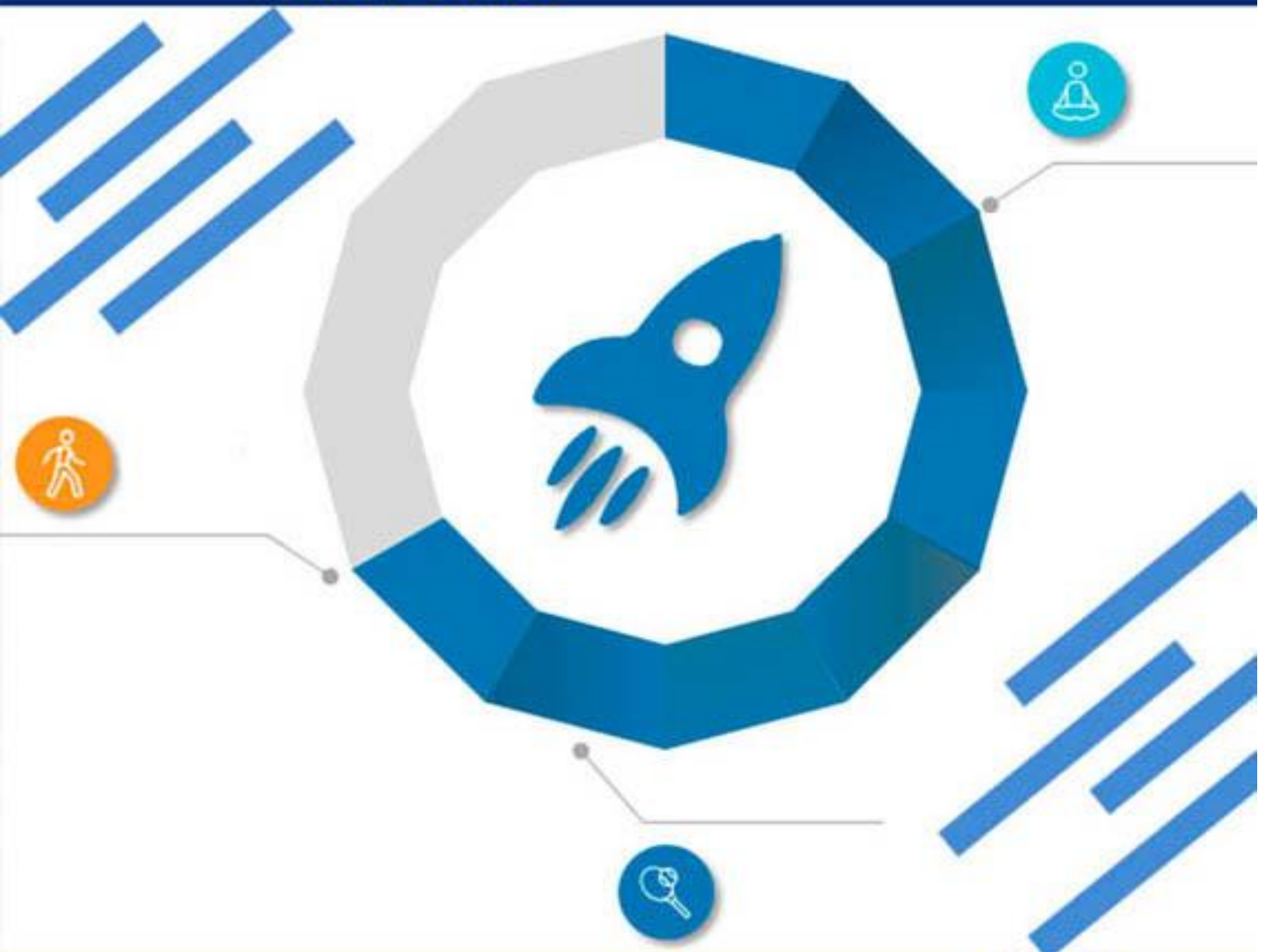


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## ADVANTAGES AND DISADVANTAGES OF INFOGRAPHICS

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**Abstract:** *This article describes the importance of infographics today and its types. In addition, the advantages and disadvantages of infographics are analyzed.*

**Key words:** *infographics, information, advertising, educational materials, competence approach, modernization.*

The development trends of computer science education in the world (humanization, humanitarianization, technologicalization) show that modern forms and technologies of education are rapidly developing on national, regional and global scales. In particular, in European countries and the USA "Merit" (selecting gifted children for high school), VISBI (cooperation in education), Hed start (compensatory training aimed at academic mastery), PISA (international assessment of students) ) programs, Dalton-plan (individual training system) are widely used. In the process of developing students' intellectual abilities, the use of modernized infographic tools based on the competency approach is gaining urgent importance.

Today, the demand and attention for graphic media products is increasing day by day. As the development of social media marketing develops, it is more effective to provide people with visual content - infographics instead of lengthy textual information about services, products and activities.

Infographics are a great way to present information. Especially for modern users who do not want to spend their time reading uncomfortable texts, but the graphic environment is well received. Saving students time and effort - all this can be achieved with infographics[1]. In which program we can do this. Infographics are easy and quick to adopt, easy to share, easy to do. In addition, according to statistics, information in the form of data is more informative. A nice bonus is that it's not too

difficult to create an infographic. If desired, it can be mastered at a critical time. Infographics is a graphical way of presenting information. In other words, it can be called image data. Infographics can include other elements (text, indicators, charts, blocks, and icons) where graphics play a key role.

Infographics, in general, are an independent means of information transfer. In short, infographics are designed to present material quickly, visually, and vividly[2].

There are five main types of infographics:

Analytical or digital infographics. With its help, statistical information is presented, which can contain a lot of numbers, charts, graphs.

News infographic. It tells a clear story about the latest events, reflects the chronology and the important stages of the events that are happening around.

Construction infographics. Shows the structure of an object or its mechanism, sometimes the chronology and causes of a historical event.

Advertising infographic. Created by companies to promote their products. As a rule, this can be a vivid picture describing the benefits of the product and the purchase[3]. If it's well-crafted, it can attract customers—that is, it combines competent marketing and good design.

Comparative infographic. Allows you to compare the properties of different objects.

Advantages of infographics:

First, infographics allow you to display large amounts of information—today's audience lacks the patience and time to read long stretches of text.

Second, a good infographic makes information clearer.

Third, an interesting image helps to attract the attention of the audience, so this format is widely used. In today's modern education system, it is recommended to use infographic materials more.

Disadvantages of infographics

- The first disadvantage of infographics is that it is not easy and cheap to make.

Writing a text or list is usually much easier, cheaper and faster than choosing the

right images and judiciously combining them[4]. In addition, to create a good infographic, you need creativity, creative design thinking.

- The second disadvantage is that sometimes such a colorful way of presenting the material can cause people to take this information less seriously.

- The third drawback is that infographics are almost always some kind of schematic, generalization and simplification of reality.

- The fourth minus depends more on the performers than on the method of presenting the information. The fact is that if a good infographic helps to absorb information, a bad one, on the contrary, hinders its perception and can even give the wrong explanation.

Using infographic elements in education:

- Infographics help to develop and form imagination in vocational education;
- Increases the level of visibility of the educational process;
- It helps to increase the mastery level by visualizing the educational process;
- By reflecting the social portrait of the profession, it motivates the learner to study the profession;

- By building a socio-economic portrait of the profession, it encourages the learner to gain confidence in the future and to build long-term plans for reaching the highest heights of the profession;

- To fully convey information about the position of the profession in the training of junior specialists to the learner;

- Infographics provide an opportunity to deepen the idea of national independence in the educational process.

Infographics are used almost everywhere. For example, in the media: but the first infographic was used only to present statistics.

- With the help of infographics, you can familiarize yourself with the information of customers or employees;

- You can show important news;

- Advertise your products and services;

- You will have prepared a user-friendly technical manual that is understandable to everyone, regardless of the language they speak;

- You can prepare statistical data, annual report, research results;

Infographics are widely used by entertainment and popular science sites - often to explain a device or mechanism. It is used in educational materials for the same purpose.

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## THE ROLE OF COMMUNICATIVE APPROACH IN TEACHING A FOREIGN LANGUAGE

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***Abstract.** Instead of focusing on grammatical purity, the Communicative Approach emphasizes the ability to express the message's meaning. It first appeared in the 1960s and is still in use today. The strategy emphasizes genuine dialogue and negotiating meaning. Its primary feature is English language comprehension through engaged student involvement, including role-playing, games, and information gaps. Both verbal and written communication are covered by the concept of "communicative competence," which is the gradual development of the capacity to use a language for personal gain. The term "communicative competence" denotes a change in emphasis from the grammatical to the communicative aspects of the language, or the uses of language and the conversation process. The Communicative Approach places a strong emphasis on the notion that communication of meaningful content is necessary for success. When students engage in genuine communication, they will employ their natural strategies, which will help them learn how to use the language.*

***Key words:** communicative competence, language acquisition, learning language, interaction, communicative purpose.*

As it's known, the purpose of teaching a foreign language is practical language proficiency, mastering the language system and acquiring language skills. However, often after graduation, even the best students do not have the skills of spontaneous speech, their poor vocabulary and the uniformity of the design of grammatical structures are felt.

Specially conducted studies have shown that more than 90% of foreign language classes are mainly aimed at teaching the language system, and not at mastering it. The main subject and the object of training with the traditional method is the teacher. He directs the types of speech activity, gives comments and organizes the learning process as a whole. At the same time, teaching methods and techniques are not aimed at the formation and development of students' speech skills and abilities.

The traditional method of learning English is also called grammar-translation. It consists of the systematic study of grammatical material, phonetics, forms translation and reading skills. Students compose dialogues, memorize them, learn words by topic, retell texts, perform written grammar exercises. The main features of this approach are memorization of the material and thoroughness. The peculiarity of the traditional methodology is that in the process of work, students must master all types of speech activity in a given volume.

Currently, the so-called communicative method of language acquisition is widely used. The communicative approach in language learning is not a new technique at all: it appeared abroad around the 60s of the last century, and came to our country around the mid-90s. Then all the English language learners began to complain that "they understand everything, but they can't speak."

The adherents of the communicative approach took the path of combating this discrepancy. Since then, the communicative methodology has been significantly transformed and it has received mass distribution all over the world. Initially, it assumed group classes with a native speaker. From the very first lesson, the training was conducted in English. Later, the approach underwent some changes, and now it is used both in a group and in individual classes. Much has been said and written about its effectiveness.

The results are achieved by minimizing the use of the learner's native language during classes. With this approach, it is very important to teach a person to think in a foreign language so that he perceives foreign speech without any associations with the native language. With this method of teaching, the study of theoretical aspects is

minimized or absent altogether, and the main attention is paid to live communication, i.e. conversational speech.

There is often a misconception that when using a communicative approach, the study of grammar is given inexcusably little time. In fact, in the learning process, a lot of attention and a sufficient amount of time is paid to both vocabulary and grammar, but their development is not the main goal of learning a foreign language. Speaking about the educational materials used in the communicative teaching of a foreign language, it should be noted their almost unlimited variety. Educational materials play a primary role in stimulating the communicative use of language.

Traditionally, there are three main types of educational materials: text-based, based on a communicative task, and realities grammar is present in a limited form as needed, vocabulary – as needed for practical tasks, practice – in the form of life situations. Discussion of real-life situations attracts students, arouses keen interest and a desire to share their ideas. The main place in the communicative teaching of a foreign language is occupied by game situations, work with a partner, tasks for finding mistakes, which not only allow you to increase your vocabulary, but also teach you to think analytically.

Many supporters of the communicative approach support the use of authentic materials in the classroom. These can be various linguistic realities, such as magazines, advertisements and newspapers, or visual sources around which communication can be built (maps, graphs, tables, etc.). The main task of the communicative methodology is to help the student get rid of the notorious language barrier. About 70% of the classes on the communicative methodology are devoted to conversational practice on various topics. And yet it would be a mistake to assume that the communicative approach is exclusively conversations in English.

The communicative approach is designed to develop oral and written speech, vocabulary, grammar, listening and reading skills. The teacher goes with the student three stages of training: engagement (involvement), study (study) and activation (activation – use). At the engagement stage, the teacher engages the student in the

learning process: initiates an exciting discussion, offers to discuss a picture, a problem, a film, etc.

At the learning stage, the student is explained the grammatical topic and the use of new words and expressions, that is, they work on expanding the vocabulary and mastering grammar. At the stage of knowledge activation, the student performs various exercises for fixing new grammar and words. This may be a continuation of the discussion of the topic under study, but with the application of the knowledge gained. Like any other way of learning a language, the communicative approach has transformed over time, but its fundamental principles have not changed. These include the following:

1. The student begins to speak English from the first lesson. Even those who study the language from scratch, master a couple dozen phrases in the first lesson. This allows you to quickly get used to the sound of speech, prevents the appearance of a language barrier or gets rid of it.

2. When learning a language using this method, you do not need to choose: speak fluently or speak correctly. The task is to make the speech fluent and literate at the same time. Modern authentic manuals are used in the training.

Carefully crafted English-language texts contain fascinating practical material that can be used in life and in professional activities. The ability to speak competently is the main skill, over improvement which the communicative technique works. Students are taught not only to speak on different topics, but also to monitor the correctness of speech. It's not secret that the language barrier often develops from the fact that a person is afraid to make a mistake in a conversation. And the communicative approach successfully combats this fear: up to 70% of the lesson time is devoted to the development of speaking skills.

Communicative approach helps to remove both the language and psychological barrier directly: students lose the fear of speaking in English. The more and more often a student speaks English, the faster he learns to formulate his thoughts. And in classes using a communicative technique, students talk most of the lesson. The teacher builds a dialogue in such a way that it is interesting for students

to answer questions and they can use their knowledge to the maximum. The communicative method teaches coherent speech, various colloquial phrases and cliches that allow you to speak fluently afterwards. Students learn not only to hear, but also to understand English. In the classroom, students listen to and analyze small audio and video materials together with the teacher. Usually, such material is used as a basis for discussion.

The communicative method of teaching English is aimed at developing the ability to speak spontaneously on various topics. In the classroom, only the language being studied is mainly used. The teacher sometimes explains complex nuances in Russian, but 90% of the lesson is conducted in English. This technique allows not only to "rebuild" to use English, but also to stop mentally translating Russian phrases into English and vice versa. Grammar and vocabulary are studied for communication, not "for show".

The communicative methodology assumes a very correct and simple principle of studying grammatical constructions: no one crams theory. The teacher explains this or that rule and together with the students begins to work it out in practice, bringing the skill of its use to automatism. They do the same with new words: no cramming, only repeated practical application.

Recently, it has become fashionable to talk about how children learn their native language in order to try to copy this process when learning a foreign language. Remember how children learn the language: they speak first, and already in the process of communication adults explain to them how to speak correctly.

So, if any of us is asked how a child learns the pronunciation, phonetics of his language, then most of us will say: imitating parents. Children, unlike us, talk, even with a meager vocabulary and having no idea about grammar, are not afraid to make mistakes and do not judge themselves for the mistakes they have made.

The absence of complexes helps children to immerse themselves in a foreign language without unnecessary baggage. Communicative approach is applied in much the same way: students discuss an interesting topic and learn to apply a new construction or vocabulary in the course of a conversation. For example, the teacher



explains the second type of conditional sentences and suggests talking about dreams: If I won much money, I would buy a Ferrari (If I won a lot of money, I would buy a Ferrari). After 5-10 sentences, students easily memorize this construction and understand the principles of its use. That is, grammar and vocabulary are not actually the main object of study, but are used as auxiliary material and learn automatically.

Life does not stand still, and the communicative methodology continues to develop. So, it began to be used in the individual form of training and in online lessons. Moreover, the communicative approach in English classes on Skype has its own distinctive features.

1. Individual approach. An individual approach means that the teacher adapts the training program to a specific student. After all, people differ from each other in their natural properties (abilities), and the ability to carry out educational and speech activities, and their characteristics as a person: personal experience, the context of activity, a set of certain feelings and emotions, interests, status (position) in the team. In English classes on Skype using a communicative method, all the teacher's attention is focused on only one student. This allows you to detect gaps in knowledge and quickly eliminate them. Thus, the student will not be too easy or too difficult in the classroom, he will have an incentive to develop, and at the same time he will thoroughly understand all the topics studied.

2. Students' choice of the volume and type of homework. It is worth noting that you can not completely abandon homework, since homework is the best way to fix the material in memory and check how well it is learned. Homework with a communicative approach is never boring – it can be online tests and crosswords, songs and various resources in English to test knowledge.

3. Using grammar and vocabulary as auxiliary material and learning them automatically. As in ordinary classroom classes, in online classes, students do not learn the dry wording of the rules. They learn the natural use of grammatical constructions and really useful words and expressions in practice.

4. Maximum practice in the classroom. For most of the lesson, students practice speaking. A few minutes are given to reading an interesting text, which

subsequently becomes a topic for discussion. Tasks to improve writing and listening skills are most often given at home. So, you can listen to the text or write a letter without hurrying, in a quiet environment. If something is unclear, the teacher will definitely come to the rescue and explain everything in class. This approach allows you to save time and work on the development of conversational speech, because this skill is usually the most difficult to master.

Thanks to this, the problem described at the beginning of the article is solved: "I understand everything, but I can't speak." The communicative methodology, despite the lack of "novelty" and "innovative approach", has many advantages. Today, this is undoubtedly the most effective way to learn English.

Thus, we can say with confidence: the communicative method of teaching English is suitable for absolutely everyone, and especially those who have had a not very pleasant experience of learning the language from ancient textbooks will appreciate it. The communicative technique is focused precisely on the possibility of communication. Of the four "whales" on which any language training (reading, writing, speaking and listening to speech), increased attention is paid to the latter two. Communicative method is designed primarily to remove the fear of communication. Communication is manifested in the functionality of learning. Functionality assumes that both words and grammatical forms are assimilated immediately in the activity, based on its execution. Based on the above, it can be concluded that communication is necessary in the learning process, since it serves to ensure that communication takes place in adequate conditions, such as taking into account the individuality of each student, the speech orientation of the learning process, the functionality of learning, situativeness communication, constant novelty of the learning process.

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## ADVANTAGES AND DISADVANTAGES OF INDUCTIVE AND DEDUCTIVE APPROACHES IN TEACHING PRESENT SIMPLE VERB FORMS

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***Abstract:** The article explores the advantages and disadvantages of inductive and deductive approaches in teaching Present Simple verb forms, analyzes the lessons using both methods, which allows to draw conclusions about the feasibility of using the inductive method in teaching English grammar.*

***Key words:** inductive approach, deductive approach, Present Simple verb forms, explicit approach, implicit approach, innovative teaching method.*

Learning grammar is an exciting process that introduces new concepts to the world, allows one to understand better the culture and traditions of a native speaker. Well-formed grammar skills can make speech correct and facilitate the communication process. Currently, grammar occupies a worthy place in teaching foreign languages as Richard and Renandya (2010) explain, “without studying grammar, students' speech skills would be very limited”. There are two main approaches in teaching grammar:

1. Explicit (based on strictly following grammar rules)
2. Implicit (with no focus on grammar rules).

Within the framework of each of these approaches, two main methods have been formed, which are rooted in the strategy of these approaches, but differ significantly in principles, practical techniques, and sequence of actions.

At the present stage, these methods are rarely utilized in their "pure form". In the practice of teaching a foreign language, the teacher may vary the use of certain methods. The choice of the method depends on the age, the level of language

competence of students, the objectives of the course, as well as the features of the grammatical material itself.

The most widespread currently in the practice of teaching grammar is a differentiated approach based on the selective use of the provisions of two traditionally established approaches.

Within the framework of the implicit approach (without explaining the rules), a structural method is used, which is based on exercises for processing structural models, as well as a communicative method, which is characterized by the formation of grammatical skills in speech, i.e. familiarization and training are included in language practice. Grammatical phenomena are studied and assimilated not as a "form" and "structure", but as a means of expressing certain thoughts and communicative intentions. Learning takes place on a situational-functional basis, i.e. from the situation to the grammatical means used in speech. This method helps to implement the principle of communication and diversify speech contexts, but the creation of a truly speech environment presents certain inclinations.

The explicit approach (with an explanation of the rules) includes two methods – deductive and inductive. The deductive approach includes traditional teaching methods while the inductive approach reflects modern methodology and practice.

The deductive approach represents traditional teaching style, because first students learn grammatical structures and rules. This approach has a certain similarity with the grammar-translation method. The main task of students is to acquire grammatical structures and the rules. After, the teacher explains the syntactic constructions in each case.

The inductive approach is modern style of teaching, when new grammatical constructions and rules are presented to students in a real language context.

As in the case of the direct method, students are taught the structure of the language in a "real" situation, that is, in context. The structure of the sentence and text is understood during practice, that is, examples from real life are taken – subjects in the classroom, restaurant menus, posters, travel brochures, etc. are considered.



Both of these methods have their advantages and disadvantages. The deductive approach can be effective for those students who have already mastered the basic grammar structures of the language.

The inductive approach will allow students to operate with the language themselves, thereby confirming learning by practice. The inductive method is considered very effective in teaching English as a second language. However, it seems difficult for students accustomed to traditional teaching methods. Therefore, the teacher should be aware of the preparation and level of students, as well as take into account the objectives of the course and the features of the grammatical material in order to organize the lesson in a more productive way. Let us consider the use of deductive and inductive methods in teaching the tenses of the verb of the Simple group and analyze the advantages and disadvantages of both methods.

With the deductive approach, a rule is first studied, usually formulated using specific grammatical terms. For example, Present Simple denotes an ordinary, repetitive action, well-known truths, or an action that occurs on a regularly basis. Then students find this grammatical phenomenon or structure in sentences or in the text, name its form, explain in what meaning it is used in this context. These can be individual sentences, examples from fiction or short stories, short dialogues. Below are the sentences with verbs in the form of Present Simple:

- *He works at the college.*
- *Water boils at 100 °C.*
- *The train arrives at 2 o'clock.*
- *He goes to the gym every day*

Then the substitution exercises are performed by analogy with the sample. Then there is a transition to transformation exercises in accordance with the rule. Translation exercises are completed from the native language into English language. Students also compose situational texts, dialogues, interviews using the studied time, which provides an opportunity to use the studied structures in discourse. Thus, the lesson conducted based on the deductive method consists of three stages: presentation, practice and production (PPP).

Undoubtedly, this method has its advantages, as it implements the principles of consciousness, science, contributes to the formation of educational skills and abilities, can be used in independent work. It should also be noted some disadvantages: the difficulty of understanding grammatical terminology, grammar is often practiced on "faceless" sentences, outside of a coherent speech context. As a result, students correctly formulate the rule, explain the use of this time by examples, but find it difficult to use the acquired skill in speech.

Let us also consider the inductive method of teaching (from the individual to the general), in which students formulate a rule themselves, trying to comprehend a grammatical phenomenon through the context, determine its form and find out the patterns of its use. This approach has received the term Guided Discovery. Proponents of this method (Harmer, Scrivener) believe that students perceive the material provided to them better if they analyze the phenomena and formulate the rule themselves.

The lesson consists of the following stages. First, a text or a set of sentences is given, where a new grammatical phenomenon often occurs, including in contrast with already known grammatical phenomena / forms /structures. For example: Present Simple – Past Simple.

*He goes to the gym every day. – He went to the gym yesterday.*

It is appropriate to use various hints in the text, for example, underlining or highlighting in different colors the features of the form of this grammatical structure, selecting such sentences where the context of using this structure is so unambiguous, clear and transparent that students will be able to easily deduce the rule.

