Development of foreign language competence of higher education students in the context of blended learning

Desenvolvimento da competência em línguas estrangeiras dos estudantes do ensino superior no contexto da aprendizagem mista

Desarrollo de la competencia en lenguas extranjeras de los estudiantes de educación superior en el contexto del aprendizaje combinado

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ABSTRACT
The circumstances of active implementation of a blended learning format at all educational levels require increased motivation and advancement of the competences learned by students of higher education institutions. Such statement equally applies to foreign language competence, which is one of most relevant skills to the future professional activity of international relations specialists. In considering this, the Ukrainian higher education institutions conducted a study on the development of foreign language competence of higher education students in the context of blended learning. The purpose of the article is to develop and empirically establish the effectiveness of the author’s model of foreign language competence development of higher education students in the context of blended learning. The study involved the development, implementation and evaluation of the effectiveness of the author’s model of foreign language competence development of higher education students in the context of blended learning. The study confirmed that the implementation of the method of organizing the formation of foreign language competence of higher education students, which requires an optimal combination of blended learning with modern digital tools and the
Development of foreign language competence of higher education students in the context of blended learning.

**Keywords:** Blended learning. Competence. Educational process. Foreign language. Students.

**RESUMO**

As circunstâncias de implementação activa de um formato de aprendizagem combinada em todos os níveis de ensino exigem uma maior motivação e avanço das competências aprendidas pelos estudantes das instituições de ensino superior. Esta afirmação aplica-se igualmente à competência em línguas estrangeiras, que é uma das competências mais relevantes para a futura actividade profissional dos especialistas em relações internacionais. Ao considerar isto, as instituições de ensino superior ucranianas realizaram um estudo sobre o desenvolvimento da competência em línguas estrangeiras dos estudantes do ensino superior no contexto da aprendizagem mista. O objectivo do artigo é desenvolver e estabelecer empiricamente a eficácia do modelo do autor de desenvolvimento da competência em línguas estrangeiras dos estudantes do ensino superior no contexto da aprendizagem mista. O estudo envolveu o desenvolvimento, implementação e avaliação da eficácia do modelo do autor de desenvolvimento de competências em línguas estrangeiras dos estudantes do ensino superior no contexto da aprendizagem mista. Os participantes do estudo eram estudantes de instituições de ensino superior: IES 1, IES 2, IES 3, que se especializaram nas seguintes especialidades: actividades internacionais, relações internacionais e algumas especialidades técnicas. Os participantes foram estudantes do 1º, 3º e 5º anos, tendo sido entrevistados 138 estudantes (68 do grupo experimental e 70 do grupo de controlo). O estudo confirmou que a implementação do método de organização da formação da competência em línguas estrangeiras dos estudantes do ensino superior, que exige uma combinação óptima de aprendizagem mista com ferramentas digitais modernas e a orientação profissional da formação em línguas estrangeiras no sistema das instituições de ensino superior, ajuda a fazer avançar a competência em línguas estrangeiras dos estudantes do ensino superior.


**RESUMEN**

Las circunstancias de la implementación activa de un formato de aprendizaje mixto en todos los niveles educativos exigen una mayor motivación y el avance de las competencias aprendidas por los estudiantes de las instituciones de educación superior. Tal afirmación se aplica igualmente a la competencia en lenguas extranjeras, que es una de las habilidades más relevantes para la futura actividad profesional de los especialistas en relaciones internacionales. Teniendo en cuenta esto, las instituciones de educación superior ucranianas realizaron un estudio sobre el desarrollo de la competencia en lenguas extranjeras de los estudiantes de educación superior en el contexto del aprendizaje combinado. El propósito del artículo es desarrollar y establecer empíricamente la eficacia del modelo del autor sobre el desarrollo de la competencia en lenguas extranjeras de los estudiantes de educación superior en el contexto del aprendizaje combinado. El estudio consistió en el desarrollo, la aplicación y la evaluación de la eficacia del modelo del autor para el desarrollo de la competencia en lenguas extranjeras de los estudiantes de educación superior en el contexto de la enseñanza semipresencial. Los participantes en el estudio fueron estudiantes de instituciones de educación superior: IES 1, IES 2, IES 3, que se especializaron en las siguientes especialidades: actividades internacionales, relaciones internacionales y algunas especialidades técnicas. Se entrevistó a un total de 138 estudiantes (68 del grupo experimental y 70 del grupo de control). El estudio confirmó que la aplicación del método de organización de la formación de la competencia en lenguas extranjeras de los estudiantes de educación superior, que requiere una combinación óptima de aprendizaje mixto con herramientas digitales modernas y la orientación profesional de la
formación en lenguas extranjeras en el sistema de instituciones de educación superior, ayuda a avanzar en la competencia en lenguas extranjeras de los estudiantes de educación superior.


