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THE ROLE OF LEARNERS' SURVEY IN PROMOTING THEIR COMMUNICATIVE SKILLS IN ENGLISH

ANNOTATION

The main purpose of this article is to illustrate one part of the scientific pedagogical research conducted at medical universities of Uzbekistan on improving the communicative competence of the English language among medical students. All stages of the experiment support the multi-level content of training students for the formation of personal intellectual, professional, social and cultural skills and skills for professional, social and personal needs. The article presents the stages and analyzes the initial and final results, provides samples of students' answers. The method of collecting information is a kind of pedagogical phenomenon – questioning. To do this, we used the methods of statistical and didactic analysis. Statistical methods enable us to determine working hypotheses about statistically significant differences in didactic characteristics used to measure learning outcomes. Working hypotheses, the validity of which has not been rejected, show the various forms that an experiment takes and enable us to improve it before the experiment is carried out in its entirety. The article demonstrates the positive results of the study in the dynamics of learning between the two stages of the questionnaire. There is a collection, processing and interpretation of scientific results and the facts of improving four components of communicative competence are presented: grammatical, discursive, sociolinguistic and strategic on the example of the results of the same respondents' answers. The results of our analysis enable us to come to some particular conclusions that are of interest to our study: the use of non-traditional forms of education, such as an authentic film of

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TALABALARNING INGLIZ TILIDAGI KOMMUNIKATIV KO'NIKMALARINI RIVOJLANTIRISHDA SO'ROVNOMANING O'RNI

ANNOTATSIYA

Maqolada tibbiyot yo'nalishida tahsil olayotgan talabalarga ingliz tilini o'rgatish jarayonida ularning kommunikativ kompetensiyasini oshirish bo'yicha olib borilayotgan mavjud ilmiy pedagogik tadqiqotlar tahlil qilingan. Eksperimentning barcha bosqichlari talabalarni shaxsiy intellektual, kasbiy, ijtimoiy va madaniy ko'nikmalar, kasbiy va ijtimoiy ehtiyojlar hamda shaxsiy ehtiyojlar uchun ko'nikmalarni shakllantirishga tayyorlashning ko'p bosqichli mazmunini qo'llab-quvvatlaydi. Maqolada aniqlash va yakuniy kesish bosqichlari ko'rsatilgan, dastlabki va yakuniy natijalar tahlil qilingan, talabalar javoblaridan namunalar keltirilgan. Axborot yig'ish usuli o'ziga xos pedagogik hodisa –so'roqdir. Buning uchun muallif statistik va didaktik tahlil usullaridan foydalangan. Statistik usullar bizga ta'lim natijalarini o'lchash uchun ishlatiladigan didaktik xususiyatlarning statistik jihatdan ahamiyatli farqlari haqida ishchi farazlarni aniqlash imkonini beradi. To'g'riligi rad etilmagan ishchi farazlar bizga eksperimentning turli shakllarini ko'rsatadi va tajriba to'liq amalga oshirilgunga qadar uni yaxshilashga imkon beradi.

Muallif so'rovnomaning ikki bosqichi o'rtasidagi o'rganish dinamikasida tadqiqotning ijobiy natijalarini taqdim etgan. Ilmiy natijalarni to'plash, qayta ishlash va sharhlash asnosida bir xil respondentlarning javoblari natijalari misolida kommunikativ kompetensiyaning quyidagi to'rtta: grammatik, diskursiv, sotsiolingvistik va strategik komponentlarini takomillashtirish tavsiya etilgan.

Natijada, ilmiy tadqiqotning nazorat bos-

the specialty language, has a positive effect on the improvement of English-speaking communicative competence.

Key words: pedagogical experiment, communicative competence, sociolinguistic competence, grammatical competence, discursive competence, strategic competence.

qichida talabalar ingliz tilidagi haqiqiy nutqqa xos boʻlgan grammatik tuzilmalardan foydalanish, oʻzlari tushunish va mantiqiy hamda izchil nutqiy bayonotlarini shakllantirish, boshqa til madaniyatini va uning ingliz tilini bevosita boshqarishdan ajralmasligini tushunish qobiliyatini namoyish etdilar, til, shuningdek, jonli nutqda yuzaga keldigan turli vaziyatlarga qaramay, suhbatdosh bilan aloqa oʻrnatish uchun nutq xatti-harakatlarini amalga oshirish qobiliyatini koʻrsata oldilar.