For example:

*Yesterday she got up at 7 o'clock and had a big breakfast. She walked to work, which took about half an hour. She started work at 8 o'clock. When she came home she cooked a meal.*

The teacher can use concept-checking questions – CCQ to analyze the concept of the context:

*Did she get up at 7 yesterday? – Yes, she did.*

*Did she walk to work today? – No, she didn't.*

*Does the text refer to the present or past? – To the past.*

Next, students formulate the rules of the grammatical structure, corrected by the teacher. The teacher can use an already formed rule with missing terms:

*Present Simple or Past Simple.*

*... is used to express an action which took place in the Past.*

*... is used to express habitual, repeated action.*

After passing through the three-time forms of the Present Simple Tense, exercises are conducted to consolidate all three times.

At the final stage, various types of work are carried out to consolidate the material covered and use it in speech: drawing up dialogues, description of the picture, presentations, discussions on the proposed topics. Tests are conducted to check the material presented, correct the spotted errors. Then you can repeat the test (TTT – test, teach, test).

The inductive method has certain advantages, as it provides the implementation of problem-based learning and stimulates independent language observation. This method develops a guess based on the context and contributes to better memorization of the material being studied. However, it should be noted that not all linguistic phenomena can be explained inductively and learning by this method can take a lot of time. The choice of one or another method is determined by several factors: learning objectives, the level of students, the nature of grammatical material. While explaining the tense forms of the verb, in particular the Simple Tense, it is advisable to use the inductive method, since this material allows for the derivation of the rule by context by the students themselves. The use of the inductive method is possible in the classroom, where students already have some basic knowledge of English, which will allow using the "Guided Discovery" method of learning. The lesson conducted using this method will be interesting and rich, contributing to the development of language guesswork and observation among students.

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## TRANSLATION ISSUES IN THE PRAGMATIC ASPECT

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***Annotation.** The article studies the issues related to translation by the translator and the establishment of a pragmatic attitude of the receptor to the transmitted communication, which affects the creation of the image and content of the translation. The author points out the need to reproduce the pragmatic potential of the original and the desire to provide the desired effect on the translation receptor, which he calls the pragmatic aspect or pragmatic translation. The issues of the specifics of translation studies in a bilingual language situation in the process of oral and written communication are also discussed. Transfers are distributed according to different criteria: by the completeness of the transmitted content, by the target and thematic orientation. The author gives the categories of translation: technical, literary (artistic), economic, medical, legal.*

***Key words:** translation, pragmatic attitude, receptor, pragmatic translation, content, technical, literary (artistic), economic, medical, legal.*

There is no secret that pragmatic aspect in translation is considered to be the most difficult issue to overcome and transfer since literal straightforward translation not only cannot render true sense of translation but also it can distort the meaning.

Thus, pragmatic aspect is mainly managed with Pragmatic adaptation of the content - bringing the content into a form that facilitates its perception as much as possible and contributes to the provision of an appropriate communicative effect.

Pragmatics of translation is a wide notion which covers not only pragmatic meaning of a word, but some problems connected with various levels of understanding by speech acts communicants of certain meanings or messages, depending on linguistic

or paralinguistic factors, that is, background knowledge. A well-known linguist V.N. Komissarov points out that pragmatic aspect of translation should be considered from three points. One of them is conveying pragmatic meaning of words. This point chiefly pertains to the translation of national realia and equivalent lacking words that is, various names.

The term pragmatic meaning of a word is not yet fully investigated. But some linguists point out that the pragmatic component of the word meaning, which is realized in various kinds of emotive and stylistic connotations, is individually-occasional or collectively used meanings. They reflect the conditions of a language unit use, the conditions such as situation and place of communication, subject and purpose of communication; social, ethnic, and individual peculiarities of communicants, their attitude towards one another. Irrespective of the fact whether pragmatic aspects are singled out into a certain type of a word meaning or whether it is considered among other components of its meaning, pragmatic meaning, which is fixed in a word, plays an important role and its retention ensures complete communicative adequacy of translation to the original.

Pragmatics as a linguistic term means the analysis of language in terms of the situational content, within which utterances are made, including the knowledge and beliefs of the speaker and the relation between speaker and listener. Pragmatic information is actualized in translating the equivalent–lacking lexical units, first of all personal names, geographical names, national realia by way of transcription and transliteration.

The importance of adaptation is highlighted with the following statement by Vinay, Darbelnet: “If a translator systematically refuses to adapt, it will eventually lead to a weakening of a target content”. [6; 33] This point of view provides a clear understanding of adaptation as an unavoidable part of the translation process which aims at strengthening the connection between source and target contents and between source and target audiences, too.

Now that the notion of pragmatic adaptation is defined, we need to find out what source content criteria imply the use of pragmatic adaptation. Albrecht Neubert in his classification puts forward the following criteria:

“Stylistic aspects of a source content” (stylistic devices used in the source content, i.e. metaphors, epithets, personifications, similes, etc.)

“Expressive elements of a source content” which can be understood as various parameters of a source content register. Michael Halliday set the definition of the content register forth: ‘these are the linguistic features which are typically associated with a configuration of situational features of formality and informality – with particular values of the field (total event of communication), mode (the function of a content) and tenor (the type of interaction)’. [7, p 124]

Syntactic construction’ which provides special emphasis on a certain part of a source content (e.g., inversion). Extra contentual factors of a source content (time, functions, place of communication where a source content is produced) When pragmatic adaptation is applied to a particular part of a given content, a translator as one (or several) uses it of the following translation techniques of pragmatic adaptation:

- omission; (translator omits unnecessary information)
- expansion (explication of source information);
- exoticism’ (substitution by rough equivalents);
- updating (substitution by modern equivalents);
- creation (a target content preserves only the most essential information of a source content).

Andrew Chesterman and Emma Wagner consider pragmatic adaptation a strategy of translation and propose the following strategies of pragmatic adaptation “Explicitness change”.

This strategy helps to transform the information of a source content to make it more explicit or implicit. When the implicit information given in a source content is not sufficient for the target audience, a translator can make it explicit in a target content. A translator can, vice versa, omit some unnecessary information provided

in a source content, which would be an implicated, if the target audience is expected to deal with it.

Interpersonal change is a kind of strategy, applied, to give an example, when translating business letters, helps to change the level of formality, the degree of involvement and sense of a source content author.

Illocutionary change is strategy involves a change of moods (e.g., indicative to imperative), changes of the structure of rhetorical questions and exclamations, variation between direct and indirect speech.

Coherence change may include various types of the source content structure alterations (e.g., paragraphing). Partial translation is using when translator can reduce a source content to a summary.

Visibility change, when translators undertake changes in the level of the author's presence in the content. Alternatively, translators make themselves visible by adding footnotes, bracketed comments, etc.

Trans editing involves radical re-writing of a source content. To recap, pragmatic adaptation can be applied to some isolated parts of a source content which block target reader's proper understanding of this content. In this case, pragmatic 94 adaptation acts as one (or several) of enumerated translation techniques. If a source content, translated as is, represents a general difficulty for understanding, pragmatic adaptation can be opted for by a translator as a strategy applied to the source content as a whole.

We are talking about changing the content of the content, introducing additional information in the form of explanations, comments, or omitting information that is incomprehensible to the recipient of the translation, which is communicatively irrelevant, or replacing incomprehensible information with more understandable information, etc. Genre affiliation of the content largely affects the degree of its pragmatic adaptation. For example, scientific and technical style is characterized by fewer discrepancies in different languages, scientific and technical contents need less adaptation.

The method of pragmatic adaptation of the content include:

Explication of the information implied in the original through appropriate additions and explanations in the TL.

Additions and explanations are used when translating into Russian:

— in translating geographical names, it should be mentioned precise information  
For example, Alberta is the Canadian province of Alberta.

— in translating the names of printed media, institutions the nominative point should be added

For example, *Newsweek is a Newsweek magazine.*

— if necessary, provide an understanding of the names of the realities associated with the peculiarities of the life and life of a foreign-speaking team.

— For example: “For dessert we got Brown Betty which nobody ate (Salinger)”  
“They served red Betty for dessert, pudding with molasses, but no one ate it.”

— at the mention of the structures of state power.

For example (from Russian to English): when mentioning the State Duma in the English content, it is appropriate to make an explanation since by explanation audience to whom these terms are unknown could get into it:

State Duma, the lower house of the Russian Parliament. For the same purpose, page footnotes or notes to the whole content of the translation can be used.

The communicative orientation of the content usually corresponds to the type of utterance. For example, informing is provided through the use of declarative sentences, motivation - through the use of the incentive mood. However, there are exceptions to this rule that you should pay attention to at the stage of content analysis. For example, “I love apples” could mean “Give me an apple”. In normal situations, these statements have a different communicative orientation. But in some speech situations, the first statement may sound like a request. This should be taken into account when translating.

The main requirements for the result of the translation are:

— the content of the translation and the original must perform the same dominant function;

— the communicative effect produced by the translated content on its recipient should be approximately the same as the communicative effect produced by the original content.

Since each group of communicants belongs to a foreign language group, i.e. its own culture, therefore, has its own mentality, national psychology and worldview. The main pragmatic setting, according to Schweitzer, is to take into account differences in the perception of the same content by speakers of different cultures, participants in different communicative situations. Here differences in initial knowledge, representations, behavioral norms affect.

In the process of interlingual communication, the translator (who is not only bilingual, but also bicultural) has the opportunity to take into account the characteristics of potential recipients of the target content when creating the translation.

The task of ensuring adequate perception of the content by the recipient of the translation is most successfully solved when the translator has managed to reliably determine which particular group of readers (listeners) will act as the recipient of the translated content. In some situations, the translator knows this for sure. If he does not know this, then he tries to establish who the original content is intended for and tries to focus on the corresponding group of recipients of the translation.

Eugene Nida, speaking about the adequacy of the translation, notes that when the question arises which of the two translations of one content is better, the answer to this question should be sought in the answer to another question: “Better for whom?” [5]

It is obvious that car maintenance instructions are intended primarily for motorists and car service workers and should be clear to them. A scientific article on ways to improve soil fertility in central Russia, obviously, will be of interest only to specialists - agronomists.

The implementation of a pragmatic impact on the recipient of information is an essential part of any communication, including interlingual communication. Establishing the necessary pragmatic relation of the Translation Receptor to the



transmitted message largely depends on the choice of language means by the translator when creating the translation content. The influence on the dissertation and result of the translation process of the need to reproduce the pragmatic potential of the original and the desire to provide the desired impact on the translation receptor is called the pragmatic aspect or pragmatics of translation. The translator, acting at the first stage of the translation process as the Receptor of the original, tries to extract the information contained in it as fully as possible, for which he must have the same background knowledge that the “native speakers” of the source language have. The successful performance of the functions of an interpreter therefore presupposes a comprehensive acquaintance with the history, culture, literature, customs, modern life and other realities of the people who speak a foreign language. Like any Receptor of the original, the translator has his own personal attitude to the transmitted message. As a linguistic intermediary in interlingual communication, the translator should strive to ensure that this personal attitude does not affect the accuracy of reproduction in the translation of the original content. In this sense, the translator must be pragmatically neutral. 257. In the second step of the translation process, the translator seeks to ensure that the original message is understood by the Translation Receptor.

It takes into account that the Translation Receptor belongs to a different language community than the Original Receptor, has different knowledge and life experience, has a different history and culture. In cases where such discrepancies may prevent a full understanding of the original message, the translator eliminates these obstacles by making the necessary changes to the translated content. The absence of the necessary background knowledge of the Translation Receptor makes it necessary to explicate the implied information, to make appropriate additions and explanations to the content of the translation. This happens especially often in connection with the use of proper names, geographical names and names of various cultural and everyday realities in the original. When translating into Russian geographical names such as American Massachusetts, Oklahoma, Virginia, Canadian Alberta, Manitoba or English Middlesex, Surrey, etc., as a rule, the words

“state, province, county” are added indicating what these names mean, in order to make they are understandable to the Russian reader: the state of Massachusetts, the province of Alberta, the county of Middle Sex, etc. Adding explanatory elements may also be required when transferring the names of institutions, firms, publications.

There are contents that, albeit not immediately, find all of humanity as their addressee, for example, fiction. Here the translator has to focus on the so-called “average recipient of the content” Komissarov: “The best results were achieved by translators who were close in their views and creative manner to the author of the translated content.” However, he also notes that: “in modern conditions, a translator is required to be able to translate contents of various authors and trends in a qualified manner. He needs the ability to transform.” [7]

Translation studies is the science of translation as a process and as a content, which studies the problems of translation, the main stages of its formation and development, its theoretical foundations - general and particular, the methodology and technique of the translation process, the formation of translation skills and the ability to transfer information from one language to another in oral and writing. Thus, the main specificity of translation studies is the study of speech and language activity in a bilingual situation, when the process of communication (oral and / or written) is carried out by means of two languages.

A written translation includes many characteristics; therefore, its types are divided into categories. There is a distribution of translations in different criteria:

- on the completeness of the content transmitted,
- on the purpose of translation;
- on his thematic orientation.

Moreover, written translation includes the following categories:

- Technical. Features of the written translation of technical documentation provide for the exact interpretation of terms, units of measurement, technical abbreviations, designations in the drawings.
- Literary or so-called artistic translation. Such work should not only convey the meaning of the content, but also its character, genre, style. This is practically the

creation of a new literary work. Artistic translation includes the transfer of prose, poems, songs.

- Economic. The prerequisite is the presence of a profile knowledge or experience in this area. This is not only knowledge of the terminology of the original language, but also a constant study of the global economy.
- Medical. One of the most complex species. To translate a medical document, you need to perfectly own medical terminology, be able to use profile directories and dictionaries.
- Legal. The main problems of such work are a specific design and excellent ownership of the concepts of a legal system of different states.

Implementation of pragmatic impact on the recipient information is the most important part of any communication in including interlarded. Establishing required pragmatic translation receptor relationship to transmitted message largely depends on the choice translator of language means when creating the content of the translation. Impact on the dissertation and result of the translation process need to reproduce pragmatic potential Original and desire to ensure the desired impact on translation receptor is called pragmatic aspect or pragmatic translation.

When pragmatic adaptation is applied to a particular part of a given content, it's used by a translator as one (or several) of the following translation techniques of pragmatic adaptation: "omission" 'expansion' (explication of source information); 'exoticism' (substitution by rough equivalents); "updating" (substitution by modern equivalents); "creation" (a target content preserves only the most essential information of a source content). Andrew Chesterman and Emma Wagner consider pragmatic adaptation a strategy of translation and propose the following strategies of pragmatic adaptation "Explicitness change". [1, p.124-127] This strategy helps to transform the information of a source content to make it more explicit or implicit. When the implicit information given in a source content is not sufficient for the target audience, a translator can make it explicit in a target content. A translator can, vice versa, omit some unnecessary information provided in a source content, which would be an implication, if the target audience is expected to deal with it.

“Interpersonal change”. This kind of strategy, applied, to give an example, when translating business letters, helps to change the level of formality, the degree of involvement of an author.

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## SPECIFIC CHARACTERISTICS OF METHODOLOGICAL COMPETENCE IN TRAINING FUTURE SPECIALISTS

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**Abstract:** *the article presents the specific features of methodical competence in the training of future specialists, and the integral and continuous connection of professional, technological and methodical competence in the training of future specialists in the educational process is described. Independent and free thinking, improvement of acquired knowledge is given to learners.*

**Key words:** *competence, technology, methodical competence, methodical system, form, method, information and communication technologies.*

### I. INTRODUCTION.

As in all fields, in the educational system, the results of scientific development, as well as the introduction of modern information and communication technologies, lead to rapid updating of knowledge in various fields of science. Today, when the amount of information is increasing, learners need to use different forms of educational literature in order to quickly acquire new knowledge. The content of the educational literature should provide students with the ability to think independently and freely, to improve the acquired knowledge, to search for new knowledge in various educational literature.

The perspective of our country, the effectiveness of the work in the field of building a democratic society based on the laws of the market economy is inextricably linked with the problem of training competitive specialists, forming a well-rounded generation at the level of developed countries.

### II. LITERATURE ANALYSIS AND METHODOLOGY

It is necessary to pay special attention to the general professional and methodical preparation of the expected result during the training of future specialists

in educational institutions. Future specialists should be formed on the basis of competencies specified in state educational standards and qualification requirements.

N.A. In Muslimov's literature "Basics of Pedagogical Competence and Creativity", methodical competence is methodologically rational organization of the pedagogical process, correctly defining the forms of educational or educational activity, being able to choose methods and tools in accordance with the purpose, being able to use methods effectively, tools It is given that it consists of successful application.

At the same time, N.L. Stefanova gives the following content to the concept of "educational-methodological system": "it is a model that reflects various components of the educational process, including goals, content, methods and forms, means and planned educational results" [Stefanova N.L. Theoretical foundations of the development of a methodical training system for a teacher of mathematics at a pedagogical university: Dissertation abstract. doc. diss. - SPb., 1996].

T. A. Voronenko in determining the methodical system of education [Voronenko T. A., N.I. Rijova Informatics teaching methodology. Special techniques: A textbook for students. - St. Petersburg: Ros. ped. un-t, 1997] suggests that:

- 1) identifying goals outside the system;
- 2) expanding the set of methodological system elements by adding the following elements:
  - expected results from education;
  - technologies for choosing educational content, methods, forms and tools;
  - technologies for establishing connections between the elements of the methodological system.

### **III. RESULTS AND DISCUSSION**

The role of highly qualified specialists is extremely important in the reforms carried out in our republic. The role of innovative technologies in higher education institutions in the formation of technological competence of future teachers is



increasing. The use of remote technologies has expanded the possibilities of modern education. Today, it is possible to get an education from anywhere in the world using modern information and communication technologies (ICT). After all, even if traditional education maintains its position, distance learning technologies are becoming popular day by day. The development of the socio-economic policy in accordance with the development of the republic and the market economy requires the improvement of the content of professional education, which meets the requirements of the time and ensures the effectiveness of the processes of training, retraining and upgrading the qualifications of highly qualified pedagogues. This, in turn, created the need to update the content of continuous education, which serves to form the professional competence of specialists, to introduce innovative forms and methods of teaching, modern information and communication technologies into practice.

On this basis, a number of measures are being implemented in higher education institutions today to improve the quality of education, to ensure the coherence and continuity of educational stages. It is known that modernizing the educational process in higher education institutions, developing the technological competence of teachers in improving the quality of the system of training pedagogues, equipping them with modern professional knowledge, qualifications and skills in the field, independent of scientific and technical innovations, creative use and the development of the ability to solve prospective tasks are important requirements. In our country, we have achieved the creation of the base of opportunities necessary for raising a mentally mature, spiritually healthy, harmonious generation.

The main factor in improving the effectiveness of education is the implementation of educational technologies, especially information and communication technologies, the rational use of multimedia resources, the result of which is the growth of the student's ability to know. The advantage of information and communication technologies is that they teach students to think independently, expand their worldview, listen and observe, strive and search, develop thinking, and

work independently. Teacher and student work together. The teacher, as a manager, shows different directions to the student. The student is active in the course of the lesson and thinks independently.

In this, ensuring the interdependence, coherence and continuity of educational stages; introduction of advanced pedagogical technologies for the organization of the educational process in higher education, ensuring the quality of educational and methodological complexes in this regard, constantly improving the literacy of professors and teachers in the use of computers and the Internet in the introduction of pedagogical technologies to go further development of the provision of the educational system with information resources and modern educational literature; it is important to study advanced foreign experiences in these areas. Therefore, in the current period, in order to increase the effectiveness of education, develop the level of technological competence of future specialists, and direct the teaching staff to innovative activities, first of all, the implementation of innovative education and information and communication technologies in the educational process in higher education institutions, assimilation of advanced foreign experiences and targeted orientation were identified as urgent tasks.

In our republic, all links of the educational system are provided with new scientific literature. They are introducing innovations in their activities based on the requirements placed on teachers. In the process of educating the young generation, along with the use of science, technology and advanced experiences, modern pedagogical technologies are effectively used. This process increases teachers' sense of responsibility. The main basis of pedagogical technology depends on the technologies chosen by the teacher and the student to systematically and cooperatively achieve a guaranteed result based on a clear sequence. The main features of pedagogical technologies are design, implementation and guaranteed result. The main goal of interactive methods is to encourage students to take active action, involve them in the lesson, and teach them to work cooperatively. Such methods include: "Zinema-zina", "Charkhpalak", "Boomerang", "Problem", "Resume", "FSMU", "Fan", "Written discussions", "Venn diagram", "Concept

analysis", There are several methods such as "Dialogue", "Three by four", "Blitz survey" and so on. Currently, with the creation and development of educational materials and the possibility of displaying information on the screen, the use of the achievements achieved in the educational process is becoming widespread. The application of modern information technologies to the educational process creates an opportunity to widely use new educational methods in education along with economic efficiency. Classes are becoming more and more popular in special specialized classrooms, such as classrooms equipped with computers, televisions, and VCRs. It is even interpreted as a separate video method. In particular, the introduction of the computer into the educational process allows the widespread use of the video method, which is able to successfully perform didactic functions. As a result, it is also called complex didactic technology. In this:

- providing students with complete and reliable information on the subject, event, process, activity they are studying;
- increasing the role of visualization in the educational process;
- satisfying the wishes, demands, needs, and interests of students;
- establishing effective communication related to testing the knowledge and skills of the teacher;
- provides an objective report on student learning, full and continuous control.

In the organization of modern education, the pedagogue's use of advanced pedagogical technologies, assimilation of interactive methods, and practical implementation of technical and technological tools are of great importance. In a short period of time, it is necessary to deliver certain theoretical knowledge to students, to create skills and competencies in them in relation to certain activities, as well as to control the activities of learners, to assess the level of knowledge, skills and competencies acquired by them. requires high pedagogical skills and a new approach to the educational process. Innovations in the educational process, advanced pedagogical technologies, news, interactive methods of teaching do not enter the educational process by themselves with orders and instructions from above. This is a process that depends on the activity of the teacher and his motivation.

**IV. CONCLUSION**

In the educational process based on modern information technologies, it fulfills the tasks of helping the main student to easily use the given complex educational information, creating opportunities for independent educational activities of students. Taking this into account, it is necessary to carry out scientific work on the planning of the educational process and the work of the teacher in the modern education system in a wide range, and this shows its effectiveness.

Today's modern education system requires the pedagogue to activate the influence of the individual relationship between the teacher and the student and the possibilities of modern information technologies. The active use of modern information and telecommunication technologies in the educational process leads to a certain change in the place, role and pedagogical activity of the teacher in the educational process. Currently, the main focus is on creating a model of the educational process based on modern information technologies and research on the problems of creating electronic textbooks and training manuals based on multimedia technologies.

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## IMPROVING PROFESSIONAL COMPETENCE OF PRESCHOOL EDUCATIONAL ORGANIZATIONS BASED ON CREATIVE APPROACH

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**ANNOTATION** This article talks about the importance of developing the creativity of pedagogues in preschool educational organizations.

**Key words:** personal life, self-awareness, citizenship, professional and ethical aspect, behavior, teacher's skill, creative activity, creativity.

### INTRODUCTION

One of the most important features of the content of education is the vital self-awareness of a person, which is characterized by recognition of his personal life and activity as a subject of the environment in which he lives. Civic, professional, and moral self-awareness is essential to human development. The educational process will give effective results only if the teacher teaches students to self-educate, that is, to work consciously on themselves. Making students learn self-education methods depends on the teacher's skill and proper organization of educational activities. Students usually imitate the behavior of their loved ones, sometimes their teachers. That is why the teacher should be able to instill trust and love in the heart of the student, relying on his pedagogical skills. Students observe how the teacher behaves in class and in life, how he dresses, behaves, interacts with people. This is also an effective tool for self-education of students and an important way to increase their social status. Under the direct supervision of the teacher, during the education and upbringing process, during recreation, community work, students develop skills in self-education methods, these methods encourage students to take initiative and think independently.

