Interactive means of motivating students to learn English for specific purposes at agrarian and technical universities

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Abstract. The article presents the analysis of the implementation of interactive technologies at the English for specific purposes lessons for motivating students at agrarian and technical universities. It is emphasized that the use of an interactive learning model, which includes modelling life situations, the use of role-playing games, joint problem solving, effects students’ motivation. Unlike the subject-object approach, the students become the subjects of interaction; they actively participate in the learning process, following their individual route. The students acquire knowledge in the process of interactive learning not in the finished form, but obtain it themselves, in the process of their own activity. Therefore, the goal of the teacher is to create the conditions under which the students will discover new knowledge, construct it, and use it. It is noted that the process of learning a foreign language for special purposes requires the creation of a mixed learning environment, in which a new type of cooperation between teachers and students emerges. The authors gave the examples of the use of interactive learning technology which can improve the training of future professionals and ensure the formation of the professional foreign language communication skills. The results of experimental implementation of interactive means for developing students’ motivation are presented.

Keywords: interactive learning technology, interactive teaching methods, English for specific purposes (ESP), communicative competence, agrarian university, technical university.

1 Introduction

The current stage of the Ukrainian society development, the renewal of all spheres of its social and spiritual life, the development of foreign economic and political relations with other countries poses new requirements for the training of future specialists from various professional fields. Along with professional competence, which involves solving problems and resolving professional issues, university graduates need to acquire critical and creative thinking skills, as well as communicative skills which contribute to
constructive dialogues and productive interaction with foreign colleagues. They also should learn how to adapt quickly and make responsible decisions in constantly changing world.

The expansion and intensification of interlingual and intercultural interaction requires a qualitatively new level of education that meets international standards, contributes to the creation of a well-developed, competitive personality, capable of using the various linguistic means needed in a particular communication situation.

The purpose of the research is to reveal the essence of the concept of motivation and its varieties; to characterize interactive methods; experimentally test the feasibility of using interactive means to generate positive motivation for learning English for specific purposes.

2 Motivation as a key component for foreign languages learning

Undoubtedly the motivation is a key component of successful acquiring foreign language skills. As A. Altalib mentioned, learners with high levels of motivation and a positive attitude regarding the learning environment are often willing to communicate and thus more effectively and successfully learn the language [1].

F. Guerid determines motivation as desire or willingness to do something; enthusiasm: keep staff up to date and maintain interest and motivation [2].

According to D. Tileston, motivation is the force that pushes us to do things [3], T. A. Thorkildsen and L. White-McNulty point out that it is also an interior power that triggers, leads, and preserves actions consistently [4].

In addition, J. M. Lokie defines motivation as the desire to engage in an activity out of curiosity, interest, or enjoyment [2].

In our research motivation is considered as a particularly important object of a certain activity, as a condition for action, a desire to perform a specific task.

The scientists recognize various types of motivation. In our research we focused our attention on intrinsic, extrinsic, instrumental and integrative motivation.

Intrinsic motivation refers to the motivation that comes from inner personal needs. Motivation comes from the pleasure obtained from the task itself or from a sense of satisfaction in the task. An internally motivated person will work on project about harvesting equipment, for example, because it’s very interesting and informative task. Intrinsic motivation is considered to be the motivating force of amateur activity, it is what induces
and motivates this type of activity. The formation of internal motivation is a prerequisite for successful activity in any field [6].

Actually motivated student already wants and is ready to learn English; he does not need to constantly mention the importance of learning English as universal for his future professional activities. He is internally ready to learn it [7].

With external motivation, a person is affected by those factors that are in the world around him, outside his personality. This factor can serve as public opinion, on which any person is dependent. For example, parents, teachers can motivate students; encourage them to take actions in order to receive a reward or to avoid punishment.

Through external motivation, the teacher forces students to carry out tasks that in themselves carry the potential of pleasure from their implementation thus lay the elements of internal motivation.

Instrumental motivation is usually indicated the desire to obtain practical benefits of learning a second language [8].

