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DESIGNING COMMUNICATIVE TRAINING FOR TECHNOLOGY STUDENTS BASED ON PROFESSIONAL STANDARDS

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Abstract

The research topicality is due to the need to develop the basic educational programs of higher education taking into account the competences of professional standards while transiting to educational standards of the new generation. The paper is aimed at defining the main principles of projecting individual disciplines and blocks (modules), taking into account the normative basis of the actual federal educational standards. The key theoretical research methods for studying the problem of educational activities implementation in accordance with the updated requirements were analysis, summarization and modeling, which allowed comprehensive examination of the approaches to selecting and structuring the content of education. The empirical research methods included documents processing and introducing the results into pedagogical practice, which allowed carrying out the pedagogical experiment and training with groups of students. The article considers the possibility to use descriptors of labor actions as content basis for formulating the indices of developed competences. The need to elaborate an invariant core of curriculum was determined, which would unite training in different majors within the educational establishment, and a variation part, which would take into account the professional specificity, the individual demands of the learners, and the regional features. The principles of introducing the modules are proposed, which would form universal competences, in particular communicative ones, obligatory for the graduates. A comparative analysis

of model educational programs of technical and technological profile was carried out. The possibility of uniting competence indices into basic groups was identified, the groups being compilation of scientific-professional texts, public speeches, carrying out discussions, and business correspondence. The authors propose a universal course, elaborated with the account of principles of selecting and structuring the content of professional training, which allowed forming the effective communicative competence of Master course graduates.

Keywords

Master training – Professional activity – Universal competences – Achievement indicators

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Introduction

Professional activity under modern production is a complex, hierarchical, multifunctional, multi-level and dynamically developing system with great possibilities for broad mutual changeover between the levels and functions within related types of activity.

In 2019, when the higher educational system in Russia en masse transits to actualized federal state educational standards (FSES), professional activity becomes a normatively stipulated foundation for projecting the content of professional education. To optimize the process of training specialists in demanded areas, it is necessary to design the relevant educational programs based on the requirements which industry demands of the level of professional competences, personality traits, knowledge, skills and abilities, mastered during specialists' training. The list of such requirements is stipulated in professional standard (PS) as summarized labor functions, decomposed into specific labor four functions and actions, necessary for effective execution of job duties of a specialist[1]. The typical structure, reflecting the logic of professional standard, allows allocating the key sections of the standard, which should be oriented at when designing the educational programs[2].

According to Article 195.1 of the Labor Code of the Russian Federation, a professional standard is a characteristic of qualification, which an employee needs to carry out a certain type of professional activity[3]. Besides, clause 5 of Article 2 of the Law "On education in the Russian Federation" interprets the notion of "qualification" as "the level of knowledge, skills, abilities, and competences characterizing the preparedness for carrying out a certain type of professional activity"[4]. Thus, successful projection of educational programs requires elaborating the appropriate "graduate's profile", having a modular structure correlating with the set of summarized labor functions and taking into account the specificity of the training area.

Such "guidelines" is especially important when projecting the training programs in the sphere of engineering and technology, as it would allow allocating and conceptually substantiating the blocks of disciplines of the curriculum related to forming the ability to perform organizational, communicative, diagnostic and controlling functions, being an indispensible part of professional activity of the 6th and 7th qualification levels of the professional standard.

Materials and methods

To determine the regularities, relations, dependencies and to construct the system of projecting the educational programs in general and their individual blocks (modules), we analyzed the normative and methodological documentation regulating training of specialists

[1] D. I. Kulikova; L. Z. Ryazapova; R. Z. Khayrullin; E. V. Samarin & A. A. Kudosov, "Professional standard as a necessary element for training a highly qualified specialists for nanoindustry". Vestnik Kazanskogo tekhnologicheskogo universiteta, vol: 17 num 4 (2014): 353-355.

[2] L. A. Kitayeva, Projecting and implementing educational programs in the sphere of petrochemistry based on the analysisof professional standards. Works of International network conference "New standards and technologies of engineering education: capabilities of universities and needs of petrochemical sector, SINERGIYA-2017 (Kazan: Bronto, 2017).

[3] Labor Code of the Russian Federation (KnoRus, Prospekt, 2013).

[4] Federal Law of 29.12.2012 No. 273-FZ (edition of 06.03.2019) "On education in the Russian Federation".

at universities and identified individual features and properties in the structure of professional standards. Also, methods of summarization of the obtained information and further modeling of professional activity allowed systemic review of approaches to selecting and structuring the content of specialists' training in various spheres of economy.