**LITERATURE ANALYSIS AND METHODOLOGY**

The concept of "creativity" reflects cultural diversity. For Westerners, creativity is generally considered a novelty. They emphasize that creativity is based on unconventionality, curiosity, imagination, sense of humor, and freedom (Murdock, Ganim, 1993; Shternberg, 1985). Easterners, on the other hand, understand creativity as a process of rebirth of goodness (Hui, Sternberg, 2002; Rudovich, Hui, 1997; Rudovich, Yue, 2000). Although Westerners and Easterners have different views on creativity, representatives of both cultures highly value this quality and its possession (Kaufman, Lan, 2012). Many pedagogues-educators believe that they do not have the ability to be creative. This can be justified for two different reasons:

- firstly, most pedagogues-educators cannot adequately explain what the concept of "creativity" really means;
- secondly, they are unaware of what qualities are directly reflected in the basis of creativity.

**RESULTS**

In order to teach students to think creatively, to form creative thinking in them, first of all, the educator must be a creative, creative person. After all, if he himself does not have the qualities of creativity, then how can a student (student) encourage children to think creatively. It is not necessary for the teacher to be creative and creative or not, but to organize lessons in the spirit of creativity and creativity, to try new ideas in the educational process. In the lessons, the educator moves in the following 4 directions according to the "creativity road map", and the actions in them are considered signs of creativity of educators (Patti Drepreau):

- Demonstrate creative thinking skills;
- To be able to use strategies that encourage students to master academic subjects with interest;
- Innovative approach and creative approach to finding solutions to pedagogical issues;

The creative potential of a teacher is a multi-level process and it is based on the following principles. The priority principles of the teacher's creativity potential are reflected in the bright manifestation of creativity: 2. Individual characteristics of the person and in life activities 3. Achieving individuality 4. Integrity, consistency, systematicity and capacity building 5. Creative orientation and problem-solving character

### **DISCUSSION**

A teacher-educator does not become a creator by himself. His creative ability is formed over a period of time through consistent study and work on himself, and it gradually improves and develops. As with any specialist, the foundation for creativity of future pedagogues is laid in the student years and is consistently developed in the organization of professional activity. It is important that the pedagogue directs himself to creative activity and is able to organize this activity effectively. In organizing creative activities, the teacher should pay special attention to the creation of creative products of a problematic nature. Self-creative activation is not whether or not a person is creative and creative in the full manifestation and development of his capabilities in creative activities, but organizing activities in the spirit of creativity, creativity, new ideas it is necessary to strive to try in the educational process.

Self-creative activation is not whether or not a person is creative and creative in the full manifestation and development of his capabilities in creative activities, but organizing activities in the spirit of creativity, creativity, new ideas it is necessary to strive to try in the educational process. According to the "creativity road map", the classes move in the following 4 directions, and the actions in them are listed as signs of creativity of pedagogues (Patti Drapeau):

- 1) demonstration of creative thinking skills;
- 2) encouraging to study with interest
- being able to use strategies;
- 3) innovative approach and finding solutions to pedagogical issues
- creative approach;

- 4) expected result

## **CONCLUSION**

It is known that among the qualities and characteristics that form certain abilities of a person, some play a leading role, while others play an auxiliary role. Characteristics of a person related to mutual exchange of ideas play a leading role in pedagogical activity. First of all, perceptive, i.e., characteristics related to the field of perception (observability is the most important of them) play a leading role. allows to make a correct assessment of the condition of the class team and, in particular, of the condition in this pedagogical situation. As a component of the characteristics of the teacher's personality related to the exchange of ideas, it is possible to count the readiness to empathize, that is, to understand the mental state of students and feel sorry for them. A necessary condition for this is love for children.

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## THE ROLE OF MANAGEMENT IN ENTERPRISES THAT HAVE IMPLEMENTED A QUALITY MANAGEMENT SYSTEM

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*Annotation: It is necessary to inform all the employees of the organization about the importance of fulfilling the requirements of consumers and the requirements of laws and regulations, to determine the organization's policies and goals in the field of quality, to conduct an analysis by the management, to prove their commitment to the development, implementation and continuous improvement of the quality management system. It is important to provide and provide available resources.*

*Key words: Quality management, management system, quality management, audit, internal audit, external audit, periodicity of analysis, resource, competition, process, system.*

The top management of the organization should inform all employees of the organization about the importance of the development, implementation and continuous improvement of the quality management system, the requirements of consumers, as well as the fulfillment of the requirements of laws and regulations, the determination of the organization's policies and goals in the field of quality, and the management's analysis , it is important to provide and provide the necessary resources.

The obligations of the management should be specified in the quality policy signed by the head of the enterprise, in the documents defining the goals in the quality field, in the quality manual, in the documents showing the results of the analysis of the quality management system by the top management. The responsibilities of the management are confirmed by the creation and operation of

the quality management system, the allocation of necessary resources to achieve the efficiency and effectiveness of the processes [1].

Adapting to customer requirements, the management of the organization must ensure that their requirements are identified and fulfilled in order to increase customer satisfaction. The organization depends on its customers, so it must understand their current needs, fulfill their requirements and strive to satisfy their needs. The management should ensure that the activities of the organization are aimed at satisfying the demands, needs and desires of consumers.

In the process of marketing activities, the management must organize activities to fulfill consumer requirements, taking into account the research of consumer requirements, requests and needs, determining consumer requirements when signing contracts for product supply, and taking into account consumer requirements when forming project input data during product design and development. The organization must have a system for collecting, studying and analyzing data from all sources that provide evidence about the level of customer satisfaction. Customer satisfaction criteria and evaluation methods should be developed. This information should be used in developing organizational goals and planning product quality [2].

Policy in the field of quality. The top management of the organization should include the commitment to the quality policy, compliance with the organization's goals, satisfaction of the requirements and continuous improvement of the quality management system, setting the goals in the quality area and creating a basis for analysis, communicated to the employees of the organization and being understandable to them, its suitability is always must ensure that it is analyzed in order to maintain it.

One of the main tasks of quality management is to define the goals that the organization is working to achieve and developing [3].

For example, increasing product sales is a goal for the marketing department.

The goals should be clear not only to the employees of the organization, but also to other interested parties.



Objectives for lower levels of management should be defined in the form of specific tasks that must be completed by specific employees in specific departments within specified time periods [4].

In the development of quality policy, top management must take into account the potential for future improvements necessary for the success of the organization, the planned level of customer satisfaction, the opportunities for professional growth of the organization's employees, the needs and desires of all interested parties, the necessary resources, the contribution of suppliers and partners. Continuous quality assurance of products and services should be the main focus of the organization's quality policy. The quality policy must be signed by the head of the enterprise. Management must ensure that the policy is understood, implemented and supported at all levels. It is important to communicate the documented quality policy to all employees of the enterprise.

Objectives in planning and quality. Top management must ensure that quality objectives, and therefore those necessary to meet product requirements, are set in the appropriate departments of the organization and at the required level. Quality objectives should be measurable and aligned with the quality policy. On the basis of the adopted quality policy, the top management of the organization should develop clear goals and ensure the management of activities to achieve the goals that lead to the improvement of the organization's performance [5].

In developing the organization's goals, the top management should consider the organization's current and future needs and consumer desires, relevant information on the results of the organization's management, quality indicators of products and processes, the level of satisfaction of all interested parties, the results of self-assessment of the organization's activities, the results of the assessment of competitors, control to evaluate the activity it is necessary to take into account the determination of points, the possibilities of improving products, processes, management system, and the necessary resources to achieve the goals set ahead.

In order for the organization to achieve its stated goals, top management must ensure that quality goals are set for departments and at appropriate levels that are

aligned with the organization's goals. Responsibilities must be clearly defined for the achievement of set goals. Organizational goals must be measurable. This means that they are characterized by either specific values or projected performance that is not represented by a numerical value. Objectives in the field of quality are organizational quality programs, quality improvement activities, or other program documents traditionally developed by the organization, which include quality improvement, technical restructuring of the enterprise, introduction of advanced technologies, improvement of staff skills, improvement of interaction with suppliers, satisfaction of consumer requirements. can be specified in the form [6].

Quality management system planning. Management must plan the quality management system to achieve quality objectives, and ensure that the integrity of the quality management system is maintained when planning and making changes to it. The management should plan work on the creation of the enterprise quality management system in accordance with the requirements of the international standards of the ISO 9000 series for the enterprise quality management system. When analyzing the quality management system, the management should take into account the changes in the structural structure, organization, and processes, and make decisions on the evaluation of the effectiveness of the quality system. Decisions made on the development of the quality management system, the implementation of changes in the current system, must guarantee the integrity of the quality management system by eliminating contradictions with the goals and objectives of the organization [7].

Responsibility, authority and information sharing. Responsibilities and powers Management should ensure that responsibilities and powers are defined and communicated to the organization's employees. The responsibilities and authorities necessary to achieve the defined quality objectives should be defined by top management and communicated to all employees, and the procedure for employee interaction should be established when the quality management system is in operation. Employees engaged in quality-affecting activities should be provided with responsibility and authority, taking into account the principle of involvement

of enterprise workers in the quality management system. Management must ensure that all stakeholders at each level of the organization are informed of their responsibilities and authority. Information about responsibilities and authorities must be communicated to employees in order to effectively and efficiently implement and maintain the quality management system.

Responsibilities, powers, and interaction between departments and responsible persons are defined in the structural structure of the organization, orders and orders of the top management, regulations on structural units, job instructions, quality manual, quality system documents, work performance instructions, and other documents of the organization. In the distribution of responsibility and authority, the order of responsibility distribution and transfer of responsibilities to the organization's employees should be provided for the achievement of the organization's goals in the field of quality [8].

Management representative. The top management of the organization must appoint a representative of the management from among the management of the organization, and this representative, regardless of other tasks assigned to him, must implement the development of the processes necessary for the quality management system and ensure that they are kept in working condition, and provide reports to the top management of the organization about the operation of the quality management system and the need to improve it. should be responsible and empowered to help ensure awareness of customer requirements at all levels of the organization.

In order for the quality management system to work efficiently and effectively, senior management must provide a representative of senior management and, regardless of other tasks assigned to him, give him the responsibility and relevant authority for the following: to ensure the development, implementation and maintenance of quality management system processes in accordance with the requirements of ISO 9001, providing reports to senior management on the operation of the quality management system, as well as the needs related to its improvement, informing the management of the organization about consumer satisfaction, helping to ensure the study and understanding of consumer requirements throughout the

organization, informing interested parties about consumer complaints and objections, quality management to communicate with external organizations on issues related to the system.

The representative of the top management has the authority to carry out the following activities: planning and coordination of work on the creation of the organization's quality management system, leading the activities to determine the processes to be included in the quality management system, their sequence and interrelationship, management, measurement, analysis and improvement of quality management processes to lead activities on quality, organize the development of quality manual, quality system documents and keep them up to date, provide interested parties with quality manual and other documents of quality system, organization of quality record management activities, organization of collection and analysis of information from consumers on product quality and their satisfaction, planning, conducting, and formalizing results of internal audits of the quality management system, internal audits of the quality management system, corrective and preventive measures on the quality of products and processes it is considered necessary to have the ability to prepare receiving operations, organize activities for measurement, analysis and improvement of processes, develop activities for product quality improvement and continuous improvement, communicate with external organizations on quality management issues [9].

Internal information exchange. The management should ensure the development of appropriate processes of information exchange in the organization, in this regard, processes for the effectiveness of the quality management system. It is necessary for the management to ensure the awareness of the employees about the issues of quality management systems, about the goals in the field of quality, about the ways of achieving the set goals and evaluating the effectiveness of their achievement.

The responsibility for providing the company's employees with relevant information is assigned to the representative of the management. Employees of the enterprise should be informed about the quality policy of the organization, the goals

of the organization in the field of quality, the goals of the activities they participate in, their responsibilities and powers, the importance of fulfilling consumer requirements, the effectiveness and efficiency of processes, product quality, and the effectiveness of the quality management system. The content of the data and the form of their delivery to the employees of the organization is determined by the representative of the top management [10].

Analysis by management. The management should regularly conduct an analysis of the organization's quality management system to ensure its continued suitability, uniformity and effectiveness. In such an analysis, it is necessary to evaluate the possibilities of improving the quality management system and the need to make changes, as well as the policies and goals in the field of quality. Analysis by management is considered one of the effective mechanisms of quality system improvement. The analysis of the quality system carried out by the management of the organization should include the assessment of the implementation of the policy in the field of quality and the achievement of goals, the assessment of the effectiveness and efficiency of the quality management system, and the assessment of the opportunities for improving the quality management system.

The frequency of analysis of the quality management system is determined by the management based on the characteristics of the manufactured products, changes in the market situation, the presence of quality problems in the enterprise, the time the quality system has been operating and other factors.

Periodicity of the analysis: it can be once a quarter, once every six months, but it should not be less than once a year.

In order for the analysis to be carried out effectively, it is necessary to develop an analysis procedure. To conduct the analysis, it is recommended to establish a sequence of preparation of initial data by enterprise units [11].

The duties and responsibilities of the departments of the enterprise participating in the analysis and providing information should be determined, the composition and form of presentation of input data on the analysis and proposals for improving the

product, process and quality management system should be established for these departments.

Input data for analysis. Input data for analysis by the management are the results of audits, customer feedback, process efficiency and product conformity, the status of preventive and corrective actions, the implementation of decisions made on the results of previous analyzes of the management system, changes that may affect the quality management system, improvements should include recommendations and information on.

The list of information that should be included in the analysis materials submitted to the management includes the implementation of the decisions made on the previous analysis, inspections, including quality system and external audits of the product, inspections by regulatory agencies, as well as the results of internal audits, the results of product evaluation by consumers, their wishes and needs. satisfaction, consumer suggestions for improving product quality, existence of objections and complaints, dynamics of non-conformities, analysis of their occurrence, measures taken to prevent possible inconsistencies, analysis of inconsistencies that may arise as a result of changes in legislation, market conditions, equipment wear and other factors, the effectiveness of corrective and preventive actions, the requirements established in accordance with the law in contracts and the mandatory requirements of regulatory documents, also, enterprise documents include information on product conformity, including evaluation of technological processes, information on the effectiveness and efficiency of the processes provided for in the quality system, information on the need to change and improve quality management systems [12].

Analysis results. The results of the management's analysis will include actions and decisions aimed at the following: improving the efficiency of the quality management system and its processes, improving the product in accordance with consumer requirements, and providing the necessary resources.

The results of the management analysis should include decisions on improving the quality management system and processes, identifying opportunities to improve

the organization's activities, and increasing the level of product quality in accordance with consumer requirements.

The analysis process should provide a system for monitoring the implementation of the decisions made by the management based on the results of the analysis and evaluating their effectiveness in the subsequent analysis of the quality management system.

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## TECHNOLOGIES FOR TEACHING STUDENTS TO THINK CRITICALLY

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**Abstract:** *The article talks about the interactive learning system. However, some information on didactics is also provided. Interactive education and its didactic potential play an important role in the psychological impact of students on the proper development of education.*

**Key words:** *Critical thinking, psychology, advanced critical thinking, The formation of critical thinking, Dictionary of Grammatical and Repertoire Terms, Critical Thinking and Writing, Ritual thinking.*

Critical thinking is the process of actively conceptualizing, analyzing, and applying information gathered through observation, experience, or reflection. It relies on rationality and logic. Critical thinking is the ability to find solutions based on evaluation, logic, and evidence. Critical thinking is the ability to ask new questions, develop different arguments, and make independent, thoughtful decisions.

The purpose of technology: to ensure the development of critical thinking by interactively involving students in the learning process.

The technology of developing critical thinking includes three stages: difficulty - understanding - reflection (the principle of human thinking, directing it to understand and understand its own forms and conditions).

Critical thinking technology gives the student:

Improving the efficiency of information perception;

Increase interest in both the studied material and the educational process itself;

Critical thinking ability;

Ability to take responsibility for one's own education;

Ability to work cooperatively with others;

Improving the quality of students' education;

Willingness and ability to be a lifelong learner.

Critical thinking technology gives the teacher:

Ability to create an atmosphere of openness and responsible cooperation in the classroom;

The ability to use the educational model and system of effective methods that help to develop critical thinking and independence in the educational process;

Become practitioners who know how to competently analyze their activities.

The technology of critical thinking implies equal cooperation both in terms of communication and in terms of the construction of knowledge born in the educational process. Working in the mode of critical thinking technology, the teacher ceases to be the main source of information and turns learning using technology techniques into a collaborative and interesting search.

Critical thinking is a natural way of interacting with ideas and information, a fulcrum. We face the problem of information selection. Skills are needed not only to possess it, but also to critically evaluate, understand and apply it. When students receive new information, they need to learn to look at it from different perspectives, make judgments about its importance and accuracy.

In foreign language classes, it is necessary to attract information that the student should know that learning a foreign language is more related to his personality and interests, and not to the methods and textbooks given by the teacher. Technology of developing critical thinking - stages and methodological techniques

Technological stages	Teacher activities	Student activities	Used techniques and methods
Stage I Activity stage: - activation of existing knowledge; - arouse interest in	It is aimed at testing the existing knowledge of	The student "remembers" (makes assumptions) what	Making a list of "Known Information": predicting the

receiving new information; - setting the student's educational goals.	students on the studied issue, increasing their activity, and encouraging them for further work.	he knows about the studied issue, organizes information before learning new material, asks questions he wants to get answers to.	story by keywords; material systematization (graphic): clusters, tables; true and false statements; confusing logic chains; brain attack; problem questions, "thick" and "thin" questions, etc.
Stage II Understanding the content (understanding the meaning): - getting new information; - correcting the educational goals set by the student.	Maintaining interest in the topic while working directly with new information is aimed at gradually moving from "old" knowledge to "new"	The student reads (listens) the text using active reading methods recommended by the teacher, makes notes in the margin or takes notes to understand new information	Active reading methods: "insert"; fish bone; "ideal"; keeping various records; looking for answers to the questions asked in the first part of the lesson
At the stage of understanding the content, direct contact with new information (text, film, lectures, paragraph materials) is established. Work is done individually or in pairs. Group work should have two elements—individual research and brainstorming, and individual research must precede brainstorming.			
III. Reflection - thinking, the birth of new knowledge; - setting new educational goals by the student.	The teacher should: refer students back to the original hypothesis notes; make changes; to give creative,	Students connect "new" information with "old", use the knowledge gained at the stage of understanding the content.	Completing clusters, tables. Establish causal relationships between blocks of information. Back to key words, true and

	<p>research or practical tasks based on the learned information</p>		<p>false statements. Answers to the questions. Organization of oral and written roundtable discussions. Organizing various types of discussions. Writing creative works. Research on specific issues of the subject, etc.</p>
<p>At the thinking stage, analysis, creative processing and interpretation of the studied information is carried out. Work is done individually, in pairs or in groups.</p>			

In critical thinking, ideas and their importance are considered from the point of view of pluralism and they are compared with other ideas. The highest level of this thinking is mental activity, with emphasis on analysis, comparison, interpretation, application, argumentation, innovation, problem solving, or evaluation of thought processes. Critical thinking develops communication and teamwork skills.

Critical thinking brings excitement to the educational process, makes lessons a joy for the teacher and students. Teaching students to read and mastering critical thinking is now considered an important task. When faced with new information, students should be able to evaluate it independently, look at it from different points of view, and draw conclusions about the possibility of using it for their own needs and goals. To become a true critical thinker, students need to think creatively, challenge themselves, and acquire the skills to do so.

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## THE EXPERIENCE OF STUDYING SAMPLE FOREIGN LITERATURE IN THE SYSTEM OF SECONDARY SCHOOL EDUCATION: A COMPARATIVE ANALYSIS

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***Abstract.** The introduction of foreign literature samples into the education system as a whole, and in particular into the secondary and primary school education system, has long existed in the history of our national education system. We deeply understand our national Uzbek literature only by knowing the history of foreign literature. Therefore, one of the important aspects of our research is related to the use of literary subjects taught in high school to create a holistic image in the minds of learners about world literature, of which Uzbek literature is an integral part.*

***Key words:** Literature at school system, history of national Uzbek literature, teaching methods, foreign literature,*

Literature is a basic educational subject that encourages the formation of the spiritual image of the young generation and moral-spiritual research. The science of literary history plays the main role in the emotional, intellectual and aesthetic development of a schoolchild, in the understanding of existence and national identity; it is difficult to imagine the spiritual development of a nation without learning the art of artistic speech. The uniqueness of literature as a secondary school subject is determined by its essence as one of the forms of culture, more precisely, as a phenomenon: literature absorbs the world aesthetically, describes the value and diversity of human existence through artistic images. It has the ability to influence people with great power by getting to know the spiritual and aesthetic values of the nation and humanity. The introduction of foreign literature samples into the education system as a whole, and in particular into the secondary and primary school

education system, has long existed in the history of our national education system. "Most of the scholars who lived in the East-West were engaged in the practice of translation. People-loving rulers who aimed for the development of the nation gathered scholars around them and tried to create the necessary conditions for them to engage in translation. As a result, they made a great contribution to making the scientific works created in different countries become universal property, and the art and culture characteristic of one culture find its value in another culture as well."

As our great-grandfather Abu Raikhan Beruni said about his time, "all collected examples of science were translated into Arabic, processed and described, and found a place in people's hearts." In this sense, the importance of madrasahs, which received the status of higher education institution, was very important. According to historical documents and sources, 386 large and small madrasahs were operating in Central Asia from the 1st century to the beginning of the 20th century. "Among them there were small madrasahs that operated for a short time and were later closed. This number naturally changed in different periods according to changes and conditions in social and political life. The issue of studying the continuous education system established in madrasahs has attracted the attention of many scientists. However, it was not possible to reflect on the real history in this regard. Only as a result of the independence of our country, the process of true study and illumination of the history of the education system, the history of oriental science, culture, and values began and opportunities were created. Information about the history of madrasahs began to be mentioned in the recently restored pages of history. The reasons why the range of knowledge of our great ancestors, who were educated in them, could be at the encyclopedic level were clarified. Academician Boturkhan Valikhojhaev's scientific research is particularly noteworthy here. The scientist argued about the madrasahs, which played an important role in the development of Eastern science, and the educational process in them, and proved that the madrasahs are the successors of today's educational institutions with evidence from sources. In particular, on June 9-11, 2009, in Samarkand, the lectures given at the International Scientific Conference dedicated to the contribution of

Mirzo Ulugbek to the development of world science were scientifically analyzed, based on new researches and written sources, the scientist's contribution to science, political and cultural environment, and the education system. As a result, scientific research conducted on the basis of some historical documents and written sources became the basis for drawing the following conclusions: 1. The teaching methods were selected in accordance with the various fields of science taught in madrasahs, and some of the taught sciences were inextricably linked with the science of methodology. It is intended to convey, i.e. to invent and apply teaching methods. For example, the method of reading with recitation, working on vocabulary and the method of composition are among them. 2. The discovered methods were used in practice in the sciences (exact sciences) that are perceived by reason. 3. Specific methods have been devised for taking measures to master complex texts. 4. Some of these teaching methods have naturally been used to study parts related to the science of literature. During the 20th century, the list of authors recommended for teaching in high school, including the Uzbek high school education system, changes not only under the influence of purely objective-literary-artistic factors, that is, due to the appearance of new names and new works, but also under the influence of factors far from art. The reasons for inclusion or exclusion of this or that author from the school program could be different. For example, in the curriculum of all-Soviet schools adopted in 1941, there are several names of German writers: Goethe, Schiller, Heine, Feuchtwanger and others. Most of them were representatives of classical literature rejected in Germany itself or humanists who rejected the ideas of the existing German National Socialists. In the structure of this program, the main focus was actually on the contributions of world writers to literature and the high, universally recognized artistic and aesthetic level of their works. It was in the program adopted in 1941 that the appeal to artistic masterpieces was devoid of submission to overt political principles, which became primary in the programs to be adopted later.