**INTRODUCTION**

Knowledge, skills, and high level of foreign language proficiency form an essential component of professional competence of a modern specialist, thus being crucial in professional training of higher education students. Such statement is particularly relevant for students majoring in international relations and international activities. For students majoring in purely technical specialties, in particular, future specialists in applied physics and mathematics, nanotechnology, mining, ecology, and heat power engineering, foreign language knowledge and skills are equally important since they open for students the opportunities for world achievements and exchange of experiences in a barrier-free communicative environment in these crucial areas of activity. Imporantly, such students have to attain a high level of foreign language competence in order to achieve professionalism in their future activities and build their professional careers. Despite the fact that higher education institutions pay considerable attention to the development of foreign language competence of students, the teachers’ community is continuously searching, developing, testing and implementing effective technologies, methods, and techniques of teaching foreign languages to students majoring in international relations, applied physics and mathematics, nanotechnology, mining, ecology, and heat power engineering. The active implementation of distance learning technologies into the overall training system in higher education institutions and observance of social restrictions necessary to combat the global pandemic have significantly transformed the educational process. This highlighted the need to introduce models of blended learning as a certain consensus between traditional full-time and distance learning. Such conditions caused the increase in the responsibility of the teaching personnel of higher education institutions for the formation of professional competencies of students. Teaching foreign languages in such conditions necessitates the implementation of particular corrective and adaptive methodological tools that might be effective in organizing the educational process focused on the acquisition of foreign language competence in the blended learning format.

**METHODOLOGY**

**Research design**

The study involved the development, implementation and evaluation of the effectiveness of the author’s model of foreign language competence development among higher education students in the context of blended learning. The study included the following stages: statement, formation, control. At the ascertaining stage, the preparatory preparation of the subjects of the educational process (students and teachers) to work in a blended model of education was carried out, the introductory monitoring of the formation of foreign language competence of higher education students was carried out. The formation stage entailed the development and implementation of the author’s model of the development of foreign language competence among higher education students in the context of blended learning. At the control stage, the final monitoring of the foreign language competence level of higher education students was carried out, and the effectiveness of the author’s model of foreign language competence development of higher education students in the
context of blended learning was assessed based on a comparative analysis of the monitoring data received at the ascertaining and control stages of the research.

Sample study

The participants of the study were students of higher education institutions: HEI 1, HEI 2, HEI 3, who majored in the following specialties: international activities, international relations, applied physics and mathematics, nanotechnology, mining, ecology, heat power engineering. The participants were 1st, 3rd and 5th year students.

The choice of groups of participants was made with regard to their integration into the curriculum of the specialty they majored in and the level of foreign language excellence. A total of 138 students were interviewed (68 from experimental and 70 from control group). The monitoring results were evaluated on the following scale: “Excellent” (A95-100), “Good” (B85-94), (C 75-84); “Satisfactory” (D 65-74), (E 60-64); Unsatisfactory (FX 30-59), (F 0-29).

Intervention

The implementation of the suggested model of forming foreign language competence among higher education students in the context of blended learning within the scientific research involved intervention in the educational process of three institutions: HEI 1, HEI 2, HEI 3. Such intervention was made upon consent of the administration, teachers and student communities.

Limitations

Monitoring and experimental procedures involved the total of 138 students aged between 17-21. The introductory monitoring was conducted at the beginning of the first semester of 2020/2021 academic year. The author’s model was introduced during the first semester of the academic year. The control stage of the experiment was implemented in the second semester of 2020/2021 academic year. The only difference in the implementation of the model in the first, third and fifth years, respectively, is the volume and complexity of lexical and communicative material, while the concept of the model itself remains unchanged.

