

**Joint Conference: 20th PCSF and 12th CSIS-2020**  
**20<sup>th</sup> conference Professional Culture of the Specialist of the Future**  
**12<sup>th</sup> conference Communicative Strategies of Information Society**

**FORMING FOREIGN LANGUAGE COMMUNICATIVE  
COMPETENCE AT MEDICAL UNIVERSITIES: THEORY AND  
METHODOLOGY**

Svetlana Logvina (a), Yekaterina Sakhno (b), Alexandra Sivtseva (c)\*, Natalia Trunchenkova (d)  
\*Corresponding author

- (a) V. I. Vernadsky Crimean Federal University, 5/7 Lenina blvd., Simferopol, Russia, svet.logvina@mail.ru  
(b) V. I. Vernadsky Crimean Federal University, 5/7 Lenina blvd., Simferopol, Russia, english\_at\_ma@mail.ru  
(c) V. I. Vernadsky Crimean Federal University, 5/7 Lenina blvd., Simferopol, Russia, alexandra\_291179@mail.ru  
(d) V. I. Vernadsky Crimean Federal University, 5/7 Lenina blvd., Simferopol, Russia, natitrun@gmail.com

*Abstract*

Profession-oriented medical training is undergoing constant changes in response to the social demands and modern trends in medical science that accentuate the necessity of producing competitive future doctors capable of adapting to contemporary world trends. Higher education is currently moving towards the globally-accredited standards that produce mobile, competitive healthcare professionals. The emphasis is placed on the competencies formation that would ensure that future doctors acquire professionally-oriented communicative skills in English as a useful tool that could increase the potential of professional future doctors. Nowadays, the problem of forming foreign language communicative competence (FLCC) of future doctors is not well explained. Our experience of teaching English to future doctors has shown that medical students do not speak this language at a level, high enough for effective professional communication. This fact accounted for the necessity of developing a theoretical and methodological background with a view to analyzing the term FLCC from both domestic and international viewpoints. Besides, our aim was to design a pedagogic model with a sequence of stages and a specially-designed pedagogical technology with the activities aimed at developing students' motivation and readiness for FLCC formation, communicativity, independent acquisition of knowledge. The technology had a gradual advance of forming competencies, developed all students' perception and feedback and proved to be effective by means of the pedagogical experiment.

2357-1330 © 2020 Published by European Publisher.

**Keywords:** FL communicative competence, future doctors, higher educational institutions, pedagogic model, second language acquisition, teaching communicative competence.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## 1. Introduction

Nowadays, the modern educational paradigm is aimed at improving the quality of future doctors' training. Profession-oriented education in Russia is now moving towards the new educational standards which form mobile, competitive specialists in the field of healthcare. The profession of a doctor is characterized by a variety of practice-based interactions with colleagues and patients that require fast, qualified help and the choice of the best communicative strategies presupposing the correct use of appropriate profession-oriented vocabulary. Therefore, future doctors are in need of profound skills of professional communication and further training in higher educational institutions. As practice shows, modern labour market is not sufficiently supplied with competent medical specialists possessing high level of FLCC, which is necessary for independent and effective ways of solving professional tasks in the context of intensification of cross-cultural communication.

The key aspect of the vocational training of future doctors is the formation of competencies that would ensure that students acquire career-oriented communicative skills in a foreign language as an effective tool that can maximize the professional perspective of future doctors and their academic performance.

## 2. Problem Statement

The requirements of the Federal State Educational Standard regarding the level of FLCC of future doctors include, first of all, high quality of foreign language basic linguistic macro skills: listening, speaking, reading and writing that should be developed simultaneously with extra-linguistic and sociolinguistic competences. The above-mentioned educational standard of developing students' FLCC states that students must have an ability to build a speech strategy and behaviour in various communicative situations. Their oral and written communication is characterized by clarity, correctness, accuracy, expressiveness, vocabulary richness; they must have a set of skills to defend their point of view in a profession-based discussion and must be able to listen to the interlocutor with tact and care (Fahrutdinova et al., 2014).

