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Methods for developing business games in foreign language classes at a medical university

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Abstract

The purpose of the study is to analyze the principles of developing a business game technology as well as to propose a methodology of developing an educational business game design and implementation in English for specific purposes at foreign language classes for medical students. The theoretical concept of business game design and development treats it as an advanced active learning technology compared to "traditional" technologies for formation of communicative and vocational competence of medical students at foreign language classes. The study was conducted at the Pirogov Russian National Research Medical University, Moscow. The pedagogic experiment involved 90 first-year students who entered the university in 2020. Students were proposed a business game "Medical checkup". The experimental research results elicited such positive aspects of application of business game technology as (a) creating an energizing atmosphere in the lesson; (b) consolidation of students' knowledges after the role-played game activities; (c) preparation for vocational activity. However, the discussion of the study results recapitulation admits that business game cannot replace fully more traditional forms of teaching. The business game is an effective technology for applying the acquired knowledge in the situations occurring in vocational activity of a physician. It allows for the formation of foreign language vocational and communicative competence of students of medical specialties.

Keywords: teaching technology, business game, foreign language vocational communicative competence, medical students.

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Introduction

Modern teaching practices, approaches and techniques are currently undergoing transformations in search of more engaging interactivity, stable educational feedback and personal response within student-centered paradigm. Modern junior medical students are less sensitive to so-called “traditional” organization of training, namely the transfer of information from the teacher to the student, engaging the students as passive blotters. Striving for competitive teaching has caused a whopping demand for essential educational outcomes, including students’ high performance in English, high quality language teaching and, as a consequence, for implementation of most productive language teaching technologies, contributing to medical student’s vocational education and self-development.

According to Alekseeva (2007), properly selected educational content of teaching a foreign language for professional communication should ensure the formation of students' foreign language vocational communicative competence - mastering a foreign language as a tool of communication in the job performance context, based on the formation and development of communication skills, knowledges, and abilities necessary for vocationally oriented communication in the target foreign language. In order to make students master communicative competence, it is necessary to create a model for the formation of the desired competence, which would clearly represent the structure of this process, reflecting its goals, indicators, content and result. Based on the analysis and systematization of the obtained data, we have developed a model for the formation of doctors' vocational communicative competence through the technology of business games in English. We carried out the study demonstrating that the use of business game would lay the base for the formation of this competence in medical students.

Purpose and objectives of the study

The final and foremost purpose of the research is elaboration of a productive language teaching model, based on design and implementation of educational business game technology as means of foreign language vocational communicative competence formation. Achieving the final goal of the study is only possible under the condition of specifying the methods for developing business games in foreign language for the target audience. The demands for the methods are as follows: (a) theory-based; (b) providing the algorithm; (c) practically tested; (d) appropriate. In the present study we set the following set of tasks:

(a) to develop a model for the formation of doctors' communicative competence through development and implementation of a business game teaching technology; (b) to establish principles for creating a scenario and designing a business game in order to teach professionally oriented communication in a foreign language and form vocational communicative competence; (c) to test our business game design in the course of pedagogic experiment; (d) to identify the role and place of business game as effective technology in teaching English language.

Literature review

We base our approach to foreign language vocational communicative competence formation on Russian tradition. Russian researchers Galskova & Gez (2004) consider communicative competence as a set of the following components: 1) knowledge of the target language system and skills in operating linguistic means of communication; 2) based on knowledges of foreign language and speech skills ability to understand and generate statements in foreign language, combine them in the act communication in accordance with a specific communication situation, speech task and communicative intention; 3) knowledge of socio-cultural specifics of the target language and the country, as well as skills and abilities to carry out verbal and non-verbal communication with native speakers of the foreign language in compliance with the specifics and norms, governing verbal interaction in the corresponding lingua-ethnocultural community.

The word "technology" comes from the Greek word "techne", meaning *art, skill*, and "logos", meaning *science, law*. Literally, "technology" is the science of mastery *lege artis*. In Russian pedagogic theory, the concept of "technology" was introduced in by Bespalko (1989) as a systematic and consistent implementation in practice of a pre-designed educational process. There is a variety of definitions of the concept of "technology". For example, according to Monakhov (1995), pedagogical technology is a well-thought-out model of joint pedagogical activity in the design, organization and conduct of the educational process with unconditional provision of comfortable conditions for students and teachers.

