nivel de motivación educativa; (2) la evaluación del nivel de dominio del idioma; (3) la evaluación del nivel de autonomía educativa; (4) la evaluación del nivel de creatividad.

PALABRAS CLAVE: Entorno educativo creative. Creatividad. Creación. Enseñanza de lenguas extranjeras. Tecnologías educativas.

Introduction

In modern conditions of existence and further development of an innovative Russian society, a person with such qualities as social and creative activity, critical and flexible thinking, observation, initiative, sociability, the ability to cooperate and create something new is becoming demanded and competitive. In connection with the personality-oriented approach established in pedagogy, particularly in language pedagogy, the socio-cultural context in teaching foreign languages has expanded its boundaries. A significant task facing modern language education is the formation of personal and professional qualities that contribute to students' successful interaction in various spheres of life with representatives of different cultures.

Following these provisions, the implementation of high-quality training of a modern specialist requires an immediate update of the foreign languages teaching methodology in higher education and the introduction of new techniques for designing the educational process. Training in the conditions of a creative educational environment will allow a future specialist to perform a new communicative product autonomously and independently, generate new ideas, and continuously develop the qualities of a creative personality.

A creative approach to educating was formed based on two innovative didactic

systems: problem-based learning (OKON, I. A.; ILNITSKAYA, I. YA.; LERNER, M. I.; MAKHMUTOV, A. B.; BRUSHLINSKY, ETC.) and developmental learning (ELKONIN, V. V.; DAVYDOV, L. V.; ZANKOV, etc.). Problem-based and developmental learning models are among the most significant areas of non-traditional education that have had a considerable impact on modern educational practice and have become widespread in modern schools. Developmental teaching differs from the explanatory-illustrative type of teaching and presupposes the activity of students. The teacher chooses the methods and forms of work that help develop students' cognitive independence, professional abilities, ideological, and moral convictions, and an active life position. Thus, developmental teaching involves students in various activities such as didactic games, discussions and uses teaching methods enriching their creative imagination, critical thinking, memory, and speech. Teaching methodology experts point to the relationship between developmental and problem-based learning and note that since the entire system of methods in problem-based learning "is aimed at the general evolution of the student, and the development of their abilities, problem-based learning is truly developmental teaching" (MAKHMUTOV, 2016). The idea of problem-based learning has become widespread in Russia and Poland since the late 60s of the 20th century, largely thanks to V. Okon and M.I. Makhmutov, one of the primary developers of this direction of pedagogical science. V. Okon and M. I. Makhmutov developed an integral problem-based learning system during this period. V. Okon understands problem-based learning as a set of actions such as organizing problem-based situations, formulating problems (students gradually become accustomed to this), providing students with the necessary assistance in solving problems, testing these solutions and, finally, guiding the process of systematizing and consolidating the acquired knowledge (OKON, 1968). M.I. Makhmutov points to the incompleteness of the definition given by V. Okon since his formulation concerns only the activities of a teacher and omits the working of a student. In his definition of problem-based learning, M.I. Makhmutov considers the interaction of a teacher and a student. According to the researcher, problem-based learning is a type of developmental learning and combines the systematic, independent scientific search of students and their assimilation of ready-made conclusions of science. The process of interaction between teaching and learning focuses on the formation of the scientific worldview of students, their cognitive independence, stable motives for learning and thinking (including creative) abilities in the course of their assimilation of scientific concepts and methods of activity, determined by the system of problem-based situations (MAKHMUTOV, 2016). The main component in problem-based learning is the creation of a problem-based situation. According to Ilnitskaya, the systematic

use of sequential problem-based situations is the essential condition for organizing the training because it forces the teacher to envisage contradictions that may arise in the minds of students in the learning process and also reveals the didactic meaning of a problem-based situation as a psychological category (ILNITSKAYA, 1985). The definition, differentiation and conditions for creating problem-based situations in detail by (MATYUSHKIN, 1972).

Scientific research of representatives of these innovative systems made it possible to create an alternative to the traditional system of normative-oriented learning and the transition to personality-oriented learning, in the process of which the creative potential of students and all the above-mentioned qualities are developed. In other words, there is a transition to creative learning.

The conducted analysis allows us to note the frequent dominance of the traditional approach to the process of foreign languages training. We share the opinion of those scientists who believe that the traditional approach does not contribute to the formation of creativity among students and significantly narrows the possibilities of their preparation for subsequent creative self-realization in their professional activity; it also reduces creative activity, determines intellectual passivity, forms mainly the reproductive type of thinking, and contradicts the modern requirements of society (GAREEV, 2003; KLARIN, 1997).

