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A Logical-Meaningful Model of the Formation of a Culture of Educational and Research Activities Among Junior University Students in the Process of Teaching English

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***Abstract*---**The purpose of the study is to develop a model for the formation of a culture of educational and research activities among junior students of the university in the process of their teaching English. The article concretizes the concept of "model", examines various types of models and methodological approaches to their construction. The scientific novelty of the research lies in the development of a logical-meaningful model of the formation of the culture of educational and research activities among junior students of the university in the process of teaching English. As a result, it was concluded that the most important property of the developed model is its integrity: the model gives a generalized description of the object of research, isolates the most significant sides for the study, makes it possible to establish a functional relationship between the parameters under study, to increase students' motivation for learning, the development of creative and creative abilities, as well as active research activities.

***Keywords*---**educational and research activities, junior students of the university, methodological approach, model.

Introduction

Modeling is one of the methods of scientific and pedagogical research, contributing to the effective formation of the culture of educational and research activities. The modeling method is understood as a reflection of the characteristics of the future pedagogical system in a specially created pedagogical object called

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the pedagogical model (Yakovlev & Yakovleva, 2006; Pashina, 2021; Krylova et al., 2020; Tarman, 2020; Volkova et al., 2020). In our study, we adhere to the opinion of the scientist-philosopher V.A. Shtoff, who understands a model as a mentally or practically created structure that reproduces this or that part of reality in a simplified (schematized) visual form (Shtoff, 1996).

Analysis of the literature on the problem under study in the field of theory and methodology of pedagogical modeling suggests that the most common of them are:

- structural and functional (the process of managing pedagogical systems is considered as a solution to a variety of pedagogical problems with the allocation of the main functional components);
- stage-by-stage (based on three stages of the management process, following each other: target, socio-psychological and operational) (Ellis, 2014);
- situational (the situation acts as a subjective, personally and activity-mediated conceptualization of the objective interactions of a person with the environment) (Lamanauskas & Augienė, 2009);
- competence-based and other models.

To build a model of the process of forming a culture of educational and research activities among junior students in the process of teaching English, we relied on the conceptual ideas of the following methodological approaches:

- system-activity (S.I. Arkhangelsky, Yu.K. Babansky, V.P. Bespalko, L.S.Vygotsky, V.V. Davydov, V.S. Stepin, G.P.), which allows us to present the process of forming a culture of educational and research activities as a pedagogical system and develop a model containing functionally oriented structural blocks; most reasonably determine the content of education, forms and methods of organizing the educational process and interaction "student - teacher"; also allows us to consider the process of forming a culture of educational and research activities in the variety of connections and relationships of an integral system and its constituent components that are in constant development);
- synergetic (L. S. Akopyan, V. A. Barabanshchikov, T. L. Busygina J. Guilford. Yu. M. Zabrodin, B. F. Lomov, S.B.), which involves the study of the mechanism of self-organization of structures, which is closely related to the development and self-improvement of the student's personality, with the understanding of a person as a system “in the process of creating itself and a certain productive activity directed outward” (Arshinov & Budanov, 2004);
- personality-oriented (B.G. Ananiev, L.S.Vygotsky, P.Ya. Galperin, V.V.Davydov, V.A. the process of cognition and focusing on the intellectual and value development of the student, which correlates the learning process with the orientation of the interests and life plans of the individual;
- culturological (N.V. Garanzha, V.I. Glukhov, N.A.Enshina, S.N. Zapletina, N.A.Kovalenko, S.I. Maksimenko, L.F. Mikhaltsova, E.A. Nikitin, T.N. Sinenko, etc.), considering the process of formation of educational and research culture as an actual task of formation and development of personal culture in general in the context of the needs of society;

- professional-contextual (A.A. Verbitsky, L.V. Parinova), which determines the consideration of the process of forming a culture of educational and research activities in the course of learning English as a learning process, in which the social and professional content of the activity of a future specialist and citizen is modeled.