Instrumental motivation is connected with a person desire to master a foreign language for any practical purposes, in particular, reading foreign texts, passing exams, getting a prestigious job or promotion. Interest is based on luck, success in language learning, caused by the connection of the subject with a foreign language communicative impact, interest associated with the positive influence of the personality of the teacher. Most of the students have this type of motivation, because their desire to learn English came after mastery of the English language could be the key to opening the way to compensation and promotion.

Integrative motivation means belonging and love to the community who speaks this language. Who wants to live the American way society and who loves them has value integrative motivation. Integrative motivation is connected with the student’s desire to become part of a foreign language culture, with the desire to master a foreign language in order to understand and communicate freely with native speakers. This type of motivation is represented by cognitive motives that are satisfied in the process of acquiring new knowledge of a professional nature.

3 Concept definition of “Interactive learning”

The main task of modernizing the higher education system, that is outlined in the Law of Ukraine “On Education” [9], “On Higher Education” [10], the National Strategy for the Development of Education in Ukraine for 2012–2021 [11], is to improve the quality and competitiveness
of education in the new economic and socio-cultural conditions, promoting the integration of Ukraine into the international educational space. A staff member of the Institute of Innovative Technologies and Content of Education N. Guschina declared: “Education must prepare people to be successful in the 21st century. If we look at our old programs, standards, forms and teaching methods, we will find that all these do not correspond to the basic competencies needed today” [12]. Therefore, over the past few years, a number of documents that outline new trends and directions of the education system have been adopted. One of them is the Presidential Decree on the National Strategy for the Development of Education in Ukraine until 2021. The main purpose of the decree is “to increase the availability of quality, competitive education in accordance with the requirements of innovative sustainable development of society, economy” and “to ensure the personal development of a person according to his individual abilities, needs based on lifelong learning”. It is expected that the implementation of the strategy will improve the quality of national education and its innovative development in accordance with world standards. And it also will contribute to “a significant increase in the intellectual, cultural, spiritual and moral potential of society and the individual”, as it was noted.

The realization of this task requires a new, better level of foreign language training of future specialists from various fields. Thus, the learning process should be focused not only on the knowledge and skills acquiring by the students, but also on the individual development, understanding the responsibility for own decisions and carrying out an objective assessment of one’s actions and deeds [13]. Therefore, the purpose of the modern education system is not to overload the student with basic knowledge, most of which will never be required, but to form the skills of successful social adaptation, cooperation and ability to educate oneself. These requirements can be met by the improvement of existing teaching methods and techniques, and the application of the latest foreign language teaching technologies at universities.

One of the most effective means of achieving this goal is the use of interactive learning technology, which is intended, first of all, to improve the training of future professionals and to ensure the formation of the professional foreign language communication skills.

Famous foreign scientists, such as K. Drury, R. Merton, J. Meade, J. Moreno, B. Ryan, T. Scone, G. Fritz, have set the basis and impetus for the study of this issue [13]. Among Ukrainian scientists, who made a significant contribution to the study of this topic, in particular the study of methods and means of technology of interactive learning and

In the modern Ukrainian and foreign science there are many definitions of the concept of “interactive learning”. The scientist N. Muradova states that interactive learning is a training that is embedded in the communication process, which consists of three components, namely: communicative (transmission and storage of verbal and non-verbal information), interactive (organization of interaction in joint activities) and perceptual (perception and understanding) [14].

O. Pometun believes that all technologies that are implemented through active interaction of students during the learning process should be considered interactive. They allow, on the basis of the contribution of each participant, to gain new knowledge and organize corporate activities, starting with a separate interaction of two or three people to each other and to the wide cooperation of the whole group [15].

In his turn, O. Kriukov defines “interactive learning” as a special form of cognitive activity organization aiming at creation of comfortable learning conditions, under which each student feels his success and intellectual ability [15].

Analysing different scientific views, we consider T. Serdyuk’s opinion as the most appropriate and by the term “interactive technologies” we mean didactic technologies, characterized by the achievement of the planned pedagogical results through the organization and implementation of active educational interaction between the students and learning environment [16].