This problem is largely due to the absence of a united scientific understanding of the concept of “creativity,” the multiplicity of approaches to its definition, and considering it the synonym of the term “creation.” For example, supporters of the subjective nature of creativity note the importance of “creation” and determine it as the ability to solve various creative tasks. In contrast, creativity refers to subjective characteristics and allows individuals to perform a specific task. In addition, that the ability to find a non-standard solution to the problem is an indicator of creativity, whereas skills and abilities in solving them are provided by creation (DUBININA, 2000; VORONIN, 2006).

One of the most productive and promising points of view is the scientific consideration of creativity through the prism of an individual’s inner resource as a fundamental basis for continuous and productive creative development, which discloses the inner potential of a personality (KASHAPOV; SKVORTSOVA, 2007). The theoretical basis of this approach comprises the humanistic ideas of the creative self-development of an individual from “a simple contemplation of reality to understanding and only then to its creative transformation” (ANDREEV, 2016).

Thus, the process of the creative educational environment formation should be based on considering the interconnectedness and interdependence of the concepts of “creativity” and

“creation” and maximally focused on the hierarchy of their development vector: from creativity (discovery or generation of something new in one’s activity) to creation (integration of accumulated experience in various types of activities into the creation of something exceptionally new and unique). According to some scientists, the creative environment constitutes the multidimensional individualized integrity necessary for self-realization and personal growth.

Methodology

Based on the existing interpretation of the concepts of “creativity” and “creation” in the context of pedagogical, psychological, and social research, we consider creativity as an integrative quality necessary for the creative process and the actualization of the creative potential of a person. Thy paper aims to determine the conditions necessary for forming an educational environment that contributes to the development of creativity and the impact of this environment on the effectiveness of the training process. According to our research hypothesis, the process of teaching a foreign language in the conditions of a creative educational environment can contribute to the intensification of the professional training of students in the field of foreign languages and the development of their creativity and creative potential. The research objectives are (1) to highlight and substantiate the essential and substantial characteristics of the concept of “creativity” in its relation to the concept of “creation”; (2) to identify and analyze the principles of forming a creative educational environment, which contributes to the development of students’ ability to personal growth and self-realization; (3) to determine and characterize educational technologies that contribute to the formation of a creative educational environment; and (4) to develop and test experimentally (within the framework of a creative educational environment) the author program “Foreign (English) language in the field of professional communication” for students specializing in the field of petroleum engineering.

The analysis of scientific literature for determining essential didactic, general methodological, and particular methodological principles allows us to identify a set of the following fundamental principles of creative teaching a foreign language: the principle of a personalized orientation; the principle of lifelong learning and the principle of learning and life connection; the principle of the problem; the principle of creative activity; the principle of independence; the principle of combining subject integration with the methodology of creation.

An important condition for realizing the principle of personality-oriented teaching a foreign language in a creative educational environment is its relationship with the principle of activity, which is an integral part of the subject “Foreign Language.” The implementation of this principle contributes to the “external and internal (mental) activity of the student” (GALSKOVA; GEZ, 2006), the development of memory, thinking, and the accumulation of personal experience. The principle facilitates the development of creativity as a personal trait of students. It serves as an essential mechanism for the creative environment formation, which supposes a new way of solving a problem to get a creative product.

In addition, the process of mastering a foreign language implies the actualization of all spheres of personality (emotional, motivational, cognitive, intellectual, and volitional) in the process of a speech act, thereby providing opportunities for the development of self-reflection and self-expression. Therefore, specialists in the field of linguodidactics, Alimov, Verbitsky, Galskova, Gez, Zimnyaya, and Smolkin, claim that it is necessary to create conditions for initiating speech activity using the forms of work that motivate students to express their thoughts, emotions and states with the help of a foreign language expressing their so-called “vector of creativity” of foreign language speech activity.

Since the concept of “creativity” is subjective, modeling a creative educational environment should solve a specific problem that a student is interested in. Following these conditions, a creative educational environment supposes:

- A problem, the solution of which is not conventional;
- Difficulties in solving the problem, correlating with the personal motives and interests of a student;
- Discretion, originality and autonomy of problem-solving, acceptance and recognition of mistakes, and respect for the diversity and variability of responses of other subjects of activity.