The universal and general professional competences, which must be formed in university graduates, are obligatory in the basic educational programs (BEP) in compliance with the actualized educational standards[5]. A specific feature of this generation of standards is that universal competences for all levels of training are structured by categories having the same title. However, from the viewpoint of the content, the wording of competences referring to the same category differs depending on the level of training, first of all, in terms of the results achieved in the course of forming these competences.

While projecting the content of communicative training of the students of a technological university, we used methods of processing documented data and introducing the results into pedagogical practice, which allowed carrying out the pedagogical experiment and training within the specially designed author's course. The communicative training should be considered inseparably from communication as a category of scientific cognition, at the same time taking into account the technological specificity of the educational space of a university.

Combination of the categories "technology" and "communication" determines the content of the "communicative technology" category. The notion of communicative technologies is based on the category of communication[6]. A Russian researcher E. Passov proposes considering it as a methodological category[7], while it is also a scientific-pedagogical one.

Communicative technology is defined as:

- a result of human activity implemented with a view of solving communicative tasks (M. Vasilyeva, T. Kondratskaya, etc.);
- a kind of social technologies implemented during communication as a social phenomenon (A. Boyko, I. Arendarchuk, A. Belyalov, etc.);
- a means of cognition and professional training of future specialists (A. Berezyuk, V. Virolaynen, A. Dubasenyuk, T. Semenyuk, A. Antonova, etc.).

Stemming from the analyzed scientific literature, we define communicative technology as a type of pedagogical technology of professional training of future specialists trained at a non-philological university, which provides communicative interpersonal interaction between the process participants and which is aimed at achieving preparedness of the said specialists for professional activity[8].

[5] E. R. Khayrullina; T. V. Pochinova; L. G. Khisamiyeva; Z. M. Sakhipova; L. V. Fedorova; A. G. Ablyasova & N. N. Aksenova, "The competences model of competitive process engineer", Journal of Sustainable Development, num 8 (3) (2015): 250.

[6] L. I. Chernyshova, "Competency as a factor of competitiveness of a person". Retrieved 12.04.2019 from: http://www.usurt.ru/ru/data/index5/files/8_11/018_5_8_11.pdf

[7] E. I. Passov & E. S. Kuznetsova (eds.), Modern directions in the methodology of teachning foreign languages (Voronezh: Interlingva, 2002).

[8] A. R. Tuzikov & R. I. Zinurova, Ideological values and orientations of Russian students through prism of sociology. "European Proceedings of Social and Behavioural Sciences". SCTCMG 2018

Thus, communicative technologies are a kind of a large set of technologies developed and implemented in the sphere of production, spiritual and material culture, and science. Technology in the broadest sense is the determining factor which demonstrates the level of cultural evolution of a society. This notion substituted more ancient categories of craft, business, or art, which were used in the beginning of the 19th century. The essence of "technology" category leads us to the process of changing the state or property; of elaborating an algorithm, set of actions, means of activity, etc. Also, the term "technology" is referred to the very operations of production, processing, transportation, storing, and control, which are parts of the overall production processes. Originating as a category of production, technology gradually transferred into the sphere of humanities and in the 1920-1930-s started to be used in the spheres of management, sociology, and political science.

The essence of the humanitarian aspect of technologies is substantiated in the research by Yu. Danilina, who determines technology as "practical use of systematized humanitarian knowledge to provide targeted influence on improving personality and its object-material and social natural environment" [9].

Characterizing the specificity of communicative technologies in philosophical sense, N. Luhmann speaks of the motivation sphere of communication, defining the mechanisms motivating a person for participating in communication as "symbolically generalized communication media"[10]. Thus, by N. Luhmann, technological content of communication coincides with the medial, like truth, power, love, art, faith, values[11] .

Communicative technologies started being especially actively elaborated within various disciplines in connection with the development of informational society and attempts of researchers to interpret its formation and target area. Due to this, the humanities started substantiating the mission of a personality in the space of total communication, as well as the place and role of communicative technologies in the epoch of post-modernism[12]. The partisans of the theory of informational society stem from the fact that its main feature is not material production and its capabilities, but creation, dissemination and consumption of information. In this case, communication is defined as a tool for information translation. Virtualization of this process of translation adds specificity to communicative technologies, compelling researchers to elaborate and implement these technologies taking into account their informological status. Today, the informational essence of communication can be defined as socially determined process of transmitting and perceiving information under interpersonal and mass communication through the maximal number of channels and communicative means (verbalized and non-verbalized). The essence of communicative technology in this case is manifested in the fact that the educational process is built as a process of communication[13].

International Scientific Conference "Social and Cultural Transformations in the Context of Modern Globalism".

[9] Yu. A. Danilina, "Communicative technologies of postindustrial epoch: antinomies of theory and practice", Voprosy kulturologii, num 12 (2007): 63–68.