Method

Analysis of theoretical approaches to modeling as a pedagogical phenomenon, reliance on the provisions highlighted in the presented methodological approaches predetermined the conclusion about the advisability of developing and implementing a logical-meaningful model of the process of forming the culture of educational and research activities of junior students of the university in the process of teaching English. This model is called "logical and meaningful", because represents a logical structure of the pedagogical process, during which the culture of educational and research activities is formed among students of junior courses of the university in the process of teaching English based on the methodological conditionality of the idea of structural and content components, and the process itself is aimed at the acquisition of professionally and personally significant qualities by the student and the development of abilities, taking into account the social order of society for the training of a specialist (Bekteshi & Xhaferi, 2020; Mashudi et al., 2021; Panova et al., 2020; Rukavishnikova et al., 2020). It should be emphasized that the implementation of a logical-meaningful model predetermines the importance of the formation of formal-operational thinking in students in the course of educational and research activities, since a logical-linguistic statement (oral or written), according to Piaget, is nothing more than the objective material shell of the form in which thinking exists (Piaget, 1999).

The logical-meaningful model is based on methodological approaches (system-activity, synergetic, personality-oriented, competence-based, professional-contextual) and psychological and pedagogical conditions. It includes interrelated blocks - target, methodological, procedural content and evaluative and effective (see: Figure 1).

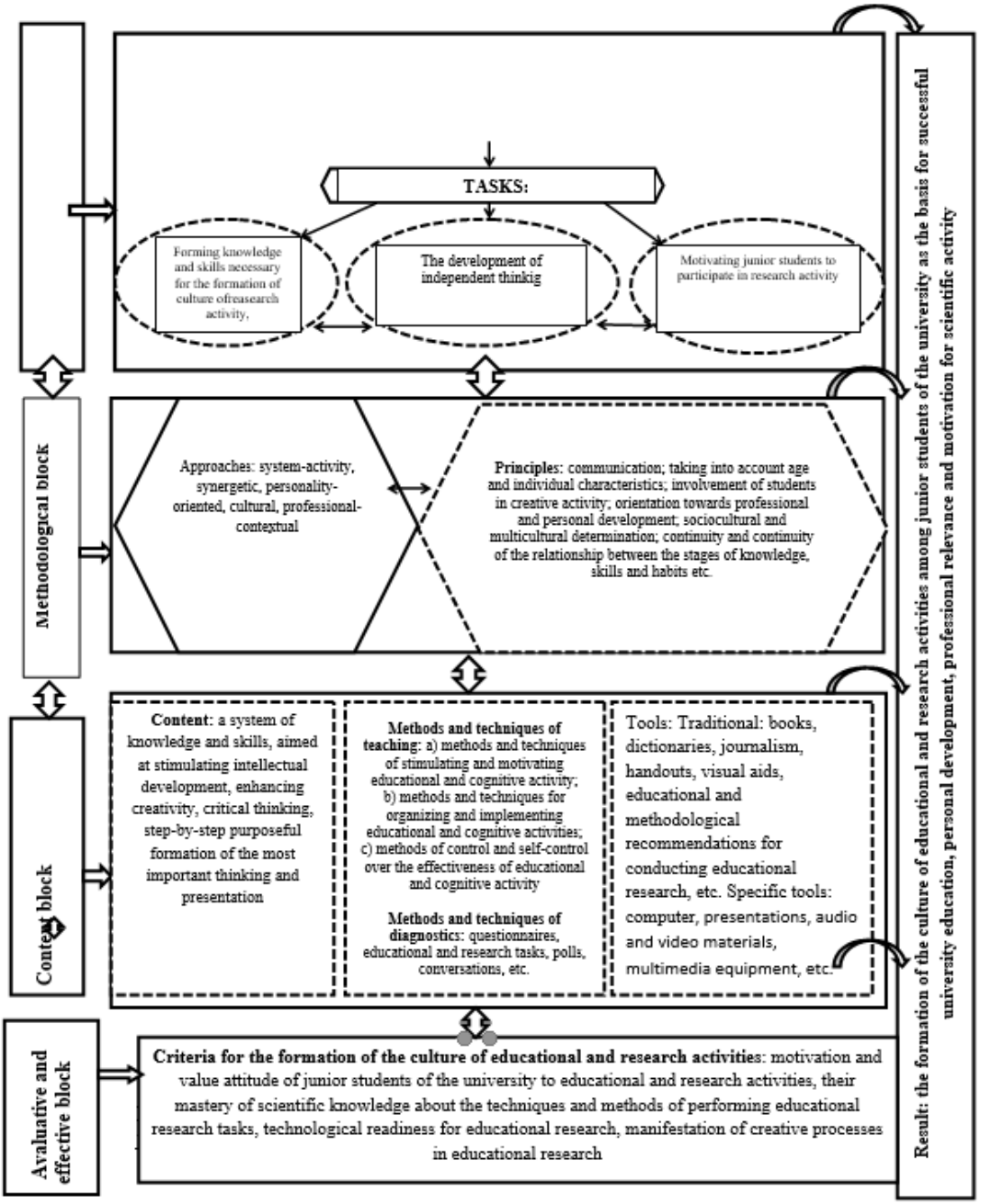

Figure 1. Model of the process of forming a culture of educational and research activities of junior students of a university in the process of teaching English