Consequently, the following algorithm of actions can be used in the process of teaching a foreign language in conditions of the creative educational environment: (1) identifying the problem by analyzing the situation; (2) finding an original solution; (3) getting a new experience; and (4) self-reflection. A significant factor in achieving the creativity of this process is a high level of student motivation.

According to the requirements of the Federal State Educational Standard and work programs of the disciplines “Foreign Language” and “Foreign (English) language in the sphere of professional communication” taught at the university, the creative aspect in the organization of independent work of students occupies a dominant place. However, currently,

there are the following factors, which can not only negatively affect the process of teaching a foreign language to students of non-linguistic specialties in general but also become barriers in the formation of a creative educational environment: non-core nature of the disciplines (the level of students' motivation to study the subject decreases), a limited number of hours given to language learning, a low level of students' language proficiency.

Accordingly, when developing a course of teaching a foreign language, one should take into account the principles of intensification, which give the possibilities to distribute study time rationally and maximally condense educational material, selected in such a way as to make possible the formation of a creative environment which in turn stimulates learning and professional activities of students and stimulates their motivation. The educational process organized in this way leads to accumulating the required professional knowledge, skills, and personality traits.

For students specializing in the sphere of petroleum engineering, we have developed an authoring program, "Foreign (English) language in the sphere of professional communication." The program is a propaedeutic course for the discipline "Academic Communication" (studied by Master students) and represents the system of classes. This course aims to develop students' foreign language communicative competence skills in professional communication. In addition to education, the main objectives include increasing the motivation of students to learn a foreign (English) language; fulfillment of the creative potential of students; formation of the ability and readiness to generate new ideas and create innovative products using a foreign language in the process of their future professional activities. The content of the program is realized within the framework of a creative educational environment based on the implementation of the following educational technologies:

- Problem-search technologies which suppose a task that can be solved using the learned language in various communication situations;
- "Gamification" technology which involves the modeling of role-playing situations and business games using both traditional and digital (technology 2.0, Web services) pedagogical technologies;
- Case analysis which investigates a specific situation from the professional sphere and serves as the basis for further discussion in a foreign language;
- Project technologies include the individual or collective implementation of creative projects in the learned language.

Using these technologies, the stages of the lesson based on a personality-oriented approach and considering the principles of the formation of a creative educational environment are designed.

Problem-search technologies

Problem-search technologies used in the training process activate the thinking process and develop students' creative abilities. The traditional and problem-search approach (participating in the formation of the creative environment) differs in transferring information, performing tasks, and assimilating information (GLADKOVA; VAGANOVA; SMIRNOVA, 2018). Table 1 summarizes these differences.

Table 1 – Solving a problem with the use of traditional and creative approaches to learning

Comparison criteria	Traditional approach	Creative approach
Task presentation	The teacher presents a ready-made sample and solution	The teacher creates a situation that requires a formulation of a hypothesis, the formation of a guess for the subsequent development of a solution
Completing the task	The task is performed according to the direct instructions of the teacher	The task is performed without direct instructions from the teacher
Knowledge assimilation	Knowledge is acquired by memorizing the studied material while performing different exercises	Knowledge is acquired in the course of search and research activities

Source: Prepared by the authors

The excessive number of students in groups can be considered a factor that complicates the implementation of a personality-oriented approach. That is why one of the possible solutions is to work in micro-groups. The application of problem-search technology in practice may look as follows. For example, when studying the topic “Exploration,” students are offered a text about the estimated offshore oil reserves near Greenland. Environmental conditions of the area are also described. Micro-groups are proposed to discuss the advantages/disadvantages of oil production in this region, considering all factors listed in the text. Since there is still no single point of view on solving this problem, students have the opportunity to compare their version with the options proposed by other micro-groups, discuss the results obtained, and draw conclusions regarding their solution to the proposed problem.

Gamification technology

Currently, in the educational process, such pedagogical technology as “gamification” is widely recognized. It is supposed to be a stimulating technique in developing a person’s creativity. Gamification allows the introduction of game techniques in non-game situations and integrates game mechanics, aesthetics and game thinking to increase student involvement in training, enhance their motivation and achieve educational goals. The unconsciousness of the participants’ behavior in the game is a distinctive feature of the use of this technology, which ultimately contributes to the growth of internal motivation.

This technology is universal and applicable to any school and university audience since students and schoolchildren have to study hard because the educational process is quite intensive. Game elements act as a relaxation for the participants in the educational process and contribute to the growth of their resistance to stress. In addition, this technology contributes to the expansion of intercultural collaboration of participants in the framework of communication which is connected with Web services: blogs, as well as reviews of other works (Blog, Wiki); rating, creating and storing links to web services (Bobrdobr); publishing photos, creating photo collages (Flickr), videos (YouTube, Videoblog), access to books, educational materials (Scribd); messaging (Messenger, Skype).