However, there are contradictions between the demands for future doctors' level of professional competence and the quality of training received in higher medical schools. Furthermore, other contradictions are displayed in requirements of the level of foreign language proficiency which would comply with teaching strategies at high school and insufficient resource supply in the system of professional training of future doctors.

The above-mentioned contradictions assisted in outlining the research problem: to find and apply the didactic forms, methods and pedagogic conditions of the formation of FLCC of future doctors through active and interactive learning.

## 3. Research Questions

Current analysis of psychological and methodological resources has shown that a number of research questions have not been substantiated. Despite a significant number of research works, there is no universal interpretation of the term "FLCC" as well as no uniformity of its structural components. Yet,

there have not been any pedagogic model which would offer new approaches, methods, pedagogic conditions, principles and specially-designed teaching technologies for organizing the higher education process in medical schools. The authors' experience has shown that formation of FLCC is complicated because of students' demotivation to study English, overload with specialized subjects, decrease in time allocation to study a foreign language at a university setting, low quality of educational resources. (Golovko et al., 2019). Therefore, the implementation of the suggested model would assist in forming FLCC at an advanced level.

#### **4. Purpose of the Study**

The purpose of this research is to design an educational technology of forming FLCC. The suggested technology includes a theoretical background of the concept "foreign language communicative competence", a design of a pedagogic model with effective approaches, pedagogic conditions, principles and methods of forming FLCC of future doctors. A model comprises a sequence of four stages, each of them having a set of suggested activities, which could effectively form this competence.

The main objectives are as follows:

- to provide theoretical findings of domestic and international scientists identifying the essence of FLCC as part of overall vocational training of future doctors;
- to identify criteria, indicators and the levels of formation of FLCC of future doctors;
- to develop the model of formation of FLCC of future doctors under certain pedagogical conditions and the technology of its implementation;
- to analyse the research outcomes.

#### **5. Research Methods**

The given research is based on methods of theoretical and methodological analysis. They included: theoretical (analysis of pedagogical, psychological, medical literature; analysis of the state of the problem in existing practice); diagnostic (observation, analysis of the results of educational and scientific activities of future doctors in the process of learning a foreign language) (Klementsova, 2019).

Research perspectives: the model of forming FLCC of future doctors is designed and characterized. Formation of the above-mentioned competency is implemented by means of methodological approaches which include systemic, competence-based, person-oriented, communicative ones and such didactic principles as (activity and interactivity, professional orientation, communicativeness, authenticity of communication), components (motivational, cognitive, communicative, active, moral, behavioural, personal). In authors' viewpoint, the suggested model can effectively increase students' motivation and readiness to communicate orally and in writing to solve professional problems and fulfil the students' needs in learning a foreign language.

## 6. Findings

### 6.1. Theoretical findings of FLCC formation

The study has shown that there are no unanimous definitions of FLCC. For example, according to Baeva and Bogdanova (2014), FLCC is viewed as a set of basic skills and willingness of students to demonstrate a set of competencies in various profession-oriented situations. A number of researchers (Dmitrieva et al., 2019) consider FLCC as linguistic skills allowing students to put knowledge of L2 into practice in various socially-determined situations with due regard to social rules that native speakers adhere to. Scholars Urazmetov et al. (2019) view it as a unity of communication skills, cognitive activity, creativity, motivation and readiness for communication in English. Researchers Osipova and Lomonosova (2019) define it as a combination of basic linguistic skills such as reading, writing, listening, speaking, structural constructs (phonetics, grammar, vocabulary) and other skills to operate them under authentic, integrative, interdisciplinary conditions. FLCC is understood as an integral, multi-level feature of a person that promotes an effective solution to problem situations and educational tasks of various levels of complexity by means of foreign language interaction (Goman & Varlakova, 2019).

A team of researchers (Malaga-Tobola et al., 2019) describe FLCC as abilities to understand other people's communicative behaviour, adequate to goals and communicative situations through text analysis skills and abilities and actually communicative achievements.

