

# Modern trends in teaching the Russian language to future engineers for foreign countries

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**Abstract.** Innovative approaches to teaching the disciplines of the philological cycle in universities involve the introduction of new methods into the process that meet the needs of today. Wide use of interactive forms, methods and technologies of teaching, providing for joint creative activities of the teacher and students. The development of skills for independent work in order to obtain the necessary information, its independent application becomes important in training. First of all, this applies to teaching Russian as a foreign language to foreign students of a non-philological profile. The conditions for teaching philological disciplines at the technical faculties of universities are the focus on the development of independence in learning, mutual enrichment of professional training and knowledge of the language in which a specialty is acquired and an increase in the role of Russian in the process of training specialists for foreign countries. An important element of the educational process in teaching bachelors is the writing and presentation of the final qualifying work. One of the tasks of the changing education system in Russia can be considered the strengthening of the practical preparedness of the future specialist for professional activity, and, accordingly, the use of innovative technologies, including new methodological approaches.

## 1 Introduction

Innovations are the main factor in the sustainable development of any state and economic system, therefore, the need to introduce (introduce) innovations in the educational and educational process is confirmed by numerous studies. The authors associate the stages of economic development and transitional economies with innovative educational models [1]. In the context of economic globalization, innovation is an essential element in ensuring sustainable economic growth, which is impossible without a high level of education achieved through the use of new techniques and teaching methods [2]. Specific activities of the university have a positive effect on the innovative activities of enterprises. Higher education institutions provide knowledge and resources [3].

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Cooperating with the employer, universities prepare training programs in the field of scientific and practical research, methodological modeling of effective development of competencies, transfer of innovations, improvement of professional training [4, 5]. Researchers note the need to apply innovative methods not only in technical, but also in the humanities [6, 7]. Scientists from England, Finland, Slovakia, Czech Republic, Canada, Colombia analyze the main problems associated with innovations in higher education and give appropriate practical recommendations for their solution [5, 8, 9, 10, 11]. At present, innovative technologies are used to create appraisal tools [11], a system of advanced training for educators [12]; creation of proactive education [13]. The relevance of education and innovation in the development of social integration policies, the importance of education for the development of the nation and the need for innovative processes in teaching are noted [14].

## **2 Main part**

Russian higher educational institutions are focused on the preparation of highly qualified specialists, therefore, during their training, innovative approaches to teaching are used, which make it possible to successfully master the curriculum, improve the specific skills and abilities necessary for their implementation in practice. Students are encouraged to predict engineering problems and make optimal professional decisions.

Innovative approaches to teaching Russian as a foreign language in universities imply the introduction of novelty into the learning process, which is most likely due to the needs of current time, rather than the potential capabilities of students. The widespread use of interactive forms, methods and technologies of teaching provides for the joint creative activity of the teacher and the student and involves each making his own contribution to the educational process. The development of independent work skills to obtain the necessary information and their professional application becomes important in training. The tasks of the formation of linguistic, communicative and culturological competences are considered as priority tasks in teaching Russian as a foreign language.

One of the problems of modern higher technical education is the lack of the required level of humanitarian training for bachelors in technical fields. Based on the experience of recent years, it is possible to formulate the requirements for teaching Russian as a foreign language at the technical faculties of universities: this is the focus on the development of independence in learning, mutual enrichment of vocational training and knowledge of the language in which a specialty is acquired; increasing the role of the Russian language in the process of training specialists for foreign countries. This is facilitated by various forms of conducting classes with foreign students to study, for example, such a course as "Fundamentals of Scientific Speech", "Culture of Speaking and Writing." But classes of this type should rely on the language skills and skills acquired in the framework of the university program in the Russian language, limited by the number of hours allocated for the study of the discipline "Russian language" for one year, which is insufficient.

New forms of work expand the linguistic horizons of foreign students, raise interest in the language as an object of research, allow you to write and correctly draw up graduate qualification works, continue your studies in a magistracy, conduct research work

Innovative methods are methods based on the use of modern achievements of science and information technology in education. They are aimed at improving the quality of training by developing students' creativity and independence. These include the methods of problem and project learning, research methods, training forms. Innovative methods can be implemented in both traditional and distance learning technology.