Scientific literature analysis has elicited that the development of educational game conception, its methodological foundation, and focus on its inspirational significance for the development of students in Russian pedagogy Vygotsky (1933), Leontiev (2012), Elkonin (1978). This concept has also had been worked on and in foreign pedagogy as well – by Mitchell (1978), Percival & Ellington (1984), Sakamoto (1974) and many others. Among the most diverse forms of organization of classes, the greatest pragmatic interest among modern students is caused by business games, since they bring the educational activities closer to real life, contribute to the formation of practical skills, corresponding to implementation of practically and professionally oriented training (Abramova & Stepanovich, 1999).

A business game is a form and method of teaching in which the subject and social aspects of the content of vocational activity are modeled. It is designed to practice vocational skills and abilities (Belchikov & Birshtein, 1989). According to Jones (1982) in order for an educational simulation to occur the participants must accept the duties and responsibilities of their roles and functions, and do the best they can in the situation in which they find themselves. Business games form a set of personal qualities of a future specialist in the process of training in the following aspects: the formation of vocational qualities; the formation of readiness for future professional activity; development of creative thinking; increasing a sense of duty in professional activities (Pidkasisty & Haidarov, 1996). Early vocationalization of learning at university can influence positively students' educational attitudes and academic performance. Therefore, we need to develop a business game approach in teaching English as a foreign language (TEFL) and for specific purposes (ESP), in which linguistic and vocational task-solving can be combined and communicative and professional competences can be formed.

Methodology

The instructional design is based on the psychological and pedagogical principles of designing a business game proposed by Verbitsky (1982): the principle of simulation modeling of the situation (production models and game models of professional activity); the principle of problematic content (the game contains educational problems built in the form of game tasks); the principle of role-playing interaction in the learners' joint activities (imitation of the communicative roles and functions of specialists through their game interaction); the principle of dialogical communication (pre-conditioned and triggered by the experiencing the problem situation and elaborating appropriate resolution of it); the principle of two-dimensional game learning activities (the possibility of internal emancipation of the individual).

The educational business game essence is that "serious" activities aimed at training and developing a specialist are implemented in a so-called "non-serious" game form. The implementation of educational business game is based on the knowledges gained in the course of previous learning. This knowledge is not only fixed in the game, but also can acquire a qualitatively new form of "existence", since it will enter the structure of the experience of regulating cognitive professional activity (Selevko, 1998).

The study was carried out within 2020-2021 academic year at the Pirogov Russian National Research Medical University. The experiment involved 90 students who entered the first year of the specialty of the medical and pediatric faculty in 2020. Participants were informed about the study. They were offered a business game design "Medical checkup", carried out during the study of the topic "Health Service".

In accordance with the psychological and pedagogical principles of designing a business game proposed by Verbitsky (1982), this business game was: a game with the interaction of participants (in forms of simulated situations); role-playing (according to the game mechanics of the game methodology); teaching, developing and evolving (as inherent part of the organization of the educational process).

The idea of the game is that students should compose and play out a dialogue between a patient and a doctor. The task of the teacher is to organize the activities of the players, set the rules, specify the targets and provide good guidance to ensure the productive interaction of the players. The educational tasks of the business game for students: familiarization of knowledges and practicing application of the vocational terminology in English used in the course of the physical examination (to take temperature, feel weakness, dry cough, etc.); mastering the grammar rules of questioning needed by the doctor can ask the patient ('Are you having any trouble with your eyes?', etc.); role-playing vocational activities in realistic situations of vocational duties of a doctor performed within interpersonal communication frame; application of a wide range of intersecting vocational knowledges and skills as well as interpersonal skills in communication with a role-played patient; critical assessing the role-played doctor's performance and focusing on doctors' competitiveness points; discussion and recapitulation on the educational outcomes and further vocational communication competence development sources and directions. The business game "Medical checkup" procedure is divided into three stages:

1. The preliminary stage.

At the preliminary stage the teacher: introduces the topic of the lesson, sets the rules of a business game, selects groups of players (students present a dialogue in pairs), invites arbitrators (2 learners). Students read or listen to various dialogues between the patient and the doctor, like the sample model as follows:

Doctor: *How long have you had the cough?*

Patient: *Oh, for years.*

Doctor: *Do you smoke?*

Patient: *I used to smoke heavily, but I gave up a year ago.*

Doctor: *Do you cough up any phlegm?*

Patient: *Yes.*

Doctor: *What color is it?*

Patient: *Usually yellow.*

Doctor: *Any problem with your breathing?*

Patient: *Yes, I get very short of breath. I have to stop halfway up the stairs to get my breath back.*

Then students are introduced to words, terms and phrases that will help them to construct a dialogue: asking about symptoms: features (main site, character, time of onset, frequency, relieving factors, duration, severity); typical questions (Where does it hurt? Can you describe the pain? When do they usually start? When do they stop? How often do you get them? Does anything bring relief? How long do they usually last? How bad they last?); English nominative means for describing pain: (a general pain, a background pain, acute pain); verbs used in instructions (lie on your side, stand up, stand straight).

