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NEW APPROACH TO ICT-BASED MEANS OF FOREIGN LANGUAGE TRAINING IN ENGINEERING UNIVERSITIES

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Abstract

The intensification of foreign language (FL) training in engineering universities depends on the usage of the highly effective means of training as a component of methodical system of FL teaching. The ICT-based means of training have not only functionalities, but also linguodidactic capabilities. So, it is applicable to consider them as education informatization facilities. The offered approach to the development and usage of electronic language resources is based on the interconnection and mutual influence of linguodidactic capabilities of education informatization facilities (LDCs of EIFs). The LDCs of EIFs having primary importance for FL training intensification in engineering universities have been listed in the introduction part. The present paper is devoted to the investigating of different aspects of the compatibility of LDCs of EIFs with the help of several theoretical methods of research. The interaction of these very capabilities has been analysed, the pairs of them have been compared; and the results of the analyses and comparisons have been summarized in a table. Then, using the table, the effective pairs of LDCs of EIFs have been made and, finally, maximum combinations of LDCs of EIFs which determine the development and usage of FL training means in engineering universities have been drawn up. The requirements to the compatibility of LDCs of EIFs from the point of the pedagogical advisability to intensify FL training in engineering universities have been identified.

Keywords: Capabilities of education informatization facilities, electronic language resources, engineering universities, foreign language, ICT-based means of training, linguodidactic.

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1. Introduction

Methodical system of foreign language (FL) teaching consists of several basic components – the purpose of training and learning objectives, language material content, methods, forms and means of training. These components are in indissoluble unity that is the change of one leads to some changes in the others. So, the efficient means of training will influence the whole system which has the necessity to be developed under present-day conditions of ICT age.

1.1. ICT-based means of training in engineering universities

Modern linguodidactics has plenty of ICT-based means of training, capable to enhance FL education in engineering universities. The wide range of open or unopened electronic general-purpose and educational-purpose language resources localized in separate information carriers (DVDs, servers, etc.) and distributed in networks (local ones and global Internet) are referred to these means. Special applications designed by language teachers for FL training within a particular curriculum of engineering university matter a lot for intensification of the educational process. Smart tools (expert systems, concordances, indexers, bitexts, text editors with spelling or grammar checker, term databases, translation memory, computer-assisted translation, etc.), as well as special firmware (mobile devices, all kinds of digital language laboratories etc.), contribute to learning activities intellectualization and self-education of engineering students.

ICT-based means of training have pedagogical as well as didactic potential (Beresneva, Zaitsev, Selezenev, Darovskikh, & Solomonovich, 2018; Sharshov & Belova, 2018). It won't be an exaggeration to consider pedagogically potential ICT facilities as education informatization facilities (Yesenina, 2013). Methodically efficient development and usage of ICT-based means of FL training depends on the full-fledged realization of their linguodidactic capabilities.

1.2. Linguodidactic potential of ICT

The linguodidactic capabilities of education informatization facilities (LDCs of EIFs), being significant for language education in non-philological universities, can be stated as follows:

1. Intellectualization of interactive «man-machine» dialogue between a student and an ICT-based means of training, considered as an expert, causing mutual answers (quasi-communication).
2. Interactivity of "man-man mediated by ICT" dialogue (with a distant interlocutor), considered as a real speech communication enhancing reading, writing, speaking and listening activities.
3. Computerized animation of real situations of FL speech communication; dramatizing learning situations as language games with an opportunity for a student to play the role of any interlocutor in dialogues or a polylogues and to influence the game's scenario;
4. Computerized visualization of learners' audio record as a speech signal graph and demonstration of man's articulatory processes which are invisible in reality.