Kalit soʻzlar: pedagogik eksperiment, kommunikativ kompetentsiya, sotsiolingvistik kompetentsiya, grammatik kompetentsiya, diskursiv kompetentsiya, strategik kompetentsiya.

INTRODUCTION

Language teaching is a complex process that can take place using a variety of methods. Regardless of the method, one of the most important topical issues in education is improving the quality of pedagogical process. Our scientific research is based on methodical elaboration of an exercise book in line with authentic episodes using multimedia form at the lessons. Despite empirical evidence in support of the effectiveness of using tasks among students, task implementation has been repeatedly reported as a thorny problem. An essential but under-researched issue is how in-service teacher education program can be conducted to facilitate teachers' implementing tasks in their classrooms [Zhu Y., 2022]. First and foremost, it's worth to consider different opinions of prominent scholars about what experiment is.

Experiment – part of the study, which consists of the fact that a researcher manipulates variables and observes the effects produced by this influence on other variables [Campbell D.T., 1980]. An experiment is commonly understood as a method of acquiring knowledge, in which a researcher deliberately influences the phenomenon under study in order to establish the expected regular relationships and dependencies [Kuzmina N.V., 1980] conditions that enable to control the course of the phenomenon and recreate it every time it is repeated up to random errors [Maslak A.A. & Anisimova T.S., 2001]. A pedagogical experiment is a purposeful introduction of fundamentally important changes in the pedagogical process in accordance with the research task and its hypothesis [Danilov M.A. et al., 1971].

Today, pedagogical technology is understood as a consistent system of actions of a teacher associated with the solution of pedagogical tasks, or as a systematic and consistent implementation in practice of a pre-designed pedagogical process [Mouza C. et al., 2017]. Nowadays, teaching English according to the basic requirements and rules of modern methods, it is worth saying that the communicative and interactive methods used in it are widely developed and optimized with their convenience and efficiency [Kushieva N.Kh., 2019]. In the course of these lessons, lexical units as well as mathematical constructions are used by a teacher to restore the communicative situation; the main part of the lesson is focused on students' speaking, while a teacher is

meant to speak only to ask questions and to direct learners correctly [Sharipova F. et al., 2020]. Teaching technologies, in contrast to teaching methods, involve the development of content and methods for organizing the activities of students themselves [Bakaev V.V. et al., 2016]. The group of a personality-oriented approach to teaching includes the technology of multilevel (differentiated) training, collective mutual learning, the technology of complete assimilation of knowledge, the technology of modular training, etc. [Ramirez G.M. et al., 2018; Pondee P. et al., 2017]. In its turn, virtual exchange, as a global social practice, provides language teacher candidates with opportunities to connect their global peers and language learners [Hilliker S.M. & Yol Ö., 2022]. More than a dozen fundamental studies, both in the general theory of pedagogy and in private teaching methods of individual subjects, are devoted to teaching methods, which, to a large extent, determine the effectiveness of academic work at a technical university [Chai C.S. et al., 2019]. To improve the quality of specialists' training, the level of development of the educational-material base of training is essential [Moreira F. et al., 2017]. It makes it possible to organize students' educational and cognitive activities at a higher level, to increase the intensity of teachers' work and students' interest in the process of obtaining the necessary education [Ríordáin M.N. et al., 2016].

Several publications demonstrate that the English-language journals in total are ranked higher than non-English ones [Liang L. et al., 2013; Vinther S. & Rosenberg J., 2012]. In this regard, it is obligatory to know English for future medical specialists. The concept of the English language as the modern language in science [Montgomery S.L., 2016] is suggested by many studies. The number and proportion of the English-language documents in Web of Science is growing [Kumar N. et al., 2016]. Nevertheless, the total number of non-English publications is growing also in line with the number of researchers in non-English speaking countries [UNESCO, 2015] grows.