So, when studying the topic “Drilling,” a business meeting can be proposed to discuss the possibilities of drilling under the mountain range. When discussing, it is recommended to pay attention to such factors as technical difficulties arising when drilling a directional well; the type of rock under the ridge; possible fracture of the subsurface rock; type of prospective well in case of drilling, etc. Instructions may be given to each member of the micro-group, depending on the level of language proficiency.

Case analysis

Case analysis or case method is an educational technology based on the particular real-life situations analysis, as a result of which a student forms and develops certain professional skills.

The principles of the case method are as follows:

- Inductive approach, supposing the use of students’ existing knowledge and experience and analysis the situation from the general to the particular;
- Development of such thinking abilities as analysis and synthesis;
- Formation of professional skills of research, analysis and decision-making

necessary in future activities.

The study case is developed for discussion, independent analysis and search for possible solutions. It is not intended to demonstrate theoretical provisions in practice and not to illustrate the expected actions in the analyzed situation. There may be several possible solutions to a specific problem in this case. Accordingly, when using the case method, the most significant materials are those that allow determining the problem and independently searching for solutions.

For example, an analysis of a major accident, namely a British Petroleum oil refinery explosion, in Texas City on March 23, 2005, allows to determine the possible sources that cause a major accident, to proceed to a discussion of possible preventive measures and to conclude with a justification of the importance of health, safety and environmental issues. Students specializing in the oil and gas industry sphere know that Russian and foreign companies are fully aware of the importance of these issues. However, analyzing a specific situation gives students a practical justification for familiar theoretical provisions.

Project technologies

Project technologies involve individual or collective projects related to students' specialization and performed in the learned language. A student/A group of students is offered a problem that can be solved using the available knowledge. An independent collection, analysis and systematization of information are carried out, the structure and content of the project work are then determined. The last step is the presentation of the project. As practice shows, project work is more effective with the second-year students since they are already studying specialized subjects and can conduct full-fledged scientific research in the area of interest. Students can also present their projects or participate in a competition at a conference.

The organization of the training process based on the developed program was carried out in three directions:

- Formation of a creative educational environment in the process of teaching a foreign language;
- Realization of a set of tasks aimed at the development of students' creativity and their creative potential;
- Appliance of certain educational techniques in the context of creative educational technology.

Results and discussion

The approbation of this program was carried out in 2020 on the site of Kazan Federal University with the second-year students of the specialty 21.03.01 “Petroleum Engineering” in the process of teaching a discipline “Foreign (English) language in the sphere of professional communication.” The control and experimental groups were formed according to the principle of random sampling. Each group of students had approximately the same level of proficiency in a foreign language (A2/B1). The experiment took place in classroom learning of the discipline. Based on the systematization and generalization of foreign and Russian researchers’ studies, we have developed the following criteria for the assessment of effectiveness of the process of teaching a foreign language in a creative educational environment: (1) assessment of the educational motivation level, the indicators of which are the predominance of the following motives (internal and external): communicative, avoidance of failure, prestige, professional, creative self-realization, educational and cognitive, social motives; (2) assessment of the language proficiency level, which is determined by the student’s ability and readiness to competently carry out professional communication in the learnt language; (3) assessment of the educational autonomy level, which is determined by the student’s ability to independently and creatively solve the set communicative tasks; and (4) assessment of the creativity level in the aggregate of its indicators (fluency, flexibility of thinking, verbal creativity (uniqueness, originality), development).

To examine the level of educational motivation of students at the beginning and end of the year, we conducted a survey based on the methodology of Ilina (ILINA, n. d.). The processing of the results of the questionnaire was carried out according to three scales: (1) the acquisition of knowledge; (2) mastering the profession; and 3) obtaining a Diploma of Higher Education. The survey allowed us to identify the dominant educational motives of the control and experimental group students in terms of their internal or external manifestations and to distribute them into levels. Table 2 shows the survey results conducted at the beginning and the end of the year in both groups and reflects the analysis of answers to the proposed questionnaire.

