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GAMIFICATION AS SUCCESSFUL FOREIGN LANGUAGES E-LEARNING FOR SPECIFIC PURPOSES

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Abstract: *The article analyses gamification as one of the modern technological trends in distance foreign language teaching, presents various approaches to defining this concept and considers various classifications. The role of game methods for teaching foreign languages for professional purposes is studied; these methods provide an effective way of encouraging students to achieve success. Using mobile applications, various types of exercises for teaching Russian as a foreign language to students specialising in medicine and law are presented: games for matching images of objects with their names, games for memorising the meaning of lexical units, play-based communicative tasks, etc. Through a focused questionnaire, the authors demonstrate the high efficiency of the gamification technology in professionally oriented teaching of the Russian language to foreign specialists. The questionnaire consisted of three units: conceptual, organisational-methodological and psychological. The resources presented in this article provide a modern teacher with a wide range of tools to convert the routine types of academic work into an interesting game form, simulate real professional communicative situations, and compensate for the lack or absence of a language environment when teaching a foreign language for professional purposes.*

Keywords: gamification; e-learning for specific purposes; the effectiveness of digital gamification; medical communication.

INTRODUCTION

Nowadays, professionally oriented language learning is becoming more technology-intensive. Modern university students, for the most part, seem to 'live' on the

Internet and prefer to perceive educational information using various modern teaching technologies that successfully allow them to develop the necessary competences and skills in using a foreign language for professional purposes.

The use of game elements and game design techniques is one of the most modern technological trends in teaching professionally oriented foreign languages. On the one hand, this develops students' motivation, encourages them to think outside the box and exercise self-control. On the other hand, this reduces students' anxiety and fear of speaking a foreign language in front of others (Arnold, 2014). Moreover, scientists note that the game is an effective means of assimilating the reality itself, the simultaneous and complex "emotional, intellectual and moral development of the student's personality, which occurs not under duress, not out of necessity, but at the request of students themselves (Azimov, 2009).

1. GAMIFICATION IN DISTANCE PROFESSIONALLY ORIENTED FOREIGN LANGUAGE LEARNING

1.1. On the Definition of Gamification

In the beginning of the 21st century, after the publication of the well-known monographs of Pelling, Prensky and Kapp a special direction was developed in didactics, which received a special terminological name – 'gamification' (Pelling 2012, Prensky 2006, Kapp 2009). It is believed that this term was introduced into scientific circulation by Nick Pelling in 2002. In the modern scientific literature, two main approaches to the interpretation of this concept can be distinguished: wide and narrow ones. According to the first approach, gamification is any use of gaming technologies, methods, tools or game designs in training. From this perspective, gamification was also interpreted by one of the founders of this direction, Karl Kapp, the author of the book *Gamification of Learning and Instruction*. This scientist defines the essence of gamification as "the introduction of gaming technology into non-gaming processes" (Kapp, 2009, p. 10), while he considers educational games as "using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems" (Kapp, 2009, p. 15). Proponents of the second approach narrow the scope of the concept of gamification, delimiting it from such 'game practices' as role-playing game, simulation, 'ordinary game', etc. (Titova, 2019, p. 136). As a basis for the delimitation, it is indicated that gamification involves game settings that are correlated with reality. An analysis of the literature on this issue shows that most scientists still adhere to the first point of view regarding the essence of this concept.

It is customary to distinguish between two main types of gamification: structural and conceptual (Titova, 2019; Kapp, 2010). Structural gamification is the use of game techniques and elements in the educational process, while conceptual gamification involves the educational interaction in the game format and design, the organisation of the learning process within the framework of the game scenario.

