

It Related Vocabulary Development and Some Obstacles in Teaching Foreign Language in Technical Universities

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Abstract: The purpose of this article is to consider some common difficulties encountered in development and teaching vocabulary in technical higher educational institutions. It deals with the problem of acquisition of IT related vocabulary by students in the foreign language teaching process. There have been analyzed some problems in teaching a foreign language to learners of a technical higher establishment. There are some recommendations for teachers in creating a program of explicit IT related vocabulary instruction to motivate their students to learn and master a foreign language through learning terminology.

Index Terms: IT related vocabulary, communicativeness, semantics, definition, contextual conjecture, a program of explicit IT related vocabulary instruction, associativity, motivation, strategies for working on the language.

Introduction

Teaching English as a foreign language is now one of the most important subjects in most countries. The implementation of English has brought along the need to establish clear objectives that are different to the ones traditionally assigned to higher establishments. While in secondary schools we still find, in many cases, a teaching based in the formal aspects of the language, i.e., only grammar. As a result of this point of view, the different educational institutions have decided to establish, as the main purpose of the EFL teaching, the development of the four skills: listening, speaking, reading and writing. However, the implementation of this approach has not been trouble-free as many teachers insist on asking their children to understand every single word they listen to or read, or expect their pupils to write or speak without making the mistakes normally found in the process of acquiring any language.

In this century, in the century of information technology, knowledge of a foreign language has become an indispensable attribute of a successful specialist. The importance of foreign language skills in the modern world is difficult to exaggerate.

Research Area

The competitiveness of a technical university today is determined not only by the level of teaching fundamental disciplines, but also by the quality of teaching foreign languages. However, despite the existing need of society for specialists of various profiles who are fluent in a foreign language, as well as the growing interest of students themselves in receiving quality training in foreign languages, it is not possible to develop speech communication skills during the years of study in a technical college with a significant number of students. Knowledge of a foreign language is a prerequisite for education in modern society. Adoption of the law on foreign languages in 2012 in our republic is very actual and important. Therefore, at present special attention is paid to the study of a foreign language in the universities of our republic, especially in Tashkent University of information technologies. In connection with the introduction of the Credit system of education in TUIT in the 2018-2019 academic year, great attention is paid to teaching English, and the students are greatly interested in learning a foreign language.

A good specialist in the field of ICT has the following requirements: the ability to search for information on their specialty, both in domestic and in foreign literature; logically interpret the extracted information; use different types of reading, such as learning, introductory; be able to keep up a conversation,

etc. Expanding ties with foreign specialists requires a modern engineer or programmer to be able to communicate freely in a foreign language without a translator, to actively use common vocabulary and professional vocabulary. Consequently, the system of training specialists in technical universities should meet the evolving needs of society. Teaching a foreign language at a technical college should be professionally oriented. The essence of vocational-oriented teaching of a foreign language lies in its integration with the main disciplines in order to acquire additional professional knowledge and form professionally significant personal qualities.

A graduate of a technical university with a good knowledge of a foreign language has great prospects not only in communication with foreign colleagues, but also the opportunity to undergo advanced training outside their state. It is also possible to pursue a master's degree program in foreign universities, participate in foreign conferences and continue to engage in scientific work based on foreign language sources. In particular, good prospects, both among students and teachers of TUIT, thanks to mutually beneficial bilateral relations with some leading foreign universities in the field of ICT, in particular with the Korean INHA.

Therefore, a professionally oriented study of a foreign language in a non-linguistic university is essential. However, when learning a foreign language in a non-linguistic university, a number of problems and contradictions arise, caused by the conditions of study. These include:

- lack of training hours;
- lack of motivation of students in learning a foreign language;
- the low level of training in the foreign language of applicants from non-linguistic universities;
- traditional teaching method.