The basis of interactive learning technologies is the changing role of the student and his interaction with the teacher and other participants in the educational process during the lesson. Thus, the student becomes a subject, plays a central role in the learning process, and the teacher acts as an observer, consultant, or organizer who designs and offers an individual approach to learning a foreign language to each student and provides assistance in case of need.

Numerous studies of the American scientists found that during the lecture, the student learns only 5% of the heard material, during reading — 10%, working with video / audio materials — 20%, during the demonstration — 30%, during the discussion — 50%, during practice time — 75%, and when a student teaches others or immediately applies knowledge — 90% [17]. Interactive technologies provide the constant interaction of all subjects of the educational process, exclude the dominance
of one participant over the others and guarantee the free expression and acceptance of any opinion. Thus, during the classwork, students are managed to learn to think critically, to analyse the circumstances and conditions, to find their own original solutions, to weigh alternative thoughts, to participate in discussions and to form their independent opinion on the problem.

Therefore, in comparison with the traditional methods, interactive learning technology has the following advantages:

- an involvement of all students in the group;
- an improving teamwork skills;
- the opportunity to express, argue their own opinion and analyse the opinions of other students, find an alternative solution to the problem;
- a creating a “success situation”;  
- an ability to absorb, activate a large amount of material in a short period of time.

4 Methods of interactive technologies

Effective implementation of interactive technologies into the process of teaching and learning foreign languages is impossible without understanding and adapting their methods to educational goals and requirements.

According to N. Kochubei, taking into account the communicative approach and situationality of educational activity as the main criteria for the formation of foreign language communicative competence, interactive teaching methods can be divided into situational and non-situational ones [18].

The main non-situational teaching methods may include interviews, a language portfolio etc. Situational methods, in their turn, are divided into two groups: game and non-game.

Non-game methods usually include situation analysis, different discussion, debates, forums, discussions, brainstorming method. Situational interactive methods are represented by two groups of methods — imitative (role and business games) and non-imitative (modelling games, project games, trainings, knowledge sharing).

Another classification is offered by the scientist T. Koval, who proposes to divide interactive teaching methods into:

- group (frontal) methods;
- collective-cooperative methods.
Group (frontal) methods of teaching foreign languages provide a main role in the educational process for a teacher. As a rule, all students should work on one task, and the teacher must check and monitor the results.

Collective-cooperative methods of teaching foreign languages are aimed on the organization of training in small groups, united by a common educational goal, such as the method of cooperation in small groups [19].

Taking into account the ways of motivating students' educational and cognitive activity, it is appropriate to distinguish the following groups of methods:

- situational and thematic (assuming active participation and interaction of students in specially created, as close as possible to real, conditions, communicative situations);
- discussions (debates, forums, etc.);
- research (Internet projects, Project method, Case method, etc.) [20].

The use of interactive teaching methods during the lesson allows teachers and students to create a comfortable learning environment, to bring the process of learning foreign languages closer to the conditions of practical activities, to form a foreign language competence, to develop communicative abilities in the process of constructive interaction [21]. Thus, we are able to identify the basic principles of this technology:

- positive interdependence (successful completion of a task by a group of students is possible only if each individual task is successfully completed);
- individual responsibility (each student bears full responsibility for his own performance, completion of different tasks);
- equal conditions of participation (each student performs tasks at equal intervals of time);
- simultaneous interaction (all group students work on assignments simultaneously).

Thus, as a result of the organization of educational activities with implementation of interactive technologies, students both learn how to interact in everyday and professional communication, and develop their memory, attention, perception, imagination, form their will and character.

5 Implementation of interactive teaching methods

At present, the teaching of a foreign language, in connection with changing national priorities, educational goals and guidelines, has
experienced a gradual transition from a traditional approach to an interactive one aiming at enhancing students’ motivation to learn a foreign language and to develop their interest to the educational process as a whole.