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5. Automated speech recognition: oral speech – etalon/ learner's / speaker's readings for the follow-up multiple listenings, comparisons and assessments and writing speech – texts, formulae, tables etc. for the follow-up linguistic editing by a man or an automated system; transformation of oral speech into writing one and otherwise.
6. Automated linguistic processing of speech, f.e. abstracting, analyses, editing, reviewing and translation.
7. Multi-format presenting of the language educational content which provides visuoauditory influence on sense organs, leading to accelerated perception, processing and analyses of data.
8. Access, archiving, presentation, replication, storage, transfer, etc. of voluminous multi-format linguistic and extralinguistic information whether on mobile carriers or on the Internet.
9. Automation of information retrieval speech activity emphasizing the cognitive and speech focus of FL information interaction by nullification of non-speech routine operations.
10. Automation of language educational content drills with unlimited execution of exercises or training tasks, return to their fragments; as well as results assessment and analysing.
11. Automation of teachers ' professional activities management and controls, including planning, modification and assessment of learning process, language educational content design; as well as information interaction between students and teachers via computer networks.

Undoubtedly, the full-fledged realization of any mentioned above LDCs of EIFs will lead to the efficiency increase and intensification of FL training.

2. Problem Statement

Owing to the pedagogical potential of these capabilities, it is highly difficult for the FL teachers (especially in non-philological universities) to resist the temptation of simultaneous combining the great number (as many as possible) of them while developing one ICT-based assignment. It erroneously seems that the more LDCs of EIFs you combine, the faster the intended result (words memorizing, grammar phenomenon learning, speech skills mastering etc.) is produced. The aspiration of language educators for combining as many as possible linguodidactic capabilities during the achievement of one learning objective leads to the serious methodical mistakes. The data banks of Fl chairs in engineering universities abound in «picturesque» ready-made and self-made language educational resources, realizing different capabilities, with no clear linguodidactic objective stated. The use of such facility «with everything and nothing» has lack of pedagogical effect as the linguodidactic capabilities of one education facility are not well-matched and do not correspond to the methodical functions this very facility should perform. Teachers' ardour for the presentable appearance of training means decreases the FL training purpose directness, disconnects language educational material, weakens vocational focus etc.

And, vice versa, development and usage of education informatization facilities according to the interconnection and mutual influence of their linguodidactic capabilities create the necessary prerequisites

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for educational process intensification at the expense of several linguodidactic objectives achieved at the same time.

Taking into account all previously mentioned, we can state that the pedagogical effect resulted from the realization of LDCs of EIFs is becoming stronger by pair (and more) combinations of some of these capabilities in one means of training or one assignment which are based on ICT and becoming worse by their superfluity.

3. Research Questions

The current approaches (Almazova, Eremin, & Rubtsova, 2016; Goga & Grigoras, 2017; Kostikova, 2008, 2013; Khalyapina, Popova, & Kogan, 2017; Nicolescu, Macarie, & Petrescu, 2017; Stritzelberger, 2017; Yashina, Poliakova, Kuznetsova, & Potikhonova, 2017) to the development and use of ICT-based means of FL training do not regard interconnection and mutual influence of LDCs of EIFs. These works do not also depict the interaction effect of linguodidactic capabilities of several means of FL training considered as a unity. To solve the problem of linguodidactic capabilities compatibility on the theoretical level the present paper deals with the following questions to research:

- To analyse the interaction and mutual influence of LDCs of EIFs mentioned in 1.2. and to compare their interconnection efficiency;
- To summarize the results of analysing and comparing in a table;
- To make the pairs of LDCs of EIFs using the table as an instrument for combining;
- To identify the requirements for the compatibility of LDCs of EIFs used for analysing and comparing;
- To draw up the maximum potential combinations of LDCs of EIFs which determine the development and usage of FL means of training in engineering universities.

The research questions also reveal the pedagogical advisability of linguodidactic capabilities compatibility to intensify FL training in engineering universities.

4. Purpose of the Study

Our study is aimed to reveal the compatibility of LDCs of EIFs which determines the development and usage of FL training means in engineering universities.

5. Research Methods

Our investigation, which is primarily of theoretical importance, is based on the concept of education informatization developed by Russian scientists (Grinshkun & Krasnova, 2017, 2018; Robert et. al., 2016). We have considered the education informatization as an activity which ensures the psychologically and pedagogically correct ICT usage, available knowledge synchronization and new knowledge formation to increase effectiveness of all educational activities and to train high-qualified specialists with a new type of thinking according to the society informatization requirements; education informatization being based on the use of technical means and techniques of education informatization which posses didactic capabilities.

