

# Speech Culture Development in Engineering Students in the Modern Education System

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**Abstract** – The article discusses the results of social and humanitarian studies on the reforms of higher education which influence the development of professional culture in engineering students. The issue of training specialists capable of competing in the global labor market is of particular relevance. New transformations should expand the functions of vocational education, so that highly qualified specialists can be socially mobile, intelligent, aware of social cultural norms, etc. For this reason, development of speech culture in the everyday, scientific and industrial areas is one of the most important requirements when training engineering students. One of the solutions to this problem which determines the speech culture level of engineering students is competent self-presentation and an ability to speak on any topic. It is necessary to improve competitiveness of graduates of technical universities. The study makes it possible to analyze the level of speech culture developed in engineering students in the modern education system.

**Keywords** – *engineering student; speech culture development; competence; speech competence; professional communicative competence.*

## I. INTRODUCTION

The requirements for Russian higher education established by the European standard involves reformation of Russian universities. One of the requirements is development of the professional culture in students. Due to the improvement of education, the problem of training specialists capable of competing in the global labor market is of particular relevance. Therefore, we believe that universities have to develop speech culture in engineering students.

New transformations should expand functions of vocational education, so that highly qualified specialists can be mobile, intelligent, aware of cultural norms, etc. Knowledge of the speech communication culture in the everyday, scientific and industrial spheres is one of the most important requirements for university graduates.

## II. RESULTS AND DISCUSSION

Modern society deals with complex technological problems to be solved by engineers. The success and productivity of activities of engineering students depend on their knowledge of the fundamentals of engineering and practical skills, their ability for analytical thinking and speech skills, their willingness and ability to work in a team. Future engineers have to get basic knowledge and develop

constructive thinking, desire for self-education. Competitive professionals should be responsible, independent, purposeful, resourceful, demanding, stress-resistant, organized, able to work with cases.

Communication skills of an individual, ability to communicate, be honest, balanced, responsive are crucial for any personality. In addition, the leader has to develop the following personal qualities: justice, stress tolerance, self-confidence, dedication and ambition, interest to people etc. Therefore, engineers need to remain competitive throughout the life cycle of their professional activities.

However, the communicative competence of engineering students is not sufficiently developed for effective everyday and professional communication. Students do not know how to behave in ordinary speech situations that require elementary communication skills. This can be due to several reasons.

First, engineering students have a low level of linguistic knowledge which does not allow them to master the standard level of speech culture.

Second, despite the fact that, in accordance with the new federal educational standards, engineering students have to study Speech Communication, the attitude towards this discipline remains sacramental, i.e. students do not understand the role of this discipline for their profession which indicates high linguistic self-assessment and serves as a psychological barrier to the study of Speech Communication [5].

The new generation federal standards obliging to study Speech communication in technical universities provide an insufficient number of training hours to acquire speech culture skills. Teaching of this discipline is not an easy task. Students need to master at least three aspects of linguistic culture - normative, communicative and ethical ones.

Therefore, it is impossible to train highly qualified engineers without studying speech culture. A specialist with a low level of speech culture who is unable to present information is insufficiently trained. Speech culture is a tool for professional activities. For this reason, the role of the speech communication discipline in the system of technical disciplines is growing. The purpose of the discipline is to develop the communicative competence in engineering students. Due to the fact that in technical universities Speech communication is the only discipline dealing with discourses, its role is crucial [11].

It is advisable to develop “above-professional” skills in engineering students. These are communication skills. Any person, especially highly-qualified ones, should have communication skills. This is due to the changes in modern engineering practices, an increase in the workflow caused by a new quality management system, the number of instructions, regular updating of documentation and systematic production reports.

New standards require development of the following skills in engineering students: collecting scientific information; writing abstracts, articles, reports, annotations; making reports, bibliography; information analysis; drawing conclusions; participation in scientific conferences, etc. Careful attention to research activities indicates the need for development of a number of speech skills and abilities which confirms the need for speech culture development in university students. Competent speech, possession of expressive speech means, ability to express ideas in written and oral discursive practices are required qualities of engineering students.

Let us analyze the concepts “competence” and “competency” which are a basis for all professional activities. Let us give their definitions. The concept “professional communicative competency” is an integral concept that includes such skills as fluency in professional speech genres, ability to use terminology, knowledge of etiquette means of communication, ability to produce texts. It requires knowledge of styles, speech, language [3].