Since the 60s of the last century, it has been observed that a purely pedagogical aspect has been developing in the teaching of foreign literature in schools of the former Union, including Uzbek. In the 1970s and 1980s, fiction, including examples

of foreign literature aimed at the aesthetic education of young people, and views on the place and role of a person in personal and social life were refined. By this time, a three-hour course introducing contemporary foreign literature is offered in 10th grade. Now, the practice of teaching the history of national Uzbek literature as an integral and integral part of the history of world literature is being implemented in the secondary school education system. The experience of reflecting the general principles of the integrated study of national literature and foreign literature at the qualitative stage, and the various processes taking place in today's world literature within the framework of secondary school curricula, has the following meaning: comparative and parallel study of national and foreign literature samples; in this case, literary similarities and parallels occur naturally through similes. Such approaches allow students to study foreign and national literature in a comparative manner, and it is very important that the historical reality reflected in the selected literary text, the raised artistic-aesthetic, literary-philosophical problems are mutually shared.

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## PSYCHOLOGY OF CRITICAL THINKING FOR STUDENTS

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**Abstract:** *The article talks about the interactive learning system. However, some information on didactics is also provided. Interactive education and its didactic potential play an important role in the psychological impact of students on the proper development of education.*

**Key words:** *Critical thinking, psychology, advanced critical thinking, The formation of critical thinking, Dictionary of Grammatical and Repertoire Terms, Critical Thinking and Writing, Ritual thinking.*

Critical thinking in society is a normal process of thought, which is natural, even natural, for any human being. But in fact, everything is very complicated: people usually move away from critical thinking, treating inappropriate behavior, or vice versa with very mildness. However, developing the right thinking within yourself means improving the quality of life, and if you learn not to live by illusion, you can succeed in all areas of activity.

### Psychology of critical thinking

Critical thinking is a unique way to think about any topic or phenomenon that effectively uses structures and intellectual norms. Advanced critical thinking gives many advantages to human life. For example, if such a way of thinking is developed, then it has the following characteristics:

- it is able to draw relevant conclusions and verify their accuracy by their criteria;
- it is able to collect the information necessary to solve the problem;
- it is able to justify and justify its position;

- it can clearly and accurately shape the question, problem or requirement;
- can apply and comment on abstract ideas;
- it has the opportunity to effectively influence people in finding new solutions;
- knows how to draw conclusions when necessary using alternative thinking systems.

Thus, critical thinking techniques are reduced to a person's ability to think thoughtfully, disciplined, thoughtlessly, with elements of self-assessment and correcting their conclusions. Such thinking is based on strict norms, but they can solve problems.

#### Development of critical thinking

The formation of critical thinking usually occurs even at school age. Teachers use a variety of methods, including development through learning and writing.

Thus, students are offered the ability to actively accept text, understand the information received and learn how to read effectively to include it in their content. During this process, one person does not write down all the information, but writes what he considers important to him.

The method is based on a three-step model:

- apply with your experience, skills, knowledge, questions and goals; semantic stage
- achieving goals , searching for answers to their questions, and achieving certain goals by entering the text; reflecting - analyzing what has been done, achieving goals.

This method is very popular and effective for people of any age. It aims to ensure that people use their personal experience in understanding problems and tasks. There are other ways of thinking critically that are offered by experienced teachers to enhance student opportunities:

#### **Brainstorming**

A group of individuals is given one task, and all of them need to find the maximum number of solutions. Not all ideas will be useful, but very original options will be allocated. It is important to record and analyze all options. After mastering the group technique, it can be done in pairs.



## Merging Bush

A group of people are given a keyword to understand. Everyone calls for combinations of words, opinions and associations with this concept. It is important that everyone says everything, and everyone can explain the way they think.

What is critical thinking, and how can it be developed? In simple words, critical thinking is a judgment that involves debating, comparing, and analyzing certain things for future conclusions. In psychology, critical and logical thinking is indispensable because the first involves incorporating logic into the judgment process. Logic is the main factor in drawing conclusions.

A person who uses critical thinking methods can analyze events, identify patterns, and thus predict events. This academic opinion can help you argue about your point of view, have great discussions and speak in public. Thus, this method is useful in work, in personal life, in communication, in a nutshell, in different aspects of life.

How can I benefit from being critical?

1. You separate the importance from the irrelevant and do well.
2. You will be able to get basic information from large data flows faster and more efficiently.
3. Your communication with others will be more effective.

## Dictionary of Grammatical and Repertoire Terms

*Critical thinking is a guideline for conduct and beliefs to independently analyze, synthesize and evaluate information. The American Philosophical Association called the critical critique "a targeted, self-regulatory decision-making process, which provides a groundbreaking review of evidence, contextuality, contextualization, methods, and criteria"(1990). Critical thinking is sometimes common as "thinking to thinking."*

Among the critical thinking skills are comments, endorsements, and intelligence skills that involve the application of logical principles. The process of applying critical thinking for writing is called critical writing.

Tracking

" The abundance of irony, uncertainty, and meaning among the views that enhance critical thinking, The development of open thinking, autonomous thoughts and relationships, treatments that hinder critical thinking include such things as defense mechanisms, culturally conditional assumptions, authoritarianism, egocentrism and ethnocentrism, rationalization, compartmentalization, stereotyping, and hypocrisy."

(Donald Laser, "Invention, Critical Thinking and Political Rectoration of Analysis"), a Perspective on Rhetorical Research published by Janet M. Atwill and Janice M. Lauer.

### **Critical Thinking and Writing**

**- it is the busiest and most demanding tool, focused on developing a consistently critical mind-out, which is a well-designed written assignment on problems on the subject. Its main goal is to create an environment that is closely related to written thinking and requires students to write their best in writing for major problems, we encourage their overall knowledge and intellectual growth.** Also, in combating student writing, we wrestle them with their opinions, emphasize written and critical thinking, so often, writing struggles associated with the upbringing of thinking and the growth of human intellectual power usually become a true feature of students' learning. "

(John C. Bean, Thought Engagement: Professor's Guide to Active Learning in Writing, Critical Thinking and Testing, 2nd, Wiley, 2011)

- "Finding a new approach to a writing assignment means that the topic should be viewed without a preview. If people want to see something, it usually looks like this is a real picture or not. Similarly, pondering and writing based on prefabricated ideas does not matter to the reader, gives no importance to the reader, is written in

writing, as a writer you have a responsibility to get behind the expected ideas and see the topic with fresh eyes.

**Ritual thinking is a very regular way to identify a problem and synthesize its knowledge, therein providing a perspective that you need to develop new ideas.**

"Classical rhetoric have used a series of three questions to help the argument, what topics can these writers understand today?" (Are the problems real ?); Quid sit As they answer these questions, writers take a look at their subject from many new angles, before focusing on a specific aspect."

(Kristin R. Woolever, About Writing: Rhetoric for Good Writers, Wadsworth, 1991)

In Conclusion, Critical thinking is very important as an investigative tool because critical thinking is a vacating force in education and a strong source in personal and civil life, and while not combined with good thinking, critical thinking is a common and self-correcting person. The ideal critical thinker is ordinary curious, well-educated, mind-based reliable, thoughtful, flexible, thoughtful, self-contained when confronted with views that are honest, cautious in making decisions, ready for rethinking, clearing issues, regularly on complex issues, deeper in search of the information you need, wise in choosing criteria for investigation and determined in search of outcomes that are clear to topics and conditions without investigative permission".

(American Philosophical Association, Consensus Statement of Critical Thinking Act, 1990)

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## TEACHING ENGLISH TO YOUNG LEARNERS WITH THE HELP OF MULTIMEDIA IN ENHANCED LESSONS

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***Abstract.** Learning takes place at different levels and in different modes. At its most basic, multimedia can enable the recognition of words, terms, and their contextual meaning. These are the simple vocabulary trainers for foreign languages or technical terms. They are the multimedia equivalent of multiple choice tests for the learning and testing of contextual meaning. This article describes teaching English to young learners with the help of multimedia in enhanced lessons.*

***Key words:** Multimedia, multimedia technologies, multimedia instruction, perception, learning styles.*

Multimedia is a form of communication that uses a combination of different content forms such as text, audio, images, animations, or video into a single interactive presentation, in contrast to traditional mass media, such as printed material or audio recordings, which features little to no interaction between users. Popular examples of multimedia include video podcasts, audio slideshows and animated videos. Multimedia also contains the principles and application of effective interactive communication such as the building blocks of software, hardware, and other technologies. Multimedia can be recorded for playback on computers, laptops, smartphones, and other electronic devices, either on demand or in real time (streaming). In the early years of multimedia, the term "rich media" was synonymous with interactive multimedia. Over time, hypermedia extensions brought multimedia to the World Wide Web.

In education, multimedia is used to produce computer-based training courses (popularly called CBTs) and reference books like encyclopedia and almanacs. A

CBT lets the user go through a series of presentations, text about a particular topic, and associated illustrations in various information formats. Learning theory in the past decade has expanded dramatically because of the introduction of multimedia. Several lines of research have evolved, e.g. cognitive load and multimedia learning. From multimedia learning theory, David Roberts has developed a large group lecture practice using PowerPoint and based on the use of full-slide images in conjunction with a reduction of visible text. The method has been applied and evaluated in 9 disciplines. In each experiment, students' engagement and active learning have been approximately 66% greater, than with the same material being delivered using bullet points, text, and speech, corroborating a range of theories presented by multimedia learning scholars like Sweller and Mayer. The idea of media convergence is also becoming a major factor in education, particularly higher education. Defined as separate technologies such as voice (and telephony features), data (and productivity applications), and video that now share resources and interact with each other, media convergence is rapidly changing the curriculum in universities all over the world. Higher education has been implementing the use of social media applications such as Twitter, YouTube, Facebook, etc. to increase student collaboration and develop new processes in how information can be conveyed to students.

Multimedia provides students with an alternate means of acquiring knowledge designed to enhance teaching and learning through various mediums and platforms. In the 1960s, technology began to expand into the classrooms through devices such as screens and telewriters. This technology allows students to learn at their own pace and gives teachers the ability to observe the individual needs of each student. The capacity for multimedia to be used in multi-disciplinary settings is structured around the idea of creating a hands-on learning environment through the use of technology. Lessons can be tailored to the subject matter as well as be personalized to the students' varying levels of knowledge on the topic. Learning content can be managed through activities that utilize and take advantage of multimedia platforms. This kind of usage of modern multimedia encourages interactive communication between students and teachers and opens feedback channels, introducing an active learning



process especially with the prevalence of new media and social media. Technology has impacted multimedia as it is largely associated with the use of computers or other electronic devices and digital media due to its capabilities concerning research, communication, problem-solving through simulations and feedback opportunities. The innovation of technology in education through the use of multimedia allows for diversification among classrooms to enhance the overall learning experience for students. With the spread and development of the English language around the world, multimedia has become an important way of communicating between different people and cultures. Multimedia Technology creates a platform where language can be taught. The traditional form of teaching English as a Second Language in classrooms have drastically changed with the prevalence of technology, making easier for students to obtain language learning skills. Multimedia motivates students to learn more languages through audio, visual and animation support. It also helps create English contexts since an important aspect of learning a language is developing their grammar, vocabulary and knowledge of pragmatics and genres. In addition, cultural connections in terms of forms, contexts, meanings and ideologies have to be constructed. By improving thought patterns, multimedia develops students' communicative competence by improving their capacity to understand the language. One of the studies, carried out by Izquierdo, Simard and Pulido, presented the correlation between "Multimedia Instruction and learners' second language" and its effects on learning behavior. Their findings based on Gardner's theory of the "socio-educational model of learner motivation and attitudes", the study shows that there is easier access to language learning materials as well as increased motivation with Multimedia Instruction along with the use of Computer-Assisted Language Learning. Learning takes place at different levels and in different modes. At its most basic, multimedia can enable the recognition of words, terms, and their contextual meaning. These are the simple vocabulary trainers for foreign languages or technical terms. They are the multimedia equivalent of multiple choice tests for the learning and testing of contextual meaning.

At the next level, perception begins to play a role as shapes and colors, graphic elements, and movement through space and/or time allows the user to ask questions about the contents of pictures or sequences of movement. Multimedia computing still offers many unexploited possibilities for this kind of learning, especially in the field of art history. Multimedia computing can also be used to pursue the didactical aim of furthering creativity: finding a suitable description of an art object, manipulating scanned pictures, rearranging the pictures in a digital exhibition, or simply grouping colors and shapes, all exercise visual learning and perception. Multimedia has been shown to be effective for learning: animations effectively stimulate learner interest and thus enhance the learning experience with augmented reality improving the students' cognitive skills by provided a platform to combine digital and physical parameters. Positive findings of these studies suggest that the use of multimedia as a form of blended-learning technique cater to the multiple learning styles and have been found to provide better outcomes than traditional lecture delivery. Research conducted into the learning styles of the students provided an explanation to why interactive multimedia may prove beneficial to their learning experience.

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## THE ROLE OF TRANSLATION IN TEACHING FL

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***Abstract.** Translation is the communication of the meaning of a source-language text by means of an equivalent target-language text. This article describes the role of translation in teaching foreign languages. Additionally, there is given some types and usage of them.*

***Key words:** translation, simultaneous, diachronic, adequate, free, literary translation.*

Today, one of the main requirements for high professional qualifications is perfect knowledge of foreign languages. It is not for nothing that special attention is paid to learning English, which has been taking a leading place among the languages of international communication. In the educational system of the Republic of Uzbekistan, English language teaching and learning is rising to a new level of quality based on the scientific approach and the introduction of new information and communication and pedagogical technologies that fully meet the requirements of the time. Since learning a foreign language is a requirement of the present time, developing new methods of language learning for the young generation based on the "National Personnel Training Program" and recommending them to the study process is one of the urgent issues facing scientists and specialists. In order for our talented young people to become mature specialists in their fields of interest, first of all, it is necessary for them to have a perfect knowledge of a foreign language, including English. There are many methods for learning English, and the choice depends on which way they learn the language faster and more effectively. One such effective way is to learn a language through translation. A lot of works have been written in the scientific literature about the theory of translation, types of translation,

and the issue of its operation. Translation is a type of activity that teaches the activity of translation. Translation is the conversion of information, text, speech from one language to another. By translation we understand the translation of text, speech and speech of another language into the language being studied. Translation is necessary and necessary in teaching English, it has a lot of benefits and importance.

Translation helps to consciously understand unfamiliar information given in the target language, information that is difficult to understand in English.

Translation usually takes two forms, oral and written. Among these, translation is further divided into types:

1. Simultaneous translation;
2. Diachronic translation;
3. Adequate translation;
4. Free translation;
5. word by word translation;
6. Literary translation.

Synchronous translation means translating a speech or text while listening to the speaker, while diachronous translation means listening to, reading, and then translating the speech or lecture that has been listened to. In word-for-word translation, the text and speech are translated without changing the place and meaning of the words. Literary translation is mainly used in the translation of literary works, poems, stories, novels, it is quite complicated.

It is necessary to know in advance the place, usefulness and necessity of using translation in teaching English, and then it is better to use it. Improper and frequent use of translation has a detrimental effect on English language teaching.

We can see that the use of translation and its application in teaching English has a positive effect in the following cases:

- ✓ In opening the meaning of the English lexicon. In this case, the lexicon is used if there is only one translation equivalent. If the meaning of the lexicon is wider or narrower in one language, an explanation is given to the translation;
- ✓ Knowing and explaining the meaning of English grammar material;

- ✓ Teaching listening comprehension in English, checking information and understanding;
- ✓ Checking the reading and understanding of the text;
- ✓ Listening to someone else's speech and learning to translate;
- ✓ When studying the constructions of some sentences in the text, sentences that are not structured according to the rules, paragraphs that are difficult to understand;
- ✓ Teaching translation from Uzbek to English or from English to Uzbek.

In addition, in teaching foreign languages, the acquisition of grammar rules through translation is also envisaged. That is, in this case, the teacher explains the grammar rule to the students orally, and then the students are asked to translate those rules in writing. Because during the translation process, students focus on the meaning of each word and try to understand the general meaning of the text. This process allows students to increase their vocabulary, develop their translation skills, and at the same time teach them to understand the grammatical structure of words.

Therefore, translation plays a very important role in the process of language learning and mainly develops students' translation literacy along with learning a foreign language.

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## THE ROLE OF RESEARCH-BASED LEARNING TO ENHANCE RESEARCH AND ACADEMIC WRITING SKILLS AND TYPES OF PROJECTS

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***Abstract** The publication promotes an innovative method called project based learning and research based learning created according to the new educational standards for the teacher of Higher educational establishments and schools. This article aims to help teachers of foreign languages and students build academic content knowledge and skills, develop deeper understanding, build 21<sup>st</sup> century success skills such as research skill, writing skill, critical thinking, problem solving, collaboration creativity, innovation. It also intends to help learners become aware of their own academic, personal, social development.*

***Keywords:** individual projects, short-term projects, individual projects, team projects, educational projects.*

Today, as a teacher we have so many ideas about how to develop students' research and writing skills. Students with a growing interest are always on the search of new knowledge, interested in new developments, ideas and insights. However, research skill is more than just for a class assignment. So, how to develop this competency? According to types of implementation, projects are classified into different types.

- according to the scholars research projects are subdivided into individual, team and class projects;
- according to the nature of the main learning activity: projects production, communication, organization, etc.;
- according to their more or less political or strategic dimension: educational project, foreign language learning project, educational project and training project.

Obviously, we will easily understand here that these different types of projects are neither presented in optimal order, nor mutually exclusive. Therefore, it will be less question in this chapter of a watertight typology that of perspectives different from which one can consider the nature of educational projects. So let's take the distinctions in order presented in the previous lines.

According to the temporal extent within class, projects can of course vary in the time required for their completion. Arbitrarily, we will say that the projects that are done over a period of one to two weeks are short-term projects, those that spanning a period of three to twenty weeks are rather in the medium term, while those who are practically asking the entire school year are considered to be long term.

#### Short-term projects

Short-term projects are certainly the easiest to manage "pedagogically both for the learner and for the teacher. They sort of correspond to what we could call "micro-projects". We must also recognize that the use of such projects in school learning did not wait for an explicit pedagogical approach like that of project-based learning gives it citizenship before exercising. All teachers who have at heart to energize and concretize their teaching strategy have, sooner or later and often, appealed to this type of projects.

This is the case when we ask students to bring to the next history lessons practical suggestions of methods or ways to use in class to better understand how our ancestors lived in Quebec. Collecting photos of family, for example, could turn out to be a happy suggestion of learners. However, a real approach per project requires time for investigation and implementation bigger to bear all its fruits. In succession, not only micro-projects can be short of breath, but they also carry the risk of lacking consistency between them and therefore to encourage learning in grains of rosary beads that convey little meaning or educational intent.

#### Medium-term projects

The medium-term projects appear in a way as a central link in a structured learning process and prolonged. On its own, this type of project does not generally

satisfy not all the educational intent, but it is the support main. Generally, medium-term projects are similar long-term projects, except for their duration. However, they also differ in that they set the table, so to speak, to other educational activities that will come reinforce the targeted learning. For example, a teacher of physical education could suggest to groups of students to prepare a mini-show of rhythmic dance, another of muscle strength, agility and speed of execution in a sporting activity, etc.

These mini-shows would then be used in a subsequent part of the course as a basis illustration of more formal or theoretical information on the functioning of the main muscles of the body, on the motor coordination, on reflex functions, etc. Better again, this teacher might even ask his groups of students that they suggest project ideas to facilitate the acquisition of identified knowledge. So we see here that it is a generally intermediate role that the project plays at medium term in a prolonged learning sequence and relatively substantial. The teacher who uses in his practice medium-term projects must therefore first have fairly precise idea not only of the expected product of the project and its intended goals, but also how it counts retrieve the learning achieved in the training plus scope that it must provide to learners. It's for this reason that a medium-term project should not in principle complete a school year, but rather fit into teaching structure where the distinction between the objectives specific, intermediate and teaching terminals is pedagogically well established, with the place of the project to medium well-defined term with regard to these objectives.

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#### Individual projects

Authors such as Bru and Not (1987) consider that it would be regrettable to abandon or neglect individual projects in the name of a group pedagogy that is starting to suffer from gluttony. According to them, such projects have their place in pedagogy and they see no contraindication to their use. On the background of the question, they are probably right. But virtue must often settle for imperfection.

First of all, it should be noted that the projects - especially those that are medium and long term - appear most of the time as substantial projects, which pursue several objectives, require a variety of skills, require knowledge various and require the execution of several different tasks. The learner alone is generally far from being a man-orchestra capable of responding to all these requests.

In this sense, projects carried out by more than one learner appear advantageous. In addition, in the context of current teacher-student ratios, we may

seriously doubt that a teacher can supervise with great attention and efficiency from 25 to 30 individual projects in a class. He could still do it in the case of short-term micro-projects, but it would probably be fast exceeded in the case of substantial projects.

There is also a risk of logistical problems in a class with individual projects: insufficient work areas, material in limited quantity, supervision or presentation time too short to meet everyone's needs, etc.

Finally, if it is true that project-based learning develops intentionally or at the margins of relationship skills interpersonal, why then do we do without? We do not give up on individual projects and we recognize quite their legitimacy. We are simply saying that their use is subject to several constraints and they turn out to be more suitable for small and short learning activities term. So much for the reserves. However, in the context of activities learning restrictions that we have just mentioned, it It is clear that individual projects also have their usefulness in pedagogy.

Not only do they ensure that the interests of all learners in a class will be considered – this which might not be the case in collective projects -, but they also ensure that each of the learners will be able to contribution some of his skills and develop others even his individual project. Therefore, the formula of the project will have, so to speak, been optimized in its claim to join each of the students in the learning to be achieved.

#### Team projects

In an earlier work (Proulx, 1999), we discussed in detail of the advantages and limitations of teamwork on learning and pedagogy plans. We will not resume therefore not these words here. We will say rather that in the current context of school organization, team projects are probably the most functional types of projects and the easiest to implement in a redesigned pedagogy. In at the same time as they enrich the training of learners by their diversity, they greatly reduce the sum of the requirements or particular constraints inherent in individual projects and they expose

the learner less to a certain monolithic which could result or escape from class projects.

#### Class projects

Class projects are projects which, in terms of content learning, are based on a common denominator to the whole class. To some extent, they focus attention learners and mobilize their energy towards the same target. For example, in a geography class, a whole class-group could be brought to establish a geographical map populations according to their race, their religion, their territory, their education, their economic condition, etc. Certainly, we can see it here, such a project can be divided into different parts of interest to small groups of learners. The fact remains, however, that the expected product is the same for all: a geographic map of the populations. We understand while a dynamic of interdependence and complementarity to be established will quickly impose itself on people involved in this project. The expected benefit maybe very obvious, but the obstacles of the course more numerous, each not working at the same pace nor with the same ease in terms of resources. Class projects ambitious deserve to be encouraged, but the danger of "putting all his eggs in one basket" is real. It is therefore necessary to this. In this regard, design projects that are sufficiently flexible and broad so that most of the content objectives of a course can befit in effectively.

According to the nature of the main activity learning as most projects have multiple objectives learning and hence call for various tasks for their realization, it becomes possible to distinguish them summarily in relation to the main learning activity they seek.

Few authors, however, have exploited this vein. In a work published in 1991, Palmade presents under this angle a classification by W.H. Kilpatrick which seems interesting to us, but that we will modify somewhat in the name of the third category of projects according to this classification.