The steps in research can be listed as follows:

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- Comparative evaluation of all possible variants of the compatibility of LDCs of EIFs for the choice of the rational achievement of maximum results in minimum time and labour inputs of students;
- Study of really actual functional capabilities of education informatization facilities regardless of their electronic language resources;
- Construction of functional solutions of structuring and presenting of language educational content, uncharacteristic for knowledge-intensive fields of high technologies, with the help of LDCs of EIFs;
- Patterning of optimal ways of realization of LDCs of EIFs so that the increase of one capability in a combination should not be made by an incomplete realization of the others.

Theoretical methods of investigations include observing and summarizing of pedagogical and psychological foundations, accumulating and systemising of foreign and Russian experience in linguodidactics and education informatization, expert assessment of linguistic informational resources, analysis and criticism of LDCs of EIFs and modelling of their different combinations etc.; the empirical ones represent interviews and questionnaires with scholars, experienced FL teachers and students.

6. Findings

6.1. The interaction and mutual influence of linguodidactic capabilities of education informatization facilities

Feedback's pedagogical effect in any system is increased significantly by the capabilities of this very system of *archiving, storing and processing of large volumes of FL information presented in any format*. A man has a limited storage of information which is vanishing when not used. Intellectual system (f.e. expert system) can be considered as a new automated form of information, knowledge and data storage in one specific subject area. The shell of the system is its unique component, including not only reasoners but also database shell filled by a user. The system, at the stage of development, is being filled with the knowledge of many experts and professionals. These data are summarized during the system's learning: when getting the task at the input, the system analyses the task and makes the plan of its solution. The input data are saved forever and can be added. Such a system is able to self-learning; the information volume being practically unlimited.

Practical realization of such LDCs of EIFs as *automation of language material drill* and *instantaneous feedback between a FL learner and an education informatization facility* contributes to the intellectualization of learning activity, directing a student toward search and choice of the right task decision with the help of prompts and supplementary reference information. A learner chooses the pace and the trajectory of learning. A system accompanies the learner's decision with step-by-step control. Man-machine informational interaction is based on the dialogue regime of a learner and a system.

Thus, the heuristic method of learning is realized; that is a creative method of training used for personality and creativity self-realization: a learner constructs some knowledge in the subject area before the first acquaintance with a new learning material. The heuristic method to FL teaching should be oriented to students' creativity development, critical analyses of events and discussion taking in oral and written

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speech. It is realized by expert and learning system with *intellectualization of man-machine dialogue, automation of information retrieval activity, unlimited storage of linguistic and extralinguistic information and multiple accesses to this storage*. Hence, the practical usage of such systems favours differentiation and individualization of training, development of learners' self-instruction and cognitive activity as well as the application of FL knowledge as an accessor to new information which is inaccessible by means of native language knowledge.

The combination mentioned above can be extended at the theoretical level by the capability of *presenting of language educational material in all formats as it provides audio and video influence on sense organs expressed in accelerated perception, processing, analyses of information*. Elite systems of virtual reality (VR) provide not only 3-D images and sound but also natural language communication in a synchronous regime. But only incredible arrays of data as well as technologies of data processing can support the research activity of a scholar.

Let's consider the combination of such LDCs of EIFs as *automated speech recognition, graphic visualization of audio-record* and *automation of language material drill*. Multiple listenings and comparisons of a learner's reading record with etalon develop inner hearing – an ability to hear a reading «inside». The use of additional devices which are coupled with a computer allows visual analysing of learners' intonation change. A user records a variant of text reading and then the record is compared with program's sample; the result is shown as a graph. Graphic image of text-reading and its comparison with etalon help a learner to assess pronunciation and intonation, to analyse mistakes in details and to correct them at language drill stage.

The combination of *automated oral and written speech recognition and further automated speech processing* permits a FL teacher to reveal learners' individual peculiarities, their phonetic specificities, typical mistakes of some language groups, etc. with the help of record and archiving of speech samples, access to archive, reproducing of any pronunciation sample from archive, multiple comparisons of learners' reading variants with etalon as well as learners' speech graphic modelling.