Next, a teacher sets a specified task for each group, namely the topic of dialogue (some specific ailment). Then students in groups prepare their own dialogues, that would reflect real life vocational situations. In order for students to feel interested in the game, the topic of the dialogue they are going to play out should be such that they themselves can identify with specific roles within the topic frame. Moreover, the degree of dialogue success or failure will depend largely on the effectiveness of the player's powers of communication rather than on mechanical control over a number of lexical or syntactical items.

2.The game (the main body of the game) structure

The main body of the game includes: (1) presentation of the groups (presenting a dialogue between a doctor and a patient); (2) selection of the order of performances; (3) performances; (4) assessment of the performances.

Summing up is carried by the arbitrators for groups in the following positions: one score for question and one score for an answer (linguistic content); one score for the use of grammatical structures in accordance with the task; scores for the number of grammatical errors; one score for demonstrated willingness to support dialogue; one score for spontaneity of replicas, one score for "authenticity" of the dialogue to the dialogue that would take place in real life.

3.The post-game analysis procedures

First the teacher collects scoring marks from the arbitrators. When all the dialogues have been played out, the teacher provides feedback on incorrectly asked questions, pronunciation errors or long pauses during dialogue, etc. Another technique is collecting students' critical evaluation remarks. According to Harmer (2008), involving students in assessment of themselves and their peer occurs when we ask a class *Do you think that's right?* after writing something we heard someone say up on the board.

Results

Based on adopted indicators, we have collected data on the participants' level of possession of the communicative competence.

Table 1. The results of assessing the level of formation of lexical and grammar, pragmatic and sociocultural subcompetences (B1 level) (%) on entry level

Mark	Experimental group	Control group
Lexical and grammar subcompetences		
Excellent	7,7	9
Good	77	82
Adequately	15,3	9
Pragmatic subcompetence		
Excellent	27	36
Good	67	55
Adequately	6	9
Sociocultural subcompetence		
Excellent	40	90
Good	47	10
Adequately	13	0

Table 2. The results of assessing the level of formation of lexical and grammar, pragmatic and sociocultural subcompetences (B1 level) (and revealed dynamics measured in per cent) after experiment

Mark	Experimental group	Control group
Lexical and grammar subcompetences		
Excellent	9,5 (+1,8)	10 (+1)
Good	77,4 (+0,4)	82,6 (+0,6)
Adequately	13,1 (-2,2)	7,4 (-1,6)
Pragmatic subcompetence		
Excellent	28,4 (+1,4)	36,8 (+0,8)
Good	68,8 (+1,8)	56,2 (+1,2)
Adequately	2,8 (-3,2)	7 (-2)
Sociocultural subcompetence		
Excellent	42,4 (+2,4)	90,5 (+0,5)
Good	51 (+4)	9,5 (-0,5)
Adequately	6,6 (-6,4)	0

In analyzing the results obtained during the testing of the lexical, grammar, pragmatic and sociocultural competences, it should be noted that students successfully coped with the proposed test and demonstrated mostly good and excellent results in all targeted subcompetences. Sufficiently high results obtained by medical students indicate that future medical specialists pay significant attention not only to lexical and grammatical training in a foreign language, but also to sociocultural and pragmatic subcompetences.

The results of the experiment provide evidence that in the experimental academic groups of students, where the business game technology was implemented, the results of assessing the communicative competence exposed higher positive dynamics in attainment of good and excellent points in all three indicators, in comparison to the control groups, in which the business game educational technology was not implemented.

A business game can be used to practice and test all components of professional communicative competence: lexical and grammatical, pragmatic and sociocultural subcompetencies. The introduction of the technology of business games into the educational process significantly enhances the developmental side of education, makes it possible for students to personally engage in a situation of real professional communication. Students' awareness of their involvement in the cognitive process speeds up the process of mastering the material and evokes a lot of positive emotions in students. The communicative and professional competences formed under such conditions are assessed by students as long-term and stable.