#### Collaborative projects

Even if in general any project is characterized by a form of production or another, the production projects considered here are those who explicitly call for the



making of product, to a confection, literally speaking. Build scale model, make recreational furniture for improve a school park, establish a luminous sky map, make clothes or draw clothes patterns futuristic or traditional, so many examples of products which give rise to manual and technological operations which change more or less shapeless material to a more defined and more functional. These types of projects are generally very motivating for the people who work there, but they have the disadvantage of requiring a lot of material resources that the school environment is not always able to guarantee.

In consumer projects, learners use of products, works or services in place to make one benefit in terms of school learning. Set up a school cuisine in collaboration with a financial institution, set up a recycling service, organize a show circuit are all projects that fall into this category.

In these types of projects, the product in the broad sense refers more to activities held and use than in terms of learning than actual material goods. If they sometimes constitute major challenges from an organizational point of view, they are also, mutatis mutandis, less expensive in terms of material resources.

#### Problem solving projects

As their name suggests, the draft resolutions of problems mobilize learners' ability to solve problems for which the solution exists or not at the moment when these are posed, but without being then known to the learner. Intuition, agitation, creativity, anticipation, practical and formal reasoning are skills particularly requested by this type of project. Riddles, riddles, mind games, word puzzles, number and assembly games belong of course to this category. But we can conceive this type of projects in a much broader and more extensive way in terms of profitable learning. Submit a model efficient operation of a hospital, design a plan for research to slow down biological aging, simulate a process that would explain construction techniques

The learner who tries to meet, to its measure and within its limits, such challenges not only develop the intellectual skills mentioned previously. He prepares

without realizing too much for work itself as an agent of change and progress in the society that awaits it.

#### Functional learning projects

In the Kilpatrick classification presented by Palmade (1991), it is referred to as "technical improvement projects" to report on this type of project. The expression "Functional learning" seemed to us to be more adequate in terms of what this category includes projects that bring learning to master a certain number of technical operations, theoretical or practical from data or objects existing.

Mastery of software, conditioning of animals, learning a language or communication codes, driving a motorized vehicle, learning clockwork mechanisms, musical instruments, rules parliamentarians, etc., these are all examples of so-called functional learning. Sometimes entire courses constitute alone such projects. Language courses, driving automotive, rescue, etc., are examples. But, generally, in the school context, these projects fit into learning objectives and content wider. For example, we will take advantage of a biology course animal to learn within a project how birds build their nests by making one yourself. This type of projects, of course, is characterized by its great flexibility. of use in pedagogy. So it's no wonder that we use it frequently, especially when we want to illustrate theoretical data or when we want to bring the learner, by an inductive process, to discover for himself certain theoretical laws or properties that apply to an object learning.

According to their political or strategic dimension recent years have seen the emergence of educational circles and in the terminology they use a "flight of types of projects" whose various names are confusing more than the layman.

Educational projects, training, educational projects and establishment projects are among the expressions most used to qualify certain types of projects with more or less institutional scope.

Although these types of projects are not new to the most of it is gargled over and over again today in the jargon educative. Let's try to see things clearly, even if,

strictly speaking, these types of projects are rather on the periphery of learning projects.

Educational projects; in accordance with the words of Joannert and Vander Borgh (1999) on this subject, we will say of educational projects that they are projects developed mainly by a group or a team of teachers who share a common situation teaching and who decide to work together in it around a common pedagogical model. This type of projects is certainly the one that best suits the project-based approach. This, in fact, can precisely result, as an educational formula, an educational project having favored this approach. Usually projects teaching are prepared and tested by team's teachers working within the same class group or the same program in a school. For example, a group of sixth grade teachers' year in an intensive English program might decide teaching.

For reasons of better synergy, comparability and equity, it is desirable that projects are mainly developed and carried out by teachers working with students from the same class group or who follow the same program. Of course, we should not exclude that an educational project can be carried out by the entire teaching staff in a school, but the marked differences between levels and programs in the same establishment easily suggest that an educational project planned, for example, for first-year learners of the secondary will not necessarily bear the same fruits for fifth secondary learners.

#### Training projects

Unlike educational projects which, in principle, were only set up by a team of teachers, the training projects are projects developed by various agents of education, which range from the teachers themselves to the staff executive through representatives of the community and the people to train themselves. Of course, learners most of them have their own training project, but so understood here, the training project has a larger and refers to the decisions made by educational environment to offer a program in a given environment qualifying course, after a well-defined reading of the social needs expressed in the community. In this sense, such projects first find their justification in their report with the political or strategic

situation from which they originate. Strictly speaking, they have little to do with educational formulas themselves.

#### Educational projects

Educational projects are generally projects that involve all the staff of a school around mainly certain values to be promoted in all relationships experienced at school. When, for example, an establishment decides to respect, autonomy and a sense of responsibility three fundamental values conveyed and embodied within its walls, we will say that his educational project is made up of these elements essential. Obviously, such a project is not limited to putting some key values in the foreground; he sets out principles and beliefs; he prescribes behavioral standards desired or prohibited; it favors operating modes or activity, etc. We can think here that, depending on the very content of the educational project, the educational formulas may vary although this is not always the case. If, for example, the staff of a school wanted to favor openness to others and cooperation at work in leisure or other activities, teamwork could then constitute an educational formula which would fit well into such an educational project.

#### Establishment projects

Among the types of projects mentioned above, establishment projects are certainly those whose dimension «Political" is the most obvious. These projects always cover an official character in that they are the subject of decisions taken by the higher authority in a school, i.e. the board institution or the board of directors. Of course, such projects have, in the course of development and implementation, ramifications at different levels of the institution, but first of all the bodies mentioned above which adopt it and which follow up. Another characteristic aspect of projects establishment is that they cast a very broad cast on subjects likely to hold their attention. It therefore does not concern necessarily the teaching itself. For example, a tip establishment could have plans to expand its school park, to redesign and repaint the interior of school, to set up a cafeteria service for students, etc.

All these projects would certainly constitute establishment projects, but their impact would be very indirect on education as such. In this, these projects can

appropriately work according to the will and priorities of the staff approved by the governing body, whether or not it has a tangible effect on pedagogy practiced at school. It is clear, for example, that a tipoff an institution that would decide to invest, massively in the purchase of computer equipment for teaching purposes would at the same time create a shock wave spread over the practices educational programs in force within its walls.

In general, it is also desirable that it be so, that is to say that the establishment projects focus as much as possible on what is at the heart of the institutions' mission.

We will not go any further in examining type projects political or strategic, which affect less directly the educational intervention in itself.

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## DISCURSIVE ANALYSIS OF THE TEXT OF THE FAIRY TALE GENRE

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***Annotation** This article provides information on the structural analysis of the fairy tale genre, its division into initial formulas, medial formulas, and final formulas, and the purpose of using these formulas and their role in the fairy tale text. In addition, examples of fairy-tale formulas were given, an opinion was made about the changes of these formulas according to the type of fairy-tale, and information was given about the opinions expressed by our research scientists about the structural structure of the text of the fairy-tale genre.*

***Key words:** Household Tales, Fantasy Adventure Tales, Animal Tales, Initial Formulas, Medial Formulas, Final Formulas*

***Аннотация** Ушбу мақолада эртак жанри матнининг структурал таҳлили унинг инициал формулалар, медиал формулалар, финал формулаларга ажратилиши ва ушбу формулаларнинг қўлланилиши мақсади ва эртак матнида тутган ўрни ҳақида маълумот берилган. Бундан ташқари, эртак формулаларига мисоллар келтирилиб, эртак тури асносида ушбу формулалар ўзгариб бориши ҳақида фикр олиб борилган бўлиб, қолаверса тадқиқотчи олимларимиз томонидан эртак жанри матнининг структурал тузилиши ҳақида билдирган мулоҳазалари ҳақида маълумот берилган.*

***Калит сўзлар:** Машиий эртаклар, фантастик саргузаит эртак, ҳайвонлар ҳақидаги эртак, инициал формулалар, медиал формулалар, финал формулалар*

***Аннотация** В данной статье представлены сведения о структурном анализе жанра сказки, его разделении на начальные формулы, медиальные формулы и конечные формулы, а также о цели использования этих формул и*

*их роли в тексте сказки. Кроме того, были приведены примеры сказочных формул, высказано мнение об изменениях этих формул по типу сказки, а также дана информация о мнениях, высказанных нашими учеными-исследователями о структурной структуре текста. жанра сказки.*

*Ключевые слова: Бытовые сказки, фантастические приключенческие сказки, сказки о животных, начальные формулы, средние формулы, окончательные формулы*

Nowadays we cannot imagine our fast-paced lives without technology, we can observe that the need for fairy tales among our youth is waning. However, reading fairy tales has a broad and positive influence on the intellectual potential, psyche and imagination of our youngsters, who are the hopes of our lives.

We got our first ideas about the universe that surrounds us through fairy tales. For this reason, even though the text of the fairy tale has been studied to this day, we feel the urge to study it more deeply. It is known that a fairy tale is one of the main types of oral creativity, a fictional story of a fantastic adventure and nature. In stories of animal, animals can communicate like humans, and each animal has its own character.

For example, the fox is cunning, the bear is lazy, the rabbit is cowardly, etc. Most of the heroes of household tales are "farmer", "shoemaker", "old man", "orphan boy", "tanna girl". Fairy tale scholar N. Roshianu told about the structure of fairy tales

- a) Initial formulas
- b) Medial formulas
- c) Final formulas.

This type of divisibility is based on the formal position of these elements in the fairy tale text (Roshianu 1974.16). Repetition of traditional formulas determines the actions of the fairy tale, their structural features and gives them specific functions.

N.N. Dostkhodjaeva stated that "the artistic perfection of a fairy tale begins with its introduction (initial "zachin")." According to M. Afzalov, "These traditional

divisions depend on the artistic skill of the fairy tale. The purpose of giving examples of different versions of zachins is to show the skills of word artists in choosing words.

K.Imomov, doctor of philological sciences, says, "In a fairy tale, the beginning is a permanent element in the plot line, but it is not related to the development of the plot, it does not give impetus to the organization of the action. It provides information about the characters involved, indicates the time and place in which the events that are supposed to happen in the plot line will take place.

The beginning always acquires uncertainty and generality in the direction of the plot" (Imomov K. 1981). Q. Beknazarov notes the following about the beginning of fairy tales: "Initial formulas are traditional ornaments in fairy tales, usually performing the task of attracting the listener's attention to the epic space and time or the traditional introduction to the fairy tale" (Q. Beknazarov 1993).

*Bir bor ekan bir yo'q ekan. Qadim qadim zamonda tuyalar dallol ekan, pashsha sartarosh ekan.*

In addition to attracting the listener's attention, the introduction of a fairy tale performs aesthetic tasks such as creating an imaginary background that matches the nature of the plot and creating uplifting and happy moods among the listeners of the fairy tale (Kholmurodova O.A 2020).

*Bir bor ekan, bir yo'q ekan, och ekanda, to'q ekan, bo'ri bokavul ekan, tulki yasovul ekan, qarg'a qaqimchi ekan, chumchuq chaqimchi ekan, g'oz karnaychi ekan, o'rdak surnaychi ekan, tovuq toq etdi bilmadim qayga ketdi.....*

In the process of studying the text of folk tales, the initial formulas mainly indicate that the event took place in the long past.

*Qadim zamonda.... Burungi zamonda , Long ago...,once upon a time, there was once a .....,*

"In the initial parts of the fairy tales, the concept of the hero, time and space is constantly repeated at the level of legitimacy. Also, the elements of whether or not the event happened are constant" (Dostkhodjaeva N.N 1999).

In the text of Uzbek fairy tales, in many cases, we can find more imaginary and fictional beginnings.

*Men otamning beshigini tebratib o'tirgan bir zamonda bir podshox bor ekan.*

"It is known that there is a lot of information about the fact that the performer of a fairy tale directly affects the text of the fairy tale by his verb, profession, age, gender, and mental state. Therefore, if the verb of the storyteller does not accept excessive details, he will transfer the medial part of the story to the content expression as soon as he has briefly stated it. If the storyteller has the ability to perfectly describe the details of each event, then the medial part of the story will be perfect in turn," says Dostkhodjaeva N.N. Medial formulas differ from each other (Bakanova A.V 2006). Medial formulas vary according to the content of the tale. Medial formulas also refer to the passing of one event to another.

*Endi ikki og'iz so'zni.....dan eshiting.*

What is more, medial structure expresses time expressions.

*Kundan-kun, Oydan-oy, yildan-yil o'tibdi.*

The final formulas in both Uzbek and English fairy tales express a happy ending, admonition, and the regret of the heroes of the fairy tale.

*Shunday qilib, ota-qiz murod maqsadlariga yetishibdi* She decided always to follow her mother's advice

In short, the initial formula of the fairy tale consists of repeated ornaments, the purpose of its use is to give the fairy tale an upbeat spirit and attract the listener's attention. Medial formulas expand according to the desire of the storyteller and the scope of his imagination.

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## EXTRA-CURRICULUM INDEPENDENT WORK AND ITS ROLE OF LEARNING ACTIVITIES OF LANGUAGE STUDENTS

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**Abstract:** *A systematic approach to the organization and management of independent work of students at the university is considered. The importance of independent work of students in the educational activity of students as a condition and way of intensifying their cognitive activity is substantiated. Pedagogical conditions are proposed that contribute to the effective organization and management of independent work of students at the university and the implementation of an individually differentiated approach to teaching students in higher education. Independent work of students is considered as a special type of educational activity, in the structure of which one can single out motivational, goal-setting, performance and control components.*

**Key words:** *independent work, systematic approach, cognitive activity, general intellectual skills, motivation, pedagogical conditions, logical and content side.*

Extracurricular independent work of students of the faculty of languages is one of the types of their independent work on mastering a foreign language, which involves a differentiated approach to students and individualization of learning. Teaching a foreign language in a group of 15-20 people encounters significant difficulties due to the difference in the individual psychological characteristics of students. The same material, the same teaching methods, the same rhythm of work are simultaneously offered to students endowed with different abilities, memory, attention, type of thinking and perception, temperament, emotions, and the like. In the context of a radical restructuring of the system of vocational education and the transition from knowledge-centered education, based on the transfer of knowledge,



skills, to personality-oriented, humanistic education, the purpose of which is to recognize human individuality and develop the intellectual, emotional, spiritual and moral potential of the individual, independent work of students is becoming one of the most important problems in the organization of training.

Extracurricular independent work of students as a form of mastering foreign language knowledge, skills and abilities has the following advantages:

1) In extracurricular independent work, the conditions necessary for mastering a foreign language are personified. The student himself determines the pace of work, the ways of its implementation, based on personal qualities;

2) Differences in the individual psychological characteristics of students predetermine different learning technologies. For mastering a foreign language, such mental processes as thinking (type of thinking), perception, memory are of particular importance;

3) Extracurricular independent work on the language contributes to the formation of positive personality traits: independence, initiative, purposefulness, systematic and thorough work, and so on. Students experience satisfaction from their own "inquiry", learn to rationally use their time, cultivate conscious discipline and volitional self-control, develop memory, thinking, and the ability to creative activity. The concept of independent work is multifaceted; therefore, it is quite natural that it has not received a single interpretation in the pedagogical and methodological literature. The essence and signs of independent work are revealed in different ways, various classifications of its types are given.

The term "independent work" is used by domestic methodologists in the meaning of the method of organization and implementation of educational and cognitive activities, as an integral and specific part of the learning process or a form of organization of the educational process, a type of educational activity, and also as a means of involving students in independent cognitive and practical activities. Some authors avoid using the term "independent work" and use only the term "independent activity", others consider the concept of independent activity as broader in relation to independent work, including self-organization, self-

management, self-control and independent work. Sometimes independent work is opposed to lesson forms of student work [1].

The issue related to independent work is comprehensively analyzed in the studies of P.I. Pikasisty, who considers it in the educational process both as a means of organizing and managing students' independent activities, and as a specific form of educational cognition [4]. With this approach to independent work, the interests of both subjects of the educational process are taken into account: for the teacher, independent work is an instrument of pedagogical guidance for the independent cognitive activity of students, and for students it is a type of cognitive activity associated with an independent solution of a learning problem. It is hard not to agree with P.I. Pikasy in defining the essence of independent learning activity, which does not mean that the student works without outside help. The main feature of independent activity as a didactic category is manifested in the fact that the goal of the student's activity simultaneously carries the function of managing this activity. Therefore, the subject content of each educational action is realized by the student and becomes the immediate goal of this action [2].

Most of the above definitions refer to independent work in general, regardless of the venue and the subject being studied. Our study considers extracurricular independent work in English by students of the Faculty of Languages.

Based on the objectives of the study and shifting the focus to the sphere of students' personalities, we tried to give a working definition of extracurricular independent work in a foreign language by students of the language faculty as a special form of learning activity, due to the individual psychological and personal characteristics of students and contributing to the formation of their individual learning style through mastering a wide range of cognitive strategies (rational methods and techniques used to learn a foreign language).

Thus, extracurricular independent work of students of the language faculty as a special, highest form of learning activity involves students' awareness of their abilities, goals, methods and techniques of learning a foreign language, as well as the development of cognitive independence.

It seems that independence should be considered in two different but interrelated aspects: as a characteristic of the student's activity in a particular learning situation and as a personality trait. The first, obviously, participates in the formation of the second. Independence as a characteristic of the student's activity in a particular learning situation is the ability to constantly demonstrate the ability to achieve the goal of the activity without outside help. At the same time, it must be emphasized that independence should be associated not only with the ability to act without outside help, but precisely with the ability to achieve the goal of the study without outside support. Absolute, complete independence is impossible in learning, so it should be assessed taking into account the extent to which the participation of the teacher is objectively necessary. It is this kind of cognitive independence that can be recognized as optimal.

External signs of the independence of the student are planning his activities, completing the task without the direct participation of the teacher, constant self-control over the progress and results of the work performed, and its subsequent correction. The inner side of cognitive independence is formed by the need-motivational sphere, the mental, moral-volitional efforts of the student, aimed at achieving the goal without outside help. The level of independence is not related to the time factor. Learning activity can be qualified as independent, regardless of how long it lasted.

In didactic and methodological literature, it is customary to distinguish three stages of independence that a student goes through in the process of forming this quality of educational knowledge: reproductive-imitative, search-performing, creative [3]. Independence begins with imitative actions at the stage of joint activity of the subjects of the educational process, passes through the stage of the emergence of awareness and arbitrariness of one's own mental processes, the stage of reproducing learned actions to the stage of creative activity [3]. It should be emphasized that in refraction to foreign language speech activity, the independence of students should be manifested primarily in the desire to independently use the language for the purpose of communication (the ability to express and justify one's

point of view, build a detailed monologue statement, and so on). The degree of independence of students can be different. It depends primarily on the individual speech experience of students, as well as on the degree of development of speech supports, for example: the more detailed the plan of the intended statement is, the less independent is the speech of students.

The objectives of this study correspond to the allocation of reproducing, transforming and creative types of independent work. Will all three types of independent work be inherent in 1st year students of the Faculty of Languages when mastering a foreign language as a means of communication? I think so.

The reproducing type of independent work is performed by the student during the initial acquaintance with the object being assimilated. It would be wrong to believe that successful learning of independence is achieved only in the process of independent actions of the student. In educational work, there are always actions according to a ready-made model, which are often imitative in nature, and the better the student masters the skills of actions according to the model, the more successfully his independence in educational and practical work is manifested [2].

When performing independent work according to the model, the independence of students is manifested in the replacement of some language means, the transformation of sentences, and in general, a foreign language statement is an act of reproducing the content and language form of the material read or listened to without any significant changes or with minimal changes in the language form of the sample. At the same time, students do not perform such actions as independent choice and combination of language units. Therefore, the degree of independence of students in the language design of the statement is not great. The abilities and skills of independent work of the reproducing type as a form of learning activity among 1st year students have already been formed in the conditions of the school course of learning a foreign language and require only some correction. We are talking about students striving for verbatim (full) reproduction of any language material, which prevents further formation of the ability to use the language independently for communicative purposes.

A higher level of independence is represented by independent work of a transformative type, characterized by a meaningful modification of the acquired information, the ability to explain the new through the already familiar, to independently comprehend the internal structure of the material being studied. In the course of performing independent work of a transforming type, landmarks and supports (plan, key words and expressions, logical-semantic schemes, and so on) assist students in preparing an utterance both in terms of presenting the content and in terms of choosing means of expression. When performing tasks on supports, students have a greater degree of independence, creativity, which is manifested in the ability to navigate the language material, highlight the main thing when drawing up a plan, answer questions, argue or refute, formulate conclusions. It seems to us that search and performance independence, which involves the actualization of such mental functions as analysis and synthesis, comparison, generalization, choice, combination and is associated with the adoption of an educational task and the search for ways to solve it, it is sufficiently formed among 1st year students of the Faculty of Languages. Therefore, independent work of a transformative type requires only some control action on the part of the teacher, which can be in the form of additional instructions and recommendations.

It is the development of students' creative independence in using the studied language as a means of communication that is the main goal of teaching at the Faculty of Languages. This becomes possible when performing independent work of a creative type, when students create statements of various communicative types, choose ways to solve a learning problem, determine the content of a foreign language statement themselves, choose and combine words, syntactic structures, express their judgments and personal attitude to what they are studying.

An essential sign of independent work of a creative type is the development of a complex transfer of learned methods of speech action to new non-identical conditions of activity, the ability to compose a complete orienting basis of action when performing a creative task, that is, “to highlight all the objective conditions

that determine its correct implementation” [3]. Creative tasks contain conditions that stimulate the emergence of problem situations that can be created in various ways:

- by posing the problem by the teacher;
- by posing a more or less defined problem, in the process of finding a solution to which the student independently discovers a new additional problem (foreseen when constructing a problem situation);
- by presenting such conditions, analyzing which the student himself must understand and formulate the problems contained in them. The most important condition for the successful organization of independent work of a creative type is the inclusion of students in the process of independent solution of subjectively new and significant problems for them [6].

Thus, extracurricular independent work of students of the language faculty as a special form of educational activity is the result of pedagogical interaction between the teacher and students in the process of learning a foreign language. Based on this, the teacher organizes and manages independent work on mastering foreign language speech activity in such a way that students have to show an increasing degree of cognitive independence when performing independent work of a reproducing, transforming creative type.

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## LINGUISTIC FEATURES OF COMPLEX SENTENCES (ON THE MATERIAL OF THE SCIENTIFIC TEXT)

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**Abstract:** *The article is based on investigation of complex sentence and their linguistic features and simultaneously it study a scientific text the framework of its functional and stylistic features in relation to a complex sentence as a construct text as a whole. The syntactic features of a complex sentence are studied, as well as modern approaches to comprehending of a complex sentence, taking into account the corresponding syntactic transformations.*

*The influence of the syntactic structure of a complex sentence on the choice of a translation strategy when translating a scientific text from English into Uzbek is determined.*

**Key words:** *scientific functional style; scientific text; functional and stylistic characteristics of a scientific text; syntactic structure of a complex sentence; complex sentence syntax; translation strategy.*

The purpose of this investigation is to study the transformational features of the syntactic structure of a complex sentence in the translation of a scientific text from English into Uzbek and systematization of the methods of transferring the syntactic structure of the sentence of the original text. The tasks of this work include consideration of a scientific text within the framework of its functional and stylistic features; to identify the functional and stylistic characteristics of a scientific text in relation to a complex sentence as a text construct generally; consider modern approaches to the translation of a complex sentence, taking into account the appropriate syntactic transformations and determine the influence of the syntactic structure of a complex sentence on the choice of a translation strategy when translating a scientific text from English into Uzbek.