On the other hand, many research publications are not indexed in global citation databases, such as Web of Science and Scopus, especially in Social Science and Humanities [Kulczycki E. et al., 2018]. One must bear in mind that when it comes to language teaching, teachers may indeed internally struggle with a range of different identities: they may be figuring out their own transformation from an expert on the field to a teacher of their field. They may also need to reflect on their teacher identity in English [Moate J.M., 2011].

MATERIALS AND METHODS

Our scientific research consisted of two successive stages. The initial experiment was carried out in order to collect information regarding the existing knowledge of students of the English language, in particular medical terminology, as well as to check the level of proficiency in communicative competencies. A survey was conducted among the students of the control and experimental groups, revealing general information about the students, including names. In studies of this type, only the gender of the respondent was usually mentioned, however, we intentionally expanded

the information about the students so that the final data would not be lost in anonymity and the participants would be encouraged to participate in the experiment, since in the conclusion one could trace the personal progress dynamics. Also, for our study, the issue of an academic performance and the assimilation of knowledge depending on the location and institution were of interest, i.e. trace the connection, if any. It should be noted that the identical questionnaires were used both in the initial and in the formative experiment, to identify and ascertain the real and acquired knowledge of students.

For collecting information, we used the questionnaire method to collect data on the knowledge of students before the beginning of the experiment, and after the studying. The survey was conducted by registering the respondents' answers to the questions formulated by a teacher, arising from the goals and objectives of the study. The main part is the most important, most informative part of the questionnaire for the researcher, because it provides meaningful information, which is then analyzed and interpreted, that is, it acts as the basis for formulating certain conclusions. The main part is conditionally divided into three components: first, the so-called contact questions are formulated – they are simple, simply formulated. Their main purpose is to get respondents interested, to include them in the problem, to give them the opportunity to test the technique of filling out the questionnaire. The questions gradually become more difficult, but respondents are already prepared for this. The second group of questions consists of the main – the most difficult questions.

Given the above, our survey consists of three parts including:

1. General information about respondents, their interests and opinion.
2. Checking the level of communicative competence of the English language (grammatical, discursive, sociolinguistic and strategic competence).
3. Knowledge of professional medical terminology in English.

The content of these questions corresponds to the purpose and objectives of the study and provides us with key information regarding the problem under study. If it is necessary to solve several tasks, then the first groups of questions are formulated for each task, but they are placed in the questionnaire either in bulk or mixed with questions from other blocks, however, they are located only in the middle of the main part. The benefits of our survey are:

- independence of respondents' answers from the personality of the questionnaire, their worldview, value orientations, etc.;
- sufficient time for respondents to think about the question and formulate the answer;
- the use of a well-designed questionnaire as a tool that has appropriate qualitative characteristics, which reduces the impact on the result due to the lack of experience of the questionnaire;
- preliminary reasonableness, balance of questions that are formulated in the questionnaire (subject to its high-quality development);
- a fairly wide range of questions, unlimited in time, as, for example, when interviewing;

We used a common type of diagnostic and research methods, distributed as a series of thematically related questions, in a certain way ordered, open or closed, including questions of a demographic nature (personal data) and an appeal to the respondent. A professionally compiled questionnaire is developed on the basis of a previously developed construct that models the diagnosed phenomenon, the essential features and forms of respondents' behavior. As a result, we got one whole phenomenon and not the sum of questions reflecting certain properties and placed in the questionnaire at the request of the researcher.

RESULTS AND DISCUSSION

The personal opinion of the respondents was surveyed with a specific strategic goal. The first two questions of the questionnaire revealed students' interest in a non-traditional learning format, in particular, the opinion about the effectiveness of using authentic films in the classroom. If respondents answered positively to the first two questions, showing interest in a non-traditional format of education, they were enrolled in the experimental group of our pedagogical study. Similarly, who answered negatively was automatically included into the control group, which was also necessary for our study in order to obtain a qualitative and pure result of the effectiveness of the applied methodology. For subsequent questions, the respondents could no longer have influence, since the experiment program had already been developed, however, it was necessary to identify the attitude of students to subsequent events and make sure we chose the right course of action in the right direction, as a result of the majority's answer.