Methodologists Chanpet et al. (2020) define FL communicative competence as a multi-aspect and multi-stage phenomenon that reflects practical skills that provide perceptual and interactive-communicative functions of L2 communication. FLCC is viewed as an integrity of structural components as communicative, linguistic, sociolinguistic, discursive, strategic, sociocultural (Klementsova, 2019) with ICT competency, formed by an extensive introduction of EDM (electronic didactic resources) which foster independent extraction of information, self-monitoring of acquired knowledge, a large-scale access to educational resources and a teacher's feedback (Almazova et al., 2018).

### 6.2. Methodology of forming FLCC

As this paper is a research into FLCC formation in medical schools, the necessity of designing a pedagogical model arises as it determines consistency of the stipulated aim with the final result obtained during experimental work (Shipunova et al., 2019). The suggested model included the theoretical block, the methodological block with the key scientific approaches: *competence-based, systemically active, person-oriented and communicative*. The most distinctive are the *principle of interactivity, communicativeness, professional orientation, the principles of visibility, accessibility, feasibility, activity-based principle, authenticity of communicative interaction, consolidation of knowledge*. The designed model was based on such methodological principles: *the principle of communicativity, active and interactive learning, the activity-based principle, the principle of authenticity, etc.* The criteria-diagnostic block contained the criteria (*motivational, communicative-active, cognitive-informative, reflective-evaluative*), levels (*advanced, intermediate, elementary*) of formation of FLCC of future doctors. The procedure-content block of the model included the step-by-step implementation of the pedagogic technology of the formation of FLCC of future doctors which included four stages (introductory, reproductive, practical, creative) implemented under certain pedagogical conditions:

- orientation of the goals and objectives of teaching L2 to future doctors with a view to improving the quality of their professional training;
- involvement of future doctors in communicative and cognitive activities;
- the formation of communicative, interactive, perceptual, professional, behavioural blocks of communication; holistic, competence-based, systemically active character of the formation of FLCC and creative orientation (Antonova, 2013).

A specially tailored training course (Kabanova & Kogan, 2017) of forming FLCC of future doctors was developed by the authors. It was split into four stages. For each stage, a goal was determined that was fulfilled in the suggested tasks under certain pedagogical conditions.

The purpose of the *first stage (introductory) of the course* was to familiarize students with the professional activities of the doctor and systematize basic linguistic skills (phonetic, grammatical, lexical aspects). At this stage we accentuated *motivational and linguistic competencies* since students' motivation is essential for increasing intellectual activity in any academic process (Pokrovskaja et al., 2018). According to Razinkina et al. (2018), students' satisfaction is crucial in evaluating the effectiveness the quality of the academic process. The suggested stage involved a set of activities: writing an essay justifying a personal choice of medical profession "Being a doctor is rewarding", role-playing games, performing lexical and grammatical tasks, doing tests to evaluate professionally-oriented vocabulary and grammar competency. We also focused on "imitations, memorization and repetition drills" (Tashkeyeva et al., 2019) that mainly concerned the formation of macro skills rather than professional communication in a foreign language. At this stage, according to Sabri (2018), we used "bottom up" approach, which means a hierarchy of arranging teaching resources: from simplicity to complexity. For example, the chosen listening and speaking activities began with teaching how to "replicate", then to conclude dialogical unity, progressed to mini-dialogues and then dialogues of certain functional types. We used practical and demonstration methods of work as well as audio-visual and verbal means in the classroom. The expected result of the first stage of work was to increase students' motivation and readiness for productive interaction in a foreign language.

The *second stage (reproductive)* of the course was aimed at enhancement of information exchange in English; freer communication in English. It included playing educational games, dialogues and communicative situations (Bylieva & Sastre, 2018), listening and reading tasks of authentic profession-oriented texts, podcasts, webinars of practicing doctors and professors (Goman & Varlakova, 2019). At this stage, we practiced students' full immersion into English-speaking environment to create cognitive communication through flipped learning (Teng, 2018) when students are able to extract knowledge independently and then have classroom discussions to share the acquired knowledge. We also employed computer-assisted classroom activities and discussions to form interactive competence of the first year L2 learners both in oral and written discourse. Due to the mentioned method, students felt more excited and freer in interacting and asking questions on the suggested topics than in the formal teacher-student discussion (Razinkina et al., 2018). So, at this stage, the expected result was the formation of general communicative skills in English.

