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MODEL OF FORMING STUDENTS' RESEARCH COMPETENCIES IN TEACHING A FOREIGN LANGUAGE AT TECHNICAL UNIVERSITY

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Purpose. *The article examines the process of forming students' research competency in the process of teaching a foreign language at technical university as the way of improving professional education and students' self-organization.*

Materials and methods. *The basis of the research is the theoretical methods (methods of analysis and synthesis, generalization and systematization, projecting). The leading method of research is the method of projecting, and the main humanistic principle is multimodality to ensure students' integrity, autonomy and subjectivity.*

Results. *The model of forming students' research competency has been developed in the context of personal oriented, competent oriented approaches and synergistic methodology. The article determines the main conditions for the formation of students' research competency. The project model is revealed and the basis of forming research competency is the activity of students' personal structures. Therefore, they are indicators of increasing the levels of research competencies in the process of teaching a foreign language. The obtained results convincingly testify to*

the increase in motivation to learn a foreign language, the development of the experience of research competence of students, the motivation to participate in real research projects in the research educational and cultural environment of a technical university. Students' project activities increase the effectiveness of teaching foreign language communication, the development of research skills, the flexibility of cognitive functions, subjectivity, the formation of research experience, the formation of professional values and meanings.

Keywords: *research competencies; professionalism; foreign language; project method; multimodality; personal structures; technical university; teaching a foreign language*

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Научная статья | Методология и технология профессионального образования

МОДЕЛЬ ФОРМИРОВАНИЯ У СТУДЕНТОВ ИССЛЕДОВАТЕЛЬСКИХ КОМПЕТЕНЦИЙ В ПРОЦЕССЕ ОБУЧЕНИЯ ИНОСТРАННОМУ ЯЗЫКУ В ТЕХНИЧЕСКОМ ВУЗЕ

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Цель. *В статье рассматривается процесс формирования у студентов исследовательских компетенций при обучении иностранному языку в техническом вузе как способ совершенствования профессионального образования и средство самоорганизации студентов.*

Материалы и методы. *Основу исследования составляют теоретические методы (методы анализа и синтеза, обобщения и систематизации, проектирования). Ведущим методом исследования является метод проектирования, а основным гуманистическим принципом – мультимодальность, обеспечивающая целостность, самостоятельность и субъектность учащихся.*

Результаты. *Модель формирования исследовательской компетентности студентов была разработана в контексте личностно-ориентированного, компетентностно-ориентированного подходов и синергетической методологии. В статье определены основные условия формирования исследовательской компетентности студентов. Раскрыта проектная модель, в основе формирования исследовательской компетентности лежит активность личностных структур студентов. Следовательно, они являются показателями повышения уровня исследовательских компетенций в процессе преподавания иностранного языка. Полученные результаты убедительно свидетельствуют о повышении мотивации к изучению иностранного языка, развитии опыта исследовательской компетентности студентов, мотивации к участию в реальных исследовательских проектах в научно-образовательной и культурной среде технического вуза. Проектная деятельность студентов повышает эффективность обучения иноязычному общению, развитию исследовательских навыков, гибкости когнитивных функций, субъектности, формированию исследовательского опыта, формированию профессиональных ценностей и смыслов.*

Ключевые слова: *исследовательские компетенции; профессионализм; иностранный язык; метод проектов; мультимодальность; личностные структуры; технический вуз; обучение иностранному языку*

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Introduction

The relevance of the research is determined by modern socio-economic conditions and the tasks of improving the efficiency and quality of training of competent specialists who are able to effectively apply research skills and have experience in conducting research activity. The Federal State Educational Standards (Russia) determine the process of forming research competencies as unification, reorganization and trans-

formation of professional content and creating a unified cultural and educational space in our country.

Thus, the formation of research competencies (RC) at in a technical university is considered professional, personal, semantic and value-oriented components of the educational process [10, p. 17].

The formation of an RC contributes to the formation of the future specialist's readiness to use the subjective experience of conducting research to improve the efficiency of professional activity. This determines the universality and subjectivity of research competence and allows us to consider it as a key competence of professionalism, contributing to the development of the competence and competitiveness of a future specialist.

At the Institute of Service and Entrepreneurship (branch) of the Don State Technical University, much attention is paid to the formation of research competencies among students. Students from the first year are involved in scientific societies and clubs to be an integral part of scientific projects within the institute.

As practice shows, the level of research competencies leaves much to be desired. Only active students willingly take part in extracurricular research activities, while many students usually with low self-esteem do not participate in projects [1]. The only way to overcome personal hardships is believed to be the organization of a purposeful process of students' RC formation in education process, where the students are involved in the learning process of self-organization, let them to get rid of fears and insecurities. Moreover, we believe that research projects in teaching process will increase students' self-esteem and confidence [2, p. 131-134].

Thus, the organization of project activities in the process of teaching foreign language communication will contribute to the effectiveness of teaching foreign language communication, the development of research skills, the flexibility of cognitive functions, subjectivity, the formation of research experience, the formation of professional values and meanings. Thus, both the relevance and the level of consideration of the problem of forming RC indicate the need to develop a pedagogical model of forming research competencies in teaching a foreign language at a technical university.