The target block is determined by the Federal State Educational Standard. This block is expressed not only by the set of necessary skills, but also by the complexity of the graduate's personal qualities, the formation of which occurs in accordance with the state and social order of society, regulatory documents (curriculum, FSES-3 ++, curricula, etc.). In addition, the target block assumes the

formation of a culture of educational and research activities among junior students on the basis of their motivation for further active participation in research work (Fraser et al., 1987; Daub, 2007; Suryasa et al., 2019).

The methodological block presents the approaches and principles on the basis of which the process of forming a culture of educational and research activities among junior students in the process of their teaching English is carried out (Moody & Matthews, 2020; Saenko et al., 2019; Sozontova et al., 2020; Panfilova et al., 2021). The procedural and content block includes a system of knowledge, skills and abilities aimed at stimulating intellectual development, enhancing creative potential, critical thinking, step-by-step purposeful formation of the most important thinking and presentation skills. Proceeding from the fact that the basis of educational and research activities is educational and cognitive activity, we consider it logical to use the following methods and techniques of teaching, identified by Yu.K. Babansky, contributing to the formation of a culture of educational and research activities among junior students of the university in the course of their teaching English:

- methods and techniques for stimulating and motivating educational and cognitive activity;
- methods and techniques for organizing and implementing educational and cognitive activities;
- methods of control and self-control over the effectiveness of educational and cognitive activity.

In the course of implementing the model of the process of forming a culture of educational and research activities among undergraduate students of a university in the course of teaching English, in addition to teaching methods, it is necessary to use diagnostic methods and techniques: questionnaires, educational research tasks, polls, conversations, etc. Among the teaching aids, not only traditional (books, dictionaries, journalism, handouts, visual aids, educational and methodological recommendations for conducting educational research, etc.), but also modern (computer, presentations, audio, video materials, multimedia equipment, etc.). In the productive-evaluative block, the criteria for the formation of the culture of educational and research activities are presented, among which it is necessary to highlight the motivation and value attitude of junior students of the university to educational and research activities, their mastery of scientific knowledge about the techniques and methods of performing educational and research tasks, technological readiness for educational research, the manifestation of the processes of creativity in educational research (Savin-Baden, 2000; Ogilvie & Dunn, 2010).

All presented blocks and their content are aimed at a specific result, which presupposes the formation of the culture of educational and research activities as the basis for successful university education, personal development, professional relevance and motivation for reserach activity (Kumar et al., 2016; Aryani et al., 2016). Determination of the result of the process of forming a culture of educational and research activity among junior students is based on identifying the levels of formation of the culture of educational and research activity among junior students, as well as on the changes that have occurred to it as a result of

purposeful educational and educational work (Simona, 2015; Pica, 2000; Wang, 2015).

Results

So, at a high level, the formation of all components of the culture of educational and research activities among junior students is noted: motivational-value, cognitive, technological and creative-creative (Isaikina et al., 2021). Undergraduate students of English have a strong and sustained motivation for learning and research. They have formed not only an interest in mastering the knowledge of conducting educational research, but also a desire to successfully complete the educational research assignment. Moreover, they perceive educational and research activities at the university, not only as a condition for successful studies, but also as a factor contributing to effective professional activity in the future. They understand the essence of educational and research activities, the algorithm for its implementation (Din et al., 2016; Susanty et al., 2021). These students are proficient in mental operations, they have developed critical thinking, skills and abilities to solve problem situations. At this level, students have creative abilities and actively use them in the process of completing educational research assignments.