Statistical analysis

The monitoring performed at the statement and control stages of the research involved the implementation of test tasks approved at the faculties of the experimental bases. The survey of students was carried out through Google forms. Recording and processing of results was carried out in Excel spreadsheet.

Monitoring at the ascertaining and control stages of the research involved the implementation of test tasks approved by the departmental experimental bases.

RESULTS

The scientific research was focused on the elaboration of an author's model of foreign language competence development of higher education students in the context of blended learning. The suggested model includes the following components (Figure 1): motivational and cognitive, practical and action-related, improvisational and creative, value and ethical, communicative and reflexive.
The motivational and cognitive component of the model assumes that the student has a constant desire to improve and correct the current level of foreign language competence development, and is based on a clear algorithm for further acquisition of knowledge, skills and abilities within the blended learning format.

The practical and action-related component is characterized by the ability of the higher education student to demonstrate the current level of development of foreign language competence in performing professionally oriented tasks according to the program suggested by teachers and with regard to personal learning capabilities in the context of blended learning.

The improvisational and creative component involves the formation of students' ability to act in atypical and contradictory speech situations without prior training and demonstrate creative approach to solving non-standard professional situations without teacher's assistance in the context of blended learning.
The formation of the value and ethical component is intended to develop among higher education students a clear and stable system of value orientations, facilitate the perception of foreign ethical norms and standards outside face-to-face communication, and increase the ability to use the established values and ethical norms in real professional communications.

Considering the communicative and reflexive component of the model, it is necessary to focus on the level of communicative potential of the student, his excellence in foreign speech, success of the professionally oriented communicative transactions, and the ability to evaluate the success and effectiveness of real-time and other types of communication.

For each of the components of the suggested model, it is recommended to use various tasks and create particular organizational and pedagogical conditions.

To implement the motivational and cognitive component of the model in the context of blended learning for ensuring the development of foreign language competence, it is advisable to use advanced searching tasks, work in small groups, organize offline creative projects and apply training technologies. The effectiveness of the implementation of the practical and action-related component of the model depends on students’ success in solving real educational and professional situations by using the foreign language material learned, as well as on the use of professional quests.

To implement the improvisational and creative component of the model, it is advisable to design non-standard professional situations that would require not only the application of speaking skills, but also a creative approach to solutions. Importantly, such situations should be spontaneous and reflect the most accurate picture of reality.

The requisite for the implementation of the value and ethical component of the model is the elaboration of speechbehavioral models with regard to the specificity of the multicultural environment and the target audiences by mandatorily following the established ethical clichés of the foreign language.

The implementation of the communicative-reflexive component can be achieved through the performance by students of the task of self- and mutual evaluation of the effectiveness of their communicative acts of particular thematic orientation.

To ensure the successful implementation of the proposed author’s model, all subjects of the educational process should be adaptable, mobile, tolerant and motivated. Adaptability is crucial for students to be able to quickly adapt to transformational educational challenges and reconfigure the system of teaching and learning accordingly. Mobility is the trait necessary for students and teachers to be independent from learning conditions and work towards excellence. Tolerance will facilitate adequate response to diversity in teaching and learning. If motivated, the subjects of the educational process will be able to overcome any barriers and adequately respond to new challenges, actualized by the active introduction of blended learning.

Organizational and pedagogical conditions for the implementation of the suggested model include: establishment of a positive microclimate in the relationship between the subjects of the educational process; formation of a tolerant attitude to the expansion and diversification of teaching methods and techniques; sufficient and high level of ICT competence of the subjects of the educational process; realization of the optimal combination of methods, techniques, forms of work, and learning technologies; rational distribution of the educational materials with regard to individual features of groups and the organizational pattern of the educational process.

The system of tasks suggested within the author’s model was developed in consideration of all its components and the fields of study (international relations, applied physics and mathematics, nanotechnology, mining, ecology, heatpower engineering) and was broadcast to students through Google Classroom, Zoom, WhatsApp, Instagram, and Viber:
1) Prepare a scenario plan for an online international meeting with foreign partners. Send the presentation to the teacher for assessment. The dialogues suggested within the scenario plan should be discussed during the training sessions.

2) Draw up a code of ethics for an international relations specialist (10-15 positions) and share it as a post on social networks.