In the question of choosing the most productive genre for learning the language and directly desired cinematography that contributes to the teaching of medical terminology, the vast majority of respondents chose the positions of the genre related to their future professional activity and, accordingly, how the series was chosen by "House M.D." among the proposed 6 options (House M.D., Knickerbocker Hospital, Critical Care, The Good Doctor, Sister Jackie, Body Parts) only partly competing with The Good Doctor. However, 90 percent of respondents, arbitrarily, without prior acquaintance and "campaigning" chose the series "Doctor House", designating it as the main source of obtaining knowledge of medical English. Thus, we can state the unity of students' views as a successful start in choosing the course of our research.

Furthermore, students' opinions were divided into two centers regarding the choice of subtitle language when watching a film, choosing the options "only English" and "Russian at the same time as English". We conclude that choosing a variation of only English subtitles, students do not quite objectively assess the level of language proficiency and the degree of complexity of authentic medical speech that is not adapted for a non-native speaker. The perspective for solving this problem is opened by the simultaneous presence of translation in subtitles, which makes it possible to freely return to a difficult-to-perceive fragment and scroll it again with full understanding of the translation. Since the work is not carried out on the number of episodes watched and tasks completed, but first of all on the quality. Conceptually

significant, full understanding of all complex phrases and constructions are not typical of the native language.

The follow-up questions provided a personal perspective on students' willingness to participate in the experiment and the intention to continue to be involved despite a possible initial lack of positive results. These items were added in order to identify the relationship between a conscious desire to participate and positive learning dynamics, if any. Exactly as on the opposite side, with poor results of cognitive activity at the end of the experiment, there is an objective reason for the lack of an intense desire to participate in scientific researches. For students of universities whose specialty is not a foreign language, the use of such methods as working in groups, discussions, presentations in the study of the English language are the most acceptable ways in learning English. The assumptions of teachers themselves, their worldview and beliefs are also important here [Peacock M., 2001]. During our experimental study we tried to include all of these categories, which may have influenced the positive outcome of our study. Other studies discuss the expediency of a method of transferring knowledge to a student based on the integration of linguistic and content goals, the proper development of a communicative strategy based on a balanced synthesis of vocabulary, experience, content and vocabulary [Richards J.C. & Rodgers T.S., 2001].

These multiple rounds ensured data saturation, that is, adequate data richness and thickness, since after four interviews no new themes arose [Fusch P.I. & Ness L.R., 2015]. Gradually, as all inter-related viewpoints from the interviews were collected under suitable coding headings, two main themes were developed. However, since according to Yuan there is still a lack of understanding of how the English language teachers actually teach and why and how they have resorted to their approaches and teaching methods, the present study will contribute to fill this gap. After all, prior to developing and implementing successful studying with a focus on pedagogy, one must first gain insights into what goes on in the programs and classrooms [Yuan R., 2020].

The second part of the questionnaire, as noted, is aimed at checking 4 points of language proficiency, which together constitute communicative competence. Based on the fact that this section presents a certain difficulty for students of non-professional universities, at the ascertaining stage of the experiment, high results were not expected from the participants and even the fact that this part of the questionnaire could remain empty was accepted. The knowledge gained by students should be reflected in the control part of the experiment, when students meet with the same tasks, but the implementation of which, if our hypothesis is successfully confirmed, is not difficult.

In the "grammatical competence" element, the task is given to compose any 2 sentences that are not related to each other, but maximally detailed using medical terminology and a variety of language expressions. It is assumed that at the initial stage, students make up "primitive" sentences, with a "Russified" flavor, i.e. literal translation from Russian into English, without taking into account national specific turnovers and constructions. At the control stage, when performing the same task, the use of complicated and meaningful speech structures that are characteristic of native English speakers is expected.