[10] A. V. Nazarchuk, "Society as communication in the works by Kihlas Luhmann", Voprosy filosofii, num 6 (2006): 156–173.

[11] A. V. Nazarchuk, "Society as communication in the works by Kihlas Luhmann", Voprosy filosofii, num 6 (2006): 156–173.

[12] N. K. Garifullina & I. V. Vyatkina, Russian language and culture of professional speech (Kazan: Kazanskiy natsionalnyy issledovatelskiy tekhnologicheskiy universitet, 2013).

[13] I. V. Vyatkina, "Russian language and culture of speech" as a tool for forming communicative competence", Works of International symposium "Reliability and quality", num 1 (2008): 160-161.

Results and discussion

Regardless of the sector of economy and sphere of activity, a professional standard has an established structure, shown in Fig. 1[14].

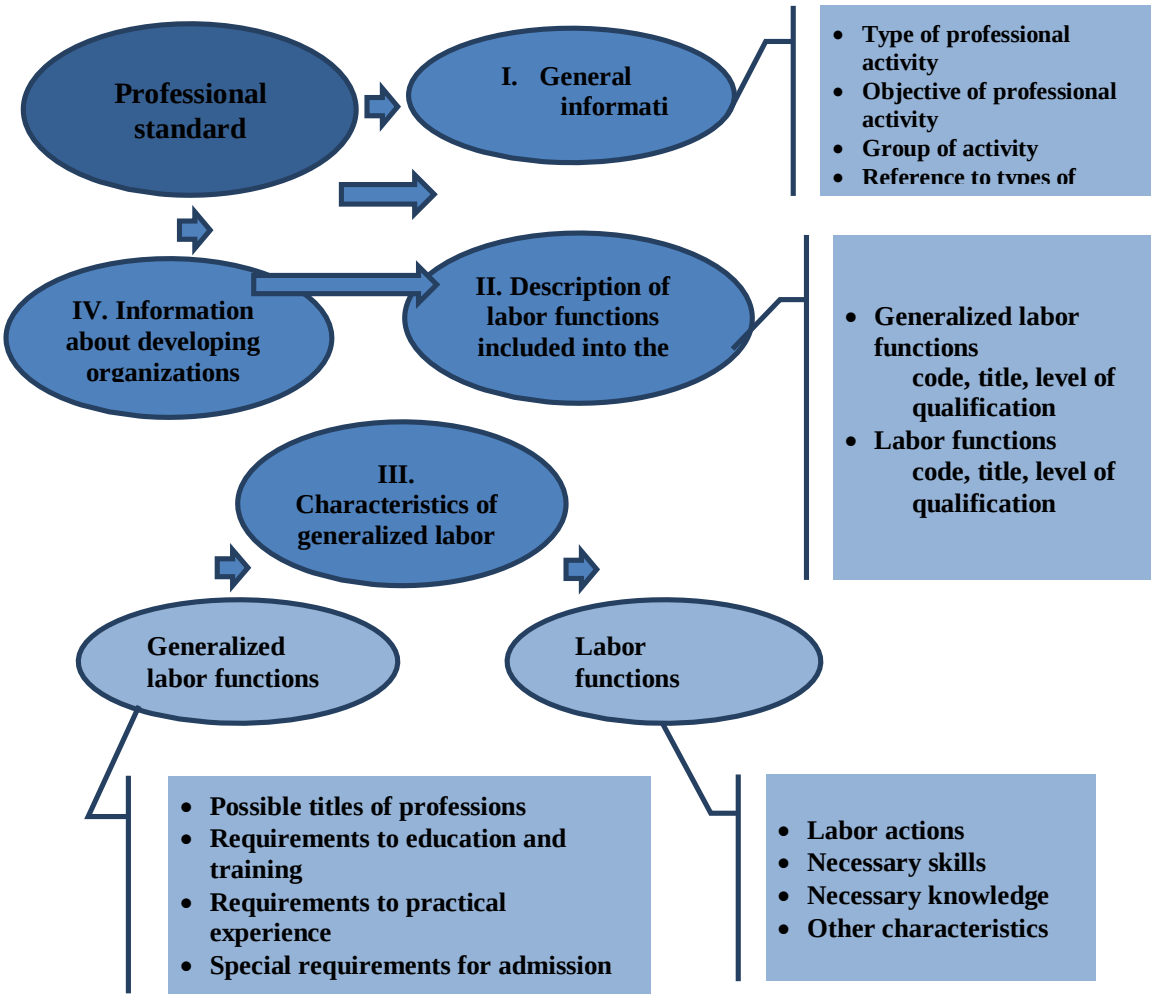

Fig. 1
Structure of a professional standard

In particular, professional standards in the sphere of materials science, chemical technology, manufacturing of machines and equipment include labor functions related to development and organizational-technical maintenance of the model of technological process, methodological provision of integration of technological processes, and elaboration of local normative-technical documentation (Table 1)[15].