And also, there are some objective factors, for example, for students of technical specialties, learning a foreign language is more difficult due to the purely technical mentality and lack of linguistic intuition, contributing to the perception of linguistic realities. In this regard, the process of teaching a foreign language to technical students is more difficult, and the results are less noticeable than the results of students of humanitarian faculties. As you know, motivation plays a crucial role in learning a foreign language. According to numerous studies of the majority of students of technical universities, the motivation to learn a foreign language is quite low, since they pay more attention to specialized subjects than secondary ones. Perhaps this is due to the lack of need to use a foreign language as a means of obtaining new intellectual information when studying at a university or after it.

Over the past two decades, an increasing interest in a communicative approach to teaching foreign languages in the world should be noted. This trend is noted and higher educational institutions of the Republic of Uzbekistan. Communicative learning aims to master students' communicative competence, which allows them to practically implement the skills they have learned in order to successfully solve communicative tasks. In modern conditions, the focus of education at the university should increasingly shift towards the ability to practically apply the acquired knowledge of a foreign language by graduates of technical universities. Students' needs for communicative language activities should be taken into consideration in teaching English in technical higher establishments.

Currently, much attention is paid to the problem of teaching English, since language teaching is an essential component of specialist training. To achieve the goal, i.e. to teach a student to talk about the problems of his specialty and understand the speech of native speakers in this regard - it is necessary to place a strong emphasis on the principle of communicativeness both in teaching and in the construction of educational materials used. Teaching English in a non-linguistic university should be based on specific conditions determined by the nature of the learning tasks and the features of the curriculum. This is what determines the selection, representation and assimilation of educational material, the specifics of the development of relevant skills. Learning features are also characterized by the correlation between the types of speech activities and the goals specific to a non-linguistic university for the practical application of knowledge, skills and abilities.

The most informative aspect of language is vocabulary. Foreign language proficiency in the field of professional activity is largely determined by the level of lexical knowledge and skills, since the requirement of a foreign language program in non-linguistic universities is to read literature in the specialty with a complete understanding of the content in order to obtain information. Learning vocabulary begins with its

semantization. Revealing the lexical meaning is a non-laborious and not lengthy process, but it is crucial for the subsequent work on the word. Because words are the tools students use to access their background knowledge, express ideas, and learn about new concepts. Students' word knowledge is linked strongly to academic success. Specifically, word knowledge is crucial to reading comprehension, and determines how well students will be able to comprehend the texts they read in the upper elementary grades, in middle and high school, and in college. [1]

IT related Vocabulary knowledge has long been recognized as an essential component of comprehension and is a contributing factor for understanding as means of learning in technical tertiary education. Vocabulary can and does impact meaningful comprehension of the material for struggling through accomplished learners.

Simply put, students who know the meaning to the words they encounter when dealing with different materials are more likely to comprehend that piece; students with large vocabularies tend to be more proficient learners. Therefore, IT related vocabulary emphasis should be a major feature of every instruction program. Vocabulary can be thought of as hooks for background knowledge, concepts about the world, understanding discipline content, integration of new learning with what is known and representation of abstract understandings. Simply stated, the breadth and depth of IT related vocabulary enables the interaction with and the comprehension of material. Additionally, when describing vocabulary knowledge, researchers commonly distinguish between breadth and depth. Breadth of vocabulary knowledge refers simply to the quantity of words known, whereas depth of vocabulary knowledge refers to the richness of the understanding of those known words. While breadth is understood as a numerical quantity, depth is thought of as a continuum of understanding, ranging from some recognition of a word to complete understanding of a word's various meanings and how to use it appropriately in a variety of contexts. Depth of vocabulary knowledge includes knowledge of multiple related meanings, including shades of meaning, knowledge of semantically related words including subordinates and super ordinates, and the syntactic and pragmatic knowledge of whether and how to use a word in a given context. [2]

Some learners who are admitted to technical universities often lack adequate vocabulary to get meaning from what they listen, read or write. Consequently, these activities are difficult and tedious for them, and they are unable (and often unwilling) to do the large amount of above mentioned activities they must do if they are to encounter unknown words often enough to learn them. This situation contributes to what are called "Matthew Effects," that is, interactions with the environment that exaggerate individual differences over time, with "rich get richer, poor get poorer" consequences. Good learners are engaged in the target activities more, become even better, and learn more words; poor learners are engaged less, become poorer, and learn fewer words. Indeed, the vocabulary problems of students who enter university with poor or limited vocabularies only worsen over time. [3]

In this paper, we look at some of the obstacles that can make IT related vocabulary development a difficult task in teaching a foreign language.