Literature analysis

To date, the task of developing the research competency of a future specialist has not been fully implemented. This is partly due to the lack of a common understanding of this term in psychological and pedagogical research. Research competence is understood as knowledge, skills, experience, and the willingness to use them. [23, p. 23]. Research competence is defined as a set of interrelated qualities: knowledge, skills, mode of activity necessary for productive interaction with a certain range of subjects or research processes.

According to the author's [22] research competence is treated as a system of knowledge, skills, abilities and personal qualities", in other work it is considered to be a system of personal characteristics [27, p. 34, 29], or is regarded as psychological readiness to participate in scientific activity [5, p. 45-47; 15, p. 13; 13, p. 37].

The problem of forming students' RC is the subject of many studies (1; 2; 3, etc.). Scientists are working on the problems of the formation of RC in educational activities [12]. The main provision in this study is the understanding of the special role of the discipline "Foreign language" in the educational process of a technical university. It has been determined that learning a foreign language contributes to the expansion, differentiation, and formation of the cognitive basis of research competencies [21, p.54].

In foreign pedagogical practice, the formation of students' IC takes place in design (a framework for the development of research skills) and is considered as a phased (multi-level) development of design stages: clarification of the task, search and generalization, assessment, organization, analysis and synthesis, communication and practical application [26, p. 53].

The analysis of the use of projecting method in a foreign language is based on professionally oriented reading [28, p. 32-36], in which communicative situations containing various professional problems determine the stages of independent activity of students [17, p. 8, 16, p. 56-59].

Theoretical analysis of the effectiveness of the multimodal approach to the development of the projecting method showed an increase in the efficiency and quality of teaching a foreign language and the develop-

ment of students' RC. Although, practical implementation of multimodal project is not fully described [4, p. 11-16, 20, p. 107-110].

Thus, a number of problems associated with the formation of students' IC in teaching a foreign language at technical university remain unresolved. There are no indicators and criteria for assessing the levels of research competence and a holistic pedagogical model, the specifics of multimodal design in the process of teaching a foreign language at technical university have not been clarified yet.

There appear contradictions between modern tasks, approaches and methods of forming students' RC in teaching a foreign language; among students' peculiarities of perception learning material and the need to ensure humanistic conditions for personal development of every student is the problem of this study. The question is which methods will be effective for the students' RC development in the process of teaching a foreign language at a technical university? Thus, both the relevance and the level of consideration of the problem indicate the need to develop a pedagogical model of multimodal projecting of forming students' research competencies in teaching a foreign language at a technical university. This determines the tasks of the study:

1) to determine convenient pedagogic conditions for the formation of students' RC in the model of multimodal projecting in the process of teaching a foreign language at a technical university;

2) to design a model of multimodal projecting for the formation of students' RC in teaching a foreign language at a technical university;

3) to prove the effectiveness of the model of students' forming RC in teaching a foreign language at a technical university.

Basic provisions

In this study, students' RC is considered to be personal characteristics and a basis for a system of integrative competencies of a future specialist, as readiness for active research work in professional activities, abilities to functional transformation of professional knowledge due to self-organization.

The research competency of students is formed in the process of teaching a foreign language as an integration of motivational, informational, cognitive, communicative-reflexive and personal components. [8, p. 25]

The motivational component of students' RC is associated with the formation of interest in research activities, the achievement results and forming subjective experience of conducting research activity in the process of teaching a foreign language [18, p. 26]. The information component is associated with the development of abilities to search, process, analyze and transform the extracted information in research projecting, in oral and written forms (reports, plans, articles, summaries and annotations). The cognitive component is associated with the development of RC awareness, cultural values and meanings in modern society, professional activities, for applying research methods for solving problems in various non-standard situations.

The communicative-reflexive component determines the need for productive communication, to find and see non-standard ways to solve problematic communicative situations; make decisions, the ability to recognize, evaluate and analyze research phenomena in various situations [14, p. 15-22]. The personal component involves the development of self-organization, autonomy and subjectivity. The main principle of multimodal projecting is the principle of multimodality, which is didactically substantiated by the simultaneous impact of different modalities for better perception of learning material [9, p. 67]. Multimodality acts as a humanistic system-forming factor in the development of the student's subjectivity.

The main pedagogical approaches in the model are a personal oriented, competence-based approach and the methodology of pedagogical synergy.

Methods

In accordance with the goal, methodological basis includes both theoretical (analysis of pedagogical and methodological literature, abstracts on the problem under study, modeling, comparison and generalization) and empirical (studying the research activity of students in the communicative creativity of oral and written forms, experts, assessment method, method self-assessment according to the developed questionnaire), which are widely used in pedagogical research.

This study was organized and conducted at the Institute of Service and Business (branch) of the Don State Technical University in Shakhty, Rostov

Region, Russia. The experiment lasted from September 2021 to December 2022 academic year. The participants of the experiment were 42 first-year students of the Engineering Faculty of the Don State Technical University.

