

FEATURES OF TEACHING SCIENTIFIC DISCIPLINES TO STUDENTS IN ENGLISH

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Abstract: The article aims to analyze teaching English issues concerning mastering a foreign language and examining teaching listening methods, reading literature in the specialty, and developing written communication skills. Attention is drawn to the classification of exercises for the development of various skills. There are fundamental differences in teaching English to students of scientific disciplines. The relevance of the work is due to the fact that today it is difficult to overestimate the importance of the English language for students of non-linguistic specialties: they can be considered world-class specialists only if they are familiar with advanced research in their field, which cannot be done without knowing a foreign language. The article emphasizes that when working with students of various specialties, it is necessary to use discourse analysis because it gives students information about extralinguistic factors, without which successful communication is impossible.

Keywords: Development of communication skills, Linguistic factors, Student knowledge, Teaching techniques, Teaching in English.

1 Introduction

Today, English is one of the primary means of professional communication, allowing professionals who speak different languages to exchange experiences. That is why much attention is paid to teaching English to linguistic students and representatives of non-linguistic areas [2]. However, the approach to working with these two groups is certainly different.

The goal of teaching a foreign language to students of non-linguistic fields is to master a foreign language as a means of communication within the framework of their chosen specialty [7], and, based on this goal, one of the tasks is to develop the ability to read original literature in the specialty and conduct a conversation on professional topics.

First of all, we would like to say about the aspect to which unreasonably little attention is paid to the teaching of the professional language – listening. It is an active thought process because it aims at the perception, recognition, and understanding of new speech messages, which presupposes the creative combination of skills and their active use in a correspondingly changed situation [10]. These skills can be divided into the following main groups:

- Skills of subconscious recognition of grammatical forms of speech [17];
- Skills of direct understanding of words and phrases [19];
- Skills of subconscious perception and distinguishing the sound side of speech [22].

There are four main approaches to teaching listening. According to the first approach, preparatory exercises are performed first, and then speech exercises. Another approach to teaching listening is to do the prep work while working on speaking. At the same time, students learn to subconsciously distinguish the forms of words, phrases, grammatical structures by ear. In addition, they develop auditory memory and understand all kinds of combinations and speech at a normal pace.

The next approach combines listening and reading, as well as listening and writing. This approach is useful for mastering complex syntactic models that are difficult to understand by ear. When teaching listening, they often resort to the approach of

listening to the same text many times, which can be useful when preparing a monologue statement [25].

It should be noted that within the framework of the course "English for specific purposes" (ESP), the purpose of listening is the formation of strategies for perception and understanding of information by ear (extraction of information from a sounding text) with the subsequent use of the information received in a foreign language oral or written communication [1, 3]. Listening assignments can be used as one of the means of working out new language material and should contribute to the development of the ability to perceive by ear terms and certain expressions associated with a particular scientific field. Thus, listening here can be associated with typical tasks for understanding the information heard (the following statements are true or not, choose the correct answer), and tasks for filling in the gaps in the text when students need to enter a particular term [5, 12].

Of course, when conducting listening on a professional topic, the selection of material is especially difficult. Here, in the author's opinion, one should refer to podcasts from the Scientific American website, as well as assignments from the Listen a Minute website, where audio recordings on a variety of topics, including scientific ones, are presented. In addition, within the framework of the educational process, YouTube can be used, where videos on scientific topics are presented among the videos. The videos "Photosynthesis" and "Career Profiles – Biology" are examples of this kind of video [4]. The indisputable advantage of such videos is the ability to use subtitles for weaker students. As for these videos' tasks, it is possible both a discussion of the general meaning – conducting a dialogue, and more typical tasks: are these discussions correct, insert words that are appropriate in meaning (based on video material) into the text presented, etc.

2 Materials and Methods

Difficulties with the selection of material also arise when teaching to read literature in a specialty. In general, in this case, teachers face two questions: how to introduce reading literature in their specialty and what texts to select?

According to the researchers [20, 23, 24], the teaching method can proceed from the following two main provisions: approach to the text as a single structural and semantic unit and teaching various types of reading specialized literature to extract information from these texts directly. Thus, we can talk about the inductive analysis of the text (from the particular to the general) and deductive analysis of the text (from the general to the particular).

Examples of assignments focused on these two types of text analysis can be found in the Essential English for Biology Students Toolkit. Thus, the tasks from the "Quick check" section, when students are asked to find certain information in the text, are directly related to search reading and, therefore, inductive text analysis. But the work on finding English-language equivalents to the native language words and expressions can be attributed to the deductive analysis of the text [4].

Such types of tasks contribute to solving several tasks at once, which are posed when teaching reading in a specialty:

- Development of the ability to guess the meaning of unknown words;
- Development of the ability to "ignore" unknown words and expressions if they do not interfere with the general understanding of the meaning of the text;
- Teaching the perception of new combinations of known language units [21].

Thus, when teaching reading in a specialty, it is important that the texts are logically distributed according to the level of

difficulty so that the language units presented in each new text partly overlap with what the students passed earlier and partly were completely new. On the one hand, this approach allows you to check how well the previous material was mastered. On the other hand, it allows students to build the knowledge gained into a certain system, which means it is better to master the material.

When selecting educational materials in foreign languages, one should focus on the following characteristics: information richness, cultural markings, communicative value, pragmatic value, relevance, accessibility, authenticity, visibility, motivational and cognitive value, variability, and diversity [5, 11, 26].