3) Act out together with peers a conflict communicative situation with foreign partners and use it to make a video on how to act correctly during a conflict.

4) Prepare an event project in an international company, taking into account the values of the participating companies and using for this purpose electronic dictionaries.

5) Come up with questions for the online quiz for the participants of the international event.

6) Formulate and write down the rules of successful international communications in the circumstances of social limitations.

7) Working with online tools in small groups, make a matrix of values (virtual mosaic) for a specialist in international relations (16-20 values).

8) Take part in the advanced search project “Prerequisites of communicative success in international relations”.

9) Storytelling. Topic “How to succeed in professional activities”.

10) Make a SWOT-analysis “I am an international relations specialist”, indicating the strengths, weaknesses, threats and opportunities with regard to the use of foreign languages in international relations.

11) Take part in the lexical-communicative competition “Who knows more terms in the field of international activities”.

12) Solve the communicative dilemma: “Social distancing: problem or a new prospect for international communication”.

13) Model and reproduce in a virtual way a “chart of communication barriers” for a specialist in international relations.

14) Prepare for the discussion “How to improve the speaking skills of a specialist in international relations today”.

15) Organize during Zoom sessions group dialogues between students using the pre-prepared Canva presentations on the topic suggested by the teacher.

16) Organize a mini-competition among classmates devoted to the question “What do I know about the future specialty” using “Kahoot” app.

17) Draw a “dream man” about your future professional activity in collaboration with your classmates in Google forms.

18) Share your impressions with classmates about blended format classes using Viber, WhatsApp, Instagram.

19) Take part in the creative project “My English language skills”, using the tools of Padlet online board.

20) Using Inspiration visualization tools, prepare a presentation for a virtual tour across Ukraine intended for demonstration to an English-speaking delegation.

21) Using Canva tools, prepare a presentation on the topic “Advances in Applied Mathematics and Physics that continue to change the world”. Post the presentation on the social network and share it with other students from the department.

22) Join the collective non-adapted translation of a technical text (such as patents, instructions, etc.). While working with Google Spreadsheets, put down unclear words and explain how you are going to use them in the context. To do so, make sentences with these words.

23) Build a model of competencies for a nanotechnology specialist, using SmartArt tools, indicating in a foreign language 8-10 skills that you have developed and plan to master. Submit the finished model to the teacher through any of the messengers available.
24) Cooperate with your classmates in small groups to make a video interview in the foreign language about the advantages of engineering specialties in the modern world. The interview should contain 10-12 questions and answers, respectively. Upload the video you created to Google Drive for review by your teacher.

25) Compose a letter about your suggested rationalizations in energy (use of wind, solar, tidal energy, etc. for practical purposes) and send it by any means of communication to your classmate. Exchange replies online. Provide comments and share your impressions.

26) Based on your knowledge of professional subjects and foreign language vocabulary, cooperate in small groups to create a booklet “Nuclear Future of Mankind” in Publisher. Post it on your social network page. Invite your peers to participate in discussions and provide comments.

27) Using SmartArt tools, create a memo “How to reduce energy consumption” and submit it to the teacher for review by any means (e-mail, messengers).

28) Participate in the debate planned within Zoom activities on the topic: “What should a tolerant relationship between science and society be like”. Post the video recording of the debate on social networks and share your remarks with students from both your and other departments.

29) Prepare and record an original 5-7 minutes long video with accompanying multimedia elements on the topic “Evolution of robotics: prospects”. Upload it to your teacher’s YouTube channel or your own (if any). Invite peers to write comments in a foreign language.

30) Using professional foreign language vocabulary, write and publish on any available resource individual theses on the topic “The value of sciences”. Send a link to your publication to your foreign language teacher and peers for review.

The suggested model was implemented in the first semester of 2020/2021 academic year and entailed attendance of foreign language classes by students once a month for 1.5 hours, while the rest of the days were devoted to independent work. Students could submit the completed tasks for verification via WhatsApp, Instagram, Viber, e-mail, as well as join online broadcasts via Google Classroom and Zoom.

Table 1 below illustrates the comparative monitoring data at the ascertaining and control stages of the research.