A complex sentence, being an obligatory element of a scientific text, combines various structured segments of the syntax of the English language, which must be learned and correctly used in the process of translating complex sentences from English into Uzbek. A complex sentence includes not only structural elements, such as nominative-predicative parts as constituent segments of a single complex syntactic form, it also contains a complex semantic load that must be conveyed to the translator as fully as possible. Quite an important influence on the lexical-semantic content of a complex sentence is exerted by its syntactic structure. Structural-component units of a sentence with a complex syntax contain one important feature: the structure of a complex sentence contains components, representing their meaning and content, separate syntactic units with their own completely independent function. Thus, the relevance of the problem of converting syntactic structures of complex sentence is the need to develop a strategy for translating complex sentences in English scientific texts. The scientific novelty of the work lies in the fact that it attempts to examine in detail the process of translating a complex sentence in the text space of a scientific style.

In the field of syntactic and pragmatic studies of the language system, the syntactic structure of a complex proposals are the subject of theoretical discussions. In the theory and practice of translation, the sentence is connected with the problem of correlation of the syntactic "nature" of the sentence with its translation. This specificity of the embodiment of the syntactic structure of a sentence in its lexico-semantic sense is fully reflected in the study of the sentence as a multilevel object of translation activity.

The function of a simple syntax element within a complex sentence is certainly not "self-limited." Any function of a simple syntax element in a complex sentence has its own influence on the translation process. In addition, a simple syntax element in a complex sentence is directly transposed into a complex set of syntax elements of a higher order.

The design of a complex sentence as a syntactic integrity plays an important role in choosing a translation strategy, given that the translator will not deal with a

single one, isolated sentence. The object of translation, as a rule, is the text, which is complex interconnection and combination of sentences, both simple and complex. But if the syntax of a simple sentence (provided that it is not complicated by constructions and phrases) basically contains uncomplicated syntactic constructions, the transformation of which is carried out by the translator.

Sentence syntax variants are expressed in specific functional styles, in accordance with the "canons" of which texts of different levels of complexity and understanding are created. The text itself is a certain "linguistic and communicative field" [4, p. 8], on which the transmission of relevant information and, consequently, awareness and understanding of certain issues and problems is based. Of course, the fact of the important role of the scientific text as an object of translation activity cannot be ignored due to the rather detailed elaboration of translation problems related to this topic. At the same time, most researchers in the field of translation of scientific texts concentrated on studying the scientific text as an object of translation as a whole and did not concretize their research on certain aspects of syntax. However, most studies of the problematic of the syntax of a complex sentence in a scientific text are coupled with a certain linguistic and specific translation phenomenon [1, p. 43]. The closest to the syntax of a complex sentence in the English language are the lexical and grammatical aspects of the functional style of the language, including the scientific style. Concretizing the above, it can be argued that the syntax of a complex sentence and syntactic phenomena in the English language are inextricably linked with each other. The structure of the sentence is the direct "embodiment" of its lexical and grammatical content, which together forms a unity of multilevel components of a syntactic unit of a complex order.

Speech in any language is capable of realizing almost any linguistic potential through the act of communication. The linguistic potential of a scientific text is also notable for the fact that it contains a certain paradigm of linguistic and syntactic interrelationships capable of carrying out a stylistic "visualization" of the content of scientific information. It is the process of transferring information in a scientific text that is essentially an individualized act of concretizing the lexical and syntactic

components of the language. The relationship of the language of the scientific functional style in English to a certain objectified scientific text (natural science, technical, humanitarian content) is considered by many researchers of scientific texts in the English language as a facet of the relationship between language and style.

In the order of the arrangement of these structures in a simple sentence, then in a complex sentence the matter is different. The syntax of a complex sentence for a translator contains a very complex component, which consists in the translator's search for "meaningful" and similar syntactic structures in the target language, taking into account their coherence and compatibility in a single "matter" of a complex sentence.

There is a clear tendency in the scientific text to apply uniform principles of organizing language means. When characterizing scientific texts in English, particular importance should be given to creative elements that can be realized in the presentation of scientific information. It is generally accepted that a scientific text should contain objectively rigorous information, without any "foreign style" inclusions. However, we also support the point of view of most researchers of the functional styles of the language that the boundaries between functional styles are very flexible with some exceptions - for example, it is the official business style [5, p. 173].

A scientific text is a set of information acts, objectified in the form of lexical, grammatical and syntactic components. For texts of a scientific functional style, the use of certain lexical units expressing terminology, grammatical structures (parts of speech, word formation) and the syntactic integrity of information components of the communicative space is characteristic. In a scientific text, a stylistic component can be clearly expressed, which is a manifestation of the individual author's style. The basis of a scientific text itself remains invariant. It is transformed by the author based on the subjective understanding of the "readability" of the information. This primarily applies to scientific texts that contain subjects of humanitarian knowledge, for example, many issues of the humanities, such as: linguistics, translation theory, philosophy, political science, sociology - are debatable, which requires the author to

be creative. when creating material sources of scientific information containing knowledge primarily in the humanities. When analyzing the features of the scientific functional style, it is important to take into account the individuality of the author's style, because the elements of its manifestation, as it were, facilitate the perception of the information contained in the text, and make it possible to eliminate the impression of monotony that is created in some cases when reading scientific papers. A scientific text is a specially organized closed chain of sentences linked by a common communicative goal. This is expressed through communicative integrity, i.e. communicatively, the subsequent sentence builds on the previous one, moving the statement from the known to the new. As a result, a theme-rhematic chain is formed, which has a finite character and determines the boundaries of the text [6, p. 53].

To understand the essence of a complex sentence in a scientific text, it should be noted that it represents event or situational nominations that represent relationships between events in reality. In turn, an event or a situation is a combination of participants, persons or objects related to each other by certain relationships, which makes it possible to consider complex sentences as forms of nomination, denoting situations that include two or more events. Being forms of complex nomination, complex sentences are able to represent the relationship between the events of objective reality, somehow temporary, causal, conditional, concessive, goals, consequences, modes of action and comparison. An important role here belongs to unions used to combine simple sentences into a single syntactic "aggregate" (within a compound sentence) or to include subordinate clauses in a compound sentence. In a complex sentence, unions convey information about relationships and connections between events of objective reality, thus performing a nominative function. As a unit of a complex nomination, the proposal correlates with the situation, i.e. possesses predicativeness. In this sense, a sentence is rightfully considered as a predicative unit of language, with the help of which a predicative (correlating content with reality) unit of thinking is reproduced. Communication and

nomination reflect such relationships between the phenomena of reality, which are characterized as predicative relationships.

In order to express directly the features of the translation of a complex sentence in English, as well as modern approaches to the translation of a complex sentence, we considered it necessary to dwell on the information aspects of the translation of a complex sentence and, first of all, the basics of forming such information in a scientific text. When reading and subsequent translation of a scientific text, it is necessary to understand the structure of scientific knowledge as a whole and what forms such knowledge at the linguistic-semantic level.

When translating a complex sentence of a scientific text from English into Russian, it is necessary to take into account informational factors that determine the process of written translation. The difference between the amount of information that makes up the informational richness of a scientific text and the amount of information that makes it informative for the recipient-translator depends on the limits of distinguishability, in other words, on the interpreter's properties, which are based on the structure of the translation thesaurus [7, p. 224].

The peculiarity of the informative component in the process of translating a complex sentence from English into Russian and in the entire translation process as a whole lies in the way of processing the original information, which leads to a significant or insignificant modification of information at various levels of the language. This is implemented directly in a sentence, including a complex sentence in the English language. As a result of these modifications, additional, mainly pragmatic information penetrates into the translated text and the sentence in particular, which is directly influenced by:

- a) the personal qualities of the translator;
- b) the structure of his thesaurus in comparison with the original;
- c) the nature of the interaction between the original thesaurus and the translator's thesaurus.

The material indicator of this additional information is the discrepancy in the information status between the units of the original and translated texts, which is



especially important when translating a complex sentence in an English scientific text [3, p. 114]. At the same time, any translation modifications have the specifics of transformational process and position themselves in the theory and practice of translation as translation techniques.

The main problem in the process of transmitting the syntactic structure of a complex sentence is the processing by the translator of grammatical constructions that have no analogues in the target language. In the process of translation, the main task is to extract the meaning in a complex sentence and its adequate transmission [2, p. 327].

*Public opinion is lukewarm; although Europeans generally support a bigger role for the EU in international security, they are very skeptical of operations of a peace-enforcement nature [8, p. 43]. / Jamoatchilik fikri iliq; Evropaliklar, odatda, xalqaro xavfsizlik masalasida Evropa Ittifoqining katta rolini qo'llab-quvvatlasalar-da, ular tinchlikparvarlik amaliyotiga juda shubha bilan qaraydilar*

This sentence is complex, contains elements of both subordination and compositional communication. A compositional connection in a complex sentence is expressed in punctuation between the first simple sentence (*Jamoatchilik fikri iliq*) and the rest of the sentence with a complex subordinate connection. Within the entire complex sentence there is a subordinate clause of the assignment (*Evropaliklar, odatda, xalqaro xavfsizlik masalasida Evropa Ittifoqining katta rolini qo'llab-quvvatlasalar-da, ular tinchlikparvarlik amaliyotiga juda shubha bilan qaraydilar*) When translating this sentence, we made the following syntactic replacements: division of sentences - this transformation was necessary due to the different punctuation of complex sentences in English and Uzbek; At the level of a phrase, we made syntactic replacements in a phrase (*inchlikparvarlik amaliyotiga*), in which the attributive part of a phrase in English was transformed into a phrase with a prepositional construction (*operations of a peace-enforcement nature*).

When analyzing the translation of complex sentences in a scientific text, we used the following syntactic transformations: division and combination of sentences, replacement of sentence members, replacement of the type of sentences. We applied



such transformations taking into account the semantic coherence of the informative field of the English complex sentence. The lexico-semantic content of a scientific text required the use of complex syntactic units overloaded with information, which created certain difficulties in translation. One of the basic problems of translating a complex sentence in a scientific text lies in the selection of the necessary syntactic structure that would most fully correspond to the semantic content of an equivalent syntactic unit.

Thus, as a unit of translation, a complex sentence is subject to translation transformations, among which there are various approaches to ways of transforming its syntactic structure in English. It is necessary to take into account the degree of information content of a complex sentence in any approach to its translation from English into Russian. First of all, this manifests itself in endowing a complex sentence with such a universal, extralinguistic quality as informative value, since with such an interpretation of the function of a complex sentence in a linguistic communicative space, i.e. the ability to include in its syntactic structure certain meanings embedded in the lexical "palette" of the information chain of a complex sentence, the method of translation transformations at the syntax level may differ.

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## THE ROLE OF DEICTIC EXPRESSIONS IN CONTEXT

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*Annotation* Deixis belongs to the area of pragmatics because it directly involves the relationship between the structure of language and the context in which it is used. This article will discuss deictic expressions, firstly by giving definitions by different linguists, secondly by presenting and discussing the different deictic categories and finally by commenting on the different types of uses of deictic expressions such as deictic and anaphoric.

**Keywords:** Anaphoric, Deictic Expressions, Deixis, Personal Deixis, Spatial Deixis, Temporal Deixis, Discourse Deixis, Social Deixis.

**Аннотация** Дейксис принадлежит к области прагматики, потому что он непосредственно затрагивает отношения между структурой языка и контекстом, в котором он используется. В этой статье мы обсудим дейктические выражения, во-первых, дав определения разных лингвистов, во-вторых, представляя и обсуждая различные дейктические категории и, наконец, комментируя различные типы использования дейктических выражений, таких как дейктические и анафорические.

**Ключевые слова:** анафорические, дейктические выражения, дейксис, дейксис личностный, дейксис пространственный, дейксис временной, дейксис дискурсивный, дейксис социальный.

A deictic expression (deictic from Ancient Greek δεικτικός, deiktikós, 'capable of proof') is defined as any word or expression used to indicate the place, time, and the condition or situation of the speaker at the time of speaking. Deictic expressions (also

referred to as 'deictics') will typically include personal pronouns, demonstratives, verbs, and adverbs.

Deixis is an important field studied in pragmatics, semantics and linguistics. Deixis refers to the phenomenon wherein understanding the meaning of certain words and phrases in an utterance requires contextual information. Words or phrases that require contextual information to convey meaning are deictic [6, p 54].

The contextual information of the utterance mentioned by Levinson consists of information about the speaker, the addressee, the time and the place. For example, if we take a close look on the sentence *I am leaving tomorrow*, who does *I*, *am*, and *tomorrow* refer to? We cannot identify the meaning of this utterance, unless we know the time of the utterance, the place, and who the speaker is, in other words the context of the utterance. Expressions like *I*, *you*, *we*, *this*, *that*, *here*, *there*, *today*, *tomorrow*, are all indexed, and the listener needs to identify the speaker, the time and the place of the utterance to fully understand what is being said and meant.

There are three deictic categories identified in the literature. These are: **personal deixis** (*I*, *you*, *we*), **spatial deixis** (*this*, *that*, *here*, *there*), and **temporal deixis** (*now*, *today*, *yesterday*). In addition to person, place and time deixis, Levinson, following Lyons and Filmore, adds two other deictic categories. These are: **social deixis** which covers the encoding of social distinctions that are relative to participant-roles, particularly aspects of the social relationship holding between speaker and addressee(s) or speaker and some referents, and **discourse deixis** which involves the encoding of reference to portions of the unfolding discourse in which the utterance is located.

However, Yule describes deixis as a way of “pointing through language”, and also refers to deixis as a technical word that comes from Greek. Yule also admits that deictic expressions have their most basic uses in face-to-face spoken utterances. In addition, Lyons has defined deixis as follows:

By deixis is meant the location and identification of persons, objects, events, processes and activities talked about, or referred to, in relation to the spatio-temporal

context created and sustained by the act of utterance and the participation in it, typically, of a single speaker and a least one addressee [7, p 377].

In other words, an utterance containing deictic expressions such as *I will take this paper over here* requires contextual information for an accurate meaning: which *paper* is being referred to, knowledge about space – knowing where *here* is, and who the speaker is. Levinson states that an utterance can be tested as being deictic or not in terms of its truth conditions. For example, if we say *John is the husband of Mary*, the utterance can be either true or false, however if we say *He is the husband of Mary*, we cannot assess whether the sentence is true or false because it depends who the *he* is. If we take another example, such as *I'll come and see you tomorrow*, we cannot assess whether this sentence is true or false because we are not aware of when the sentence was written, therefore we do not know when *tomorrow* is. Thus, knowledge about the context in the interpretation of utterances containing deictic expressions is crucial.

For Levinson [ 6, p 64], deixis is organised in an egocentric way, with the deictic centre constituting the reference point in relation to which a deictic expression is to be interpreted. For example, in an utterance such as *as I'm over here now*, the speaker, the actual location and the actual time of the utterance are respectively the deictic centres. The term deictic centre underlines that the deictic term has to relate to the situation exactly at the point where the utterance is made or the text is written, in other words it has to relate to the position from which the deictic terms are understood. In conversations, the deictic centre is constantly changing between the partners; the speech event is conceptualised from a different point of view.

A deictic expression is a word or phrase, that points out the different meaning in various situations. Without a pragmatic approach, the interpretation of an utterance would be impossible to understand, therefore deictic expressions are crucial and it involves the relationship between the structure of languages and the contexts in which they are used. A word that depends on deictic indicators is called a deictic word, and is bound to a context. Hence, words that are deictic hold a

denotational meaning which varies depending on time and/or place, and a fixed semantic meaning.

In addition to knowing the time, place and the speaker and addressee, deictic expressions help us realise what is close to the speaker and what is not. This is defined by the following two terms: proximal (near the speaker), such as *this, here, now*, and distal (away from the speaker) such as *that, there, then* [6, p 396]. This concept of distance is more relevant to the study of spatial deixis. Deictic expressions also help us realise if the movement is away from the speaker or towards the speaker (*go vs come*). According to Fillmore (1977), the most obvious manifestations of deictic categories in languages are to be found in the systems of pronouns i.e *I, we, she*, demonstratives i.e *this, these*; and tenses i.e *walk, walked*.

Person deixis localises an entity in relation to the position of the speaker and/or hearer [3, p 356]. First and second person pronouns typically refer to the speaking and hearing speech participants, whereas third person pronouns designate the non-speech or narrated participant. According to Lyons the active participants are the speaker and the addressee, whereas the third person is not an active participant in the speech act.

To give an illustration of what I mean let us look at the following examples:

*I* was busy.

*You* came late.

*I* saw *her*.

Third person pronouns may be used deictically or anaphorically. An anaphoric use of a deictic expression occurs when reference is being made to another entity that was introduced earlier in the text/speech.

Examples:

George thinks *she* is happy. (deictic use)

Ann thinks I heard *her*. (anaphoric use)

In English, pronouns come in singular and plural forms, several are marked for case, and the third person singular forms encode gender.



Another category of deixis is spatial deixis. Spatial deixis localises both the speech participants and the narrated participants in space. The most frequent words are the pronouns *this/that* and *these/those* . Other expressions that belong to this category are the adverbs *here/there* and prepositions *in/on*.

Spatial deixis also entails whether something is near the speaker or not ( *this* vs *that* ). In all languages, there are pairs of verbs such as *come/go* , *bring/take*, which are interpreted to identify the direction of the motion, towards or away from the place of speech event, hence the spatial deixis is the marking in language of the orientation or position in a space. Lyons [ 7, p 648] states that “there are two ways in which we can identify an object by means of a referring expression: first, by informing the addressee where it is; second, by telling him what is like, what the properties it has or what class of objects it belongs to”.

Fillmore talks about the fact that deictic pointing can be achieved in different ways. He distinguishes between two types of uses: the gestural and symbolic ones. The gestural use requires monitoring the speech event in order to identify the referent, whereas the symbolic use involves activating knowledge about the communicative situation and the referent. Levinson exemplifies the two uses with the following examples:

*This* finger hurts (gestural).

*This* city stinks (symbolic).

In the first example, we notice that the demonstrative can be accompanied by a pointing gesture which illustrates the gestural use. In the second example, which does not involve a pointing gesture and shows a larger situational context illustrates the symbolic use.

Temporal deixis is another category of deictic expressions. It refers to an event of an utterance, which takes place any time relative to the speaking time and is, therefore, represented by tense, time adverbials and sometimes by spatial prepositions such as *in the morning*, *at night*, *on time*. The location of an event referred to and represented by time and tense constitutes the deictic centre in the utterance of a speaker. In English, the present and the past are morphologically



marked. Morphology is an area of study within grammar that describes how words are composed. A linguistic element is morphologically marked when it is more distinctively identified than another element, by adding a morpheme. A morpheme is the minimal unit of meaning. For example, the first person present tense *I clean* is not morphologically marked. On the other hand, the third person *he clean-s*, and the past tense *he clean-ed* are marked by the morpheme *-s* and *-ed*. The future is constructed using the modal verb *will*. Another way to express the future in English is by attaching an adverb of time indicating the future illustrated in the following example:

*I go on holiday next week.*

*She drinks coffee every morning* (morphologically marked present tense *-s*, expressing an event occurring on a regular basis)

Fillmore (1977) and Levinson (1983) note that the deictic words *yesterday*, *today*, and *tomorrow*, pre-empt the absolute ways of referring to the relevant days. Thus, the utterance, *I will call you on Sunday*, said on Sunday, can only be referring to next Sunday, otherwise the speaker should have said today.

Having presented the traditional deictic categories, what will now be discussed is the discourse and the social deixis. The discourse deixis provides a reference to an utterance backward or forward to other utterances. Levinson [ 6, p 62] states that discourse deixis is “the encoding of reference to portions of the unfolding discourse in which the utterance is located”. In other words, discourse deixis refers to all expressions and phrases that point the reader or hearer through spoken or written text. These examples illustrate discourse deixis: *earlier*, *later*, *the preceding x*, *the following s*, *in the following paragraphs*, *in the following weeks*, *during next month*, *in the next chapter*.

Social deixis refers to the relation between the speaker and the addressee and third party referents. According to Levinson social deixis is those aspects of language structure that are anchored to the social identities of participants in the speech event, or to relations between them, or to relations between them and other referents [ 6, p 63]. In some languages, such as Spanish, French, Romanian, the

singular second person pronoun has two forms: *tu* and *usted - vous-dumneavoastra*. The first form ( *tu* ) is used to address to a speaker in an informal or relaxed way. The second form ( *usted – vous – dumneavoastra* ) is used in a more formal or polite context. In Modern English, there is no such distinction for the second person pronoun *you*. However, in the Elizabethan English *thee*, an archaic pronoun has been widely used with the same role as *vous* in French [5, p 27].

I tell *Thee* what Antonio, I love *Thee*, and it is my love that speaks [4].

There are some expressions that are not understood unless the interlocutors have some knowledge about the context of the utterance, knowledge about the status of those involved, intend of the speaker, the place and time of the utterance. These words do not have a constant meaning, and they are known as deictic words. Deictic words are a crucial element of pragmatics because they are related to the context of the utterance.

To sum up, personal deixis system in English marks distinctions in gender (in the third person only) and number (in first and third person); the second person pronoun *you* can refer to both singular and plural entities, i.e. neutralised. Thus, personal deixis can mark a number of overlapping distinctions: person, gender, number, and social status. Spatial deixis involves the specification of locations relative to points of reference in the speech event. English has a proximal or distal distance from speaker. A third type of deixis is temporal deixis which shows the orientation or position of the referent of actions and events in time. As shown in temporal deixis section, the concept of time English is represented by three main classes: time adverbials, tenses, and time expressions. These three categories of deixis are known as traditional deictic categories. Furthermore, Fillmore identified two more categories: discourse and social deixis. Discourse deixis indicates or refers to some portion or aspect of the ongoing discourse, and the social deixis reflects the social relation between the speakers, and classifiers used with human referents.

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## ON THE HISTORICAL EXPLANATION OF THE CONQUEST OF THE ANCIENT USTRUSHANA BY THE ARABS

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*Annotation: The first Arab campaigns to Central Asia began with the capture of Marv in 651 under the leadership of Ubaidullah ibn Ziyad. A lot of Arab expeditions to Mowarraunnahr which were in the second half of the 7th century, were organized for the purpose of plundering and exploring the region. The ultima conquest of Movaraunnahr by the Arabs began with the arrival of Qutayba ibn Muslim to the viceroyalty of Khurasan at the beginning of the 8th century. Ustrushana was not left out of such political processes and its subsequent political life consisted of struggles against the Arab caliphate's invasion campaigns, and the history of diplomatic relations like other regions of Central Asia.*

*Keywords: Ustrushana, Arabs, muslim, Marv, history, territory.*

The first appearance of Arabs in Ustrushana coincides with the period of Salm ibn Ziyad (680-683), the third raid of the caliphate on Movaraunnahr during the reign of the viceroy of Khurasan. Arriving in Samarkand Salm ibn Ziyad ordered his assistants to mobilize the army towards Khojand and this army reached Khojand through the territory of Ustrushana and was severely defeated by the local population on the outskirts of the city. The second military campaign of the Arabs to Ustrushana was organized under the command of Muhallab ibn Sufra (697-701)<sup>1</sup>.