Learners' emotional and intellectual tension leads to high interest and motivation of FL learning. These are achieved by the combination of *feedback*, *multimedia presenting of educational content*, *automation of language material drill* and *learning activity modelling in language games*. These LDCs of EIFs allow learners the following:

- To take part in (not only to watch) communicative situations of an animated movie – answer the heroes and command the heroes' actions, change the game's scenario;
- To monitor learning activity during the work with synchronized visual and aural demonstration of language educational material by suspending the session, decelerating or accelerating the pace of content presenting, repeating the previous fragments of content;
- To apply electronic language resources as a language driller.

The methodical correct connection of hearing and seeing imageries in such ICT-based means of training as "micro-world" contributes to the development of oral speech communication owing to informativeness of visuoauditory plurality and dynamism of image which are controlled by a FL learner. The use of such electronic language resources with unique LDCs of EIFs permits the following:

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- Multiple drilling of language exercises of any complexity and intended purpose, returning to badly mastered fragments of language content and omitting the mastered content;
- Formation of all kinds of speech activities (speaking, listening, writing, reading) skills as individually as in parallel during one assignment doing (f. e. reading + listening, etc.);
- Usage of electronic dictionaries, glossaries, encyclopedias, not wasting time for information seeking in separate printed products, while the electronic linguistic information being actual and being presented by text, graphic, audio, video;
- Learning without the teachers' assistance, but under the continuous automated control;
- Communicating in animated dialogues and polylogues, representing real communication.

Automation of language material drill and *learners' results control, phoneme graphic image* and *articulatory processes visualization at a monitor, automated speech recognition* and *presenting of language educational material in all formats on any mobile carrier* as a combination allows a student to study phonetics, to master listening, to reach correct pronunciation and fluent speaking without teachers' assistance.

Such LDCs of EIFs as *instantaneous feedback, computerized animation of learning speech situations, presenting of language educational material in all formats on any carrier and network* permit maximum reproduction of objective reality during the informational interaction of FL training-purpose. The combination of these LDCs of EIF «immerses» a learner in VR; so the main problem of non-native language learning – the absence of a real language environment – is solvable. This solution creates the prerequisites for the qualitative improvement of Fl teaching in engineering universities.

The realization of *automation of the information and methodological support, feedback, automated speech recognition* and *presenting of language educational material in all formats* by one educational facility enables a FL teacher to create special applications and individual assignments with audio and video content and to generate instructions to students using technologies of expert assessment.

The compatibility of *presenting of language educational material in all formats, automated speech recognition and automated linguistic processing, automation of language material drill, multiple revisions of badly mastered fragments of language content* and *automation of the processes of information and methodological support* determines scientifically substantiated selection of language educational material as well as creating the necessary exercises and assignments.

Automation of the processes of information and methodological support combined with *presenting of educational content in all formats on any removable media, content posting on the Internet with the capability of it further modification* gives a FL teacher the opportunity to work out the specific language educational content presented in the following:

- Short situational dialogues for speaking fluency;
- Vocational audio and symbol texts for listening and reading;
- Voiced and transcribed dictionaries (for a lesson, a text, a theme, etc.) coupled with visual information (schemes, graphs, figures of devices and tools, routine samples etc.);
- Actual speech patterns of science and engineering discourse;
- Different tests (for a lesson, a text, a theme, etc.) as well as tests of international systems of language examinations.

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Let's consider the interconnection of *automated speech processing, archiving, storage, access, presentation, etc. of FL information* and *automation of the processes of information and methodological support* on the example of software «Ginger». The program, which is compatible with Internet Explorer, Outlook, PowerPoint and Word, has the following capabilities of linguodidactic editing:

- Correction of typical mistakes of homophone pairs (then – then, signal – single, stuff – staff);
- Correction of homophones (~~Fizix~~ is my favorite subject →Physics), separation and mixture of words (A three ~~bed room~~ apartment → bedroom), spelling correction ("wer": I ~~wer~~ a shirt →wear, They ~~wer~~ there →were, ~~Wer~~ are you? →Where);
- Parallel and instantaneous checking of grammar and spelling;
- Explanation of corrections with the examples;
- Regular mistakes reports;
- Speech recording, writing speech transformation into oral speech and otherwise, listening to the transformed texts, correction of accent, intonation, pace etc.