**Table 1.** Information educational technologies.

<b>Information educational technologies</b>	
Electronic and multimedia technologies	Textbooks and tutorials
	Computer dialogue tutorials
	Library electronic resources
	Lecture presentations
	Electronic workshops
	Computer training and calculation programs
	Internet resources
Global and local information network	Organization of the educational process at a distance
	Consulting using e-mail and web portal
	Distance learning
Active teaching methods	Business game
	Round table
	Scientific projects
	Contextual learning
	Modular training
Testing	Volumetric test items to check the skills formed

Despite the fact that modern human life is filled with the latest developments in the field of digital technologies, which are increasingly being introduced into every branch of science, including such a field as the study of foreign languages (Russian as a foreign language), the purpose of education is still communication, which means practical knowledge of a foreign language. The main task of the teacher is to involve the student in the educational process, to create speech situations that are most interesting and conducive to speech utterances, using modern technologies. There are many non-standard forms of teacher's work that activate the attention and interest of students in learning Russian as a foreign language (RFL). But the role of the teacher in direct communication in the classroom still prevails in the context of the rapid development of new technologies.

Active learning is based on the fact that the student is increasingly faced in real life with the need to solve problem situations. This method is aimed at self-organization and self-development of the individual. The basic principle is that the student himself is the creator of his knowledge. Active learning is, of course, a priority at the present stage of teaching Russian as a foreign language. It is necessary to give preference to active teaching methods, which are aimed at the formation of the student's independence, flexibility, critical thinking.

Innovative technologies in education are, first of all, information and communication technologies, inextricably linked with the use of computerized learning. The use of Internet technologies in Russian language classes should be an incentive for the development of student motivation. The prospects for the use of Internet technologies today are quite wide. This can be correspondence with classmates and teachers via e-mail, participation in international Internet conferences, seminars and other network projects, creation and placement of presentations.

The World Wide Web provides a unique opportunity for learners of Russian as a foreign language to use authentic texts, communicate with native speakers, creating a natural language environment and developing the ability for intercultural interaction.

The purposeful use of Internet materials in Russian language classes allows you to effectively solve a number of didactic tasks, improve reading skills, replenish vocabulary with the vocabulary of the modern language, improve monologue skills, etc. When communicating in Russian by e-mail, there are a number of problems associated with the means of communication in writing, which was confirmed by the distance learning introduced in connection with the pandemic. This is especially true for working with large amounts of information of various types. Formation of sustainable motivation in the study of Russian as a foreign language by students of a non-philological profile can only be contact teaching in the classroom, where it is possible to solve many modern didactic problems, namely, the formation of key competencies described in regulatory documents and which are the basis of the content of modern education.

Despite a number of difficulties associated with the transition to distance learning and the use of electronic educational technologies, solutions were developed for organizing the educational process. This transition also changed the format of conducting classes: videoconferences, online practical classes made it possible to effectively organize training in electronic format and consider it an exceptional measure in the current conditions of force majeure.

The Don State Technical University (DSTU) used several platforms for conducting classes and meetings in the format of videoconferences. The most commonly used platform is ZOOM, which allows you to connect up to a hundred participants to the educational process, use presentations, a whiteboard and work in the system for 40 minutes for free, the conference time is not limited for a 1 on 1 conference, has an unlimited number of conferences, support on request, the automatic definition of the active speaker by voice, the conference can be recorded. The developers offer a large number of video conferencing platforms. Although the best option for a university is its own platform.

**Table 2.** Video conferencing platforms.

<b>Video conferencing platforms</b>	
Mind	<ul style="list-style-type: none"> <li>• availability of several tariff plans. The minimum option provides for the participation of 25 people, the maximum option allows you to combine more than 500 participants in a video conference and get the quality of communication at the 4K level. ;</li> <li>• high level of confidentiality;</li> <li>• you can simultaneously hold an unlimited number of conferences</li> <li>• the ability to work even with poor communication quality;</li> <li>• the ability to join the conference using the phone;</li> <li>• Participants can share their desktop and access other people's desktops, join group chats, receive and send reminders;</li> <li>• there is a function of automatic detection of the active speaker by voice.</li> </ul>
True Conf	<ul style="list-style-type: none"> <li>• a large number of conference participants. In True Conf Online - up to 120, in True Conf Server - 250, and in True Conf Enterprise - up to 1000;</li> <li>• the quality of video communication depends on the chosen solution (minimum - 320 * 180, maximum - 3840 * 1440);</li> <li>• each participant has access to the general chat,</li> </ul>