The use of interactive teaching methods encourages both students and teachers to constant creativity and promotes the development of pedagogical abilities [22]. However, it should be noted that the teacher should be carefully prepared for each lesson in which he or she intends to use interactive forms of work. The teacher should take into account the students’ level of foreign language skills, the level of communication skills they have formed, as well as the specific features of the subject and the objectives of the course. However, as A. Tsyrkal points out, the most important task in the process of implementing interactive learning at foreign language lessons is to provide favourable conditions in the group for free expression of each student’s own point of view [23]. Therefore, the teacher should maintain an atmosphere of friendship, openness and support, not limiting, but rather encouraging the originality and dissimilarity of the opinions that are expressed. The technology of using interactive teaching methods should be introduced gradually from simple to more complex forms of educational activities. Moreover, the lesson should not be overloaded with interactive work. Taking into account the type of lesson and its main objectives, it will be appropriate to use no more than two or three interactive methods. Moreover, the latest learning technologies should be combined with traditional ones and thus anticipate and avoid student fatigue and loss of interest to the learning process.

The structure of a foreign language lesson with using interactive technology involves four steps:

1) Preparation. This stage involves organizational issues such as handouts, choosing the place and the necessary technical facilities.

2) Introduction. At this stage, explanations of rules, goals and tasks; grouping and role distribution; classroom and time management are important.

3) Conducting. It is mandatory to discuss teacher-defined situations in groups, to search for the possible solutions and to present the answers.

4) Reflection and results. Elements of this stage are discussion of the lesson results, evaluation and feedback.

Compared to traditional methods, among the benefits of interactive learning methods implementation are: the involvement of all students of
the group; the improving teamwork skills; the opportunity to express, argue
their own opinion and analyse the opinions of other students, finding an
alternative solution to the problem; the creating a “success situation”; the
possibility of studying and the activation of a large amount of material in
a short period of time [22].

Thus, the use of interactive learning technology helps to:
• develop a certain of thoughts, the ability to express and defend one’s
  opinions, to adequately and tolerantly perceive other, opposite, points
  of view;
• develop skills of critical and creative thinking as a result of solving a
certain problematic situation and revising the material;
• develop correct, clear and logically structured speech, together with
  the active learning of lexical and grammatical material.

6 The use of interactive forms of ESP learning at
agrarian and technical universities

The main purpose of teaching a foreign language in higher non-linguistic
educational institutions is to prepare specialists for the foreign language
communication in their future professional field, that is, development of
practical language skills in various types of speech activity in personal,
public, professional and educational spheres and improvement of already
acquired vocabulary and grammar skills. In order to achieve this goal various
forms of work, e.g. making up monologues and dialogues, translation of
the specific extracts and texts, annotation of professional literature, etc.
which contribute to the forming of the foreign language communicative
competence, can be involved into the learning process.

Thus, the use of interactive forms of learning in the study of foreign
languages at agrarian and technical universities will be effective if
the content of the educational process deals with the students’ future
professional activities. It should be ensured that theoretical knowledge
in the process of active learning becomes aware, and students develop
and refine not only the language skills, but also link them to the future
professional activity [24]. With this purpose, it is appropriate to apply
those interactive teaching methods in the classroom that will provide the
greatest connection between the topic of the lesson and future professional
activity.

At the beginning of the lesson there is a need of gradual immersion in
foreign language environment. Thus, such interactive games as “Grab a
minute”, “An item description”, etc., can be used as Warm up activities.

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“Grab a minute” is a game in which a student is given 1 minute to represent a term written on an interactive map. The student should provide as much information about the subject / term, its meaning, use, etc. as possible. The student who provided the most complete and related information about the subject or term indicated on the card wins [23].

For example, during ESP (English for Specific purposes) lessons the third year students of specialty “Agrarian engineering” are offered to explain the vocabulary from the previous lesson, trying to expose the proposed concept as widely as possible. Thus, revising the topic “Principles of engine operation” students had the opportunity to explain different cycles of the internal combustion engine operation and other students had to name them. The possible answer looked as follows: “During this process the piston reaches TDC, an electric spark ignites the fuel mixture in the combustion chamber of the gasoline engine (in a diesel engine the heat of the highly compressed air ignites the fuel). When the air-fuel mixture burns it moves the piston with great force”.

This method gives the teacher the opportunity to check the vocabulary on a specific topic in combination with grammar, as well as consolidate the material of previous lessons.