In terms of the strategic approach, structural gamification is described in (Werbach, 2012). Werbach and Hunter presented it as six 'steps' that form *the 6 D Strategy* (Werbach, 2012, 85):

Step 1. *Define – define* the goals and objectives of the use of gaming technologies in the educational process.
Step 2. *Delineate – delineate, outline* the expected learning outcome.
Step 3. *Describe – describe* 'one's own players', i.e. compile profiles of the main categories of students – potential participants in the game. Let us consider this 'step' in more detail. In the process of compiling the profiles of participants, it is advisable to take into account the psychotypes of the players identified by Professor R. A. Bartle (University of Essex). This typology is widely recognised by educational game developers. In identifying these psychotypes, Bartle took into account two scales: (1) action – interaction; and (2) players – the world. The scientist called the zone of intersection of the scales 'a plane of interests'. Having tested more than 200,000 people, Bartle identified the following four main psychotypes:

1. Achievers – aimed at achieving the highest possible result, at the accumulation of funds, artefacts, resources and benefits provided by the game;
2. Killers – whose main goal is to achieve superiority over other players; such people head for victory at all rates, using all means available to them;
3. Explorers – who are interested in studying gaming reality; and
4. Socialisers (social workers or partygoers) – who are first of all attracted by the possibility of social interaction and communication with other people in the game.

Step 4. *Devise – devise, develop* cycles of game learning activities: (1) engagement loops and (2) progressive stairs. The first cycle integrates the actions of students and the responses of the system to these actions, i.e. feedback, which is expressed in points, scores, awards, or in the form of reaching a new level, gaining access to hidden content, etc. The second cycle is the participants' progressing along the educational game path, the 'micro perspective' of their game journey.
Step 5. *Don't forget – not to forget* that this is still a game: about entertaining game aspects.
Step 6. *Deploy – deploy, introduce* the game into action, in educational practice. In professionally oriented language teaching, gamification performs several functions, the main of which are as follows:

- *Learning function*, i.e. learning in a game form facts and phenomena of language and speech, developing communication skills;
- *Adaptive-integrating function*: during the game, students learn the norms, rules, strategies of professional and communicative interaction, "try on" social and professional roles, which ultimately contributes to their successful adaptation and integration into the professional community;
- *Control and diagnostic function* – establishing the level of the development of skills, abilities and competencies, and determining the zones of the nearest and further communicative-verbal development;
- *Communicative function* – creating the necessary conditions for enhancing educational communication in the target language;
- *Corrective function* – correcting inaccuracies in the formation and use of words as well as 'false automatisms' in the process of an educational game;

- *Play therapy function* – assisting by means of the game in correcting personal qualities that impede free communication with other people, effective communication, including in the target language;
- *Relaxing function* – relieving emotional stress, fatigue, introducing diversity into monotonous training activities, etc.;
- *Entertaining function* that underlies the interest, motivation to learn, actively involving students in activities to learn a new language and thereby contributes to the integration of gamification as the main component in the linguistic and methodical direction, called 'edutainment' (Bartle, 2004).

The main didactic advantages of gamification in teaching a foreign language as a means of professional communication include:

- increasing interest and internal motivation of students;
- involving students in the educational process; and
- overcoming the fear of making mistakes.

In professionally oriented foreign language teaching, it is recommended to use this game technique in relation to the future specialities of students. Of course, there are professional-communicative games that are structured and meaningfully built as competitions, for example, games for future lawyers – "Advocate" or "Court Session", – during which the parties compete in the art of persuasion and argumentation and only one of the participants becomes the winner – the one who belongs either to the defence or to the prosecution. An element of competition can be introduced into other professional-communicative games, for example, developed using the webquest technology (which of the participants will select the largest number of necessary materials, the most significant, detailed information on a given problem, etc.) or case technology (who makes the most accurate diagnosis, selects a convincing legislative framework, etc.).

1.2. Digital Gamification

In modern linguodidactics, gamification based on the use of computers is the most interesting and promising direction. Currently, teachers have a large arsenal of educational mobile applications, computer games, software shells for developing their own game learning products, applications with elements of augmented reality, applications with 3D communication using avatars. For example, Second Life, an online virtual world, developed and owned by the San Francisco-based firm Linden Lab and launched on June 23, 2003, has gained great popularity among game creators. Using this application, it is possible to provide conditions for educational communication in 3D format. Second Life users, also called 'residents', create virtual representations of themselves, called avatars, and are able to interact with places, objects and other avatars. In addition, the application provides opportunity for both dialogic and polylogic communication that accompanies a variety of social activities (building, shopping and trading virtual property and services with one another). Second Life also has its own virtual currency, the Linden Dollar, which is exchangeable with real world currency. It should be noted, that in accordance with the policy of the developer company, participants in games created using this application can be people aged 16 and

over. There are other popular mobile applications based on the principles of structured gamification, for example, LearningApps, Quizlet, Classtools, etc.