According to N. Negmatov, Qutayba made the next battle of the Arabs to Ustrushana in 713, when he organized a warfare to Ferghana. Qutayba attacked Choch and Fergana several times in 713-714 and won every time . Those times he

<sup>1</sup> Пардаев М.Х., Гофуров Ж.И. Уструшонанинг илк ўрта аср кишлок маконлари. Тошкент, 2016. Б.296.



attacked not only the settlements of the people located in the plain areas of Ustrushona, but also the towns and villages in the mountainous and mountainous regions. Particularly, Qutayba fought with people wearing black clothes in the Mink fortress according to Ibn Hawqal and al-Istahri's confession and besieged al-Afshin<sup>2</sup>. Most experts suspect that the medieval authors made a mistake by confusing al-Afshinin, who was besieged by Qutayba in Mink, with Heydar al-Afshin who was the prince of Ustrushana, who served in the 20s and 30s of the 9th century during the reign of Caliph Mutasim. In fact, the authors did not make a mistake, but Afshin, who besieged Mink, was the ancestor of another ruler of Ustrushana, whose name was Haydar al-Afshin and has not reached to us. There are those who do not believe in the matter of the "black-clothed" who resisted the Arabs as well. At this point, it should be noted that in ancient and medieval battles, a large number of troops who entered the battle wore the same color clothes to distinguish their comrades from the enemy, and this situation also happened in Ustrushona (Mink Castle) either.

Sogd-Ustrushana relations on some issues of the science which studies Ustrushona belong to this period of the early Middle Ages. In this point, it can be explained according to the genealogy of the governor of Sughd, Gurak, he belonged to the Afshin dynasty of the rulers of Ustrushona, and the uprising of Sughd in 721-722 was connected with the history of Ustrushana<sup>3</sup>.

Ustrushona was a geographical gate opening in the north-eastern direction to the Fergana Valley, the south side was the right bank of the upper reaches of the Zarafshan river, the north side was the Syr Darya, and the west side was surrounded by Mirzachol in the ancient and early medieval times. Even in the Middle Ages this country had a relatively unique position in various political and economic situations due to its geographical location. For example, it acted as a buffer between Sughd and Choch during the Arab invasion. It was considered important to be aware of the

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<sup>2</sup> Сверчков Л.М. Поселение Мык - источник истории средневековой Уструшаны: Автореф.дисс. ...канд.ист.наук.- Самарканд, 1991. С. 60.

<sup>3</sup> Пардаев М.Х., Гофуров Ж.И. Уструшонанинг илк ўрта аср қишлоқ маконлари. Тошкент,2016. Б.297.

situation in Ustrushona for the military-political situation of Choch. The ambassador Fatufarn sent to Choch by Panchikant (Panjikent) khvabusi (ruler, 708-722 AD) Devashtich had to pass through Ustrushona on his way back to Panjikent. But during the days he was in Choch, Ustrushona fell into the rulership of the Arabs and as a result his path was blocked, so fearing to continue his journey alone he returned to Choch. The letter he wrote to his master Devashtich when he was in Choch has come down to us as part of the archive of documents of Mugh Mountain Sugd and is numbered A-14. In lines 16-17 of this letter, Fatufarn writes, "Ustrushanikutakt pgramshtak" - the lands of Ustrushona were occupied<sup>4</sup>. It seems this situation led to an increase in danger not only for the Ustrushans, but also for Panch and Choch.

M. Ishakov says that it is a letter without typical introduction and conclusion that determines to whom the letter or from whom. It seems that this was deliberately hidden due to the complicated situation during the days of the Arab occupation. As for the content of the letter, the unknown author writes as follows: "... (there are) reports that the events in Khojand have calmed down. The people of (Khojand) converted to the religion (or "under the protection") of the emir. There are 14,000 nobles, merchants, officials, working people. They apostatized from their (original) religion. We sent a message about these events. But we heard that (the batman) returned to Huttal(?)<sup>5</sup>.

A number of place names mentioned in the document (Shakat, Btuttam, Pargar, Huttal, etc.) are areas between Khojand and Panjikent (Panchikant). Since the military and political situation in this region was important for Panch, in 720 and 721, the ruler Devashtich sent his spy and used to get information.

According to Tabari, the people of Ustrushan and Panjikent together sought refuge from Alutar, the ruler of Ferghana. However, it is known that this plan did

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<sup>4</sup> Исҳоқов М.И. Илк ўрта асрларда Суғд, Уструшона ва Чоч муносабатларига доир. // "Уструшона Буюк ипак йўлида, унинг минтақалараро сиёсий – иқтисодий ва маданий муносабатларни ривожлантиришдаги ўрни (антик ва ўрта асрлар даврида)" мавзусида ўтказилган республика илмий-амалий анжумани материаллари. Гулистон, 2016. Б.5-7.

<sup>5</sup> Исҳоқов М.И. илк ўрта асрларда Уструшонанинг сиёсий мақомига доир. // "Қадимий Жиззах воҳаси – Марказий Осиё цивилизацияси тизимида (сиёсий, иқтисодий, маданий ҳаёт)" Республика илмий-амалий конференция материаллари. Жиззах 2019. Б. 29-31.



not materialize due to Aluttar did not fulfill his promise. Learning about the situation The Arabs killed the incomers on the road near Khojand. After that, the people of Panch also changed their mind about their intention to travel. If these events took place on the eve of 720 AD, Chinese sources, in particular, the Annals of the Tang Dynasty - Tan-shu provide a number of information about Ustrushana.

The viceroy of Khurasan, Asad ibn Abdullah al-Qushayri (735-738), gathered an army to conquer the Khuttalan province in 737. The Khuttalon region which took control of the Wakhsh oasis and its surrounding areas, had maintained its independence until that time, successfully repelled several Arab attacks, and even inflicted a heavy defeat on them. Badr Tarkhan, the governor of Khuttalan at that time, came to the aid of Turk Khan and Hara Bugro with a large army. The allies won in this battle near the Amudarya.

According to Tabari's report, the fighters of the Khagan army, who were happy about this victory and lost their vigilance, dispersed to the villages to celebrate the victory. Assad took advantage of this situation, quickly withdraw his army and hit the allies who are trying to retreat. The Turkic khan returns to his country through Ustrushana, where he is welcomed by Afshin Hara Bugro with great honor and hospitality. In connection with the visit of the khakhan and his army, a hurricane blew, purebred vultures and various gifts were presented to the khakan and his army and were hospitable<sup>6</sup>.

Thus, the reasons why the Arabs conquered the Movaraunnahr territories in a short period of time were as follows: The political disunity prevailing in the country and the mutual struggles of the local rulers were very convenient for the Arabs. Qutayba managed to win over the local governors who were in the movement of mutual unification and working for the alliance with various tricks. The Arabs helped one of the warring governors to defeat the other, and then conquered both of them in turn.

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<sup>6</sup> Пардаев М.Х., Гофуров Ж.И. Уструшонанинг илк ўрта аср қишлоқ маконлари... Б.302.





The Afshins of Ustrushana, a nominal component of the caliphate, were annexed to the state of the Tahirites and became a subordinate country from 822. From this period Ustrushana began to occupy a worthy place among the works of all Arabic-speaking historians and geographers <sup>7</sup>. It becomes one of the provinces of strategic importance in the political and economic life of the Tahirid state, which united Khurasan and Movaraunnahr. From this period, Ustrushana began to regularly pay 50,000 dirhams (of which 48,000 Muhammadi, 2,000 Musayabi) dirhams to the tahiris as hiraj. The Afshini dynasty, which ruled Ustrushana during the Somani state, was terminated in 893. In later written sources the term Ustrushana began to be used as a geographical name of a specific province, not a political structure. Therefore, Ustrushana will receive the status of a region within the Samanid and subsequent states.

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<sup>7</sup> Пардаев М.Х., Гофуров Ж.И. Уструшонанинг илк ўрта аср қишлоқ маконлари... Б. 311



## MEASUREMENT UNCERTAINTY EVALUATION IN THE DIGITAL ERA

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**Abstract:** *Disadvantages of the traditional approach to measurement uncertainty evaluation are analyzed. An algorithm for measurement uncertainty evaluation based on the Monte Carlo method is described, which makes it possible to eliminate these shortcomings. The results of a comparison of measurement uncertainty estimates obtained by the traditional method and the Monte Carlo method are presented. The need to revise the “Guide to the Expression of Uncertainty in Measurement” is substantiated and its current state is described.*

**Keywords:** *measurement uncertainty, Monte Carlo method, revision of the “Guide to the Expressing of Uncertainty in Measurement”, kurtosis method.*

**Аннотация:** *Анализируются недостатки традиционного подхода к оцениванию неопределённости измерений. Описан алгоритм оценивания неопределённости измерений на основе метода Монте-Карло, позволяющий устранить эти недостатки. Приводятся результаты сравнения оценок неопределённости измерений, полученные традиционным методом и методом Монте-Карло. Обосновывается необходимость ревизии «Руководства по выражению неопределённости измерений» и описывается ее современное состояние.*

**Ключевые слова:** *неопределённость измерений, метод Монте-Карло, ревизия «Руководства по выражению неопределённости измерений, метод эксцессов*

**Introduction**

International Metrology Day was held this year on May 20, 2022 under the motto “Metrology in the Digital Era”. This topic was chosen because digital technologies have revolutionized our community and are one of the most significant trends in the world today. And since the accuracy of measurements determines the reliability of scientific research, industrial production, and international trade, it is advisable to analyze the impact of digital technologies on approaches to assessing the accuracy of measurements.

In 1993, the “Guide to the Expression of Uncertainty in Measurements” (GUM) were published, which were based on: the law of propagation of uncertainty, which leads, for nonlinear model equations, to a shift in estimates of the numerical values of the measurand and its uncertainty; the central limit theorem of probability theory with the apparatus of the number of degrees of freedom, predetermining the unreliability of the expanded uncertainty estimates due to ignoring the influence of the laws of distribution of input quantities on the law of distribution of the measurand [1].

To get rid of these shortcomings allowed the introduction of the so-called law of propagation of distributions, based on a numerical method – the Monte Carlo method (MCM). The MCM is based on the generation of input values in the form of random numbers with a given distribution law and their transformation through a measurement model into a set of random numbers with a distribution law corresponding to the distribution of the measurand [2].

The use of MCM was a real breakthrough in the measurement uncertainty evaluation, since it made it possible to get rid of the disadvantages of the traditional approach listed above. However, it turned out that the measurement uncertainty estimates obtained using the MCM numerically differ from the estimates obtained using the GUM approach. Therefore, Supplement 1 to the GUM (GUM-S1) setting out the MCM, came into conflict with the GUM itself. This placed the task of revising the GUM before the Joint Committee for Guides in Metrology (JCGM) Working Group WG1 [3].

### The essence of the Monte Carlo method

In the Monte Carlo method, the input quantities  $X_1, X_2, \dots, X_N$  are represented as random variables with probability distribution functions (PDF)  $g_1, g_2, \dots, g_N$ . The expected values and standard deviations of these PDF are equivalent to the estimates of the input quantities  $x_1, x_2, \dots, x_N$  and their standard uncertainties  $u_1, u_2, \dots, u_N$ , respectively. In this case, the application of the Monte Carlo method consists in performing the following operations:

- 1) generating  $N$  arrays of random numbers  $j=1.2$  large volume  $M$  ( $M = 10^6-10^7$ ),
- 1) obtaining an array of estimates of the output value  $y$  of the volume  $M$  ;
  - 2) calculation of estimates of the parameters of the obtained distribution: mathematical expectation  $y$ , combined standard uncertainty  $u(y)$ , coverage factor  $k$  and expanded uncertainty  $U_p$  [4].

### GUM revision

It should be noted that the following factors hinder the direct use of MCM for measurement uncertainty evaluation in testing and calibration laboratories accredited for compliance with the requirements of ISO/IEC 17025:2017:

- lack of specialized certified software tools for measurement uncertainty evaluation based on MCM;
- the impossibility of obtaining the measurement uncertainty budget by the existing software tools that implement the MCM;
- the impossibility of documenting a step-by-step procedure for measurement uncertainty evaluating based on MCM.

In addition, a comparison of the estimates of the combined standard uncertainty obtained using the approaches described in [1] and [4] shows their numerical difference, primarily due to the difference in finding the type A standard uncertainties of input quantities. This posed a challenge for WG1 GUM revisions [5].

The first draft NewGUM was circulated by the end of 2014 to JCGM Member Organizations, National Metrology Institutes and other recipients. The revised Guide retained the law of propagation of uncertainty, with Type A and Type B

uncertainty estimates being calculated based on a Bayesian approach. However, the developers of NewGUM failed to offer an approach to a reliable expression of the expanded uncertainty.

### **Kurtosis method**

As part of the implementation of the topic COOMET 796UA19\_2019, the Recommendation “Expression of the expanded measurement uncertainty (kurtosis method)” was developed, which makes it possible to obtain estimates of the numerical values and uncertainty of the measurement result that are close to the estimates obtained using the MCM.

The recommendations include the following sections:

1. Introduction.
2. Terms of use.
3. Notation used.
4. General provisions.
  - 4.1. Measurement model.
  - 4.2. Estimation of input quantities, their standard uncertainties and covariances.
  - 4.3. Calculation of the numerical value of the measurement result.
  - 4.4. Calculation of the standard uncertainty of the measured quantity.
  5. Calculation of the expanded uncertainty.
    - 5.1. Kurtosis method [6].
    - 5.2. The law of propagation of expanded uncertainty [7].
      - Appendix A. Finding the parameters of distributions by coverage factor [8].
      - Appendix C. Accounting for the shift of the numerical value of the measured value in the case of a nonlinear model equation [9].
      - Appendix C. Accounting for the bias of the standard uncertainty of the measured quantity with a nonlinear model equation [10].
      - Appendix D. Student coefficients for the number of degrees of freedom  $\nu$  and the probabilities 0.95 and 0.9545.
      - Appendix E. List of publications with examples of estimation of measurement uncertainty by the proposed methods.

Literature.

Draft COOMET Recommendations “Expression of expanded measurement uncertainty (kurtosis method)” was approved at the 33<sup>rd</sup> COOMET Committee meeting which will be held online on the Zoom platform on 25-27 October 2022.

### **Rebranding GUM**

In 2017, JCGM rebranded documents in its portfolio that were prepared or to be developed by Working Group 1: the entire set of documents is now known as the “Guide to the Expression of Uncertainty in Measurement” or “GUM”, and deals with the evaluation and expression of measurement uncertainty, as well as its application in science, commerce, health, security and other types of public activities. The GUM will consist of the following 12 documents [11]:

- JCGM GUM-1. Part 1: Introduction.
- JCGM GUM-2. Part 2: Concepts.
- JCGM GUM-3. Part 3: GUM:1995 with minor corrections.
- JCGM GUM-4. Part 4: The role of measurement uncertainty in conformity assessment.
- JCGM GUM-5. Part 5: Examples.
- JCGM GUM-6. Part 6: Developing and using measurement models.
- JCGM GUM-7. Part 7: Propagation of distributions using a Monte Carlo method.
- JCGM GUM-8. Part 8: Extension to any number of output quantities.
- JCGM GUM-9. Part 9 Statistical models and data analysis for interlaboratory studies.
- JCGM GUM-10. Part 10 Applications of the least-squares method.
- JCGM GUM-11. Part 11 Bayesian methods.
- JCGM GUM-12. Basic methods for uncertainty propagation.

### **Conclusions**

The digital technologies that have revolutionized our community have not bypassed the theory of measurement uncertainty evaluation. An example of this is the development of a numerical implementation of the law of propagation of distributions based on the numerical Monte Carlo method. The use of MCM was

a real breakthrough in the measurement uncertainty evaluation, since it made it possible to get rid of the disadvantages of the traditional approach listed above. However, it turned out that the estimates of measurement uncertainty obtained using the MCM are in poor agreement with the estimates obtained using the GUM approach. In this regard, there is a need to revise the GUM based on the Bayesian approach. Working group number 1 on manuals in metrology has not yet fully coped with this task in terms of estimating the expanded uncertainty. The way out of this situation is the method of kurtosis, brought to practical use by the author of the report. The recommendation developed on the basis of this method can adequately supplement the set of GUM documents proposed by WG-1 as part of its rebranding.

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## USE OF PHYSICAL PROPERTIES OF CAPACITIVE TRANSDUCER IN DETERMINATION OF WATER CONTENT IN CRUDE OIL

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**Аннотация:** Ушбу мақолада электр сизимли конденсаторнинг физик хусусиятларидан фойдаланган ҳолда хом нефть таркибидаги сув миқдорини аниқлашнинг икки усули кўриб чиқилган. Нефть таркибидаги сув миқдорини аниқлаш учун индикатор сифатида актив ва реактив элементлардан ташкил топган электр схема ишлатилган. Бунда сизимнинг муҳит диэлектрик киритувчанлигини ўзгаришига асосланган ҳолда аниқлаш усули кўриб чиқилган. Ушбу мақола орқали ўлчаш схемаси ва ҳисоблаш формулалари берилган.

**Калит сўзлар:** нефть, хом нефть, муҳитни диэлектрик киритувчанлиги, конденсатор реактив қаршилиги, қаршилиқлар учбурчаги.

**Аннотация:** В данной работе рассмотрена два способа определения содержания количества воды в сырой нефти с помощью электрофизических свойств электрических конденсаторов. В качестве индикатора определения влажности нефти использована электрическая схема состоящих из активных и реактивных элементов. Ёмкость конденсатора на прямую связана с диэлектрической проницаемостью исследуемого объекта. Приведена электрическая схема измерения и расчетные формулы определения ёмкости.

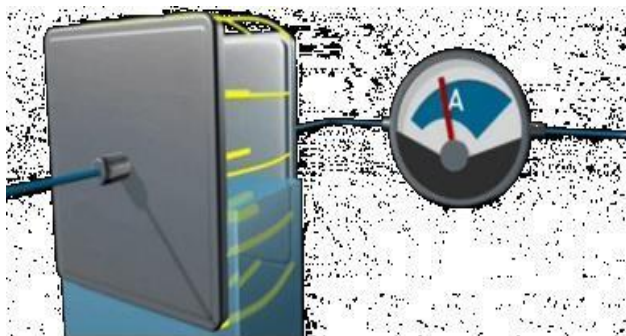
**Ключевые слова:** Сырой нефть, диэлектрическая проницаемость, ёмкость конденсатора, реактивная сопротивление, треугольник сопротивлений, сдвиг фаз, фазометр.

**Annotation:** *In this paper, we consider two methods for determining the amount of water in crude oil using the electrophysical properties of electrical capacitors. An electrical circuit consisting of active and reactive elements was used as an indicator for determining the oil moisture content. The capacitance of the capacitor is directly related to the dielectric constant of the object under study. The electrical circuit of the measurement and calculation formulas for determining the capacitance are given.*

**Keywords:** *crude oil, dielectric permeability, capacitor capacitance, reactance, resistance triangle, phase shift, phase meter.*

It is important to determine the quality of oil products at the initial stages of production. One such quality indicator is the water content of crude oil, that is, the water content of crude oil is the main factor affecting its quality indicators. Determining the amount of water in oil is carried out using one of two methods, namely [1]:

- - using special sensors (electrodes) placed inside the pipelines during the flow of the extracted or transported product through oil pipelines;
- - testing of extracted oil in laboratory conditions of oil samples taken from special reservoirs.
- In both cases, we can use the physical properties of the capacitor element as sensors (electrodes) that carry out the measurement [2].



P 1. Two-electrode capacitance measurement sensor Capacitance of a known flat capacitor:

here:

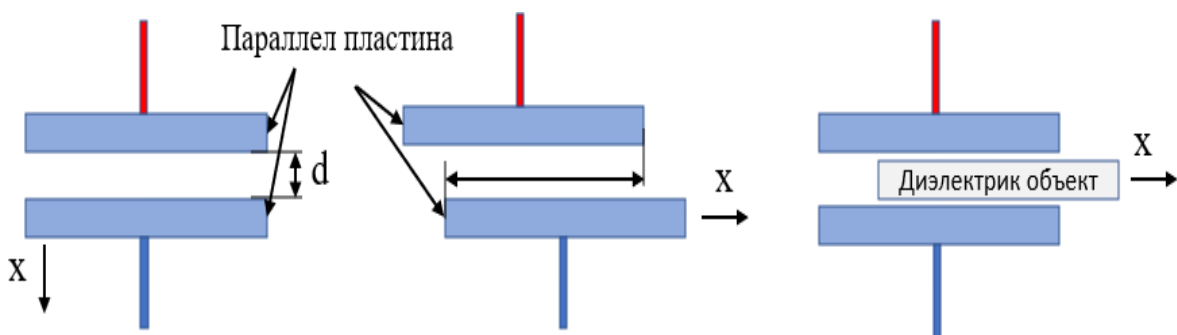
$$C = \epsilon \epsilon_0 \frac{S}{d} \tag{1.1}$$

$\epsilon$  - dielectric permittivity of the medium;

$\epsilon_0$  - dielectric constant;

$S$  is the surface of the capacitor plate;

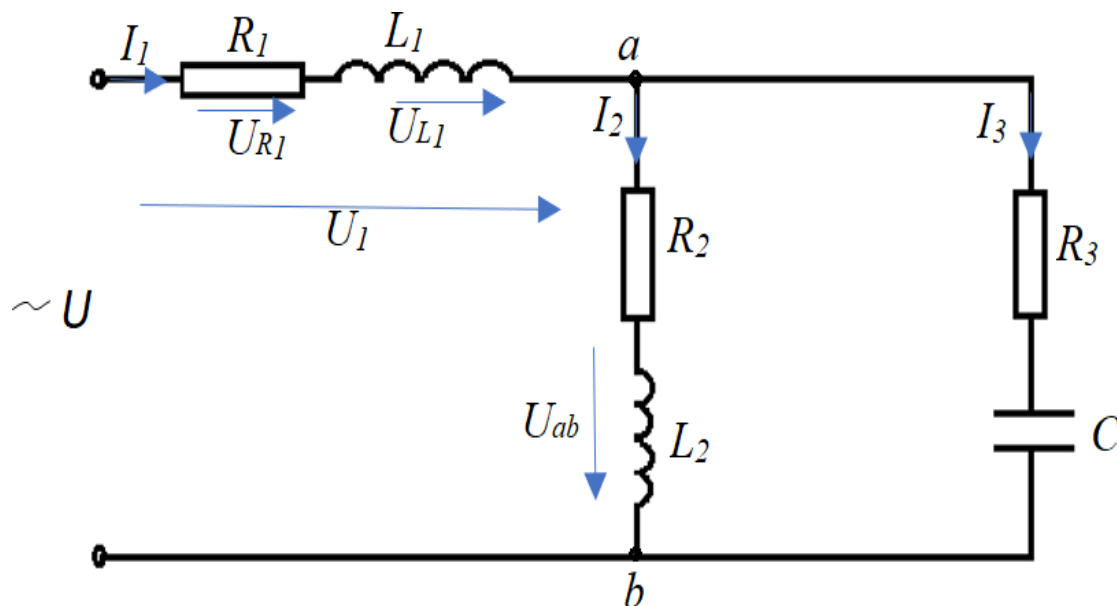
$d$  is the distance between the capacitor plates (P. 2).



P 2. Parallel plate of flat capacitor

To carry out the measurement, we can consider the following circuit in the form of an electrical circuit [3].

P 3. Electrical scheme of the measuring sensor



is equal to Here:  $\omega=2\pi f$  angular frequency [4]. The current passing through this part of the circuit I3:

$$I_3 = \frac{U_{ab}}{Z_3}; \tag{1.3}$$

Z3 is the total resistance in the circuit a) and b) part:

$$Z_3 = \sqrt{R^2 + X^2} \tag{1.4}$$

The X-reactive resistance is  $X = X_s$  since this network consists only of  $X_s$  [5].