Discussion

The study outcomes confirm that the design and implementation of business game in the foreign language lessons in a medical university provides a valuable contribution to formation of vocational communicative competence both in English and their native language. It allows students to apply their multi-disciplinary knowledges and skills and successfully perform and test various models of their future vocational activities. Business game in the foreign language classes is a holistic, step-by-step process that affects the individual's readiness for future vocational activities and helps to increase the competitiveness of a future specialist in the labor market. In the course of the business game students learn to correctly formulate their statements, while future specialists develop vocational communication skills, including the ability to listen to the interlocutor and overcome communication barriers. The post-game critical analysis contributes to the consolidation of knowledge in a form of a dialogue, both between the teacher and between students themselves. Such educational dialogue develops students' vocational communicative ability, networking skills and aptness to solve problems in a teamwork format.

The application of business game in the educational process of medical students is optimal when implementing a set of principles and functions, that must be observed and continuously performed by both the teacher and a university student. Business games have their benefits and drawbacks. *The benefits of business games*: high level of motivation and emotional saturation of a learning process; preparation for professional activity, pragmatic approach to knowledges and skills formation, students learn to apply their knowledge; discussion and criticism contribute to consolidation of knowledges and skills. *The drawbacks of business games* are mainly concerned with the mental and emotional strain of the teacher; high complexity of preparation for the lesson for the teacher; great tension for the teacher, intense focus on the continuous creative search, mastery of acting skills; unavailability of students to work using a business game; organizational difficulties with replacing the teacher who conducted the business game (Abramova & Stepanovich, 1999).

The issues of increasing the efficiency of mastering foreign and vocational communicative competence by students of medical universities are presently studied in several areas, including contextual and vocationally biased teaching of a foreign language; learning a foreign language in the dialogue of cultures; interdisciplinary paradigm of teaching foreign languages; a productive approach to teaching foreign languages; modeling in teaching foreign languages. Communicative competence presupposes a set of the knowledges, skills and abilities necessary for understanding a foreign participant in a dialogue and generating a productive model of speech behavior that is adequate to goals, areas, communication situations.

It requires knowledge of the basic concepts of linguistics (styles, types, ways of communicating sentences in the text, etc.), the skills and abilities of analyzing the text, and actually communicative skills, i.e., speech communicative skills, relevant to target areas and situations of communication, taking into account the purpose of conversation in interaction, the addressee sets and attitudes, speaker's strategies of recipient design.

The technology of business games involves students into situations of vocational communication.

This contributes to the development of speech initiative and strengthens the communicative component of the lesson. A business game in ESP lesson demands creative performance of competences in realistic and meaningful vocational task-solving activities. Moreover, to the advantage of business games they allow to demonstrate knowledges and skills in a highly-appreciated by students integrate form. Therefore, it is recommendable to implement a business game at the final stage of studying the unit or conducting a lesson.

The effectiveness of using a business game as a developing active method is largely due to the position of the teacher, instructor's focus on creating a personality -oriented pedagogical learning style, implementing dialogue forms of interaction with students and taking into account the real capabilities of students. It should be noted that the need for consistency in the use of active forms, a gradual increase in the degree of a student independence in educational and cognitive activities and a decrease in direct teacher's assistance.

Conclusion

Business games teaching technology has acquired a new meaning in the context of teaching and learning a foreign language. In the process of the business game implementation, realistic vocational situations are role-played and discussed by participants. Due to a number of most obvious reasons (such as "learning by induction" principle, complexity of game design, as well as most demanding time- and effort- consuming elaboration, creation, tuning and moderation etc.) business games teaching technology cannot replace traditional forms and methods of teaching, but should be applied as a fruitful extension of them in order to provide integrity to professionally-oriented ESP teaching and learning, allowing for vocational communication mastery development. The obtained results confirm that when done with appropriate careful preparation and design, business educational games prove fruitful: students get totally involved in dynamic role-played task-solving communication and critical thinking activity. The immediate educational outcome of such activity is either enhancement or mastery of targeted foreign language vocational communicative competence, based on interdisciplinary approach, creativity and strategic thinking.

Abbreviations

TEFL Teaching English as a Foreign Language

ESP English for Specific Purposes

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