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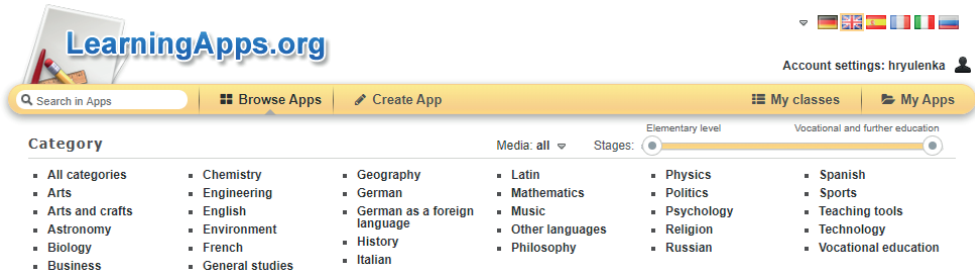
2. GAME RESOURCES FOR TEACHING RUSSIAN AS A FOREIGN LANGUAGE

As an example, we shall consider the game resources that we have developed for different categories of foreign specialists based on the LearningApps shell (https://learningapps.org/index.php?overview &s=&category=0&tool=). This is a convenient free mobile Web 2.0 application, using which one can develop game training and control tasks as well as tests in a variety of subject areas:



F i g u r e 1. Game-based application for training

S o u r c e: https://learningapps.org/index.php?overview&s=&category=0&tool=

The developers define the main goals of this resource as providing support for training and learning different subjects "through interactive modules". At the same time, the teacher can use the modules developed by LearningApps specialists, correct and change them, or quickly create new ones according to the available templates: the application includes 20 task templates and 5 organisational tools. The most interesting game tasks are: 'Horse racing', 'Puzzle', 'Couples' and 'Who wants to be a millionaire?'. The latter is based on the scenario of the popular game in which participants need to choose the correct answer from each of the four proposed for each question. The most interesting tools are the Interactive Notepad and Message Board. The Notepad can be used in the chat function to communicate with the participants. In it, users can exchange information in video and text format as well as using pictures. The Message Board contains important educational and organisational information. In general, this resource can be assessed as one of the most interesting, technologically equipped, easy-to-work: teachers without special knowledge in computer science can easily and quickly create the required amount of game learning resources.

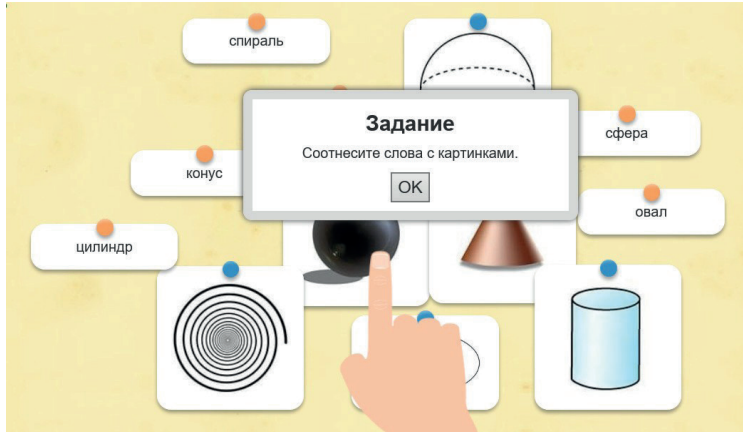
It should also be noted that, in the process of creating games, we used the most authentic, most frequent and 'communicatively demanded' linguistic and speech material, selected the most interesting and relevant topics as well as problems that encourage students to actively participate in dialogic and polylogic communication. An important distinguishing feature of educational games is the simulation of situations of natural communication between representatives of the professional community – native speakers of the Russian language. These factors, in our opinion, contribute to the formation of the motivational base necessary for acquiring the skills of professional and business communication, and also make it possible to solve the problems of preparing students for the conditions of real communication and their adaptation in a professional and business environment, which in general significantly increases the effectiveness of training and gives great savings of time.