An important functional characteristic of the pedagogical model of multimodal design in the process of teaching a foreign language is the level of formation of students' research competencies as its qualitative indicator and as a result of teaching a foreign language. The assessment of the level of formation of the research competence of students is carried out on the basis of a level scale developed by [24, p. 155], i.e., 3 points – a high level of competence formation; 2 points – average level; 1 point – low level; 0 points – lack of competence.

A high level of RC implies sustainable results of the use of research competence obtained in research projecting in teaching a foreign language. The average level of RC reflects the situational research skills obtained in research design and relatively well-formed research competencies with minor operational shortcomings (performance of actions) [25, p. 17]. A low level of RC indicates frequent and constant significant difficulties experienced by most students in research projecting and indicates insufficiently formed research competency.

The above pointed levels of RC, a basic level is determined as abilities to analyze, process foreign information, work with reference literature, analyze data, determine the goals and objectives of the study, evaluate research activities, determine the structure of information; write an abstract, exchange opinions, compare and generalize, analyze the results of the study and present them to public opinion.

Since the process of forming students' research competency is a complex, personal oriented, continuous and systemic process and synergy condition of forming students' RC is the educational and research environment of this university.

Synergistic situations appear as responses to complexity of the situation, when students cannot solve complex, unpredictable problems due to standard algorithms, they need new approaches. Therefore, the systems (students, consciousness, etc.) are experiencing imbalances, crisis, leading to inner self-organization of systems. Self-organization of students' research competencies is a transition to a higher level of professionalism.

For the practical implementation of this study, project topics were added to the curricula of the discipline *Foreign Language*. This pedagogical model of multimodal design was implemented as the integration and cooperation of various research teams, as business and scientific partnership and parity communication, as a joint work of teachers and students.

Synergetic integration in the model of multimodal projecting in teaching a foreign language creates conditions for autonomous choice of ways of organizing and operating individual research project, taking into account the personal and age characteristics of the students. Students' creativity actualizes personal structures and contributes to the development of research experience.

Indicators of students' research competencies are creativity, subjectivity, complementarities and originality. They are revealed through parameters of organizing education process: conceptualizations, problem-oriented content of multimodal projecting, dialogue orientation activity (as inner dialogues of students' cognizing consciousness) and criticality. The implementation of these criteria becomes possible provided principles of openness, subjectivity and dialog orientation. Thus, the research project is the basis for supplementing it with personal meanings and cultural values, communicative creativity activity of students' personal structures in parity dialogues [28, p. 33, 29]. The purpose of the model is determined by principles that have a functional orientation.

The main principles are integration, conceptual content, combination of contradictions and exit to a third-party position due to compromise, multimodality, cultural values inclusion in projecting [11, p. 27].

Thus, the model provides the simultaneous activation of several channels of information perception (visual, auditory, kinesthetic, discrete, etc.), as well as the integration of linguistic, research, and professional competencies as personality-developing foundations of the activity of personality structures of consciousness.

The interdisciplinary methodological component of the model includes methodological reflection (the ability to analyze one's own scientific activity), the ability for scientific justification, (argumentation and conceptualization), critical reflection and creative application of certain concepts, forms of research and research methods (Table 1). According

to [19, p. 33; 5, p. 45], projecting in this study is the goal and means of developing students' RC.

Table 1.

The authors' model of multimodal projecting for the formation of students' research competencies in the process of teaching a foreign language

Stages	Tasks	Projecting students' activity	Teacher's activity	Multimodal means
Organizational stage				
1. Preparation	Determining the content of the research project 'Smart home appliances', listening to audio recordings, read texts on the topic, making analysis, defining project objectives.	Reading texts, learning vocabulary, analyzing, summaries of texts, asking questions, searching for answers, problems definition and adjustment of goals, tasks, critical analysis aimed expressing views, generalization of opinions.	Motivates students' activity, searches for interesting texts, helps in setting goals and tasks of the project, monitors, regulates and assists in communicative activity.	Audio-visual, video films, smart devices, podcasts, presentation, lectures on research projects.
Subjects' oriented stage				
2. Information analysis	Searching information sources, stating tasks and criteria for evaluating results, stating the relevance of the project, organizing individual activity with information sources.	Planning projects, stating tasks, decision making, using cloud information sources, selecting useful information, listening lectures.	Supports and helps in analyzing (when necessary), observes individual results and evaluates personal results, encourages students to further work.	Cloud technologies, PC, visual, audio files, lectures, research designs, theses.
3. Information storage	Systematization of information, reliability of information sources, working with education sites, organizing communicative situations and brain storming.	Working with information sources, texts, theses, and lectures, doing tests, writing summaries, analysis and generalization, searching additional information, communicative comprehension, taking part in business game.	Motivates and helps (when necessary), observes individual results and evaluates personal results, and motivates students to further work.	Audio-visual, video films, PC, texts, films, sites podcasts, presentation, and lectures on research projects.
Executive stage				
4. Project designing	Modeling designs (graphs, schemes, tables), describing tasks, hypotheses, novelty of the design	Listening to oral research lecture and reports, stating strengths and weakness in them, presenting personal projects, pointing tasks, hypotheses, novelty of the design.	Motivates and helps in understanding (when necessary), observes individual results and evaluates personal results and motivates students to further work.	Audio reports, visual diagrams podcasts, PC.