Automation of information retrieval FL activity coupled with *hypermedia/ hypertext access to network information resource* determines the interactivity of the informational interaction and the usage of the informational environment of culture and science. These very capabilities accompanied by *interactive FL dialogue with a remote communicator* provide formation and development of vocationally-oriented FL informational interaction. An improvement of just that very interaction causes making up of the second vocationally-oriented language personality (Kostikova, 2013).

Archiving, transfer, replication, presentation, etc. of rather large volumes of linguistic and extralinguistic network information of any type and *automation of information retrieval activity determining the cognitive and speech aspects of FL information interaction by means of automation of routine operations* make conditions for active interrelated reading, writing, listening and speaking practice as well as for making up of the second language personality (Kostikova, 2008). These conditions contribute to the modelling of vocationally-oriented FL informational interaction and socium, development of communicative skills in science and engineering sphere, learning of knowledge-intensive fields of high technologies.

6.2. The results of analysing and comparison of linguodidactic capabilities of education informatization facilities

The received results of analysing and comparison are summarized in a table (Table 01). The table shows the compatibility of LDCs of EIFs from the point of the pedagogical advisability of linguodidactic capabilities compatibility to intensify FL training in engineering universities. Each capability in the table is relative to the ordinal number of LDCs of EIFs mentioned in section 1.2.

Table 01. The compatibility of linguodidactic capabilities of education informatization facilities

LDCs of EIFs	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.		X	√	X	√	X	√	√	√	√	X
2.	X		X	X	X	X	√	√	X	X	X
3.	√	X		X	X	X	√	√	X	√	X

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4.	X	X	X		√	X	√	√	X	√	X
5.	√	X	X	√		√	√	√	X	X	X
6.	X	X	X	X	√		√	√	X	√	√
7.	√	X	√	√	√	√		√	X	√	√
8.	√	√	√	√	√	√	√		√	√	√
9.	√	√	X	X	X	X	X	√		X	X
10.	√	X	√	√	√	X	√	√	X		X
11.	X	X	X	X	X	X	√	√	X	X	

Using the table as a tool for combining we have made the pairs of LDCs of EIFs according to their ordinal number and have got, without repetitions, the following pairs: 1-3; 1-5; 1-7; 1-9; 1-10; 2-9; 3-7; 3-10; 4-5; 4-7; 4-10; 5-6; 5-7; 5-10; 6-7; 6-11; 7-10; 7-11; 8-1; 8-2; 8-3; 8-4; 8-5; 8-6; 8-7; 8-9; 8-10; 8-11.

6.3. The requirements for the compatibility of linguodidactic capabilities of education informatization facilities and their maximum potential combinations.

While doing research four requirements for the compatibility of LDCs of EIFs have been fulfilled. These requirements can be summarized as follows:

1. ***Actuality*** – we have studied the actual functionalities and linguodidactic capabilities of ICT and have taken into account nor the widely used in practice of engineering universities nor the perspective electronic language resources which realize or able to realize these capabilities;
2. ***Optimality*** – while modelling pairs and combinations which are efficient for FL training we have tried to make them optimal as we have not increased and expanded the potential of one LDC of EIFs in a pair or a combination by an incomplete implementation of the others;
3. ***Rationality*** – we have evaluated all possible variants of compatibility of LDCs of EIFs and have chosen the rational achievement of maximum results by minimum time and labour inputs of FL teachers and students;
4. ***Functionality*** – the solutions being designed for specific and urgent linguodidactic tasks are functional as they concern structuring and presenting of educational content with the help of LDCs of EIFs for the training of phonetics, spelling, lexis, grammar, reading, listening, speaking and writing in specific conditions of language education in engineering universities.

According to the requirements mentioned above and the pairs in section 6.3 we have drawn up the maximum potential combinations of LDCs of EIFs which can most of all increase linguodidactic efficiency of electronic language resources on their base as each combination represents a single set of pedagogical influence means: **1-3-7-8-10, 1-5-7-8-10, 1-8-9, 2-8-9, 4-5-7-8-10, 5-6-8, 6-7-8-11**. These combinations determine didactical functions of education informatization facilities being developed or used for FL teaching in engineering universities and influence methods and forms of training.