	<p>file exchange, can speak at the “tribune”, show his desktop and see someone else's;</p> <ul style="list-style-type: none"> <li>• the conference can be recorded;</li> <li>• software allows making calls to landline phones;</li> <li>• undemanding to the quality of the connection.</li> </ul> <p>This is a domestic product that was developed taking into account all our realities;</p> <ul style="list-style-type: none"> <li>• there is a free version (for 6 users).</li> </ul>
VideoMost	<ul style="list-style-type: none"> <li>• easy to configure and maintain. It is quite easy to scale the system if desired;</li> <li>• availability of all the necessary functionality for video conferencing (chat, file exchange, desktop demonstration, creating polls, etc.);</li> <li>• high level of security and confidentiality;</li> <li>• the ability to integrate with various business applications;</li> <li>• there are several solutions for users. There is software for mobile phones, it is possible to use a cloud video conferencing service (nothing needs to be configured or installed, the number of participants is up to 100), and for the most demanding users a server solution is provided with the ability to conduct video conferencing for 1000 participants;</li> <li>• regardless of the chosen solution, the maximum connection quality is 4K, but here a lot depends on the Internet connection and the capabilities of the PC / smartphone.</li> </ul>
Google Hangouts	<ul style="list-style-type: none"> <li>• number of participants - up to 10;</li> <li>• simple interface;</li> <li>• integration with other services from Google, which significantly expands the functionality of the solution;</li> <li>• all the basic functions required for video conferencing are here. We are pleased with the chat capabilities. History is stored on Google servers, which makes it easy to synchronize. In addition, in the chat you can see which user has read the correspondence until what point;</li> <li>• completely free solution, but free of charge turns into not very high quality of communication - users note that there are substantial delays from 15 seconds to 1 minute.</li> </ul>
Skype	<ul style="list-style-type: none"> <li>• number of participants - 250;</li> <li>• the ability to make phone calls;</li> <li>• screen sharing function;</li> <li>• through integration with other Microsoft products, the use of the application is expanded.</li> </ul>

The experience of using distance learning in educational institutions has shown that foreign students, when teaching humanitarian subjects, which include the Russian language, encounter difficulties of an intercultural nature, since most RFL courses must take into account the mental characteristics of students. All this makes the development of linguistic education topical, as well as models of the use of innovative technologies in the study of the Russian language, taking into account the mental and psychological characteristics of students. In the process of distance learning, the following range of communication and

information services was used: e-mail, its convenience lies in the fact that it is not required to simultaneously find a teacher and a student online. When teaching Russian as a foreign language via e-mail, the teacher can send the student study materials, individual assignments, individual rules, answer questions and receive the results of assignments from him. E-mail today is one of the most common communication services implemented over the Internet. It is a means of asynchronous communication: each e-mail user can write and read letters at a convenient time. At the same time, the student is provided with a feedback channel, without which the process of learning a language cannot be complete. In addition, the online mode on the Zoom platform was widely used for direct communication between participants in the learning process, access to local databases, access to use Internet resources and social networks.

For those wishing to jointly discuss a problem of interest, online conferences can be organized, at the entrance to which on the computer screen of each participant the statements of other participants are provided in the order of their arrival. Electronic conferences provide an opportunity for successful group lessons in a creative atmosphere, group consultations, answers to the most frequently asked questions. Thus, teaching RFL using innovative methods is an effective form designed for the formation and development of internal speech, without which neither active external speech, nor foreign language thinking, nor full-fledged mastery of Russian speech in oral and written form are possible. If you need to get advice from a teacher, you can use the forum or chat. The expansion of the electronic educational space for students of Russian as a foreign language in certain conditions contributes to the availability of education, the receipt of educational services on an individual basis for students who are not in Russia.

The online perception of educational information was accompanied by certain negative sensory and emotional reactions of students, which often did not activate mental activity, did not develop skills and abilities. Of course, such a system does not fully ensure the process of forming linguistic and communicative competence, although under certain conditions it remains the only way to implement the educational process. This was especially true in groups at the senior years of the Agro-industrial Faculty, when students had to compose a speech to defend their final qualifying work and present the work in Russian, showing the level of language proficiency and using demonstrative and presentation forms.

Presentations of diploma theses in Russian language classes allow senior foreign students to concentrate on the main points of the information presented, such classes motivate students, provide an opportunity to assess the general educational level by the students themselves.

Carrying out and describing work with elements of scientific research - coursework, final qualification, master's thesis - is a mandatory component of training at a university in any specialty, and the presentation of the work performed is an important element of the educational process. Students must present and defend their scientific research in a class held in the form of a scientific-practical conference for different specialties.