[14] Decree of the Government of the Russian Federation No. 23 of 22 January 2013 “On the rules of development, adoption and implementation of professional standards”.

[15] Register of professional standards of the Ministry of Labor and Social Security of the Russian Federation. Retrieved 20.04.2019 from: http://profstandart.rosmintrud.ru/obshchiy-informatsionnyy-

Title of standard	Level of qualification	Labor function	Necessary skills / knowledge
Specialist in producing nano-structured polymer materials	6	Development of local normative-technical documentation on producing nano-structured polymer materials	To collect and summarize data, to complete the relevant technical documentation; to work in a collective and a team, to effectively communicate with colleagues and management; to read and analyze special literature on producing nano-structured polymer materials
Specialist in exploitation of gas-transportation equipment	6	Provision of woks on technical maintenance and repairs, diagnostic examination of gas-transportation equipment	To implement the methods and technical means for testing and diagnosing electrical equipment of gas industry facilities; to demonstrate knowledge of organization of technical maintenance and repairs of electrical equipment of gas industry facilities; to demonstrate understanding of interrelation between the tasks of exploitation and projecting
Specialist in computer-assisted design of technological processes	6	Computer-assisted design of typical, group and individual technological processes	To know the technique and methods of technological processes designing, the standard computer software for calculating technical means and technological solutions; to be able to elaborate typical projecting, technological and operative documentation using computer-assisted design of technological processes; to possess skills of projecting individual sections of technical and technological projects.

Table 1
Descriptors of the labor functions determining the organizational-technical aspect of engineering activity

Today, in the absence of the adopted model basic educational programs (MBEP), universities should not only autonomously allocate the specific professional competences, which must be formed within the implemented training program, but also determine the indicators of achieving the competences formation. This is also true for the competences directly defined by the Federal State Educational Standards, namely, for universal (UC) and general professional (GPC) competences. There are clear wordings of the competences, in case of UC unified for the whole higher education of the Russian Federation and in case of GPC – for the enlarged group of majors and areas of training, but the indicators of their formation for specific majors and areas are lacking. The model educational programs mainly define the indicators as the expected and measurable components of competences: knowledge, practical skills, experience of activity, which a student must obtain and demonstrate after mastering a discipline (module); therefore, the expected results of educational programs mastering will significantly differ depending on the area of training, the specificity and traditions of scientific schools of an educational establishment, and on the features of regional economy.

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On the one hand, this enables universities to independently define the requirements to the results of the educational program mastering; on the other hand, it may lead to de-unification of the educational programs content even within one enlarged group of majors and areas of training[16], not to mention the educational programs of different areas (Table 2).

Code and title of UC	Code and title of FSES	Indicators proposed in the draft model educational program
UC-1 Able to carry out the search, critical analysis and synthesis of information, apply systemic approach to solve the set tasks	21.03.01 Oil and Gas Engineering	Analyzes the task, identifying its basic components, carries out decomposition of the task; Finds and critically analyzes information, necessary for solving the set task; Considers the possible variants of solving the set task, estimating their advantages and disadvantages; Skillfully, logically and argumentatively forms one's judgments and assessments. Distinguishes facts from opinions, interpretations, estimations, etc. in the reasoning of other participants of activity; Defines and assesses the consequences of possible solutions of the task.
	13.03.02 Electrical Engineering	Searches for the necessary information, critically analyzes it and summarizes the analysis results for solving the set task. Uses systemic approach for solving the set task.
UC-3 Able to implement social interaction and execute one's role in a team	21.03.01 Oil and Gas Engineering	Realizes the efficiency of cooperation strategy for solving the set task, determines one's role in a team; Realizes the features of behavior of the identified groups of people with which he/she works/interacts, takes them into account in his/her activity (the groups of people are identified by the educational establishment depending on the training objectives – by age, ethnicity or religion, socially unsecured groups, etc.); Foresees the results (consequences) of personal actions and plans a sequence of steps for achieving the set result; Effectively interacts with other team members, including participation in the exchange of information, knowledge and experience, and in presentation of the team work results.
	13.03.02 Electrical Engineering	Determines cooperation strategy for solving the set task. Interacts with other team members for solving the set task.

Table 2
Indicators of achieving the formed competences

In future, this may lead to reducing the academic mobility of the students and problems with their further employment. To overcome this, we should orient towards professional standard as the determining vector of achieving the program mastering results. At that, the labor actions necessary for implementing labor functions will serve as the

[16] Register of model basic educational programs of higher education of the Ministry of Science and Higher Education of the Russian Federation. Retrieved 20.04.2019 from: http://poop.rf/projects

conceptual basis for indicators of achieving the formed competences. To obtain a finalized system of indicators, descriptions of labor functions of a professional standard should be complemented with descriptors, determining the threshold, basic and advanced levels of formed competences. The funds of assessment means, elaborated on that basis, would adequately reflect the results of educational activity and training in compliance with the programs implemented at a university.