The game application intended to teach foreign medical students to communicate in the educational and professional field. This application includes several units of tasks. The first unit contains language games aimed at students' learning terminological vocabulary, developing lexical and grammatical skills. To consolidate the terminological nominations of objects, the meaning of terms, we used various types of games. Let us consider the main ones.

2.1. Games for Medical Students

2.1.1. Games for matching images of objects with their names (games with pictures)

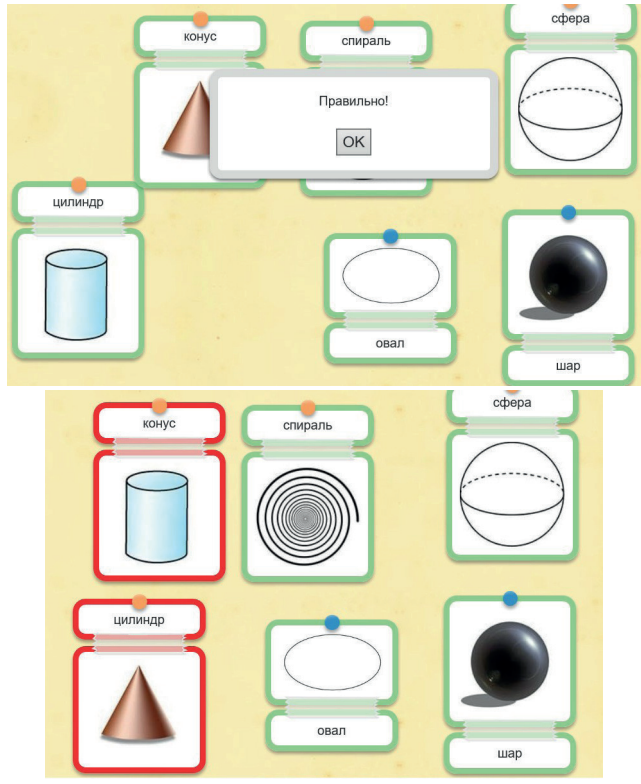
Let us see an example of such a task, which is performed in the course of learning the lexical-semantic group (LSG) 'the form of an object (cell, organ, organoid, etc.)':



F i g u r e 2. The example of learning lexical-semantic group

S o u r c e: https://learningapps.org/display?v=pvjfin64k20.

The system immediately evaluates the quality of the completed task and indicates the errors made:



F i g u r e 3. The evaluation of the task

S o u r c e: https://learningapps.org/display?v=pvjfin64k20.

2.1.2. Games for memorising the meaning of lexical units

One of the most important, but perhaps the least interesting, tasks is memorising the meanings of new words. LearningApps provides the teacher with all the necessary tools to make this process effective and exciting. For example, in the process of studying the lexical-semantic group "colour of an object" we offered the students this game:

F i g u r e 4. The example of the game to train the colours

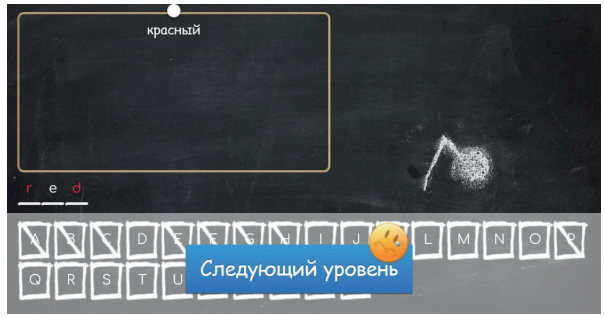
S o u r c e: https://learningapps.org/display?v=p84m2swva20.

In accordance with the assignment, students must type the correct colour name in their native language. Their answers are evaluated by the system: in case of an error, they cannot proceed to the next question, and the number of mistakes made can be counted by the number of 'lost' flower petals:

F i g u r e 5. The stages of the game

S o u r c e: https://learningapps.org/display?v=p84m2swva20.