For a more complete characterization of the issue under consideration, questionnaires were studied, while analyzing the results of the study; one student wrote a sentence at the ascertaining stage:

I'm going to exit.

Thus, the sentence is grammatically correct, however, its use in real life by a native speaker is unlikely. The matter is in the culture of speech, since the sentence was translated from Russian into English word-for-word, which is not typical for native speakers. It is impossible to learn a language separately from the culture and worldview of the people of the language being studied. In this regard, it is necessary to plunge, if not into the real, and then into the modeling environment of the carriers, which will allow us to adopt the idea of the process of constructing sentences and wording when compiling texts. At the control stage, the same student used the same idea, but already built a completely different sentence:

I'm about to leave.

This construction has exactly the same semantic marker of the meaning “I’m going to leave”, which was used at the beginning of the study. However, the results of our analysis already enable us to draw some particular conclusion that this student, upon completion of participation in our scientific study, improved his/her grammatical competence, which is illustrated in his/her ability to use grammatical constructions that are not typical for the translation of the Russian language, but are characteristic of authentic speech. It is not at all a fact that during the entire period of study the student came across this particular phrase, which he/she simply learned and subsequently memorized. Communicative competence, in particular grammatical, is also formed on the basis of imagery. Probably, the student met the common expression “I’m about to...” several times, which means the intention of a person to perform some action, instead of the notorious “I’m going to...” to which we are so “used” from school times. Also, the word “to exit” in the meaning of the verb could simply never have been encountered throughout the many dialogues and communicative situations in the learning process, and vice versa, the word “to leave” (to leave) turned out to be more common than one might expect. Accordingly, students, subconsciously, could build an authentic English sentence based on the experience gained.

Words attitudes of students to independent learning using online applications when studied analytically, a positive attitude of students prevails, as well as the best aspect of learning words online is that students are on their own performance based on learning speed and time, i.e. flexibility. In addition, a variety of exercises, visual aids, thematic exercises and pronunciation of words are covered useful features of learning words through online applications [Ekmekçi E. & Yaman I., 2014].

Farrell’s (2020) advice, English teaching could function as an initial forum for teachers’ reflections, as participants could via dialogue questions enhance each other understandings of their own teaching philosophy and practice. This could simultaneously demonstrate to participants the usefulness of teachers’ collaboration and shared reflection, and thus encourage them to promote this collegial approach and sense of community among their own program colleagues.

When testing discursive competence, students were asked to compose a short dialogue on any medical topic. Discursive competence, based on the definition of E.V. Shuman, is the ability of a student to understand and create logical and coherent speech statements, presented orally or in writing [Shuman E.V., 2006]. It is noteworthy that most of the respondents were able to complete this task before the start of the experiment. Meanwhile, the quality of the material varied significantly between the two rounds of the survey. At the ascertaining stage, students were inclined to compose primitive dialogues that did not correspond to deep communicative thought. However, during the control survey, many students created really high intelligent dialogues that were in no way inferior to professionally generated authentic films about medicine. For example:

A: The pressure will force the oxygen into your system and saturate your blood. It will enhance white cell activity and reduce the inflammation.

B: And that will help with this mixed connective tissue disease?

A: We'll be doing about ten treatments and then we'll reevaluate.

B: The last treatment with prednisone caused the seizures, right?

A: That you reacted so strongly to the prednisone let us know that you had an underlying problem with your immune system.

The next item is the test of sociolinguistic competence. According to modern Russian scholar N.N. Panaiti: "Sociolinguistic competence consists in knowing the socio-cultural rules of language and discourse. This type of competence requires an understanding of the social context in which the language is used, namely an understanding of the role of each of the interlocutors, the information they exchange, the function of their interaction. Only on the basis of such a context can one judge the relevance and accuracy of an individual statement" [Panaiti N.N., 2009]. Thus, in order to objectively test this competence, students were asked a question with the possibility of answering in their native language about the difference in the speech behavior of Americans and Uzbeks. We deliberately allowed students to use their native language when answering this question, so that the respondents would not be distracted by the forms of the language, but would be focused on the content; and also, so that the possible difficulties of the English language do not affect the outcome of the answer. As a result of considering this issue, we can say that students at the ascertaining stage of the experiment by an absolute majority do not have sociolinguistic knowledge, despite the possibility of answering in their native language. However, upon completion of training, more than 70 percent of students were already able to give a detailed answer to this question, thereby demonstrating a better understanding of sociolinguistic competence. Here is a fragment of the answer during the control survey to this question of the student, who has left it empty in the first survey.