The presentation model for all participants is the same: defining the object and subject of the study, substantiating the relevance, highlighting its goals and objectives, formulating preliminary conclusions, moreover, an orientation is given to the need for oral presentation in the speaking mode, not reading. Such group work in the form of communication training contributes to the development of foreign students' skill in presenting the results of scientific research in Russian. Innovative methods in the modern world of science increasingly require understanding and solving problems with the involvement of not only related sciences, but also such branches of scientific knowledge, which, at first glance, are in a different plane and are not thematically related to each other.

It should be said that conducting practical classes in the Russian language with foreign students remotely is a much more difficult task than the distance learning of theoretical courses. During the pandemic, Skype sessions began to be conducted using modern programs that provide reliable video communication. But this method can only be used when working with a small group. Taking into account the three-month experience of working online, it can be concluded that students do not make a choice in favor of distance learning, since the following problems became obvious for them too: time planning, lack of contact with Russian classmates, the impossibility of fully and correctly giving written answers, with psychological difficulties. During online conferences, students experienced psychological discomfort associated with the lack of direct contact, the learning atmosphere and constantly emerging technical problems. This significantly reduces the quality of assimilation of the material. The type of education in which the teacher and the student do not come into direct contact presupposes mostly self-study.

Modern information technologies, which are actively being introduced in the teaching process of the Russian language, help to implement a student-centric approach to teaching, to ensure the individualization of teaching, taking into account the abilities of students and their level of language proficiency. The relationship between the use of information and communication technologies and the process of language learning is obvious. Using the Internet, it is possible to create situations of real verbal communication, where students spontaneously and adequately respond to the flow of information, using original statements, and not language templates. However, it is worth remembering that the use of the Internet is an auxiliary tool that is integrated into the teaching process.

The change in the teaching paradigm, and as a result, the need to redesign the educational process in the past academic year was a serious test for foreign students of 1-4 courses.

The use of new educational technologies made it possible to maintain information and communication interaction with students, traditional approaches to teaching could be expanded through the use of Internet communication tools, new technologies for presenting educational content and automation of knowledge control. In the distance education system of DSTU - SKIF, blocks of tests of current and final control for all types of speech activity (reading, writing, grammar) were placed, except for listening. Computer controls should increase the efficiency of independent work, efficiency in obtaining the result, but at the same time reduce the objectivity of the assessment by 20-25% (while in the dormitory, students received help and tips, the ability to write off answers), without introducing an awareness of the need for self-improvement.

One of the tasks in the changing education system in Russia can be considered the strengthening of the practical preparedness of the future specialist for professional activity, which entails an increase in the effectiveness of education, and, accordingly, the use of innovative technologies, including new methodological approaches.

Scientists note that industry innovation and project management can be attributed to education [16].

At the Don State Technical University, much attention is paid to project activities. Foreign students already at the stage of pre-university training defend research projects in Russian. At the university, the faculty "Institute of Advanced Technologies" School of IKS "has been created, in which training takes place as part of teams on the basis of project activities, taking into account the ability to self-organize and the trajectory of personal development. Students receive grants for projects jointly with a potential employer, and can implement their project in real production. DSTU has creative workshops, the Center for Innovative and Technological Development "Industrial coworking" Garage – DSTU - Garage". On its basis, events are held and programs of various kinds are implemented: "Projectorium" - a series of educational events aimed at the development of project

activities of students; "Startup Environment" - a public system for selecting potential resident entrepreneurs for coworking; "Donskaya assembly" is the largest annual competition-review of inventors of the Rostov region and other regions of Russia, as well as numerous educational intensives and courses [17,18].

The festival of project activities "AGROFEST-2020" gathered students, entrepreneurs and leading specialists of the university to participate in solving new technological problems based on unique cases received from the largest companies in the agro-industrial complex of our region. Seven teams came up with strong and interesting projects. Won a project to develop a 3D model of a tower loader for the Trade and Construction Company Bonum. Students had to not only present the project, but also defend it.

Environmental forums held by the university require students to not only create projects to protect the environment, invent new approaches to the disposal of household and industrial waste, but also have sufficient knowledge and language training to prove their case and defend their opinions [19, 20].

The main task of teaching Russian as a foreign language is teaching the language as a real and full-fledged means of communication. Education should equip future specialists with competencies that will help them successfully realize themselves in the profession. The teacher should take into account that the defining approach in teaching Russian as a foreign language is a communicative-activity approach, which orients language classes towards teaching communication, using the language for the purpose of exchanging thoughts. And this is possible only in the classroom.