Control stage				
5. Presenting results	Demonstrating presentation, reports, discussion, evaluation, experts' assessment.	Making presentations and reports, discussing designs, expressing opinions, argumentation and evaluating presentations, experts' assessment.	Listens to students' reports, organizes and supports discussion, helps in modeling problem situations.	PC, presentations, audio reports, lectures.
Reflexive stage				
6. Self-evaluation	Writing summaries, diaries, records, analyzing received results, expressing general ideas and making conclusion	Analyzing and writing reports about subjective experience of participating in projects, preparing reports about personal hardships in the conducted projects.	Motivates and helps (when necessary), observes individual results and evaluates organizes experts' estimation, encourages students.	Visual, auditory, kinesthetic, discrete information technology, PC.

Source: Completed by the authors

To implement the model, the activity of personal structures of consciousness is necessary, i.e., autonomy, self-control, reflexivity, motivation, criticality, criticality, etc. It should be noted that the teacher has a special place in project activities as a coordinator of students' activities, providing students with support that ensures the student's entry into the research culture and self-determination [6, p. 235-245].. Evaluation of the research competencies of students in the process of teaching a foreign language determines the need for an assessment in the communicative skills of a foreign language in communicative creative activity according to the selected indicators presented in Table 2. The evaluation of the effectiveness of the author's model was carried out on the basis of pedagogical observation, expert evaluation of the presentation of the completed project. Experts were those teachers who know students well and who are interested in further research work.

The total score for participation in the project is 50. Less than 30 is a low level of research competencies, from 31 to 36 is a threshold level, from3to 45 is a basic level, from 46 to 50 is an advanced level. According to experts, the results were positive and are presented in Table 3.

Table 2.

Criteria for assessing research competencies

Stage	Activity	Criteria	Score
Iinformation analysis	Searching and analyzing information sources, expressing the summaries and references of on the content of the project, identifying the relevance of the presented material, detailed planning, giving prospects.	Accuracy, creativity, logical presentation, consistency of facts; communicative strategies, (persuasive, contradictory strategies), clarity, detailed presentation	5
Personal efforts	Personal contribution to the general model, presentation participation in the discussion, analyzing information source, giving argumentation.	Personal activity, subsequence, logical report, completeness, activity, creativity, originality, accuracy, brevity.	5
Presentation	Making oral reports, presentations, answering to questions, saying about presentation structure, communicative behavior.	Quality of the presented report, completeness, fidelity, argumentation, attention, correctness, interest, reflexivity.	5

Source: Completed by the authors.

Table 3.

Individual assessment of the research competencies of students in the experimental group (expert assessment)

Students	Results of evaluation
St-1	42
St- 2	46
St-.3	39
St-4	45
St-5	37

Source: Completed by the authors

To confirm the effectiveness of the influence of the author's model on the formation of the RC, we turn to qualitative indicators of the assessment of students' research competencies by indirect indicators i.e., a) the activity of personal structures of consciousness, which have a direct empirical, expression; b) the ability of consciousness to produce "transformed" forms, i.e. materialize in research project activity.

Personal structures regulate, control and correct the way of forming RC. They can be criteria of persuasiveness in argumentation, a system of

moral and technocratic values (motivation), results of analyses of personal points of view (reflection), guidelines in communication (autonomy), tolerance and value orientation in critical opinions (criticality), self- estimation, self- control communicative behavior (self-control), regulate and adjust the communicative strategy (self-regulation).

Participating in project actualizes students' personal structures of consciousness, as a way of awakening meaning-creating activity and activity of consciousness in communication. Their main attention is directed to personal self-regulation of research competence in communicative creativity.

Table 4.

Individual dynamics of personality changes for each student (according to the results of the self-actualization test, in points

Scales	The beginning of the experiment			The end of the experiment			Dynamical changes		
	St-1	St-2	St-3	St-1	St-2	St-3	St-1	St-2	St-3
1. Time competence	43	37	52	54	50	64	+11	+15	+12
2. Support	52	46	64	57	59	71	+5	+11	+7
3. Value orientations	62	41	59	69	56	79	+7	+15	+20
4. Flexible behavior	41	38	51	53	46	68	+12	+8	+17
5. Sensitivity	34	32	45	46	40	53	+12	+8	+8
6. Spontaneity	46	34	51	52	50	61	+12	+16	+10
7. Self-esteem	60	34	56	65	47	78	+5	+13	+13
8. Self-acceptance	56	36	59	64	49	68	+12	+13	+10
9. Nature representation	36	41	49	45	49	56	+9	+8	+7
10. Synergy	31	30	35	49	46	52	+18	+19	+11
11. Acceptance of aggression	32	39	46	45	51	56	+13	+12	+10
12. Contact work	42	36	49	54	47	61	+12	+11	+7
13. Cognitive needs	35	31	46	49	45	58	+14	+14	+12
14. Creativity	46	36	51	58	48	64	+12	+12	+13