There are several types of vocabulary. [4] For example, students' listening vocabulary is made up of all the words they hear and understand, as the speaking vocabulary includes all the words, including IT related vocabulary they use in the communication with foreign partners in the future profession. The reading vocabulary is made up of the words in print, including texts on specialty and scientific ones that students recognize or can figure out. As we use vocabulary in this paper, the term refers to the reading vocabulary—the body of words students must know if they are to read increasingly demanding text with fluency and comprehension. We do not address issues of decoding and of acquiring sight words; our focus is on how students acquire meanings—and, more importantly, understandings—of new IT related terms and concepts.

There are some obstacles to IT related vocabulary development. In order to develop IT related vocabulary students not only have to look up words in a dictionary, but also need instruction that will help them acquire IT related word knowledge and develop strategies to enable them to increase the depth of that knowledge over time. To help students develop word knowledge in breadth and depth four fundamental obstacles must be recognized, and then develop teaching practices to address those obstacles, which comprise the size of the task, the differences between spoken English and written, or "literate" English, the limitations of sources of information about words, the complexity of word knowledge.

(1) Often students encounter the problem with the number of words that is exceedingly large in size for students to learn. [5] (2) The differences between spoken English and written, or “literate” English also pose serious difficulties to students as they differ from each other greatly. If teachers are not aware of the difference in the time it takes to achieve conversational fluency and proficiency with written English, they might diagnose as learning or reading disabled a conversationally proficient English language learner who has trouble understanding textbooks and audio material.[6] (3) The sources of information about IT related words that are readily available to students—dictionaries, word parts, and context, while all of these are important, however each pose difficulties to use, uninformative, or even misleading. In fact, after examining the errors made by students who wrote sentences based on dictionary definitions of new words, the examiners concluded that this activity is “pedagogically useless. [7] In interpretation of new IT related words word parts—prefixes, suffixes, and roots can contribute greatly to the IT related vocabulary growth. To illustrate, consider pairs of words such as the following, which share recognizable parts, but which are not clearly related in meaning: hard/hard disc, soft/software, run /runtime, sign/resign, sign/design, bug/debug.

(4) Knowing a word involves much more than knowing its dictionary definition, and simply memorizing a dictionary definition does not guarantee the ability to use a word in reading or writing. Adding to the complexity is the fact that different kinds of words place different demands on learners. [8] Students can acquire a great deal of vocabulary knowledge as they pick up the meanings of words from context as they read widely in appropriately challenging texts on their specialty. However, the benefits of context are primarily long-term—a matter of gradually accumulating partial information about words as they are encountered repeatedly; the chance of learning the meaning of any particular word from one encounter with that word in context is rather slim. [9]

Thus, to use dictionary definitions, word parts, and context effectively requires awareness of words and flexible thinking—metacognitive and metalinguistic sophistication that many students do not possess. In fact, the students who are most in need of IT related vocabulary growth are likely to be the ones least effective at using these sources of information.

To be effective, teachers should create a program of explicit vocabulary instruction which should be dynamic and involve a variety of techniques. It should provide students with opportunities for IT related word learning by:

- encouraging wide reading taking into account students future specialty;
- exposing students to high-quality oral language which will be needed in negotiation with foreign colleagues;
- promoting IT related word consciousness;
- providing explicit instruction of specific words; and
- providing modeling and instruction in independent IT related word-learning strategies.