The communicative competency is possession of complex communication skills and abilities, development of relevant skills in new social structures, knowledge of cultural norms and communication limitations, customs, traditions, etiquette, politeness, respect for decency, national and social mentality expressed within the profession.

Speech competence is the ability to carry out speech activities in accordance with communication purposes and situations within a particular field. It is based on a set of skills that allow people to participate in speech communication. The communicative competence level can be determined by choices of speech means, clearness of thoughts, arguments, ability to produce texts of various genres [6].

Speech competence is a part of the structure of the communicative competence. It determines the content of speech competence. Speech competence is knowledge of the laws of language and speech and the ability to use them to solve professional problems. Speech competency can be specified only when speech competence is defined, i.e., the range of relevant problems, issues and tasks is limited. Competence outlines the boundaries of the problem, while competency implies solutions. Speech competency is a part of professional communicative competency [3].

Speech culture is a combination of eloquence, strict adherence to literary standards excluding slang vocabulary, active resistance to the use of alien words and expressions; development of the need in speech purity.

The terms “culture of speech”, “speech culture” and “communication culture” should be distinguished. “Speech

culture” is a level of communicative competence of an individual or a group of individuals, a factor of a person’s attitude to language, its standards, cultural and moral values. That is, speech culture involves possession of literary language standards and an ability to choose the most accurate speech option. Therefore, it is important to cultivate a conscious attitude to the choice and use of language means in speech practice in engineering students.

“Communication culture” is a combination of communication skills and abilities and the laws of interpersonal interaction which contribute to mutual understanding and effective solution of communication tasks. The concept “communication culture” is close to the concept “speech culture” but focuses on the relationship with the interlocutor and includes verbal behavior (including prediction of verbal behavior of the interlocutor) and the ability to empathy, authenticity, initiative, curiosity, etc. Therefore, speech culture is part of the communication culture [6].

Thus, having analyzed the main definitions, we can identify differences between “speech culture”, “culture of speech”, “speech competence”, “communication competence”, “communication culture”, etc. Speech culture is practical implementation of the culture of speech. Speech competency and speech competence are part of the speech culture and determine its content. At the same time, speech culture is an indicator of communicative competence and is included in the structure of professional communicative culture of engineering students.

The number of requirements for linguistic components of the communicative competence of native speakers and culture is increasing. Its basis is speech competence based on the language competence. Thus, the communicative aspect of speech culture presupposes the choice of language means that ensure the greatest effect in achieving a set of communicative tasks in a particular communication situation while following modern linguistic and ethical norms [1, 4].

To implement them, it is necessary to develop background linguistic knowledge in engineering students who lack this knowledge. Its development is time-consuming. The way out of this situation is purposeful organization of students' independent work. It should include a system of tasks aimed at eliminating existing linguistic incompetence: training exercises for all types of literary norms taking into account the methodological principle of interrelated teaching of different language levels. Therefore, the tasks should be based on individual words, phrases, sentences and even microtexts. Orthoepic, spelling and grammatical skills are developed on this lexical material. This system of exercises develops language competence in highly qualified students.

An important methodological task is selection of optimal ways to present language material. For engineering students who often have a psychological barrier to language learning, the language material should be presented in an entertaining form. These training exercises will develop primary skills required for development of high-level skills – doing creative tasks in practical classes, production of speech utterances. Successful development of speech competence involves conscious speech progress which ensures transition to speech

crocidism without affecting the speech accuracy. Linguistic exercises containing entertainment elements allow engineering students to participate in direct communication and simulate communication situations. These tasks diversify training and create a comfortable environment during classes.

The efficiency of the tasks presented in the course “Speech Communication” largely depends on properly organized control of knowledge and skills. One of the forms is tests that include a language minimum for each literary norm. They indicate consistency or inconsistency with a teaching purpose and results achieved. The effective feedback informs about assimilation of knowledge, development of communicative skills in students and helps construct training sessions, use training time in accordance with an ultimate teaching goal.

The monitoring of acquired linguistic knowledge can be carried out by testing orthoepic, including accentological, orthographic, vocabulary aspects. This will allow engineering students to master the normative aspect of speech culture, fill gaps in knowledge and move to the main goal – development of a sustainable understanding of the culture of speech, its speech construction in general and the formal business style in particular, as it serves as a basis for written and oral professional communication [2].

We believe that in training highly qualified engineers, it is necessary to pay attention to speech culture development because the content of the course “Speech communication”, which is obligatory for all engineers, is a good basis for solving this problem. By developing speech culture in engineering students, we contribute to formation of their professional communicative culture.