7. Conclusion

As the final result of the research done, seven maximum combinations of LDCs of EIFs have been drawn up. The combinations of LDCs of EIFs mentioned above have been developed according to the

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requirements of 1) actuality of every capability in a combination, 2) rationality of maximum educational results achieved and minimum labour and time input ratio with their help, 3) optimality of every capability increase in a combination and 4) functionality of every combination.

Based on the theoretical finding achieved, we can afford to conclude that the practical realization of the LDCs of EIFs combinations creates the necessary prerequisites for the intensification of FL training in engineering universities. The use of combinations of LDCs of EIFs at the stage of projecting of FL methodical system components as well as at the stages of FL training and practice in engineering universities is a major precondition for to the following:

- Effective formation of information and speech activity skills;
- Usage of science and engineering discourse;
- Mastering of the science-intensive thesaurus;
- Further improvement of colloquial language proficiency;
- Stable motivation and cognitive interest in producing of knowledge in the form of intellectual linguistic informational resources, etc.

Methodical aspects of ICT-based means of FL training, which are being developed and used, have earlier been researched regardless of the interconnection and mutual influence of their linguodidactic capabilities. Nor foreign (Bloju, 2017; Mirela, 2017) nor Russian (Kovaleva & Dymova, 2017; Poliakova, Yashina, & Popova, 2017) educationalists have investigated the influence of LDCs of EIFs compatibility on determining the practical purpose of FL training and learning objectives, constructing the language material content, selection the methods and forms of training. The development and usage of training means on the base of the LCDs of EIFs compatibility make it possible by a single set of pedagogical influences to solve several tasks simultaneously and to get systemic and integrated versus irregular and single-order effect. The intensification of FL training in engineering universities is reached by the diffusion, interpenetration and mutual increase of the purpose of training and learning objectives, language material content, methods, forms and means of training.

So, further investigations in the field of realization of LDCs of EIFs combinations to intensify FL training in engineering universities should be dedicated to the following «how»:

- To form the practical speech skills of vocationally-oriented FL informational interaction – both “man-machine” communication and “man-man mediated by ICT” communication;
- To modify the composition, volume and structure of language educational material content with the tendency to transfer from symbolic and graphic presenting of information to multimedia one and from linear to hypertext and hypermedia one.
- To develop blended learning models as the most effective forms of FL training according to the learners’ peculiarities and needs with remote language practice and tutorials, students’ webinars and online conferences, virtual excursions and laboratory routines, etc.;
- To match educative and cognitive, stimulating and motivating, controlling and directive methods of training during new language material familiarization and its deductive and inductive comprehension, receptive and reproductive language drill, problematic information retrieval and language practice without learners’ overload and overstrain.

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References

Almazova, N.I., Eremin, Yu.V., & Rubtsova, A.V. (2016). Productive linguodidactic technology as an innovative approach to the problem of foreign language training efficiency in high school. *Russian linguistic Bulletin, 3* (7)*,* 50-54. doi: 10.18454/RULB.7.38.

Beresneva, E. V., Zaitsev, M. A., Selezenev, R. V., Darovskikh, L. V., & Solomonovich, M. M. (2018). Didactic Potential of Modern Information Technologies in Training a Chemistry Graduate. *Integratsiya obrazovaniya = Integration of Education*, *22* (1), 177-192. doi: 10.15507/1991-9468.090.022.201801.177-192.

Bloju, C. L. (2017). The utilization of e-learning instruments in consolidation activities of the grammar elements. *The European Proceedings of Social & Behavioural Sciences (EpSBS), 23,* 400-405. doi:10.15405/epsbs.2017.05.02.49.

Goga, M., & Grigoras, A-M. (2017). The role of ICT in education – Romanian experience. *The European Proceedings of Social & Behavioural Sciences (EpSBS), 23,* 992-999. doi:10.15405/epsbs.2017.05.02.122.

Grinshkun, V. V., & Krasnova, G. A. (2017). New education for new new information and technological revolutions. *RUDN Journal of Informatization in Education, 14* (2), 131-139. doi:10.22363/2312-8631-2017-14-2-131-139.