Source: Completed by the authors

The manifestation of personal new characteristics is not directly related to how we propose to represent this or that situation of communication, but is mediated by it, being realized in changes in value-evaluative attitudes towards oneself. These changes can be measured statistically us-

ing methods representing levels of difficulty: the Self-Actualization Test (SAT). The use of the methodology showed that the "range of self-actualization" usually corresponds to 55-70 points, but 45-55 points are known as the mental-statistical norm. The results confirmed our assumption that multimodal design actualizes student structures. The results of improving the research competence of students are presented in Table 4.

An increase in levels in personal structures, indicating an increase in RC, was recorded on at least three main scales and two additional ones. The results obtained allow us to come to the following: the authors' model of multimodal research projecting in teaching a foreign language contributes (1) to the formation of students' independent beliefs, autonomy as free attitude to various problem situations, greater internal freedom and creativity of students; (2) increase self-respect and self-acceptance, self-actualizing; (3) to the formation of higher levels of research competence due to self-organization.

1. The most effective results of the multimodal model of students' CI formation were (1) the ability to focus on the variety of information choices; (2) introducing students to multimodal educational material [3; 9, p. 64] and texts as a semantic self-developing activity consistent with the findings of scientists [7, p. 622-648]. Thus, the multimodal model of RC formation provides significant feedback that contributes to the formation of RC as a process of self-organization as an internal self-development [1, p.26] as a pedagogical support for student RC [7, p. 623].

When analyzing the results obtained, it should be taken into account that the situation that arises when submitting projects to a subject is a complex problematic one. The environment forms a multi-component motivational reaction in the subject, on the basis of which a complex functional system of preparation and problem solving is built. The problematic situation leads to the actualization of a number of needs, among which are cognitive, research, social, as well as the needs of a higher level of individuality, the level of self-awareness.

Based on these needs, the subject evaluates the significance of research competence and the difficulty of the task, the time and effort

spent, predicts the possible results of research activities in learning a foreign language.

The problem under study is complex and multifaceted. Therefore, this study does not claim to fully and completely disclose the phenomenon under study – the formation of IC [6, p. 235]. The general limitations of this study were due to the relatively small sample of respondents, the limited timing of the study, the approaches to learning used, as well as the stages and methods of the multimodal project aimed at forming students' RC in teaching a foreign language.

Assessment methods were mainly based on pedagogical observation, expert assessments and self-assessment tests, written assignments and oral dialogues, videos, podcasts, reports, abstracts, conclusions, discussions and presentations.

Conclusion

Within the framework of this study, an attempt was made to identify, clarify and methodologically substantiate the model of multimodal research projecting of forming students' research competence in teaching a foreign language.

Thus, the author's multimodal model is a unified system that combines the efforts of many researchers, students and teachers in the creative activity of designing research in the educational environment of a technical university.

The methodological foundations established in the study and the clarified content of key concepts determined the direction of the search for opportunities of forming students' RC in teaching a foreign language.

Thus, synergy methodology in the multimodal model helps to present the process of RC formation as interconnected processes of discovering, adding and building new research skills in research projecting.

The model acquires humanistic characteristics when it includes synergistic foundations of openness, uncertainty, and complementarities, etc., creating conditions for constructing own meaning.

The value orientation of the constructed model determined the need to choose those guidelines that ensure the formation of students' re-

search competencies and self-organization in the process of teaching a foreign language.

The proof of students' research abilities was based on the fact that their content of research projecting is filled with semantic meanings.

Thus, identified values can be revealed in the activity of personal structures of consciousness that are most relevant for research. They are concretized by the abilities (tendencies) for self-actualization, congruence, empathy, subject control, which are manifested in research projecting, as well as the skills of self-organized learning. Research abilities and skills are expressed empirically and are the basis for diagnosing the effectiveness of the experimentally tested model of multimodal research projecting of forming students' RC.

References

1. Astanina S.Yu. *Kardiovaskulyarnaya terapiya i profilaktika,* 2022, vol. 21(1), 3192. https://doi.org/10.15829/1728-8800-2022-3192
2. To The Question Of Foreign Language Teachers' Certification / R. F. Khasanova, Z. R. Kireeva, V. F. Aitov, Kh. Kh. Galimova. European Proceedings of Social and Behavioural Sciences EpSBS : Humanistic Practice in Education in a Postmodern Age (HPEPA 2019), Ufa, November 15–16, 2019. Vol. 93. Ufa, 2020. P. 1078-1087.
3. Ananiadou K., Claro M. 21st Century Skills and Competences for New Millennium Learners in OECD Countries. OECD Education Working Papers, No. 41. Paris: OECD Publishing, 2009.
4. Arapova E.A. et al. *Sovremennye informatsionnye tekhnologii i IT-obrazovanie*, 2020, vol. 16, no. 1, pp. 177-186. https://doi.org/10.25559/SITITO.16.202001.177-186
5. Berezhnova E.V., Kraevskiy V.V. Osnovy uchebno-issledovatel'skoy deyatel'nosti studentov: uchebnik dlya *studentov obrazovatel'nykh uchrezhdeniy srednego professional'nogo obrazovaniya, obuchayushchikhsya po spetsial'nostyam pedagogicheskogo profilya* [Fundamentals of educational and research activities of students: a textbook for students of educational institutions of secondary vocational education studying in pedagogical specialties]. Moscow: Publishing center "Academy", 2008, 128 p.