At this level, undergraduate students take an interest in doing instructional research. They understand the importance of teaching and research activities. However, to a greater extent they are attracted by the knowledge, skills and abilities not obtained in the course of this type of activity and their influence on the comprehensive development of the personality of junior students, and the possibility of obtaining higher scores in exams, the opportunity to apply for an increased government scholarship for achievements, authority among fellow students. and teachers, etc. Students with an average level of formation of the culture of educational and research activities are well aware of the algorithms for performing educational and research tasks, they can foresee the final result of their work, but are not always able to apply the necessary mental operations. At this level, learners try to get creative with instructional research. However, due to the fact that their creative abilities are not sufficiently developed, educational and research activities seem difficult and boring to them. They do not always follow through on a case study (Kalenskaya et al., 2013; Fagaras et al., 2015).

The level below the average indicates the beginning of the formation of general ideas about educational and research activities among students. At this level, they show little interest in carrying out research activities. Lacking sustained motivation to find ways to solve problem problems and perform mental operations, students try to apply the skills and abilities of educational and cognitive activities formed in them at school. However, these attempts are sporadic. In addition, at this level, junior students often do not apply the knowledge gained about conducting educational research during their studies at a university, stopping at one of the stages of this work. Most often, difficulties for students arise at the technological stage. Due to the fact that the manifestation of the creative component of the culture of educational and research activity depends on the internal readiness of students for educational research, on the possession of techniques and methods of mental activity, students with a level

below the average rarely try to approach creatively to the implementation of educational research tasks (Paziura et al., 2021; Kane, 2020).

A low level indicates the lack of formation of the components of the culture of educational and research activities, which violate the integrity of the modeled process, deform its functional structure. Students with a low level of formation of the culture of educational and research activities do not show interest in this type of activity, considering it unnecessary in their further education and in their future professional activities (Nadia, 2011; Vattøy & Smith, 2019). They do not have a system of knowledge about educational and research activities (essence, methods, techniques, stages of educational research). Most often, such students practically do not have a command of mental operations (analysis, synthesis, classification, comparison, algorithmization, etc.) and did not use them in the learning process at school. Lack of knowledge entails difficulties in determining the algorithm for performing an elementary educational and research task and, consequently, the lack of skills and abilities to carry out this type of task. Students do not show creativity in solving problem situations. Students with a low level of formation of the culture of educational and research activities can be conditionally called “consumers of ready-made knowledge”.

Thus, the developed model of the process of forming a culture of educational and research activity among junior students in the process of teaching English enables us:

- to establish the structural and logical connections of the process of forming the components of the culture of educational and research activities among junior students;
- develop students' abilities to independently obtain subjectively significant knowledge, as well as form a functional research skill as a universal way of mastering reality, identifying and describing new facts, phenomena and patterns;
- help junior students learn the algorithm for solving research problem problems, the skills of forming and justifying versions, hypotheses in the selected problem, the skill of presenting the results of their own activities;
- teachers to comprehend the algorithm of the process of forming professionally and personally significant qualities in junior students in the course of educational research and, in the future, research activities.

In addition, the model reflects the integrity of the process of forming the culture of educational and research activities among junior students of the university in the process of their teaching English.

Discussion

In the process of implementing the model, it is important to take into account that its main goal is the formation of knowledge, skills, skills that are significant for the motivational-value, cognitive, technological, and creative-creative components of the culture of educational and research activities among junior students, which is, in fact, a social order of the modern information society. In the process of studying at a university, students develop an understanding of the

importance of using knowledge, skills and abilities of educational and research activities in professional activities, which becomes the deermining motive of educational and research activities. This correlates with the classical understanding of the goals and motives of any activity that is stimulated and directed by the motives for achieving success and the motives for avoiding failures (Heckhausen, 2003). In practice, these motives are combined, which creates conditions for correctional activities in the course of the educational process. In this regard, the target setting of the model of the process of forming the culture of educational and research activity among junior students in the process of teaching English is of great importance, which should be aimed at the formation of personal and creative qualities of students that are significant in conditions of social interaction and due to the desire for self-realization in educational activities, in society, in the professional sphere; on the formation of motivation for further active participation in research activities (Maggi).

Thus, the identified and described main components of the logical-meaningful model of the process of forming a culture of educational and research activities among junior students of a university in the process of teaching English represent an ordered system of forms and means of organizing, first of all, independent educational activities of students. The most important property of this model is its integrity: the model gives a generalized description of the object of research, isolates the most significant sides for the study, allows to establish a functional relationship between the studied parameters, to increase students' motivation for learning, the development of creative and creative abilities, as well as active research activities. Teachers, in turn, have the opportunity to work out in detail and implement an expedient process of forming professionally and personally significant qualities of junior students in the field of educational research and, in the future, research activities.

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