“An item description” is a game in which the students are intended to describe the word or phrases indicated on the interactive cards without naming the word itself or using gestures. The active role is played by the rest students of the group, whose task is to guess the word. Thus, while studying the topic “Cultivation and planting equipment” [25] students of the “Agrarian engineering” specialty should explain the principles of operation or maintaining of different kinds of agricultural machines without naming them.

With this interactive task ESP teachers can check the level of communication skills and vocabulary on a particular topic. Moreover, it is worth noting that the game “An item description” allows students to improve speaking skills and activate the search for English synonyms.

At the stage of systematization of the acquired knowledge during the last lessons on the topic, it would be appropriate to play a role-playing game that imitates future professional activities. Engaging in role-playing games in English lessons, students present themselves as someone else in a particular situation; behave appropriately according to the rules of this game. The social (farmer, teacher), interpersonal (friends, groupmates), psychological (neutral, positive, negative characters) roles that students play, help to learn how to communicate and discuss issues, understand and evaluate the feelings of other people, and solve problems. The ultimate
goal of any role-playing game at the English lesson is to acquire new knowledge and develop it into skills. This kind of game will promote the development of students’ professional skills. Role play allows students not only to experience certain communicative role, but also to express their emotions, intellectual abilities, creative imagination and creativity [26].

Topics for role-playing games must be related to their future professional and scientific activities. For instance, students of the specialty “Agronomy” can perform dialogues or role play the situations related to the widespread problems on the farm, such as “Soil conservation”, “Preparation, seeding, planting processes”, “Climate change impact on the crops”, etc. In their turn students of the “Agrarian engineering” specialty while studying the English language for specific purposes were proposed to role play different professional situations concerning the perspectives of using various farm equipment for planting and gathering crops, their maintaining and possible improvements (Fig. 1).

Fig. 1. The group presenter reporting in the role playing game

Thus, the use of role-playing games in which students communicate in pairs or in groups not only contribute to the class activities diversity, but also allows students to show their speech autonomy, to master their communication and speaking skills. Students can help one another in order to express their thoughts clearly and to meet the most appropriate solution to the problem.

In addition to this method, the “Case study method” can also be used. The “Case study” methodology consists of several steps. The main aim of the first one is to become familiar with a particular problem. Then students should revise the learning material contained in the textbooks or any additional source of information to enrich the lack of theoretical knowledge.
Then they should discuss a problematic task in the group, in order to cooperate and facilitate a full understanding of the material. Finally, they should make conclusions and present the possible solutions to the problem stated at the beginning of the lesson [27]. When choosing a topic, the most interesting cases are those that allow several different assessments of the same situation, leading to several equally probable conclusions, each of which in turn involves different explanations of subsequent actions.

For example, while studying the topic “Salts and Acidity” [25] students were confronted with the problem (How can farmers reduce acid levels in soil? What method is the best one?). Then after studying the basic educational material, students discussed a problematic question in groups or pairs and summarized all the material by providing a detailed answer.

In their turn, students of the “Geodesy and Land surveying” specialty working out the topic “Land use planning” had to propose the ways of determining the possible hazards existing on the parcel and propose the best place for building a house for the family on it. In order to cope with this task, students studied and analysed different plans of the parcel and maps of this part of the city. Then they discussed all the data and tried to define the most appropriate place for building considering all construction issues (Fig. 2).

![Fig. 2. Presenting the solutions to the problem on “Land use planning”](image_url)
When summarizing the conducted method, the teacher analyses language and speech errors, management skills and the correctness of solving the problem of the given case study.

The value of the “case” method is that it simultaneously reflects not only a practical problem, but also actualizes a certain set of language material that must be used while solving this problem.

At the reflection stage of the lesson, it is important to ensure that students understand not only the tasks they have accomplished, but also what outcomes they have achieved during the learning process. For this purpose, you can use the “Round” method, which provides an expression of their thoughts within 1–2 minutes.

7 Experimental testing of using interactive means to generate positive motivation for ESP learning

To determine the level of motivation for learning English as a language for specific purposes the questionnaire survey had been conducted among students of different specialties. In particular, they had been asked to answer 12 questions on their attitudes and motivation to study English language before and after the experimental learning. Each student had to mark all the statements that are true for him (Fig. 3).