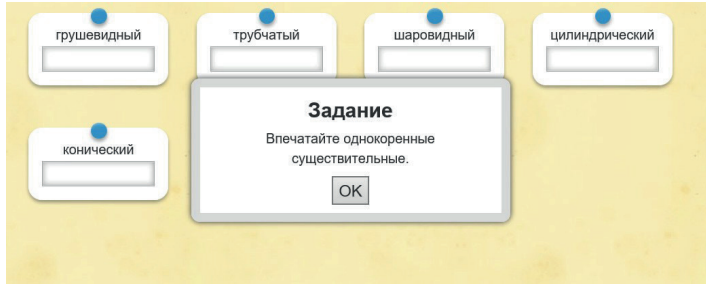
If the students still fail to give the correct answer, the system gives a hint (the correct option), 'signals' the failure (the image of a withered flower appears on the screen) and skips the students to the next task:



F i g u r e 6. The example of incorrectly completed task

S o u r c e: https://learningapps.org/display?v=p84m2swva20.

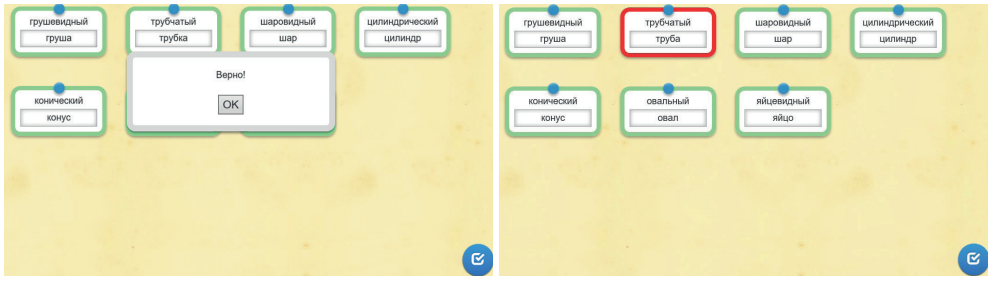
This unit also includes game tasks for studying the paradigmatic connections of words:



F i g u r e 7. The game for studying the paradigmatic connections of words

S o u r c e https://learningapps.org/display?v=p3wp9mdqn20.

These tasks are also immediately checked by the system, errors are noted, and if the students can correct them on their own, the system evaluates the answer positively and offers the following task for this group:

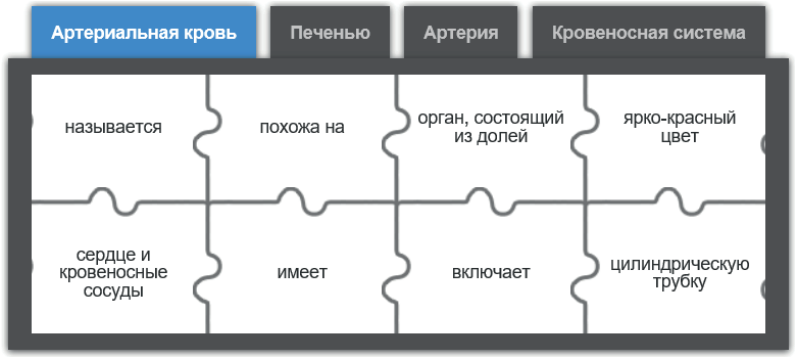


F i g u r e 8. The example of correctly and incorrectly completed task

S o u r c e https://learningapps.org/display?v=p3wp9mdqn20.

2.1.3. 'Puzzle'

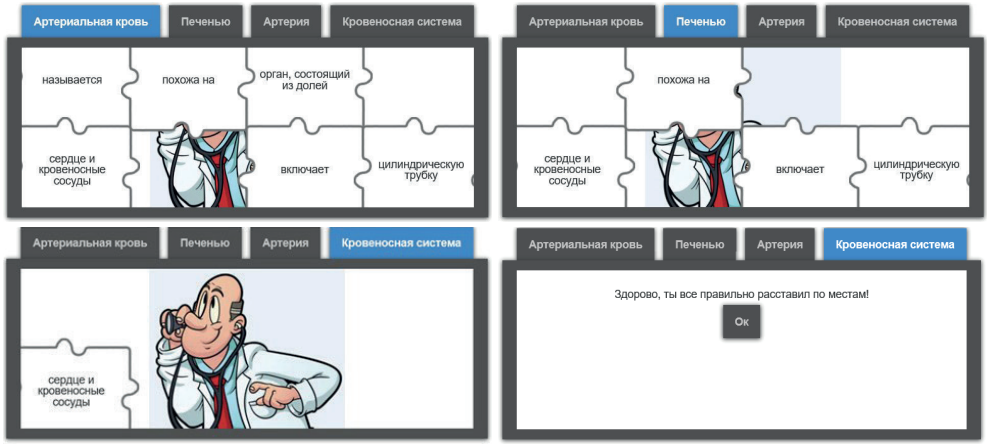
This is one of the most interesting game tasks that we used in teaching the construction of communicative units of the sentence-statement level:



F i g u r e 9. The game for constructing the communicative units of the sentence-statement level

S o u r c e https://learningapps.org/display?v=pzkjvy07a20.

In this task, the following response evaluation system is proposed: students sequentially select the components of each sentence, which, in their opinion, are correct. If their choice is correct, a hidden picture gradually opens on the screen and an overall assessment of their actions appears:



F i g u r e 10. The example of correctly and incorrectly completed task

S o u r c e https://learningapps.org/display?v=pzkjvy07a20.

2.1.4. Unit of game communicative tasks

We developed this unit using case technology. We selected the most relevant situations of professional medical communication – interviewing patients with diseases of various organs and systems. Students are invited to familiarise themselves with an

extract from the medical card, which indicates the patient's passport data, brief information about the family history, a description of the symptoms, etc. Further, they are supposed to conduct an interview: to formulate questions for the patient in accordance with the data presented in the medical record. If the question is formulated correctly, the patient's answer appears on the screen.

3. METHODS

In order to check the effectiveness of the use of gamification technology in teaching a foreign language, a survey of students was conducted. 30 medical students took part in the survey distantly. They were sent the online links to make the necessary exercises and the results were checked online as well by the teachers.
The students' satisfaction was assessed through questioning. It was necessary to identify the level of satisfaction of the students with the proposed technology. All the respondents were asked to rate the proposed learning technology on a satisfaction scale from one to five.

Table 1

Satisfaction scale

Number of points	Assessment description
5 points	Excellent. You are very satisfied with the proposed technology.
4 points	Good. You are generally satisfied, but it could be better.
3 points	Satisfactory. Your assessment is neutral.
2 points	You are not satisfied with the support provided.
1 point	You are absolutely dissatisfied with the support provided.

The questionnaire included questions on the following thematic units: conceptual (compliance of the material with the needs of students), organisational-methodological (comfort of performing exercises using gamification technology), psychological (general satisfaction with the proposed technology).

4. RESULTS

Data processing was carried out for each subject separately, and then the average arithmetic score was calculated for the units presented (expressed as a percentage). The level of students' satisfaction was established for the above aspects, which can be correlated with the following intervals: the low level: from 0 to 30%; the middle level: from 31 to 75%; and the high level: from 75 to 100%.
The results of the questionnaire survey are shown in the table below.

Table 2

Assessment of satisfaction with the use of gamification technology (questionnaire survey results)

Subjects	Units		
	Conceptual aspect (%)	Organisational-methodological aspect (%)	Psychological aspect (%)
Students	83%	90%	99%

The processed questionnaire survey data showed a rather high level of the respondents' satisfaction with the conceptual, organisational-methodological and psychological aspects, which together make it possible to positively evaluate the use of the proposed technology in teaching a foreign language.

In general, the students' satisfaction with the use of the proposed technology was 90.6%. Thus, the results of the questionnaire survey allow us to conclude about the effectiveness of using gamification technology in teaching a foreign language.

CONCLUSION

In conclusion, it should be noted that our experience and the conducted questionnaire survey confirm the high efficiency of gamification technology in professionally oriented teaching of the Russian language to foreign specialists. Computational linguodidactics provides a modern teacher with a wide range of tools to convert the routine types of academic work into an interesting game form, simulate real professional communicative situations, and compensate for the lack or absence of a language environment when teaching a foreign language for professional purposes. All this makes it possible to increase the motivation for learning the Russian language, to make memorisation more durable and to develop professional communication skills and abilities more effectively.

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