Grinshkun, V. V., & Krasnova, G. A. (2018). Virtual universities: factors of success and prospects of development. *RUDN Journal of Informatization in Education, 15* (1), 7-17. doi:10.22363/2312-8631-2018-15-1-7-17.

Khalyapina, L.P., Popova, N.V., & Kogan, M.S. (2017). Professionally-oriented content and language integrated learning (CLIL) course in higher education perspective. In L. Gomez Chova, A. Lopes Martinez & I. Candel Torres (Eds.), *ICERI2017 Proceedings: 10th International Conference of Education, Research and Innovation* (pp.1103-1112). Seville, Spain: IATED Academy.

Kovaleva, A., & Dymova, E. (2017). Information technologies in project work in foreign language teaching of non-linguistic students. In L. Gomez Chova, A. Lopes Martinez & I. Candel Torres (Eds.), *EDULEARN17 Proceedings*: *9th International Conference on Education and New Learning Technologies* (pp.168-172). Barcelona, Spain: IATED Academy.

Kostikova, L. P. (2008). Dialogue approach to culture and intercultural education. *Pedagogics, 6,* 28-35. Retrieved from http://pedagogika-rao.ru/journals/2008/6/.

Kostikova, L. P. (2013). Developing conceptual awareness of the future profession in the students of international relations through FLT. *Vestnik MGIMO-Universiteta, 4* (31), 323-327. Retrieved from http://www.vestnik.mgimo.ru/contents/4-31-2013.

Kostikova, L. P. (2018). Multicultural aspects of pre-service teacher education. *Pedagogics, 3,* 74-79. Retrieved from http://pedagogika-rao.ru/journals/2018/3/.

Mirela, C. (2017). Selecting materials for ESP classes. *The European Proceedings of Social & Behavioural Sciences (EpSBS), 23,* 210-218. doi:10.15405/epsbs.2017.05.02.28.

Nicolescu, B. N., Macarie, T., & Petrescu, T. C. (2017). Is Blended Learning A New Way To An Optimal Adult Education? *The European Proceedings of Social & Behavioural Sciences (EpSBS), 23,* 1380-1389. doi:10.15405/epsbs.2017.05.02.169.

Poliakova, N., Yashina, M., & Popova, S. (2017). Ways of using interactive methods in teaching foreign languages at the university. In L. Gomez Chova, A. Lopes Martinez & I. Candel Torres (Eds.), *EDULEARN17 Proceedings: 9th International Conference on Education and New Learning Technologies* (pp. 850-854). Barcelona, Spain: IATED Academy.

Robert, I., Kastornova, V., Mukhametzyanov, I, Dimova, A., Martorosyan, L., & Gerova, N. (2016) Implementation of the Internet for Educational Purposes. *Smart Innovation, System and Technologies, 59*, 573-583. doi: 10.1007/978-3-319-39690-3_51.

Sharshov, I. A., & Belova, E. A. (2018) Analysis of Pedagogic Potential of Electronic Educational Resources with Elements of Autodidactics. *Integratsiya obrazovaniya = Integration of Education, 22* (1), 166-176. doi:10.15507/1991-9468.090.022.201801.166-176.

Stritzelberger, I. (2017). Strategies towards plurilingualism - how students speak more in foreign language classes and achieve better results in European language exams. In L. Gomez Chova, A. Lopes Martinez & I. Candel Torres (Eds.), *EDULEARN17 Proceedings: 9th International Conference on Education and New Learning Technologies*, (p. 234). Barcelona, Spain: IATED Academy.

Yashina, M., Poliakova, N., Kuznetsova, E. V., & Potikhonova, T. A. (2017). The impact of global trends on foreign language teaching in Russia. In L. Gomez Chova, A. Lopes Martinez & I. Candel Torres (Eds.), *EDULEARN17 Proceedings: 9th International Conference on Education and New Learning Technologies*, (pp. 834-840). Barcelona, Spain: IATED Academy.

Yesenina, N. Ye. Linguodidactic potential of Informational and Communicational Facilities. (2016). *Scientific Research and Development: Modern Communication Studies, 5* (6), 41-48. doi:10.12737/22778.