Vocabulary, albeit narrowly, has often been used a proxy for language because both language and vocabulary emphasize the importance of meaning. Many broader language skills (i.e., phonology, syntax, morphology, and semantics) either are directly related to vocabulary (i.e., semantics and morphology) or can be found in models exploring vocabulary. For example, Perfetti’s lexical quality hypothesis argues that the properties of the quality of a lexical representation (i.e., what is stored in one’s lexicon about a word) include phonological and syntactical information as well as information about meaning. This is why when models of reading highlight the strong role of language, they are usually highlighting the importance of IT related vocabulary in reading texts on specialty as well.[10]

Semantics can be implemented in various ways, which are usually combined in two groups: non-translated and translated.

Non-translational methods include:

- display of objects, gestures, actions, pictures, transparencies, etc.;
- identification of the meaning of words in a foreign language, for which they can be used:
- definition - a description of the meaning of the word, for example: download - copy files from a server to your PC or mobile, word processor- program used for text manipulation, software- programs which can be used on a particular

computer system, hardware- physical parts that make up a computer system, peripherals- input and output devices attached to the CPU;

-collocations- access the Internet, enroll online, search the Web, prepare exams, write documents, complete exercises online, do research, prepare presentations;

- enumeration of words, for example: Milestones of the development of computers or TV, work of art, stamps, coins are collectibles;

-definition of a word based on contextual guesses, meanings of facts, for example: Modern banking depends on computers to perform complex operations;

- the use of synonyms and antonyms for revealing the meaning of words: perform - execute, do, store- keep, save, monitor- display, screen, integrated- built-in, embedded and etc.;

The translated methods of semantics include:

-replacement of the word (turnover) with the corresponding equivalent of the native language;

- Interpretation in which, in addition to the equivalent in the mother tongue, students are informed about the coincidence or discrepancy in the volume of meaning.

The above methods of semantics have their advantages and disadvantages. Non-translational methods develop a hunch, increase practice in the language, create supports for memorization, and strengthen associative connections. However, non-translative methods require more time than translated ones, and do not always provide an accurate understanding. Translation is economical in terms of time, universal in application, but increases the possibility of interlanguage interference. The semantics of a foreign language word is revealed gradually in the process of speech practice. As a result of the implementation of "semantic exercises", students should have a fairly clear idea of the semantics of the input word, its forms and compatibility, and also develop primary skills for its use. Full meaningful meaning comes later, as a result of students' attempts to independently formulate appropriate concepts. To read texts on the specialty studied by students, a large vocabulary is required and, therefore, the problem of teaching vocabulary has been and remains one of the most urgent problems of the methodology of teaching a foreign language, including solving the following problems:

- selection and compilation of an effective vocabulary - the formation of a potential dictionary;

- development of vocabulary teaching methods.

Learning by heart plays a huge role in teaching special vocabulary in a non-linguistic university - this is one of the forms of voluntary, that is, directed memorization, which plays a significant role in mastering a foreign language by adults, since, as psychologists involved in memory research say, "in older people the effect of involuntary memorization is reduced. " Compared with other methods of random memorization, memorization by heart provides a greater completeness and accuracy of imprinting a particular material in memory. It should be noted right away that memorization by heart is not an end in itself, but subordinated to the main task of teaching students - active mastery of a foreign language as a means of communication. Successful mastery of a foreign language largely depends on the amount of material that the student fully and accurately remembered. Certainly, memorization of separate grammatical and lexical phenomena or even texts is not yet a command of a foreign language: special exercises are required in order to "bring into the learned material", that is, to ensure its reproduction (in whole or in separate fragments) by students at a certain moment time and in a specific communication situation. However, the presence in the student's memory of a certain "set" of language units of various levels is a necessary prerequisite for speech exercises. When drawing up such exercises, it is necessary to take into account the action of factors of voluntary and involuntary attention, and the associated with it, voluntary and involuntary memorization. It is known that some part of the material, if it is repeated many times in different contexts and is of interest to students, can be assimilated by them without special memorization, involuntarily (for example, vocabulary); its other part can be learned only with directed memorization, i.e. by arbitrary memorization.