Modern teaching methods play an important role, but the "live" communication of students in the classroom cannot be completely replaced by online communication, no matter how prestigious it is.

Gaming technologies are widely used in Russian language classes with foreign students. Role play is a special type of cognitive activity that can serve as a method of teaching communication in a foreign language, as well as rest during the lesson. The game contributes to the performance of tasks such as providing psychological preparation for communication in Russian, repeated repetition of language material. Being a difficult and at the same time exciting activity, it requires a huge concentration of attention, trains memory, develops speech, and in addition, helps to realize the main goals of learning.

Games with a learning goal and an expected result are quite successful. For example, the presentation of the final qualifying work in the classroom with senior students. An example of work on conducting role-playing games aimed not only at the formation of knowledge in Russian as a foreign language, but also professionally oriented, is the game "At the Interagromash Exhibition", which involves language support for the sphere of food production technologies or processing of products of the agro-industrial complex (AIC). In the classroom, you can practice special vocabulary using the real relationship between the client and the representative of the agro-industrial complex at the Interagromash exhibition. In the business game, students imitate professional activities that combine educational and professional elements. Knowledge and skills are acquired by them not in the abstract, but in the context of the profession. In the course of the game, the norms of professional and social actions are mastered.

Students can act as a guide, transport and technological machinery specialists, and can ask questions during a tour of the exhibition. In the process of such a conversation, you can work out the use of speech turns of a professional orientation. It should be borne in mind that foreign students will have to simulate this situation in a foreign language, the more interesting this game seems to be in the audience, when they recreate the subject and social content of future professional activity, and knowledge and skills are acquired by them not abstractly, but in the context of a real profession.

Students show a high interest in choosing agricultural equipment, positioning themselves as a manager of a company, choosing suitable equipment for organizing agricultural work in various countries. The study of professionally oriented vocabulary arouses the interest of students.

In recent years, the number of foreign students in Russian universities has been steadily and significantly increasing. Teaching future engineers from different countries in Russian remains an urgent task for RFL teachers, but in the modern methodological arsenal of RFL teaching, there are no manuals aimed at directly forming the professional competence of engineers.

In the Don State Technical University for its entire 90-year history, most of the foreign students studied at the faculty, which is the same age as the university, "Agroindustrial". This faculty is an innovative platform that opens up wide opportunities for future specialists in the field of processing technology for agricultural products and food production, as well as in the design of agricultural equipment. The situation requires increased responsibility on the part of teachers of Russian as a foreign language in the training of foreign specialists in this area. A lot of textbooks on the scientific style of speech and language of the specialty for foreign students of the engineering profile have been published, the cognitive features of this contingent of students are described, and the engineering discourse is studied. However, preparation for the inclusion of future engineers in the professional field remains a challenge in teaching RFL.

### **3 Conclusion**

Information and communication technologies in teaching Russian as a foreign language today occupy more and more space, which is due to the very essence of education, where information exchange between the teacher and students, as well as between foreign students themselves, through both Internet technologies and direct communication becomes the main thing. The use of computer technologies in the educational process represents, in the opinion of many experts, a qualitatively new stage in the modern theory and practice of pedagogy. This is the use of electronic textbooks that take into account the professional communication competence of innovative engineers, and assignments for assessment in the form of tests posted on the distance learning portal of DSTU - SKIF. Organization of different types of control requires special attention. Control and measuring materials for midterm and final control are organized in the form of tests prepared in accordance with the requirements of the Russian state testing system for Russian as a foreign language.

Tasks created with the use of innovative technologies allow foreign students to develop mechanisms of comprehension and auditory memory, which ensures the mastery of phonetic-lexical-grammatical baggage, which contributes to an increase in the volume of students' working memory. The use of such technologies lies at the heart of distance learning, which for the first time in such a volume has been encountered by the university community, in a situation where students, being in different countries, continued their education at the university online.

The combination of full-time and distance learning Russian as a foreign language makes the process more fun, increases the efficiency of learning the material, but this is possible when all students are provided with technical means with high-speed Internet, and such training is only possible for motivated and highly disciplined students.

Among the advantages of online learning, of course, one should mention the fact that the educational process does not depend on the location of the students, and one can join it regardless of the state of health. The student can determine the pace of learning by himself, and, importantly, self-discipline develops.

Innovative forms should, of course, be improved in the modern world, deviating from traditional forms of education. This issue will be in active discussion of the pedagogical community in the near future. Blended learning is likely to be a priority for a long time.

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