Table 2 – Levels of motivation of students to study at the university

Group	High level		Medium level		Low level	
	At the beginning of the year	At the end of the year	At the beginning of the year	At the end of the year	At the beginning of the year	At the end of the year
Experimental	23%	27%	47%	53%	30%	20%
Control	20%	22%	42%	45%	38%	33%

Source: Prepared by the authors

To assess the level of language proficiency, we carried out the entrance and final testing to determine the level of knowledge of the English language according to the international system. Table 3 contains the testing results at the beginning and the end of the year in both groups.

Table 3 – English proficiency levels

Group	Level A2		Level B1		Level B2	
	At the beginning of the year	At the end of the year	At the beginning of the year	At the end of the year	At the beginning of the year	At the end of the year
Experimental	20%	16%	56%	58%	24%	26%
Control	20%	18%	60%	62%	20%	20%

Source: Prepared by the authors

Both educational motivation and the level of language proficiency affect the next criterion that determines the effectiveness of the organization of the educational process - the autonomy of educational activities. In psychological and pedagogical works devoted to the problem of formation and development of educational autonomy in the process of teaching a foreign language in institutions of higher education, three levels of formation of autonomous educational activity are distinguished:

- Low level (training activities are carried out under the direct supervision of the teacher);
- Medium level (educational activities are carried out both under the guidance of the teacher and individually in similar situations);
- High level (training activities are performed independently and in new situations).

A questionnaire developed by Bim *et al.* (2003), was used to estimate awareness indicators and the applicability of educational strategies when learning a foreign language. The questionnaire is based on the reflection of students. It aims to determine the level of development of their skills to organize their educational activities while mastering a foreign language independently. Table 4 shows changes in formation levels of autonomous educational activities at the beginning and end of the year in both groups.

Table 4 – Levels of formation of autonomous educational activities

Group of questioning	High level		Medium level		Low level	
	At the beginning of the year	At the end of the year	At the beginning of the year	At the end of the year	At the beginning of the year	At the end of the year
Experimental	23%	26%	56%	58%	21%	16%
Control	23%	23%	53%	57%	24%	20%

Source: Prepared by the authors

The analysis and systematization of the results of teaching a foreign language to experimental group students were carried out based on the methodology developed by E.P. Torrance (1991). The levels of creativity were determined by indicators such as fluency, the flexibility of thinking, originality, development, verbal creativity (originality and uniqueness). Table 5 shows the differences in creativity levels of students in experimental and control groups.

Table 5 – Creativity levels of students

Creativity indicators	High level		Medium level		Low level	
Fluency	86% (EG) 64% (CG)	98% (EG) 70% (CG)	14% (EG) 36% (CG)	2% (EG) 30% (CG)	-	-
Flexibility of Thinking	48% (EG) 56% (CG)	80% (EG) 58% (CG)	52% (EG) 44% (CG)	20% (EG) 42% (CG)	-	-
Originality	52% (EG) 48% (CG)	72% (EG) 52% (CG)	48% (EG) 52% (CG)	38% (EG) 48% (CG)	-	-
Elaboration	28 % (EG) 36% (CG)	48% (EG) 42 % (CG)	64% (EG) 48% (CG)	52% (EG) 44% (CG)	8% (EG) 16% (CG)	- 14% (CG)
Verbal creativity (originality)	-	48% (EG) 2% (CG)	68% (EG) 64% (CG)	52% (EG) 76% (CG)	32% (EG) 36% (CG)	- 32% (CG)
Verbal creativity (uniqueness)	-	4% (EG) 2% (CG)	32% (EG) 28% (CG)	92% (EG) 30% (CG)	68% (EG) 70 % (CG)	4% (EG) 68% (CG)

Source: Prepared by the authors

Thus, the conducted surveys and the comparative assessment of teaching a foreign language show that the results in the experimental group improved in all criteria. The analysis indicates the correct choice of educational strategy and emphasizes the efficiency of a creative educational environment.

In recent works devoted to the problem under study, researchers agree on the need to organize the educational process in a creative educational environment since this environment allows students to be transferred from an object to a subject of learning by strengthening their motivation for self-education (EMELYANOVA; KURGALIN; SHERSHEN, 2017); develops the creative abilities of university students (KRECHETNIKOV; TITARENKO, 2015); provides students with a set of opportunities for the revealing their creativity and the formation of professional and general cultural competencies (SHKERINA, 2010); develops emotional intelligence, that is understanding personal emotions and skills to control them, the ability for self-motivation, recognition of other people's emotional reactions and states (BEREZHNAYA, 2014).