At the *third stage (practical)* of the course, our goal was the formation of extralinguistic competency and extensive development of profession-oriented communication. With other competencies

being developed, we advanced to developing *general culture competency* (Razinkina et al., 2018) and *linguosociocultural competency*. Such competencies involved understanding linguistic realia, onomastic vocabulary, phraseology and aphorisms with national cultural semantics, which contributed to the development of understanding and interpretations of various aspects of culture and communicative behaviour in a professional environment. This stage comprised doing creative projects, developing portfolio, reading articles or listening to world news services such as BBC News Health, NHS Choices, Medline Plus, PubMed, etc. and further arrangement of discussions, round tables, debate (Galishnikova et al., 2019). Other educational activities included interviews, speeches, presentations as well as active students' participation in international online language competitions and olympiads testing the knowledge of medical terminology. Students were involved in online project-based learning (Chanpet et al., 2020) and extensive performance of CLIL tasks due to which cognitive skills are emphasized (Baranova et al., 2019). At this stage, the expected result assumed the formation of the ability of future doctors to communicate in various situations in L2.

The aim of the *fourth stage (creative)* was to master L2 at an advanced level with developed systemic, pragmatic, extra linguistic, sociocultural competencies altogether. At this stage ICT competency was accentuated and the formation of information culture with Electronic Didactic Tools (EDT) was crucial (Almazova et al., 2018). The goal was specified in the following tasks: to form the ability to creatively solve complex practical situations by designing an academic e-learning environment (Golovko et al., 2019); the ability to build effective communication in English with different communicants. Professional competency was marked by the formed skills and abilities of finding and operating a foreign language professionally-relevant information, knowledge of professional terminological vocabulary, skills of reading authentic profession-oriented texts and making summaries. This stage included defence of creative essays, preparation of reports for participation in student conferences (Popova & Beavitt, 2017), information retrieval tasks; consultation, brainstorming, extracurricular reading followed general drafting and defence of an abstract, communicative training (Urazmetov et al., 2019). At this stage, the expected result assumed the future doctors to acquire L2 at an advanced level.

The experiment was attended by the students of the Medical Academy named after S.I. Georgievsky (Crimea, Simferopol). The experimental work covered 196 medical 1-2 year students (101 respondent - experimental group, 95 - control group).

At the ascertaining stage, a high level of formation of FLCC based on the results of performing four series of tasks was revealed in 10% of students (experimental group) and in 9.8% (control group). The overwhelming majority demonstrated an intermediate level of formation of FLCC: 63.2% experimental group and 63.8% control group. A low level of formation of FLCC was recorded in 26.8% of those in the experimental group and 26.4% of those in the control group respectively.

The formative stage of the research included the approbation of the technology for the implementation of the model of the formation of the FLCC of future doctors in the university setting; it was introduced at the introductory, reproductive, practical and creative stages. A comparative analysis showed remarkable positive changes in the experimental group. So, the number of students with an advanced level increased from 10% to 24.8% during the control examination.

The number of participants with an intermediate level of FLCC has slightly increased: from 63.2% to 66.4%. The number of the future doctors with elementary level of FLCC has significantly decreased: from 26.8% to 8.8% during the control examination. The respondents of the control group also showed obvious progress, although less significant. The analysis of the qualitative results of the experimental work indicates an advanced level of L2 in the majority of the respondents of the experimental group. Future doctors were capable of effective communication in L2, entered into a dialogue, freely used medical terminology in communication.

Statistical processing of the research outcomes was carried out using the Pearson criterion. The results show empirical values of Pearson's criterion for the control and experimental groups, as well as a tabular value with an error level of 0.05 and degrees of freedom 2 5.991. Since  $11.68 > 5.991$  at the control stage of the experiment, the difference in the values of the experimental group in comparison with the control shows that significant changes have occurred, and  $15.5 > 5.991$  in values of the experimental group before and after the experiment demonstrate that obvious changes have occurred, since the obtained value exceeds the tabulated value. Thus, the quantitative and qualitative results of the experiment testify to the efficacy of FLCC formation due to the suggested pedagogical technology.