On the one hand, the educational standards of the new generation postulate the independence of an educational establishment when projecting the basic educational programs (BEP) of Master courses (clause 1.4 of FSES). On the other hand, however, they require obligatorily taking into account, and in some sections of BEP – unconditionally executing a number of additional documents, namely, the Model basic educational program (MBEP) and Professional standard or several standards.

The overall number of competences is seven for Bachelor and Specialist training and six for Master training, as there is no “Personal and social safety” category at that level. Notably, the “Communication” category, relevant for this paper, is present at all levels of training; for the universal competence in this category, the wordings are as follows (Fig. 2).

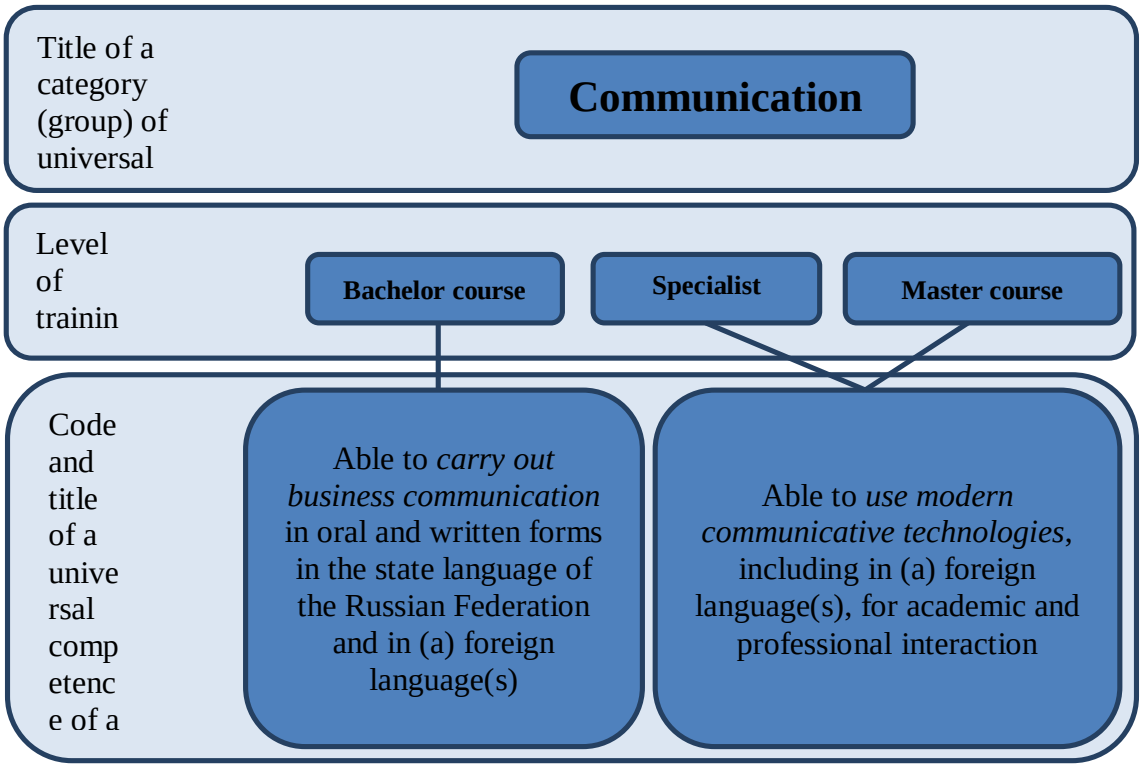

Fig. 2
Universal competence UC-4 for various levels of training

The wording of the communicative competence for Bachelor courses apparently implies inclusion of the discipline “Russian language and business communication” into the basic educational program; since the appearance of federal standards, this discipline traditionally enabled the students to master the appropriate knowledge, skills and abilities. The discipline objectives are: to improve the knowledge of the norms of the modern Russian language; to develop the skill of using expressive means of the language in speech

communication; to master the technique, psycho-technique and logic of oral and written speech; to acquire the skills necessary for everyday and business communication[17].