The conducted research proves practically theoretical provisions put forward earlier of the positive impact of the creative environment on the learning process in general and on the learning a foreign language, in particular. A creative educational environment in teaching a foreign language to students of non-linguistic specialties ensures the consistent and permanent development and improvement of their foreign language communicative competence. It contributes to the successful and adequate implementation of intercultural and interpersonal communication. Assessment of the educational motivation, language proficiency, educational activity autonomy, and creativity shows improvements in all investigated levels of the experimental group compared to the control group.

The percentage of students with high motivation in the experimental group increased by the end of the year (by 4% in the high-level group, by 6% in the medium level group). In comparison, the percentage of students with low motivation decreased (from 30% to 20%). In the control group, the percentage of students with high and medium level motivation remained practically the same. The percentage of students with low motivation decreased slightly (by 5%).

In both groups, the number of students with a language proficiency level of A2 decreased (by 4% in the experimental group, by 2% in the control group), the percentage of students with a level of B1 increased (by 2% in both groups). The percentage of students with a level of B2 in the experimental group increased (by 2%, 26% in total), while the number of students with a level of B2 remained the same in the control group (20%).

The experimental group students increased their level of autonomous educational activities (by 3% in the high-level group, by 2% in the medium level group). The number of students with a low autonomous educational activity decreased (from 21% to 16%).

Analysis and systematization of the results of teaching a language to students of the experimental group showed a significant increase in the indicators of the potential creative level (fluency, originality, elaboration); verbal creativity (originality, uniqueness). At the same time, no significant changes were found among the control group students, who were trained according to the traditional methodology of teaching a foreign language.

A creative approach to teaching foreign languages does not imply abandoning traditional forms of teaching. As E.A. Nikiforova notes, it is impossible to use only exclusively creative and original ways of teaching in class, but, at the same time, such methods of training make it possible to develop creative independence, teach how to work with various sources of knowledge and thus form the general and professional competencies of a future specialist (NIKIFOROVA, 2018). This approach (in addition to the problem-based and developmental learning) combines with an explanation of the teacher, the reproductive activity of students, the setting of tasks, and the performance of exercises by students (MAKHMUTOV, 2016). In addition, only a few students can immediately see problem situations. For the majority of students to be able to see and solve problems, a system of problem situations, problems and problem tasks included in the content of the training is needed. That is why we agree with Lerner who believes that the indicators of the system of problematic tasks are the following characteristics: (1) coverage of various features of creative activity; and (2) various degrees of complexity (LERNER, 1974).

Therefore, we applied a system approach to organizing the educational process in the conditions of the creative environment when developing the program “Foreign (English) language in the sphere of professional communication.”

Conclusion

The study confirmed the hypothesis that teaching a foreign language in the conditions of a creative educational environment intensifies students’ professional training in foreign languages and develops their creativity and creative potential. We differentiate between the concepts of “creativity” and “creation” and define “creativity” as internal quality and a certain personal resource, which is realized in the creative process and contributes to the actualization of the creative potential of the individual. According to the tasks set, we identify a set of

fundamental principles applied in teaching a foreign language in the conditions of the creative environment. The principles of a personalized orientation, lifelong learning, learning and life connection, problem, creative activity, independence, combining subject integration with the creation methodology are among them. We also highlight and describe pedagogical technologies (problem-search, gamification, case analysis, project technologies) that have proven their effectiveness in the light of the problem under study. The results of the experiment carried out on the site of the Kazan Federal University confirm the positive impact of the creative educational environment on the process of learning English by students of non-linguistic specialties.

The targeted and systematic formation of a creative educational environment in the process of teaching a foreign language to students of non-linguistic specialties ensures the ability and readiness of students for their subsequent creative self-development and self-determination both personally and professionally, as well as participates in building an individual self-improvement route in general, and in the area of foreign languages, in particular.

The research has practical significance. General principles, forms, and work methods in the conditions of a creative educational environment generated during the research will develop programs, textbooks, and digital educational resources devoted to teaching a foreign language for specific purposes. In the future, we also plan to develop a system of classes in a creative educational environment for students of other non-linguistic specialties.

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How to reference this article

SIGAL, N. G.; ZABOLOTSKAYA, A. R. Creative educational environment formation in the process of teaching english to students of non-linguistic specialities. **Rev. EntreLinguas**, Araraquara, v. 8, n. esp. 1, e022029, Mar. 2022. e-ISSN: 2447-3529. DOI: <https://doi.org/10.29051/el.v8iesp.1.16946>.

Submitted: 29/11/2021

Required revisions: 06/01/2022

Approved: 15/02/2022

Published: 30/03/2022