6. Cardy R.L., Selvarajan T.T. Competencies: Alternative Frameworks for Competitive Advantage. *Business Horizons*, 2006, vol. 49, issue 3, pp. 235-245. https://doi.org/10.1016/j.bushor.2005.09.004
7. Chen T-Yu. Expanding competence sets for the consumer decision problem. *Eur. J. Oper. Res.,* 2002, vol. 138, pp. 622-648.
8. Chernyaeva L.A. *Formirovanie issledovatel'skoy kompetentsii studentov pedagogicheskogo kolledzha* [Formation of research competence of students of a pedagogical college]. Novokuznetsk, 2011, 25 p.
9. Chun D., Kern R., Smith B. Technology in language use, language teaching, and language learning. *Modern Language Journal*, 2016, vol. 100, pp. 64–80. https://doi.org/10.1111/modl.12302
10. Garaeva E.A. *Organizatsiya issledovatel'skoy raboty bakalavrov [Tekst]: uchebnoe posobie dlya studentov, obuchayushchikhsya po programmam vysshego professional'nogo obrazovaniya po napravleniyu podgotovki 051000.62 Professional'noe obuchenie (po otraslyam)* [Organization of undergraduate research work [Text]: textbook for students studying in higher professional education programs in the field of training 051000.62 Vocational training (by industry)]. Orenburg: OGU, 2012, 210 p.
11. Kachalov D.V. *Sovremennye issledovaniya sotsial'nykh problem (elektronnyy nauchnyy zhurnal),* 2015, no. 2, pp. 26-36. https://doi.org/10.12731/2218-7405-2015-2-17
12. Kalganova G.F., Kudryavtseva M.G. *Sovremennye issledovaniya sotsial'nykh problem (elektronnyy nauchnyy zhurnal),* 2017, vol. 8, no. 7, pp. 160-174. https://doi.org/10.12731/2218-7405-2017-7-160-174
13. Klarin M.V. *Innovatsionnye modeli obucheniya v zarubezhnykh pedagogicheskikh poiskakh: Uchebnoe posobie* [Innovative teaching models in foreign pedagogical searches: Textbook]. M.: Arena, 1994, 224 p.
14. Krivshenko L.P., Zakharova A.V. *Vestnik Moskovskogo oblastnogo gosudarstvennogo universiteta. Seriya: Pedagogika,* 2013, no. 3, pp. 15-22.
15. Lazarev V.S. *Proektnaya deyatel'nost' v shkole : uchebnoe posobie dlya uchashchikhsya 7-11 klassov* [Project activities at school: a textbook for students in grades 7-11]. Surgut: RIO SurGPU, 2014, 135 p.
16. Mardanshina R.M. *V mire nauchnykh otkrytiy,* 2012, no. 5-2(29), pp. 101-110.

17. Palaeva L.I. *Ispol'zovanie metoda proektov na srednem etape obucheniya inostrannym yazykam v obshcheobrazovatel'noy shkole (na materiale angliyskogo yazyka) : spetsial'nost' 13.00.02 "Teoriya i metodika obucheniya i vospitaniya (po oblastyam i urovnyam obrazovaniya)" : dissertatsiya na soiskanie uchenoy stepeni kandidata pedagogicheskikh nauk* [Using the project method at the middle stage of teaching foreign languages in a secondary school (based on the English language): specialty 13.00.02 "Theory and methodology of teaching and upbringing (by area and level of education)": dissertation for the degree of candidate of pedagogical sciences]. Moscow, 2005, 239 p.
18. Pal'chevskiy B.V., Fridman L. *Sovetskaya pedagogika,* 1991, no. 6, pp. 26-32.
19. Organizatsiya proektnoy deyatel'nosti obuchayushchikhsya v ramkakh realizatsii predmetnoy oblasti "tekhnologiya" [Organization of project activities of students within the framework of the implementation of the subject area "technology"] / M.G. Volchek, R.V. Kamenev, D.Yu. Chupin, E.Yu. Nikitina. *Vestnik pedagogicheskikh innovatsiy,* 2021, no. 4(64), pp. 87-101. https://doi.org/10.15293/1812-9463.2104.09
20. D'yakova T.A., Zherebtsova Zh.I., Kholodkova M.V. *Prepodavatel' XXI vek,* 2021, no. 4, part 1, pp. 141–157. https://doi.org/10.31862/2073-9613-2021-4-141-157
21. Ndyay M., Nguen V.T., Grunina E.O. *Rusistika,* 2020, vol. 18, no. 1, pp. 7-38. https://doi.org/10.22363/2618-8163-2020-18-1-7-38
22. Savenkov A.I., Karpova S.I. *Vestnik Moskovskogo gorodskogo pedagogicheskogo universiteta. Seriya: Pedagogika i psikhologiya,* 2012, no. 2 (20), pp. 53-65.
23. Shadrikov V. D. *Ponimanie: kontseptual'nye modeli* [Understanding: conceptual models]. M.: Izd-vo «Institut psikhologii RAN», 2021, 209 p.
24. Shepel' V.M. *Sotsial'noe upravlenie proizvodstvennym kollektivom (Opyt sotsiologicheskogo issledovaniya problemy)* [Social management of production teams (Experience of sociological research of the problem)]. M.: Bukinist, 1976, 216 p.
25. Smyshlyaeva L. G. *Kompetentnostnoe obnovlenie na raznykh stupenyakh obrazovaniya: koll. monografiya* [Competence renewal at differ-