3 Results

Quite often, the already mentioned Scientific American site, which presents articles of a very different orientation, acts as a specialty source. It is important to note that within the framework of the consideration of texts of this kind, it is possible to practice lexical and grammatical skills [16]. In particular, the rules for word-formation suffixes of nouns and adjectives.

Of course, reading is far from the only aspect that should be touched upon when working with students of non-linguistic fields. The fact is that the main goal of teaching English to representatives of non-core specialties is to provide an opportunity to communicate with foreign colleagues, share their experience, and adopt best practices from abroad. This means that an important place is occupied by the skill of written communication, that is, the aspect of "writing".

It should be noted that graduate students listen to the course "Academic writing", during which they get acquainted with the structure of scientific articles (their formal division into parts - "Methods", "Results", etc., as well as lexical content - certain lexical units that allow you to enter examples, give arguments) and acquire the skills of writing these articles [21].

However, bachelor students studying in non-linguistic specialties acquire written professional communication skills to one degree or another. Here we are talking, for example, about the ability to write a resume and cover letters [20].

Indeed, the texts by which written professional communication is conducted include the already mentioned cover letters, resumes, and scientific articles, and business correspondence, abstract statements of certain scientific publications, and much more [9]. That is why it cannot be said that students get acquainted with the features of this communication at a certain stage of training; instead, they learn this gradually.

In general, when developing the skills of both reading professionally-oriented texts and writing, the so-called discourse analysis is of great importance [6, 29]. Scientists have repeatedly noted its importance in teaching foreign languages in general and teaching English to students of non-linguistic areas in particular. The main thing is that discourse analysis helps to develop students' ability to isolate hierarchical elements of a scientific text, which means that it is better to understand its structural and semantic organization. Moreover, it is the concept of "discourse" (and not text) that includes extralinguistic factors, which must be taken into account when teaching professional English [18].

Thus, the written communicative competence serving professional communication is directly related to the competence of discourse, that is, depending on the structure of the linguistic personality, on the changing context of communication, there is a correlation between the role of the creative and the role of the stereotype in the construction of social communication. The writer achieves the intended effect by constructing their verbal/non-verbal behavior under a native speaker partner's expectations. It means that when teaching written communication, it is necessary not only to explain to them the structure of, for example, a business letter and introduce them to the lexical units characteristic of it but also to give an idea of how certain inaccuracies in the written speech by a native

speaker can be perceived, what mistakes are capable lead to the fact that communication will not take place.

4 Discussion

So, when working with students of non-linguistic directions, the concept of "discourse" comes to the fore, which means there is a need to take into account extralinguistic factors [8]. Another feature of teaching English to students of non-linguistic specialties/directions is the use of an individually differentiated approach [13]. First of all, it is about the distribution of students into groups according to the level of knowledge. This distribution is carried out at the very beginning of the first course according to the developed educational and methodological manual, which allows you to test not only grammar but also speaking and reading skills.

Somewhat different problems arise when teaching English to students of language directions [15]. The axiological approach associated with the concept of "value" comes to the fore here because teachers of foreign languages and translators must not only perfectly know English (and/or any other foreign language), but also be well versed in a foreign culture to some extent to be its bearer.

It is well known that literature is of paramount importance in getting a multicultural education. That is why, when working with linguistic students, much attention is paid to such an aspect as "home reading". In English classes, students discuss stories by O'Henry and Agatha Christie and other authors, which improves their vocabulary and acquaints students with the cultural and historical realities of the early 20th century.

The use of literary texts is inseparable from the regional aspect of teaching foreign languages [29, 30]. The names of literary characters occupy a special place among the realities of general cultural significance (in relation to a work of art). Each image carries a certain amount of information, including national and cultural, i.e., regional geography.

In addition to the opportunity to understand the culture of the country of the language being studied, the inclusion of acquaintance with the works of American and British writers in the academic English course has another positive effect: it gives students the opportunity to gain knowledge of the style of the English language already in their first year.

Of course, the aspect of "home reading" presupposes a huge independent work of students: it is at home that they read the text, say essays and monologues, and often do lexical exercises. In such conditions, the distance education courses developed by the teachers of Kazan Federal University are significant, which present not only the texts and exercises necessary for reading that students perform independently but also links to Internet sources where they can find the necessary linguistic or regional geographic comments. Examples of such courses include "Selected stories by O'Henry" and "Practical course of a foreign language, first course, second semester: "Selected Stories by A. Christie".

In general, the acquaintance of students with English and American literature occurs not only within the framework of the Practical Course of the First Foreign Language, one of the aspects of which is precise "home reading", but also within the framework of courses such as "History of English and American Literature" and "Stylistics".

5 Conclusion

When working with students of scientific disciplines, the primary role is played by discourse analysis with its attention to extralinguistic factors and an individually differentiated approach [28]. When teaching the language, future English teachers and translators should pay great attention to the axiological approach. Teaching literature in English lessons should also be noted as one example of the so-called method of subject-language integrated learning.

At this stage, there are many works devoted to the method, which is associated with the idea of teaching some subjects of the curriculum (history, geography, biology, literature, and others) in English. This method is useful in terms of increasing the motivation for learning a language since it ceases to be some abstraction, a set of grammatical rules, and becomes a means of acquiring knowledge.

Teachers are encouraged to use an individually differentiated approach since students initially have different levels of knowledge, and it is necessary to work with them in different ways [27, 31]. However, in this case, you should use entrance testing, remembering that this method of assessing student knowledge is not error-free. In working with future specialists, the aspect of "home reading" is significant, allowing acquainting students with specific linguistic constructions and national-cultural, regional information.

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