## 7. Conclusion

Having analysed the basic concept of our study “foreign language communicative competence”, we came to a conclusion that there is a pluralism of definitions from the viewpoint of different scientific approaches. The authors suggested a pedagogic model comprised four stages which facilitated the formation of FLCC of future doctors. The model corresponded to the goals, objectives, principles, pedagogical conditions, organizational forms and means of forming FLCC of future doctors which were reflected in the blocks of the designed model (target, methodological, theoretical, criteria-diagnostic, procedure-content and result blocks). The pedagogical technology had activities which were aimed at developing students’ motivation and readiness for FLCC formation, focused on communicativity, independent acquisition of knowledge, had a gradual advance of forming competencies, developed all students’ perception and feedback. All activities had a clear structure and had the following specifics: the conformity of educational material with the professional activities of future doctors; the relationship of the previous and subsequent educational materials, repeatability and cyclical nature of teaching resources, simplicity of execution of tasks and control of the implementation of activities (Tashkeyeva et al., 2019).

The developed model proved its effectiveness and is recommended for further implementation into higher medical schools.

## References

- Almazova, N., Barinova, D., & Ipatov, O. (2018). Forming of Information Culture with Tools of Electronic Didactic Materials. *Annals of DAAAM and Proceedings of the International DAAAM Symposium*, 29(1), 0587–0593. <https://doi.org/10.2507/29th.daaam.proceedings.085>
- Antonova, N. A. (2013). Formirovanie inoazychnoy kommunikativnoi kompetentnosti u studentov medicinskogo fakulteta v protsesse obucheniya v vuze [Formation of foreign language communicative competence in medical students during their academic process]. *Philological science. Theoretical ad Practical Issues*, 9(27), 35-38. [in Rus.]

- Baeva, T. A., & Bogdanova, N. V. (2014). Informatsionno-obrazovatel'naya sreda kak osnova formirovaniya professionalnoy inoyazychnoy kompetentsii studentov neyazykovykh vuzov. [Information educational environment as the basis for the development of professional foreign language competence of students in non-language higher school]. *Bulletin of Orel State University. Series: New Humanitarian Researches*, 5(40), 91-96. [in Rus.].
- Baranova, T. A., Kobicheva, A. M., & Tokareva, E. Y. (2019). Does CLIL work for Russian higher school students?: The Comprehensive analysis of Experience in St-Petersburg Peter the Great Polytechnic University. In *ICIET 2019: Proceedings of the 2019 7th International Conference on Information and Education* (pp. 140-145). ACM. <https://doi.org/10.1145/3323771.3323779>
- Bylieva, D., & Sastre, M. (2018). Classification of Educational Games According To Their Complexity And The Player's Skills. *The European Proceedings of Social & Behavioural Sciences*, LI, 438-446. <https://doi.org/10.15405/epsbs.2018.12.02.47>
- Chanpet, P., Chomsuwan, K., & Murphy, E. (2020). Online Project-Based Learning and Formative Assessment. *Technology, Knowledge, and Learning*, 25, 685–705. <https://doi.org/10.1007/s10758-018-9363-2>
- Dmitrieva, O., Borisova, I., Savvina, I., Maximova, B., & Sivtseva, A. (2019). Increasing Cognitive Activity in Medical Students in Learning Foreign Languages. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 183-190. <https://doi.org/10.5593/sgem2019/5.4/S22.025>
- Fahrutdinova, R. A., Yarmakeev, I. E., & Fahrutdinov, R. R. (2014). The Formation of Students' Foreign Language Communicative Competence during the Learning Process of the English Language through Interactive Learning Technologies (The Study on the Basis of Kazan Federal University). *English Language Teaching*, 7(12), 36-46. <https://doi.org/10.5539/elt.v7n12p36>
- Galishnikova, E. M., Kudryavtseva, M. G., Mardanshina, R. M., & Khusainova, A. A. (2019). Strategic Implications of Forming Students Autonomous and Independent Learning Culture. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 273-280. <https://doi.org/10.5593/sgem2019/5.4/S22.037>
- Golovko, O. N., Kokodey, T. A., Yaksa, N. V., & Kitushenko, V. V. (2019). A Process Model of Innovative Pedagogical Design of University E-Learning Environment. *European Proceedings of Social & Behavioural Sciences*, 19(5), 34-41. <https://doi.org/10.15405/epsbs.2019.12.5>
- Goman, Yu., & Varlakova, E. (2019). Teaching Communication Skills in a Foreign Language to Students of Oil and Gas Specialization. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 295-300. <https://doi.org/10.5593/sgem2019/5.4/S22.040>
- Kabanova, N., & Kogan, M. (2017). Needs Analysis as a Cornerstone in Formation of ICT Competence in Language Teachers Through Specially Tailored In-service Training Course. In P. Zaphiris & A. Ioannou (Eds.), *19th International Conference on Human-Computer Interaction. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, Vol. 10295 (pp. 110–123). Springer Verlag.
- Klementsova, N. (2019). To the Technology of Forming General Cultural Competency of a Future Engineer. *The European Proceedings of Social & Behavioural Sciences*, 19, 78-88. <https://doi.org/10.15405/epsbs.2019.12.10>
- Malaga-Tabola, U., Kwasniewski, D., Cupail, M., & Kubon, M. (2019). Methods of Evaluation of Education Quality in Bologna SY. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 199-206. <https://doi.org/10.5593/sgem2019/5.4/S22.027>
- Osipova, O., & Lomonosova, N. (2019). Application of Online Courses in Higher Education System. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 49-54. <https://doi.org/10.5593/sgem2019/5.4/S22.007>
- Pokrovskaya, N. N., Petrov, M. A., & Gridneva, M. A. (2018). Diagnostics of Professional Competencies and Motivation of the Engineer in the Knowledge Economy. In S. Shaposhnikov (Ed.), *2018 Third International Conference on Human Factors in Complex Technical Systems and Environments (ERGO)s and Environments (ERGO)* (pp. 28–31). IEEE <https://doi.org/10.1109/ERGO.2018.8443851>
- Popova, N. G., & Beavitt, T. A. (2017). English as a Means of Scientific Communication: Linguistic Imperialism or Interlingua? *Interracial romance*, 21, 1(86), 54-70.