ent levels of education: monograph] / ed. S. I. Pozdeeva. Tomsk: Tomsk State Publishing House. ped. Univ., 2010, pp. 155–174.
26. Sokolova G.A., Zimarin D.A., Kalashnikova E.A. *Mir nauki. Sotsiologiya, filologiya, kul'turologiya,* 2021, no. 1. https://sfk-mn.ru/PDF/21FLSK121.pdf
27. Walkington H. Students as Researchers: Supporting Undergraduate Research in the Discipline in Higher Education. York: Higher Education Academy, 2015.
28. Zimnyaya I.A. *Kommunikativnaya kompetentnost', rechevaya deyatel'nost', verbal'noe obshchenie* [Communicative competence, speech activity, verbal communication] / I. A. Zimnyaya, I. A. Mazaeva, M. D. Lapteva; ed. I. A. Zimney; Moscow State Institute of International Relations (University) of the Ministry of Foreign Affairs of Russia (MGIMO). Moscow: Aspect Press, 2020, 395 p.
29. Zimnyaya I.A. Klyuchevye kompetentsii - novaya paradigma rezul'tata sovremennogo obrazovaniya [Key competencies - a new paradigm for the results of modern education]. *Eydos,* 2006, no. 5.

Список литературы

1. Астанина С.Ю. Вопросы реформирования профессионального Астанина С.Ю. Вопросы реформирования профессионального медицинского образования в России // Кардиоваскулярная терапия и профилактика. 2022. Т. 21(1), 3192. https://doi.org/10.15829/1728-8800-2022-3192
2. To The Question Of Foreign Language Teachers' Certification / R. F. Khasanova, Z. R. Kireeva, V. F. Aitov, Kh. Kh. Galimova // European Proceedings of Social and Behavioural Sciences EpSBS : Humanistic Practice in Education in a Postmodern Age (HPEPA 2019), Ufa, 15–16 ноября 2019 года. Vol. 93. Ufa, 2020. P. 1078-1087.
3. Ananiadou K., Claro M. 21st Century Skills and Competences for New Millennium Learners in OECD Countries. OECD Education Working Papers, No. 41. Paris: OECD Publishing, 2009
4. Арапова Е.А. и др. Оценка доступности образовательных ресурсов для лиц с ограниченными возможностями на основе существующих

стандартов оценки качества программного обеспечения // Современные информационные технологии и ИТ-образование. 2020. Т. 16, № 1. С. 177-186. https://doi.org/10.25559/SITITO.16.202001.177-186

5. Бережнова Е.В. Основы учебно-исследовательской деятельности студентов: учебник для студентов образовательных учреждений среднего профессионального образования, обучающихся по специальностям педагогического профиля / Е. В. Бережнова, В. В. Краевский. Москва: Издательский центр «Академия», 2008. 128 с.
6. Cardy R.L., Selvarajan T.T. Competencies: Alternative Frameworks for Competitive Advantage // Business Horizons, 2006, vol. 49, issue 3, pp. 235-245. https://doi.org/10.1016/j.bushor.2005.09.004
7. Chen T-Yu. Expanding competence sets for the consumer decision problem // Eur. J. Oper. Res., 2002, vol. 138, pp. 622-648.
8. Черняева Л.А. Формирование исследовательской компетенции студентов педагогического колледжа: автореферат дис. ... кандидата педагогических наук: 13.00.08 / Черняева Лариса Александровна; [Место защиты: Кузбас. гос. пед. акад.]. Новокузнецк, 2011. 25 с.
9. Chun D., Kern R., Smith B. Technology in language use, language teaching, and language learning // Modern Language Journal, 2016, vol. 100, pp. 64–80. https://doi.org/10.1111/modl.12302
10. Гараева Е.А. Организация исследовательской работы бакалавров [Текст] : учебное пособие для студентов, обучающихся по программам высшего профессионального образования по направлению подготовки 051000.62 Профессиональное обучение (по отраслям) / Е.А. Гараева; М-во образования и науки Российской Федерации, Федеральное гос. бюджетное образовательное учреждение высш. проф. образования «Оренбургский гос. ун-т». Оренбург: ОГУ, 2012. 210 с.
11. Качалов Д.В. Формирование исследовательской компетенции магистрантов технического вуза // Современные исследования социальных проблем (электронный научный журнал). 2015. № 2. С. 26-36. https://doi.org/10.12731/2218-7405-2015-2-17
12. Калганова Г.Ф. Формирование исследовательских компетенций у студентов-экономистов средствами иностранного языка / Г.Ф. Калганова, М.Г. Кудрявцева // Современные исследования социальных