As for forming the communicative competence within Master courses, the situation is more complicated. First, in the previous versions of FSES for both academic and applied Master courses, communication as a category of competences obligatorily formed within BEP was lacking[18]. Thus, after the actualized FSES were introduced, there is a need to elaborate a course, universal for all enlarged groups of majors and areas of training (EGMAT), aimed at forming the communicative competence. Second, in compliance with clauses 3.7 and 3.8 of FSES, the indicators of achieving universal competences, including UC-4, are stipulated in the Master course program in accordance to MBEP. Analysis of MBEP drafts, elaborated by federal academic-methodological associations in the system of higher education, shows that these indicators may significantly differ even for related areas within one EGMAT. Third, the principles of selecting and structuring the content of such universal course are not defined, although the necessity to develop such a course is apparent.

The basic principles of selecting and structuring the content of training for various engineering areas has been repeatedly considered by the authors[19].

Taking the above into account, the authors elaborated the course “Modern communicative technologies of professional interaction”, which follows the requirements of the actualized FSES, model basic educational programs and professional standards. The course is intended for Master students majoring in technical and technological areas of training.

Selection of the content for projecting the course aimed at forming communicative competence in Master training will be carried out in compliance with the following principles[20]:

the principle of objectives generalization, aimed at creating a reliable and practically feasible system of objectives, at identifying the principle aspects in the desired results of specialists’ training, at identifying such qualities of a specialist which determine the flexibility of their labor functions, professional activity and independence;

the principle of combining the theoretical-cognitive and practical-cognitive components in the content of professional training;

the principle of system, enabling to view the process of communicative training as a single system with multiple internal and external successive links;

[17] L. Z. Ryazapova; N. K. Garifullina & G. S. Gayazova, Culture of speech (Kazan: KNITU, 2013).

[18] N. I. Kovaleva; N. Sh. Valeyeva; N. L. Avilova; G. M. Kharisova; R. R. Khayrutdinov; E. R. Khairullina & A. K. Shaikhlislamov, “Recommended Practices for Improving the Competitiveness of the Russian Education Services Market under the Conditions of the International Educational Integration”, Review of European Studies, num 7(4) (2015): 1-5 y A. Tuzikov & R. Zinurova, “Characteristics of the social demand for two-level professional training”, Russian Education and Society, num 51(1) (2009).

[19] G. S. Dyakonov; N. Yu. Bashkirtseva; M. V. Zhuravleva; L. Z. Ryazapova & E. R. Khayrullina, Lifelong professional training of personnel in the regional integrated educational complex of petrochemical sector (Kazan: Tsentr innovatsionnykh tekhnologiy, 2009).

[20] A. A. Kirsanov & A. M. Kochnev, Integrative bases of broad-profile training of specialists in a technical university (Kazan: ABAK, 1999).

the principle of correlation between the training content and the actual and predicted trends of development of education, science, technology, and production.

Thus, the course should include the theoretical material aimed at forming communicative competence: the main issues related to organization and efficiency of speech communication, first of all, scientific-professional; the normative, communicative and ethic aspects of speech culture; the bases of public speech skills; the features of official-business written speech; the key principles of scientific written style. Besides, a significant place in the course structure should be occupied by practical work sessions and tasks for autonomous work. Similar approaches were used when projecting the course “Culture of speech” for technical and technological majors at Kazan National Research Technological University[21].

The principles for structuring the selected content for the universal communicative training are[22]:

the principle of structural-stage construction, which determines the internal organization of the training content stemming from the stage-by-stage formation of the necessary knowledge, skills and abilities;

the principle of logical completion at each stage of forming the communicative competence;

the principle of variation, implying probable changes in the content taking into account the changing requirements to the level of formed competences and the specialized requirements for professional activity.

The first stage when projecting the course is to analyze the indicators of achieving competences described in MBEP, presented as official projects which federal educational-methodological associations transferred for adoption and introduction into the official register of the Ministry of Science and Education of the Russian Federation.

As shown in the diagram (Fig. 3), the indicators, regardless of the area of training, may be united into three main groups:

1. Ability to compile and edit texts, belonging to scientific functional style of speech.
2. Preparedness for making public reports at scientific and professional forums of various levels.
3. Ability to carry out discussions and business correspondence on professional and scientific issues, including of academic character.

[21] L. Z. Ryazapova; N. K. Garifullina & G. S. Gayazova, Culture of speech (Kazan: KNITU, 2013).

[22] A. A. Kirsanov & A. M. Kochnev, Integrative bases of broad-profile training of specialists in a technical university (Kazan: ABAK, 1999).