"In a situation where a young man wants to help an adult woman who is carrying heavy bags, the speech behavior of the two cultures will be fundamentally different. In Uzbekistan we say: "I will help you. Give me your bags". However, in America, such a construction of phrases is unacceptable, as it reflects the highest degree of rudeness and tactlessness in the form of an imperative mood. In English, in a

similar communication situation, native speakers will say *“I could help you with those bags”* or *“Let me help you”*. These forms of constructing phrases are considered appropriate, as they are built in a polite context with the choice of an interlocutor. However, this form of expression does not suit our mentality and the applicant will most likely be denied the offered assistance, as it will be perceived as a gesture of decency, and not a real desire to help. Our culture is peremptory and persistent when it comes to helping”.

Summing up the above, it should be noted that such communicative competence is unlikely to have taken place in the series “Doctor House”, each episode of which includes measures to promptly save the patient. Accordingly, students formed their own worldview regarding the language being studied, based on the viewed episodes reflecting American culture. In the process of learning, the research participant discovered, in addition to language knowledge, a cultural window into the American world. As a consequence, we can conclude that one of the hypotheses has been proven.

Furthermore, in the conclusion of the second part of our questionnaire, we move on to the last but not the least important component of communicative competence – strategic competence. Strategic competence, according to M. Swain and M. Canale, is a set of “verbal and non-verbal communication strategies used in cases where certain difficulties arise in communication or it is in danger of breaking” [Canale M. & Swain M., 1980].

In other words, strategic competence is the ability to select and use the most effective strategies for solving various communication tasks; it involves the possession of such general skills as: draw up a plan for the implementation of a specific communicative task; fulfill this plan at the level of the statement; assess the degree of achievement of communicative communication to improve communication in the future; the ability and willingness to take risks in communication situations to compensate for missing knowledge or abilities; the ability to use effective general learning skills; ask clarifying questions [Dubovko V.O., 2015].

When testing this competence, students were given the task of finding justifications for their actions, in the casus case of “fraud”, i.e. when cheating on an important test. Thus, at the ascertaining stage of the experiment, the majority of respondents either left this competence unanswered, or used a phrase that began as one “I’m sorry, I...” and then some kind of justification consisting of several phrases followed.

At the control stage, many students showed the skills of speech organizing formulas inherent in the English language, showed the ability to implement speech behavior in such a way as to establish contact with the interlocutor despite the “uncomfortable” situation, and also demonstrated the skills and abilities of verbal means of compensation in order to overcome communicative difficulties. As an example of one of the answers: *“I am sincerely sorry for cheating on the test. I was feeling insecure in my ability to do well and anxiety caused me to act irrationally. Please accept my sincerest apology and I swear that it will never happen again”*. Finally, we move on to the final part of our questionnaire, which directly consists of

medical terminology, abbreviations, phraseological units, idioms and specific speech constructions. The task of this part is to translate the English vocabulary into the native language. This task enabled us to conduct not only a qualitative, but also a quantitative analysis upon completion of our experimental training, which gave the most complete objective assessment of training in general.

CONCLUSION

So, summing up the consideration of the experiment as a pedagogical method, we can draw the following conclusions: our pedagogical experiment enables to bring certain phenomena to life, manage the pedagogical process, an experimental model can be a model for pedagogical practice; a pedagogical experiment can be repeated, reproduced both with a given group or a given person after a certain period of time, and with other subjects in other conditions; the pedagogical experiment, due to the possibility of repetition, acquires evidence and imparts objective reliability to the obtained facts, which are the basis for establishing the patterns of pedagogical tendencies. A one-time pedagogical experiment cannot claim to recognize the facts obtained as typical. This will require repeating it in different circumstances and with different composition of students.