Speech culture needs to be formed. This is due to the fact that formation influences the personality, the system of values. It is based on the experience of previous generations, involves training for a full-fledged cultural life. Speech culture is part of the general culture, it reflects the culture of behavior, thinking, and characterizes the moral and spiritual image of the person, influences speech activities. It is an important condition for professional success. Culture motivates the choice and anticipates and sometimes reforms, the system of language means [9].

Consequently, formation of speech culture involves teaching students how to choose optimal language means, control their speech activities, know speech behavior models in various social and economic situations.

Speech culture is manifested in four aspects related to each other. Let us consider these aspects in relation to the requirements of the federal educational standard of higher engineering education [8, 7, 10].

1. The regulatory aspect: knowledge of literary language standards. One of the professional activities of the future engineer is maintenance of technical documentation, development of technical regulations, other regulatory documents and guidance materials. An engineer should produce logical, reasonable and clear utterances and professional texts. Therefore, engineers should know spelling, punctuation, orthoepic, stylistic, speech and other language standards. Knowledge of the literary language standards and

the ability to apply them in speech practice are indicators of the level of speech culture.

2. The communicative aspect: the ability to choose adequate means of communication, determine communication goals and tasks, understand the communication situation. In their professional activities, engineering students will have to perform the following activities: team work planning; participation in of seminars, conferences, business meetings, negotiations; participation in scientific discussions; presentation of reports. Therefore, in addition to mastering literary language standards, it is important to be able to construct utterances. The level of communicative skills, knowledge about the types of speech interaction and the use of this knowledge in practice are indicators of the professional culture development level.

3. The ethical aspect: knowledge of the norms of behavior, speech etiquette. Specialist must know the rules of speech and business etiquette. This knowledge is manifested in speech behavior. Speech behavior is a form of manifestation of speech communication, and speech activity is the content of speech communication. Speech behavior is an indicator of general knowledge, intelligence, motivation and emotional state. The graduate should search for organizational and managerial decisions in non-standard situations, develop algorithms for their implementation and take responsibility for them; possess skills of social interaction on the basis of the moral and legal norms accepted in society. The graduate should be able to defend his/her point of view without destroying relationships; be ready to cooperate with colleagues, work in a team, resolve conflicts, etc.

Therefore, it is necessary to form correct communication behavior, use restrained but expressive gestures, pay attention to appearance. The ability to use language means in order to communicate, compliance with speech etiquette is an indicator of the speech culture of the future engineer.

4. The aesthetic aspect: the idea of what is beautiful and what is ugly in speech. The aesthetic aspect is closely related to the ethical aspect and involves manifestation of goodwill, respect for human dignity. Future engineers need to develop the ability to create a favorable psychological climate; correctness and tolerance in relationships, communicate, without suppressing other person’s identity. When communicating, students should be able to find aesthetically literate ways for expressing their thoughts. Language, intonation, mimicry, and gestures are also aesthetically significant means. Speech aesthetics is an important indicator of the level of speech culture of an engineering student.

Thus, speech culture development in engineering students should involve formation of knowledge of literary language norms and the ability to use this knowledge in practical situations; development of communication skills, ability to express own ideas in various communicative situations, knowledge of speech etiquette.

### III. CONCLUSION

Due to the study of “Speech communication”, engineers develop general cultural skills which are important in the

context of general humanization of education, including higher education, in our country.

Any engineering product is based on the transfer of relevant information that describes production, assembly and purchase technologies. Speech communication affects the success of implementation of engineering products. Technical documentation must be unambiguously interpreted and correct. The well-developed speech culture contributes to it.

People with innate discursive skills and ability to communicate are more successful in their professional activities as they can implement their ideas, find funding sources for their projects, achieve better results and establish feedback to correct actions. However, oratorical skills can be developed thanks to "Speech science" disciplines, for example, thanks to "Speech communication".

An insufficient level of proficiency in speech culture can be a huge disadvantage for engineering students. It can impede their career development and professional achievements. Therefore, we believe that the educational process should be aimed at developing speech culture in future highly qualified technical specialists which will make it possible to train a competitive specialist who know how to conduct technical documentation, participate in research activities, conduct business negotiations, present him/her in different social and economic situations. A person with a high speech culture level has credibility and inspires respect which is a key to a successful career and greater demand in the labor market.

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