When mastering a foreign language, many elements have to be learned mechanically. Mechanically memorized are lists of prepositions requiring the use of a certain case, the main forms of verbs, some categories of words. For strong memorization of the material, the action of all analyzers is essential, therefore, it is necessary to use various supports and, accordingly, exercises in the learning process.

Even with the mental repetition of memorized material, auditory-motor analyzers play a large role; in adults, visual memory is more developed, therefore, when memorizing it is desirable visual support (printed

text). An important role is played by repeated pronouncing aloud the memorized material, because sound-motor images give rise to a large number of associations that facilitate the memorization of linguistic material and its quick spontaneous recall and reproduction in the process of speech. Various so-called mechanical exercises, including wildcards, help to capture memorized material, and creative exercises should develop students' ability to extract the necessary series from long-term memory and use the element that is necessary for this statement.

Thus, mechanical memorization, which should not be neglected when studying a foreign language, should be based on all types of memory, and the student is prompted or shown the most rational technique for its implementation in each case. One of the characteristics of random memorization is accuracy. The requirement of accuracy of memorization can be presented both to the content of the material, and to the form of its expression. To this end, memorization of the text, including the scientific one, should be preceded by the identification and comprehension of its individual parts, the awareness of their logical connection, the allocation of semantic support points. At the same time, students should have a clear attitude to the accuracy of memorization: without a focus on accurate memorization, a lot is read superficially, even if it is read several times. This kind of work must necessarily accompany memorization of any material with a semantic structure. It will not only facilitate and accelerate the learning process itself, but memorization will be more durable and productive. It is also important to remember that memorization by heart is effective only when the learned language material is regularly repeated at certain intervals in time. The repetition can be of a different nature: to be one of the components of homework or to be conducted in the classroom, with a "preliminary warning". It is not necessary to repeat the learned material in the order in which it was memorized, on the contrary, it is advisable and useful to introduce it into new combinations, although it is sometimes desirable to repeat it in the original learned form.

As practice shows, one should start with the simplest descriptions and characteristics and the monological form of their processing at the very initial stage. Then you can study those that are more complex in structure and style.

Conclusion.

All above considered it must be pointed out that IT related vocabulary development and a professionally oriented study of a foreign language in a technical university is a crucial issue both for teachers and learners as well. A number of problems and contradictions arise in teaching/ learning a foreign language, which includes:

- the size of the task;
- the differences between spoken English and written, or "literate" English;
- the limitations of sources of information about words;
- the complexity of word knowledge;
- lack of motivation of students in learning a foreign language;
- lack of language environment;
- the learners' background of knowledge of a foreign language;
- grammar translation method (GTM).

However, there are some objective factors, for example, for students of technical specialties, learning a foreign language is more difficult due to the purely technical mentality and lack of linguistic intuition, contributing to the perception of linguistic realities. In this regard, the process of teaching a foreign language to technical students is more difficult, and the results are less noticeable than the results of students of humanitarian faculties. As you know, motivation plays a crucial role in learning a foreign language. According to numerous studies of the majority of students of technical universities, the motivation to learn a foreign language is quite low, since they pay more attention to specialized subjects than secondary ones.[11] It must be noticed that learning foreign language has risen to the level of public policy and the Presidential Decree "On measures to bring the promotion of foreign language learning in the Republic of Uzbekistan to a qualitatively new level" states the tasks as creating the necessary conditions for the perfect mastery, to coordinate the introduction of internationally recognized programs and textbooks for teaching foreign languages at all stages of education.[12] All these measures will give their results in foreseeable future and need to use a foreign language as a means of obtaining new intellectual information, a program of explicit IT

related vocabulary instruction to motivate students to learn and master a foreign language through learning terminology will become a catalyst that accelerates the process of acquisition of foreign languages and indispensable part of educational process. [13]

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