Thus, the features of the pedagogical experiment are to create special experimental situations for the formation of a given quality, to model the pedagogical process as a model for pedagogical practice, to repeat the experiment in various conditions, to test the data obtained in the mass experience of training and education. All this makes the pedagogical experiment the most important form of organizing pedagogical research.

REFERENCES

1. Bakaev, V.V., Bolotin, A.E., & Aganov, S.S. (2016). Physical training complex application technology to prepare rescuers for highland operations. *Theory and Practice of Physical Culture*, 6, 6-8. <http://www.teoriya.ru/ru/node/5557>
2. Campbell, D.T. (1980). *Models of experiments in social psychology and applied research*. Moscow: Progress.
3. Canale, M., Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics*, 1(1), 1-47. <http://dx.doi.org/10.1093/applin/1.1.1>
4. Chai, C.S., Hwee Ling Koh, J., & Teo, Y.H. (2019). Enhancing and modeling teachers' design beliefs and efficacy of technological pedagogical content knowledge for 21st century quality learning. *Journal of Educational Computing Research*, 57(2), 360–384. <https://doi.org/10.1177/0735633117752453>
5. Danilov, M.A., Boldyrev, N.I., Gurova, R.G. (1971). *Problems of methodology of pedagogy and research methods*. Moscow: Pedagogy. http://elib.gnpbu.ru/text/problemy_metodologii--issledovany_1971/
6. Dubovko, V.O. (2015). Strategic competence in mastering a foreign language. *Educational social network*. <https://nsportal.ru/vuz/filologicheskie-nauki/library/2015/11/28/strategicheskaya-kompetentsiya-v-ovladii-inostrannym>
7. Ekmekçi, E., & Yaman, I. (2014). Developing lexical competence through online exercises: evaluations through the eyes of students. *The Journal of International Social Research*, 7(31). <https://www.researchgate.net/publication/314364441>
8. Farrell, T.S. (2020). Professional development through reflective practice for English-