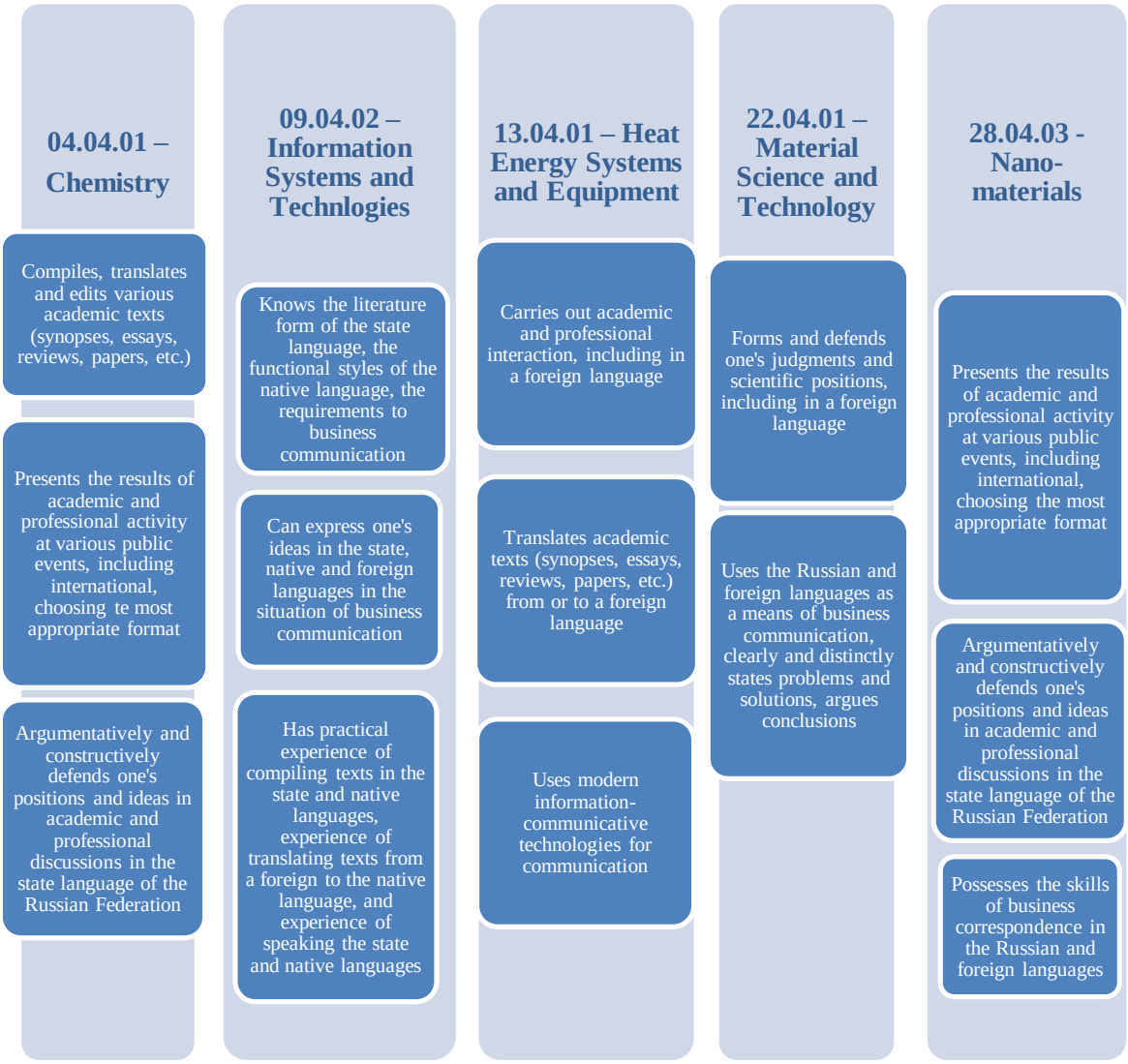

Fig. 3
Descriptors of indicators of achieving competence UC-4, presented in MBEP

The second stage of the content selection obligatorily orients towards the system of professional standards, describing the specific labor functions of the future specialists. Apparently, for such sectors as “Mechanical Engineering”, “Material Science”, “Chemical Technology”, etc. communicative competence is not a key one and is not explicitly described in professional standards; however, it is not difficult to distinguish the labor functions indirectly comprising this competence. A good example is the standard “Specialist in implementation and production management of polymer nano-structured materials”, which stipulates the knowledge and skills a technologist of nano-structured polymer materials must acquire in an educational establishment which are necessary to perform labor functions at nano-industry enterprises[23]. This professional standard enables to unambiguously state the professional knowledge and necessary skills, which a university graduate must possess after graduating a university in the corresponding specialty or area of training.

[23] D. I. Kulikova; L. Z. Ryazapova; R. Z. Khayrullin; E. V. Samarin & A. A. Kudosov, “Professional standard as a necessary element for training a highly qualified specialists for nanoindustry”, Vestnik Kazanskogo tekhnologicheskogo universiteta, vol: 17 num 4 (2014): 353-355.

Each qualification level contains at least one labor function, implementation of which is impossible without communicative competence (Table 3).