Fig. 3. The questionnaire survey “Why do you learn English?”
The questionnaire represents a set of statements that can be divided into 4 groups (extrinsic, intrinsic, instrumental, and integrative) and gives a clear representation of predominant motives for studying English for specific purposes among students (Table 1).

**Table 1.** Questionnaire questions separation by types of motivation

<table>
<thead>
<tr>
<th>Extrinsic</th>
<th>Intrinsic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I’d like to get a scholarship all the time.</td>
<td>1. I’d like to be successful in my study and passing exams.</td>
</tr>
<tr>
<td>2. I’d like to get a diploma.</td>
<td>2. I’d like to be constantly ready for the next lessons.</td>
</tr>
<tr>
<td>3. I’d like to achieve the approval of parents and others.</td>
<td>3. I enjoy learning languages.</td>
</tr>
<tr>
<td>4. I’d like to avoid condemnation for unsatisfactory grades.</td>
<td>4. I’d like to be an example to others.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instrumental</th>
<th>Integrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I’d like to become a highly qualified specialist.</td>
<td>1. I’d like to acquire deep and solid knowledge and skills in a foreign language.</td>
</tr>
<tr>
<td>2. I’d like to ensure the success of future professional activity.</td>
<td>2. I’d like to live abroad one day.</td>
</tr>
<tr>
<td>3. It is a great opportunity to obtain internship abroad.</td>
<td>3. I am fond of foreign culture.</td>
</tr>
<tr>
<td>4. I’d like to get a high position or promotion.</td>
<td>4. I share the values of English-speaking countries.</td>
</tr>
</tbody>
</table>

Having analysed the results of the questionnaire survey at the diagnostic stage, it was found out that the leading motives for learning ESP were the desire to obtain a diploma, as well as a permanent scholarship, avoiding condemnation and trouble from the teacher and the administration. Only 12% of respondents indicated that they were intellectually satisfied and were seeking a deep knowledge of English as one of the requirements for their future career. Therefore, as it shown on Fig. 4, external motivation was predominant.

On the next stage, interactive methods had been implemented into the process of learning the course of English for specific purposes. After completing the semester of experimental teaching, students had undertaken questionnaire test again. After processing the obtained data, it became obvious that interactive means of teaching have positively influenced the students’ attitudes for learning English language and contributed to increasing students’ motivation. All obtained data can be seen in the Fig. 5.
Fig. 4. The results of the questionnaire survey at the diagnostic stage of the experiment

Fig. 5. The results of the questionnaire survey at the control stage of the experiment

8 Conclusions

Summing up all of the above, we can conclude that the use of interactive forms and methods while teaching a foreign language at agrarian and technical universities allows teachers to expand the conversational practice in the classroom, while forming a communicative competence and positive motivation of students.

Taking into account all the benefits of the interactive technology using in the learning English as a language for specific purposes, we can draw the following conclusions:
• the implementation of the methodology of interactive learning during ESP lessons develops students’ ability to cooperate, changing the strategy of interaction, giving the opportunity to involve students in educational interaction;

• the use of interactive methods helps students to form foreign language communicative competence, that is determined by the communication style change, awareness of barriers to communication, the nature of solving communicative problems;

• a sense of tolerance is developed that is characterized by the perception of others and ensures the completeness and adequacy of communication in different situations.

Therefore, the introduction of interactive learning technologies into the practice of teaching foreign languages is an important component of improving the communication skills of students of non-linguistic specialties of agrarian and technological universities, and helps to increase the efficiency of communicative competence.

The experimental testing has proved that practical experience of using interactive teaching methods during ESP lessons has a positive impact on the increasing of motivation for learning English language and formation of a future specialist. The implementation of interactive teaching methods helps to expand mastering of the English language skills, leads to the development of students’ professional and personal qualities, including critical thinking skills, the ability to argue their own thoughts, the ability to cooperate and interact within the team, the sense of responsibility for each decision.

The search for ways of developing students’ motivation for learning English for specific purposes is continuing.

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