- medium instruction (EMI) teachers. *International Journal of Bilingual Education and Bilingualism*, 23(3), 277–286. <https://doi.org/10.1080/13670050.2019.1612840>
9. Fusch, P.I., & Ness, L.R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, 20(9), 1408–1416. <https://doi.org/10.46743/2160-3715/2015.2281>
 10. Hilliker, S.M., & Yol, Ö. (2022). Virtual exchange in teacher education: focus on L2 writing. *ELT Journal*, 76(1), 11–19. <https://doi.org/10.1093/elt/ccab071>
 11. Kulczycki, E., Engels, T.C.E., Pölönen, J. (2018). Publication patterns in the social sciences and humanities: evidence from eight European countries. *Scientometrics*, 116, 463–486. <https://doi.org/10.1007/s11192-018-2711-0>
 12. Kumar, N., Panwar, Y., & Mahesh, G. (2016). A snapshot of research papers in non - English languages. *Current Science*, 111(1), 9–10.
 13. Kushieva, N.Kh. (2019). Cluster approach in enhancing intercultural competence of students in teaching foreign languages. *European Journal of Research and Reflection in Educational Sciences*, 7(10), 50–55. <http://www.idpublications.org/ejrres-vol-7-no-10-2019/>
 14. Kuzmina, N.V. (1980). *Methods of systemic pedagogical research*. Leningrad: Leningrad State University.
 15. Liang, L., Rousseau, R., & Zhong, Z. (2013). Non-English journals and papers in physics and chemistry: bias in citations? *Scientometrics*, 95(1), 333–350. <https://doi.org/10.1007/s11192-012-0828-0>
 16. Maslak, A.A., Anisimova, T.S. (2001). Experiment in education as a means of improving its quality. *Research Center for Quality Problems in Training Specialists*, 15(6), 66–78.
 17. Moate, J.M. (2011). The impact of foreign language mediated teaching on teachers' sense of professional integrity in the CLIL classroom. *European Journal of Teacher Education*, 34(3), 333–346. <https://doi.org/10.1080/02619768.2011.585023>
 18. Montgomery, S.L. (2016). Impacts of a global language on science: Are there disadvantages? In M.MacLeod, R.G. Sumillera, J.Surman & E.Smirnova (Eds.), *Language as a scientific tool: Shaping scientific language across time and national tradition* (1st ed.) (pp. 199–218). Routledge. <https://doi.org/10.4324/9781315657257>
 19. Moreira, F., Ferreira, M.J., Santos, C.P., & Durão, N. (2017). Evolution and use of mobile devices in higher education: A case study in Portuguese higher education institutions between 2009/2010 and 2014/2015. *Telematics and Informatics*, 34(6), 838–852. <https://doi.org/10.1016/j.tele.2016.08.010>
 20. Mouza, C., Yang, H., Pan, Y.C., Yilmaz, O.S., & Pollock, L. (2017). Resetting educational technology coursework for pre-service teachers: A computational thinking approach to the development of technological pedagogical content knowledge (TPACK). *Australasian Journal of Educational Technology*, 33(3). <https://doi.org/10.14742/ajet.3521>
 21. Panaiti, N.N. (2009). Communicative competence as a target and content side of teaching a foreign language. *Foreign Languages in Higher Education*, 1(8), 36–46.
 22. Peacock, M. (2001). Pre-service ESL teachers' beliefs about second language learning: a longitudinal study. *System*, 29(2), 177–195. [https://doi.org/10.1016/S0346-251X\(01\)00010-0](https://doi.org/10.1016/S0346-251X(01)00010-0)
 23. Pondee, P., Premthaisong, S., & Srisawasdi, N. (2017). Fostering pre-service science teachers' technological pedagogical content knowledge of mobile laboratory learning in science. In *ICCE 2017: 25th International Conference on Computers in Education: Technology and Innovation: Computer-Based Educational Systems for the 21st Century*, Workshop Proceedings (New Zealand) (pp. 151–160): Asia-Pacific Society for Computers in Education.
 24. Ramirez, G.M., Collazos, C.A., & Moreira, F. (2018). All-learning: The state of the art of the models and the methodologies educational with ICT. *Telematics and Informatics*, 35(4), 944–953. <https://doi.org/10.1016/j.tele.2017.10.004>
 25. Richards, J.C., Rodgers, T.S. (2001). *Approaches and methods in language teaching* (2nd

- ed.). New York: Cambridge University Press
26. Ríordáin, M.N., Johnston, J., & Walshe, G. (2016). Making mathematics and science integration happen: Key aspects of practice. *International Journal of Mathematical Education in Science and Technology*, 47(2), 233-255. <https://doi.org/10.1080/0020739X.2015.1078001>
 27. Sharipova, F., Akhmedova, A., Jalilova, N. (2020). Interactive learning in the medical English classroom. *Universal Journal of Educational Research*, 8(5), 1997-2004. <https://doi.org/10.13189/ujer.2020.080537>
 28. Shuman, E.V. (2006). Possibilities and prospects of intercultural communication in German at school. *International scientific and practical (electronic) journal "Inter-Cultur@l-Net"*, 5. <http://www.my-luni.ru/journal/clauses/101/>
 29. UNESCO. (2015). *UNESCO science report: towards 2030*. UNESCO Publishing.
 30. Vinther, S., & Rosenberg, J. (2012). Impact factor trends for general medical journals: non-English-language journals are lacking behind. *Swiss Medical Weekly*, 142(13572). <https://doi.org/10.4414/smw.2012.13572>
 31. Yuan, R. (2020). Promoting EMI teacher development in EFL higher education contexts: A teacher educator's reflections. *RELC Journal*, 51(2), 309-317. <https://doi.org/10.1177/0033688219878886>
 32. Zhu, Y. (2022). Implementing tasks in young learners' language classrooms: A collaborative teacher education initiative through task evaluation. *Language Teaching Research*, 26(3), 530-551. <https://doi.org/10.1177/1362168819894706>