- Razinkina, E., Pankova, L., Trostinskaya, I., Pozdeeva, E., Evseeva, L., & Tanova, A. (2018). Student Satisfaction as an Element of Education Quality Monitoring in Innovative Higher Education Institution. *E3S Web of Conferences*, 33, 03043. <https://doi.org/10.1051/e3sconf/20183303043>
- Sabri, T. A. (2018). *Communicative Competence in English as a Foreign Language: Its Meaning and the Pedagogical Considerations for its Development*. GRIN Verlag. <https://www.grin.com/document/432042>
- Shipunova, O., Evseeva, L., Pozdeeva, E., Evseev, V. V., & Zhabenko, I. (2019). Social and Educational Environment Modelling in Future Vision: Infosphere Tools. *E3S Web of Conferences*, 110, 02011. <https://doi.org/10.1051/e3sconf/201911002011>
- Tashkeyeva, G., Sadirbekova, D., Zулbukharova, E., Abykanova, B., & Sariyeva, A. (2019). Practice-Oriented Education in Universities: Opportunities and Challenges. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 245-250. <https://doi.org/10.5593/sgem2019/5.4/S22.033>
- Teng, M. F. (2018). Flip Your Classroom to Improve EFL Students' Speaking Skills. In J. Mehring, & A. Leis (Eds.), *Innovations in Flipping the Language Classroom* (pp. 113-122). Springer. [https://doi.org/10.1007/978-981-10-6968-0\\_9](https://doi.org/10.1007/978-981-10-6968-0_9)
- Urazmetov, I., Kubyskhina, E., & Ulengov, R. (2019). Portfolio for Shaping Professional and Personal Competences of Students. *19th International Multidisciplinary Scientific Geoconference SGEM*, 19(5.4), 237-244. <https://doi.org/10.5593/sgem2019/5.4/S22.032>