Generalized labor functions	Labor functions
Elaborating (modifying) and maintaining the technologies of producing nano-structured polymer materials	Completing the established report forms
Managing the elaboration (modification) and maintenance of technologies of producing nano-structured polymer materials; participation in expert assessment of technologies of analogous products	Substantiating the use of technological equipment for producing nano-structured polymer materials
Managing the projects of technological maintenance and expertise of new technologies of producing nano-structured polymer materials	Elaborating technological documentation for producing nano-structured polymer materials
Managing the projects and project portfolios on technological maintenance of producing nano-structured polymer materials; executing audit and expertise of analogous projects	Elaborating the local documents of an enterprise regulating the process of producing nano-structured polymer materials, including the report forms

Table 3
Labor functions implying mastering the culture of business speech

Correlation between the curricula of various areas of professional training in the sphere of engineering and technology within one educational establishment implies a comparatively small invariant core (module), not exceeding 25% of the curriculum, providing development of the general intellectual, cognitive skills, abilities, and civil qualities of a personality. Also, this module is aimed at forming the competences of organizational component in the structure of engineering activity – knowledge and skills in the sphere of analysis and organization of labor of both an individual and a structural division, as well as managing industrial production[24]. The prevailing variation part of the curriculum allows taking into account the needs of the sector, the professional specificity, the individual demands of the learners, and the features of the region, which is the main consumer of the university graduates.

The specificity of communications in the process of professional training can be viewed in the aspect of content and technologies. As we consider communicative technologies, they can be defined as a system of modes and skills of social-psychological influence of the educational process subjects on each other, which provide the most efficient result – professional preparedness of a Master course graduate for the future professional activity.

Conclusion

The content of the author's course "Modern communicative technologies of professional interaction", developed for the Master students, was divided into two key modules: "Stylistics of a scientific text" and "Business communication".

[24] A. R. Shaidullina; S. F. Sheymardanov; Y. N. Ganieva; S. A. Yakovlev; E. R. Khairullina; M. K. Biktemirova & I. B. Kashirina, "The Peculiarities of the Advanced Training of the Future Specialists for the Competitive High-Tech Industry in the Process of Integration of Education, Science and Industry", Mediterranean Journal of Social Sciences, num 6 (2, S3) (2015): 43.

The first module contained the following topics for studying: features of scientific style, substyles of scientific style, structure of the main substyles of scientific style (theses, scientific paper, dissertation, monograph), terminology in scientific style, phraseology in a scientific text, making presentations and oral reports, etc. It is important to note that the main emphasis should be made not on the theory but on immersion into the “reality”, using business games and role play. Besides, it is necessary to pay much attention to writing theses, papers, reviews, compiling texts of reports for course work defense, projects and a Master thesis.

When studying the second module – “Business communication” – much attention should be paid to compiling texts of both official and personal business documents, including applications, resumes, memoranda, curriculum vita, etc. Teaching to compile the texts of various business documents is closely connected with teaching to edit such texts and eliminating the most frequent mistakes in them. In our opinion, this section must be maximally close to the situations of professional activity; especially important are active forms of sessions, when various business situations are worked at. One of the most effective forms of activity is a business game, which forms active communicative position in the Master students, teaches communicative independence in various business situations. The tasks are of creative and active character: situations of speech behavior, participants and tasks of communication are modeled. A business game implies the students taking various socio-communicative roles, which they will execute after graduation. The situations include interviews, business meetings, visits, receptions, business negotiations, telephone talks, etc.

Apparently, profound deep study of the oral and written business communication makes it possible for the Master students of non-humanitarian majors to deeper master the skills of speech communication in business sphere and of compiling business documentation, and will make them feel confident in various professional situations.

Thus, when studying the course “Modern communicative technologies of professional interaction”, Master students must learn how to achieve agreement with partners during negotiations, which provides mutual success and creates the necessary conditions for professional interaction within a company. Business communication facilitates establishing and developing relations between colleagues, with competitors, clients, partners, etc. That is why, the main objective of business communication is productive cooperation, and to achieve it, one must learn how to communicate. The author’s course for Master students of non-philological majors forms universal competences, presented in the actualized FSES 3++.

Thus, the main factor of renovation of professional education are requirements of economy and social sphere, science, technology, federal and territorial labor markets, and prospective needs of their development. The optimal system of professional education must be constructed taking into account the results of forecasting the labor market demands in personnel of various qualification, global trends and ranking of the Russian organizations of professional education. These provisions are fully reflected in professional standards, elaboration and implementation of which enables the employees, employers and the system of professional education in general obtain the conceptual basis for renovating the educational programs in compliance with the changing requirements of professional standards, for elaborating curricula, modules and methodological materials for various disciplines.

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