проблем (электронный научный журнал). 2017. Т. 8, № 7. С. 160-174. https://doi.org/10.12731/2218-7405-2017-7-160-174
13. Кларин М.В. Инновационные модели обучения в зарубежных педагогических поисках: Учебное пособие. М.: Арена, 1994. 224 с.
14. Крившенко Л.П., Захарова А.В. Формирование исследовательских компетенций в процессе обучения иностранному языку // Вестник Московского областного государственного университета. Серия: Педагогика. 2013. № 3. С.15-22.
15. Лазарев В.С. Проектная деятельность в школе : учебное пособие для учащихся 7-11 классов / В.С. Лазарев; Департамент образования и науки ХМАО - Югры, ГОУ ВПоО ХМАО - Югры «Сургутский гос. пед. ун-т». Сургут: РИО СурГПУ, 2014. 135 с.
16. Марданшина Р.М. Эпистемологический подход к иноязычному обучению в системе многоуровневого образования // В мире научных открытий. 2012. № 5-2(29). С. 101-110.
17. Палаева Л.И. Использование метода проектов на среднем этапе обучения иностранным языкам в общеобразовательной школе (на материале английского языка) : специальность 13.00.02 «Теория и методика обучения и воспитания (по областям и уровням образования)»: диссертация на соискание ученой степени кандидата педагогических наук / Палаева Лира Ильфатовна. Москва, 2005. 239 с.
18. Пальчевский Б.В., Фридман Л. Учебно-методический комплекс средств обучения // Советская педагогика. 1991. № 6. С. 26-32.
19. Организация проектной деятельности обучающихся в рамках реализации предметной области “технология” / М.Г. Волчек, Р.В. Каменев, Д.Ю. Чупин, Е.Ю. Никитина // Вестник педагогических инноваций. 2021. № 4(64). С. 87-101. https://doi.org/10.15293/1812-9463.2104.09
20. Дьякова Т.А., Жеребцова Ж.И., Холодкова М.В. Реализация принципа мультимодальности при формировании у иностранных студентов социокультурной компетенции // Преподаватель XXI век. 2021. № 4. Часть 1. С. 141–157. https://doi.org/10.31862/2073-9613-2021-4-141-157
21. Ндяй М., Нгуен В.Т., Грунина Е.О. Инновационные технологии в преподавании русского языка как иностранного // Русистика. 2020. Т. 18. №1. С. 7-38. https://doi.org/10.22363/2618-8163-2020-18-1-7-38

22. Савенков А.И., Карпова С.И. Детская одаренность как предиктор учебной и жизненной успешности в педагогике и психологии XX века // Вестник Московского городского педагогического университета. Серия: Педагогика и психология. 2012. № 2 (20). С. 53-65.
23. Шадриков В. Д. Понимание: концептуальные модели. М.: Изд-во «Институт психологии РАН», 2021. 209 с.
24. Шепель В.М. Социальное управление производственным коллективом (Опыт социологического исследования проблемы). М.: Букинист, 1976. 216 с.
25. Смышляева Л. Г. Компетентностное обновление дополнительного профессионального образования: теоретические и организационно-методические основы // Компетентностное обновление на разных ступенях образования: колл. монография / под ред. С. И. Поздеевой. Томск: Изд-во Томского гос. пед. ун-та, 2010. С. 155–174.
26. Соколова Г.А., Зимарин Д.А., Калашникова Е.А. Взгляд на риторическое искусство сквозь призму фонетического аспекта // Мир науки. Социология, филология, культурология. 2021. №1. https://sfk-mn.ru/PDF/21FLSK121.pdf
27. Walkington H. Students as Researchers: Supporting Undergraduate Research in the Discipline in Higher Education. York: Higher Education Academy, 2015.
28. Зимняя И.А. Коммуникативная компетентность, речевая деятельность, вербальное общение / И. А. Зимняя, И. А. Мазаева, М. Д. Лаптева; под редакцией профессора И. А. Зимней; Московский государственный институт международных отношений (университет) МИД России (МГИМО). Москва: Аспект пресс, 2020. 395с.
29. Зимняя И.А. Ключевые компетенции - новая парадигма результата современного образования // Эйдос. 2006. № 5.

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