<table>
<thead>
<tr>
<th>Research stages / number of respondents</th>
<th>Assessment of foreign language competence level</th>
<th>Total number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
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<tr>
<td>HEI 1</td>
<td></td>
<td></td>
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<tr>
<td>1st year, experimental group</td>
<td></td>
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<tr>
<td>Ascertaining</td>
<td>2</td>
<td>5</td>
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<tr>
<td>Control</td>
<td>5</td>
<td>7</td>
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<tr>
<td>1st year, control group</td>
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<tr>
<td>Ascertaining</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Control</td>
<td>2</td>
<td>4</td>
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<tr>
<td>HEI 2</td>
<td></td>
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<tr>
<td>3rd year, experimental group</td>
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<tr>
<td>Ascertaining</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Control</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>3rd year, control group</td>
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<tr>
<td>Ascertaining</td>
<td>1</td>
<td>8</td>
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<tr>
<td>Control</td>
<td>2</td>
<td>9</td>
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<tr>
<td>HEI 3</td>
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<tr>
<td>5th year, experimental group</td>
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<tr>
<td>Ascertaining</td>
<td>3</td>
<td>10</td>
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<tr>
<td>Control</td>
<td>6</td>
<td>12</td>
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</table>
Table 1 confirms the positive dynamics in the experimental group as compared to the control one due to the observed increase in the number of higher education students with grades “A” and “B”, which makes it justifiable to establish advancement of the foreign language competence level of respondents after the implementation of the author’s model.

**DISCUSSION**

The conducted research illustrates the transformation of the roles of the educational process in the context of blended learning. Relevant in this context to ours is a study that shows the prospects, benefits of blended learning, interactivity, but at the same time notes the lack of constant direct contact (Kacetla, 2020). The study that is relevant to the presented research in this context confirms the viability and benefits of blended learning and interactivity, yet provides evidence on the lack of constant direct contact (Kacetla, 2020). Similarly to the presented experiment, the scientific research of applied nature illustrate the positive effect of blended format on motivation to improve skills in different types of speech activity and emphasize the mandatory nature of due positive attitude of the student community to this format of knowledge acquisition. Google Classroom proved particularly effective for selection and testing of various tools of the implementation of blended learning model (Taufiqurrochman, 2020). Since the suggested tasks entail the application of various digital tools depending on students’ resources, it is necessary to consider not only strengths, but also challenges of the blended learning model. Nevertheless, both our scientific research and other studies show that the strengths of blended learning outweigh its limitations. Importantly, students positively appreciate the use of bright images, video, audio, reading texts, chatting, and discussion forums in foreign language education (Gulnaz, 2020). The procedure similar to the one followed in the presented study is based on the integration of traditional and blended learning models. In its course, students visited the institution once a week and had only a one-hour meeting, and at other times had to watch educational videos through an electronic platform set up by the university and participate in an online discussion forum.

The key difference between the results of our research from similar scientific research of applied nature is the implementation of the methods of providing the formation of the foreign language competence among higher education students, which is based on an optimal combination of blended learning with modern digital tools and professional orientation of the foreign language training in the system of higher education institutions.

**CONCLUSION**

The effectiveness of foreign language training of higher education students in the current conditions of social distancing depends on the rational construction of a blended learning model. The implementation of the suggested blended learning model, which is based on the consolidation of digital tools with professionally oriented didactic support, facilitates the advancement of the foreign language competence of higher education students.

Maximum orientation of the model on the digital awareness of students and focus on professional and practical speech situations guarantee the increase in students’ motivation to advance foreign language knowledge, skills and abilities and further contribute to a high level of the foreign language competence development of higher education students.

The prospect for further research in this area is the joint development by foreign language teachers from Ukrainian universities and ICT specialists of digital products (modular environments, virtual communities, professionally oriented blogospheres), which will facilitate the implementation
of a blended format of education for the acquisition of foreign language competence by future specialists in such fields as international relations, applied physics and mathematics, nanotechnology, mining, ecology, and heat power engineering.

**Authors’ Contributions:** Velushchak, M.: conception and design, acquisition of data, analysis and interpretation of data; Kravchenko, T.: acquisition of data; Havryленko, K.: analysis and interpretation of data, critical review of important intellectual content; Mykhailenko, T.: drafting the article; Sokolovska, L.: acquisition of data, analysis and interpretation of data, critical review of important intellectual content. All authors have read and approved the final version of the manuscript.

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