Based on the expressions given above, the change in the reactance of the capacitor leads to a change in the network current I3. If these quantities are connected together and given in the form of a graduation table, it will be possible to determine the amount of water in crude oil with high accuracy in laboratory conditions using a not so complicated scheme. allows you to determine the angle between [6]:

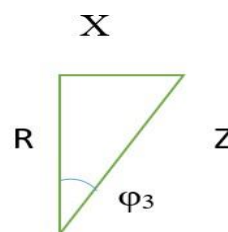
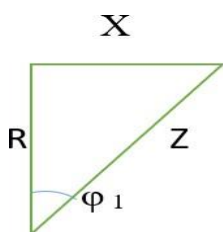
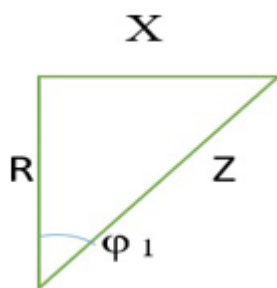
X is reactive resistance of the circuit;

R is the active resistance of the circuit;

Z – total resistance of electric circuit;

$\varphi$  is the displacement angle between current and voltage.

The reactance X of the given circuit is directly related to the reactance  $X_s$  of



capacitor taken as an indicator, and its change leads to a change in the  $\varphi$ -shift angle [7].

$\text{tg}\varphi$  is found from the triangle of resistances  $\text{tg}\varphi$ .

here:  $\varphi \equiv \arctg^X$  ;

*R*

We can measure the resulting  $\varphi$  angle with a phasometer, make a table of dependence on the amount of water in the product, and graduate it (Table) [8].

*1-Table*

tgφ град ус	X <sub>c</sub> O M	W %
30	--	12
20	--	14
15	--	17
10	--	20+

As a conclusion, we can say that if we insert a substance or material whose capacitance should be checked between the plates (shells), then we can see that the dielectric permittivity of the medium between the plates changes to a certain extent, and this, in turn, leads to a change in the value of the capacitor's capacitance [9].

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## ON APPLYING THE MEASURES OF TECHNICAL REGULATION, STANDARDIZATION, CERTIFICATION AND IMPROVEMENT OF THE NATIONAL METROLOGY SYSTEM IN AGRICULTURE.

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**Abstract:** *The article provides information about standardization in the manufacturing industry and agriculture, harmonization of our existing standards with modern standards, abandonment of outdated standards.*

**Keywords:** *measurement uncertainty, Monte Carlo method, revision of the “Guide to the Expressing of Uncertainty in Measurement”, kurtosis method.*

19,000 of the 30,000 existing standards in the country have been harmonized with international standards and a register of international standards has been formed.

5 thousand 600 outdated standard practices that have a negative impact on the mechanisms of the market economy were removed, 3 thousand 500 were improved based on the requirements of the times. 26 additional technical regulations have been developed in accordance with international analogues. Global G.A.P. in 260 enterprises producing mainly agricultural products [1].

And based on Organic standards, a quality system was introduced and they were certified at the international level, but this means that it is difficult and trying to harmonize almost 90 percent of agricultural enterprises in all of Uzbekistan with modern standards. In order to increase agricultural products and improve their quality, to accelerate production in agro-industrial complexes, to create an effective tool for organizational and management issues, the state system of standardization and metrological support should be used in every way [2]. Wide use of control-measuring devices and automatic means in agriculture determines the level of technical development of the field.

In modern times, the use of measuring devices in the production of agricultural products has reached a high level. Among them, the most widely used and widespread are electrical measuring devices [3].

One of the main reasons for the further development of mechanization, electrification and automation in agriculture and agro-industrial complexes is the provision of simple and accurate, perfect and cheap, compact and accurate measuring instruments that can meet the requirements of the present time [4].

In Uzbekistan, it is necessary to modernize the certification body, i.e., the accredited testing laboratories, to study the quality of products brought to the country from abroad, and to provide appropriate modern equipment in this regard, which will make a great contribution to the development of Uzbekistan [5].

For example, 32 textile enterprises were certified based on the Oeko-Tex standard. 21 enterprises received a certificate confirming the "SE" marking required in the European Union.

At the same time, there are many other tasks related to standards in production, export and import processes. Some procedures are creating difficulties for entrepreneurs

For example, our national standards are inconsistent with international standards.

Proposals for solving these issues and improving procedures in the field were discussed. For example, today, 3,400 types of products require a certificate of conformity along with a sanitary-epidemiological report. Testing of imported products is carried out during customs clearance, which takes up to 60 days. Therefore, it is necessary to establish a system of placing documents in this regard in the customs electronic program at least 30 days in advance [6].

It is necessary to take into account that ecological indicators have a harmful effect on the environment during the operation or consumption of the product, it is necessary to limit the release of production waste into the natural environment, to ensure the rational use of biological resources, their preservation, and the reduction of the level of atmospheric pollution. We can give examples of ecological indicators,

the composition of toxic wastes thrown into the environment, the release of toxic gases during product operation and consumption, growth, transportation, and storage [6].

When assessing the level of product quality, it is important to take into account economic indicators that describe the differences in the preparation, production and operation of the product or in the field of consumption [7].

Economic indicators are costs for the preparation and testing of experimental samples, the cost of product production, the costs of operating technical facilities, etc [8].

Quality metrics may or may not have dimensions like physical metrics. Quantitative description of quality indicators means their measurements in certain units [9].

For example, the cost of labor used to produce a product is the time spent to produce a unit of product, expressed in man-hours. Expressing the labor cost in working days does not change the labor cost of the product [10].

Similarly, the expression of economic indicators such as the cost or price of a product in sums or other units does not change its value. Like physical quantities, the quantity of qualitative indicators can be expressed by absolute and relative quantities. The absolute value of physical quantities always has dimension, while relative quantities are dimensionless. Absolute measures of product quality can be dimensionless or dimensionless, while relative measures are always dimensionless.

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## APPLICATION OF A TRANSFORMER CONVERTER WITH A DISCRETE OUTPUT IN AN AUTOMATIC CONTROL SYSTEM .

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**Abstract:** *based on the analysis of scientific and technical literature, the question of the use of transformer mechanical voltage converters with a discrete output in the automatic control system in critical production work is considered , which will allow, when used, to reduce the likelihood of accidents during repair work.*

**Keywords :** *transformer converter of mechanical stresses, automatic control system, sensor, digital code, control unit, discrete output, blocking, converter, indicator, digital-to-analog, main pipeline.*

At present, transformer converters of mechanical stresses have found their application for non-contact conversion of existing mechanical stresses in critical parts of machines and mechanisms into an electrical signal. Mechanical stress converters are used in measuring instruments, control systems, as well as various automatic blocking devices.

Discrete systems differ from continuous ones in that among the signals acting in the system there are discrete signals. Discrete signals are obtained from continuous ones by quantization in terms of level, in terms of time, or both in terms of level and time. Systems in the structure of which digital devices, controllers, microprocessors, computers are used are discrete. When carrying out repairs on main pipelines, according to the technology, the pipeline is lifted from the trench to a height at which the theoretically calculated mechanical stresses in the pipeline do not exceed the proportionality limit. However , due to metal corrosion, thinning of the pipeline walls is observed, which leads to a high

concentration of mechanical stresses in the pipeline material, and sometimes to emergency situations.

From the analysis of various designs of transformer converters of mechanical stresses, it can be concluded that, regardless of the design features of the converters, information is converted in them in three physical circuits, namely: mechanical, magnetic and electrical. To simplify the analysis, calculation and synthesis of circuits of various physical nature, it is convenient to use a single mathematical apparatus that uses the principle of direct analogy, i.e. as generalized quantities characterizing the processes for the purposes of any physical nature of transformer converters of mechanical stresses, the magnitude of the impact is taken - the generalized voltage  $U$ , the magnitude of the reaction - the generalized current  $I$  and charge  $q$  [1].

The possibility of using transformer transducers of mechanical stresses for converting mechanical stresses in pipe steels was shown in [2], however, the transducers used had low metrological characteristics.

From the analysis of works devoted to transformer converters of mechanical stresses used in the automatic control system, we can formulate the following requirements for converters:

- high sensitivity to mechanical stresses;
- small conversion error;
- high speed;
- the possibility of processing the signals of the converter with the help of a computer;
- the possibility of transforming the components of a complex stress state;
- manufacturability and ease of operation;
- low cost and high reliability [3].

An analysis of the designs of transformer mechanical stress converters showed that both converters implement a method for converting mechanical stresses, which can be formulated as follows. To reduce the error in the conversion of mechanical stresses from changes in the air gap, it is necessary to make two measurements of

the output value of the transformer mechanical stress converters at two values of the magnetic conductivity of the air gap, which are changed by changing the converter or the initial air gap. However, these designs have several disadvantages. Therefore, a transformer converter of mechanical stresses was developed, in which the change in the magnetic conductivity of the air gap is carried out by changing the effective cross-sectional area of the poles of the magnetic circuit [four].

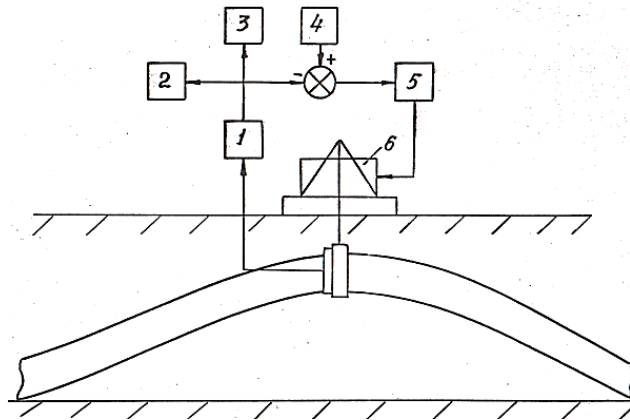
Efficient and reliable automatic control systems (ACS) for various industrial installations and technological processes can only be created on the basis of efficient and reliable automation tools, among which the converters of various parameters of these processes are the first. The use of digital computers in ACS posed to the developers the problem of pairing the computer with the means of information perception. In this connection, there was a great practical need for the development of primary converters with a code or digital output.

From the analysis of various designs of transformer converters of mechanical stresses, it can be concluded that, regardless of the design features of the converters, they convert information in three physical circuits, namely: mechanical, magnetic and electrical [5].

When developing a method for calculating a transformer mechanical stress converter (TMC) with a discrete output, the initial equation is a statistical characteristic, which is necessary, first of all, to determine the optimal ratio of the geometric parameters of the magnetic circuit, the number of windings and the optimal operating mode of the converter. As criteria for optimizing the parameters of the transducer, the following are usually used: maximum sensitivity, minimum error and maximum speed [6].

For to prevent pipeline breakdowns during their overhaul, a control system was developed, including changing, recording the existing mechanical stresses in the pipeline and blocking the pipeline lifting, the block diagram of which is shown in the figure [7].





Structural diagram of the automatic lifting control system pipeline during its overhaul.

- 1- mechanical stress converter PMN-3M;
- 2- indicator;
- 3- central control point ( digital printing );
- 4- Control block;
- 5- actuating mechanism;
- 6- pipelayer [8].

The principle of operation of the system is as follows. From the mechanical stress converter 1, which was used as the PMN-3M brand converters, a digital code is sent proportional to the value of mechanical stresses to the indicator 2, digital printing 3, and also to the comparison unit, in which a comparison is made with the code embedded in the control unit 4. If the values of the codes are equal, the actuator 5 gives sound or light signals, and after digital-to-analogue conversion and amplification, it blocks the lifting device of the pipelayer [9].

The PMN-3M sensors are located on the ring evenly along the circumference at 6 points and move along the pipeline together with the pipelayer trolley . The electronic part of the converter PMN-3M is structurally made of two blocks. The quadratic current pulse generator and the analog part of the converter are located in close proximity to the transformer converter of mechanical stresses and are located on the trolley ring. The computing and matching devices of the converter are located in the cab of the pipelayer [10].

The system showed that the accuracy and dynamic characteristics of the developed transducers meet the requirements of this control system, and also that, most often, mechanical stresses exceed the permissible level in the lower part of the pipeline, which indicates a more intensive thinning of the pipeline walls and reduces the number of sensors used. or distribute them unevenly around the circumference of the pipeline.

The use of the described system made it possible to reduce the likelihood of breakdowns of operating pipelines during their overhaul [11].

From this, drawing a conclusion, we find that the accuracy and speed of the designs of mechanical stress converters with a discrete output are two times higher compared to known converters. Also, they meet the requirements of the automatic control system for lifting and maintaining the main pipeline, and when used in this control system, reduce the likelihood of accidents during the overhaul of main pipelines.

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## IMPLEMENTATION OF THE PROCESS OF SIZES ACCORDING TO THE REQUIREMENTS OF THE INTERNATIONAL STANDARD

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***Abstract:** Magnitudes are many and varied, but all of them are explained by only two descriptions. These are qualitative and quantitative descriptions. Qualitative description is a description that expresses the nature and content of the received quantity. Often, the terms parameter, quality indicator, description (characteristic) can be used instead of the quantity, but it is clarified that all these terms essentially represent the quantity. Sizes are many and varied, but all of them are explained by only two descriptions. These are qualitative and quantitative descriptions. Qualitative description is a description that expresses the nature and content of the received quantity. Often, the terms parameter, quality indicator, description (characteristic) can be used instead of the quantity, but it is clarified that all these terms essentially represent the quantity.*

***Key words:** magnitude, invariant, electrical, mechanical, parameter, quality, unit of mass, process, property, general, quantity, states, mass, time, weight, quality indicator, description.*

Names are given to the descriptions of objects and events in animate and inanimate nature that exist in life. The differences between these descriptions are defined by these names. So "what is that thing, what is this thing?" concepts with definitions that answer the questions appear. Throughout history, the number of concepts has continuously increased and continues to increase. In some cases, it is possible to use a physical quantity instead of a concept [1].

In this case, the relevant descriptions should be such that it should be possible to determine the unit and perform measurements for it. In it, the laws of nature are

formed in the form of mathematical expressions for these quantities. This allows you to make calculations according to the general rules of mathematics [2].

It can be said that quantities are considered to be measured if it is known how many times a unit is contained within that quantity. The numerical value of the quantity {G} is the number of times the unit is in the quantity. If we symbolically designate the unit of magnitude G as [G] (the unit of time is 1 second, the unit of current is 1 Ampere), then

$$[G] = \frac{G}{\{G\}} \quad (1)$$

A numerical value is considered a pure number, without any additional information. This expression,  $G = \{G\}[G]$  (2) it will be possible to give it in appearance [3].

Therefore, indicating the value of the quantity G (showing its measured value) requires also indicating the corresponding unit. That is, if the electric current I in the conductor is 10 times greater than its unit 1 Ampere (1 A), then the current will be equal to  $I = 10 \text{ A}$  (note that not 10 [A], but always  $10 [I] = 10 \text{ A}$ ).

Numerical values of very large or very small (compared to 10) order, which lead to inconvenience, are reduced and expressed by adding additions using new discharges with the old name of the unit (so new units appear, for example,  $1 \text{ mm}^3 = 1 \cdot (10^{-3} \text{ m})^3 = 10^{-9} \text{ m}^3$ ). The physical size itself does not change because

$$G = \{G\}[G] = \{FG\}[G/F] = \{G'\}[G']. \quad (3)$$

If we decrease the unit by F times, then the numerical value also increases by F times. Such invariance of a physical quantity is preserved not only when the unit is changed to some number by ten degrees, but also when this unit is changed in other ways, for example, when changing the meter to inches [4].

Before giving the definition of magnitudes, let's give an introduction to their essence. You will see all kinds of things, animate and inanimate objects. Although these listed are quite different from each other, we can see some

commonalities in the features and characteristics that we need to look at now. For example, take a pen, a desk, and your friend. No matter how different they are from each other, they have such a commonality that all three of them are described in the same way. If we are talking about their bigness and smallness, then we understand the space or distance that is taken in a certain direction and has a clear border [5].

This property has the same meaning for all three objects. From the point of view of this meaning, the difference between them remains only in value. Or if we take the concept of weight, i.e., the characteristic of objects taken as an example, which represents the attraction to the Earth, we see the same content. In this case, the difference between them is only in the large or small force of their attraction to the Earth, that is, in their value. We simply call it weight. There are only a few such properties, and they are given the name of magnitude [6].

Sizes are many and varied, but all of them are explained by only two descriptions. These are qualitative and quantitative descriptions.

Qualitative description is a description that expresses the nature and content of the received quantity. When it comes to distance, we understand the property that indicates the size, length, or height of a certain object, that is, we bring it to our eyes. We can know this from a simple experience. Put aside your other work for a minute and bring before your eyes the quantities called weight and temperature... Well, have you noticed their qualitative characteristics? Pay attention to something, when you say weight, you have in mind some abstract, heavy or light object, most often scales, when it comes to temperature and you embodied something that signifies hotness and coldness. These are the qualitative descriptions of the magnitude that we are trying to explain to you [7].

Now, if we talk about a certain size in the obtained objects, we will see that these objects more or less "embody" this size. This is a quantitative description of magnitude. Now we can give the definition of size: Magnitude

is a property that is qualitatively general to many physical objects (physical systems, their states and processes occurring in them), and quantitatively specific to each object. The specificity given in the definition means that the property of an object is greater or smaller in comparison to another [8].

The science of metrology that we are studying is closely related to these quantities, their units, and the development of measurement techniques. It is not correct to use the term "magnitude" to express only the quantitative aspect of a property (for example, to write "magnitude of mass", "magnitude of pressure"), because these properties themselves are magnitudes. In this case, it is correct to use the term "size". For example, the length, mass, electrical resistance, etc. of a known object. Each physical object can be characterized by a number of objective properties. With the progress and development of science, the demand to know these properties is increasing. By now, it is possible to measure more than 70 sizes using modern measuring tools. It is predicted that this figure will exceed 200 by 2050 [9].

Often, instead of size, we come across the terms parameter, quality indicator, description (characteristic), but all these terms essentially represent size. There is a correlation between quantities in certain groups, which can be expressed through physical coupling equations. For example, we can determine the speed by the distance traveled per unit of time. Based on these connections, quantities are divided into two groups: basic quantities and derived quantities. The main quantity is a quantity that enters into the system and is considered independent of other quantities of the system. For example, distance (length), time, temperature, light intensity [10].

A derived quantity is a quantity that enters the system and is expressed by the system quantities. For example, speed, acceleration, electrical resistance, power, etc. Since each property can be expressed to a greater or lesser degree, that is, have a quantitative description, it means that this property can also be measured. The great Italian scientist Galileo Galilei said about this: "Measure what can be measured, and create a possibility for what



is impossible." We use dimensionality to express qualitative descriptions of quantities in a formal way. The size of a quantity is an expression that shows the relationship of this quantity with the main quantities in the system and the proportionality coefficient is equal to 1. Dimension is defined by the dim symbol, based on the (visual) word meaning dimension [11].

Typically, the size of key quantities is indicated by appropriate capital letters, e.g.

$$\dim l = L; \dim m = M; \dim t = T.$$

When determining the size of derivative quantities, the following rules should be followed: 1. The size of the right and left sides of the equation may not match. because only identical properties can be compared. If we conclude from this, we can add algebraically only quantities that have the same size.

2. The algebra of dimensions is multiplicative, that is, it consists only of multiplication:

2.1. The size of the product of several quantities is equal to the product of their sizes, that is: if the relationship between the values of the quantities A, B, C, Q

is given in the form  $Q = ABC$ , then

$$\dim Q = (\dim A)(\dim B)(\dim C).$$

2.2. The size of the division when dividing one quantity by another is equal to the ratio of their sizes, that is, if  $Q = A/B$ , then

$$\dim Q = \dim A / \dim B .$$

2.3. The size of an arbitrary quantity raised to a power is equal to its size raised to this power, that is, if  $Q = A^n$ , then

$$\dim Q = \dim A^n.$$

For example, if the speed  $v = l/t$ , then

$$\dim v = \dim l / \dim t = L/T = LT^{-1}.$$

Thus, we can use the following formula to express the size of the derivative quantity:

$$\dim Q = L^n M^m T^k ,$$

where, L, M, T..., - the size of the main quantities, respectively; n, m, k..., - the degree of dimension [12].

The exponent of each dimension can be positive or negative, integer or fractional, or zero. If all exponents are equal to zero, then such a quantity is called a dimensionless quantity. This quantity can be relative (for example, dielectric conductivity), logarithmic (for example, the logarithmic ratio of electric power and voltage), determined by the ratio of quantities of the same name.

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## HIGH RESPONSIBILITY (SENSITIVITY) AND ACCURACY OF TEMPERATURE SENSORS FACTORS OF ACHIEVEMENT AND RELIABLE OPERATION.

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*ANNOTATION Different types of sensors, the amount of output is determined depending on the physical nature. Sensors whose output is electrical, i.e. resistance, inductance, capacitance, current, voltage, phase, frequency sensors are the most common, Accurate and reliable operation of the sensors determines the relevant key indicators of the entire system. Sensors should have high sensitivity and accuracy, long service life and reliability, small size and weight, and low cost.*

***Keywords:** measurement uncertainty, Monte Carlo method, revision of the “Guide to the Expressing of Uncertainty in Measurement”, kurtosis method.*

Conventionally, sensors can be considered as receiver, intermediate and executive parts. The receiver reacts to a change in the input  $x$  by some intermediate amount. This quantity is compared with a standard (sample) value of a similar physical quantity. Then, this sensor is affected by the actuator, forming an output signal. Depending on the physical composition of input  $x$ , they are divided into electrical, thermal, mechanical, optical, acoustic, liquid and gas sensors [1].

Electrical sensors - current, voltage, power, frequency, magnetic flux; heat sensors - temperature and amount of heat; mechanical sensors - force, pressure, displacement, speed, acceleration; optical sensors - light intensity, illumination; acoustic sensors - sound power, its frequency, power; liquid and gas sensors measure pressure and velocity [2].

Each type of sensor, in turn, is classified according to the principle of operation of the receiver part, that is, they are divided into groups. For example, optical sensors are divided into photoelectric, photochemical, photothermal and photomechanical groups. Different types of sensors, the amount of output is determined depending on the physical nature. Sensors with an output quantity – electrical, that is, resistance, inductance, capacitance, current, voltage, phase, frequency sensors are the most common [3].

Sensors are divided into certain groups depending on the number and type of input  $x$  signal they change. Sensors that directly convert the input signal directly convert the input signal  $x$  to the output signal  $u$ . Such sensors are convenient because there is no need for intermediate switching parts. In sensors with intermediate conversion parts, multiple signal changes lead to complications and loss of accuracy to a certain extent. According to the appearance of  $x$ - $u$  conversion, sensors are divided into two groups: continuous and discrete (continuous) converters. Continuously variable sensors are gauges. In them,  $x$  has a continuous change, and  $u$  has a continuous change. Often, discrete operating sensors monitor the state of discrete objects, that is, objects with a finite state. Most controlled objects have two states, "connected" and "disconnected". For this reason, discrete sensors are considered binary information sensors with output quantities  $u=0$  or  $u=1$  [4].

Due to the development of semiconductor technology and the widespread use of microprocessors and computers in today's automatic systems, new ideas and directions have appeared in the development of sensors. This development features sensors that work together with microprocessors and computers. For this reason, an important quality of modern sensors is their integrated design and small size. Thanks to these features, it became possible to place several sensors in one housing and thereby create a combined sensor that measures several physical quantities at the same time [5].

Sensors that change directly. An example of a direct transducer sensor is a strain gauge (Figure 3). They are used to measure deformations and mechanical stresses on the surface of details. The strain gauge is made of P-shaped (constantan) wire

with high specific resistance and small diameter (0.006- 0,020 мм). The wire is placed between thin sheets of paper in the form of a dense and even pattern, and they are glued. The ends of the wires are soldered to copper wires, which connect the strain gauge to the circuit. The strain gauge is firmly attached to the surface of the part and is deformed along with it. the relative change of resistance  $\Delta R/R$  is  $\Delta$ proportional to the deformation  $l/l$  and to the strength of the detail surface,

$$\frac{\Delta R}{R} = k \frac{\Delta l}{l}$$

is a k-invariant quantity in it [6].

So, the mechanical quantity (deformation) is directly converted into electrical quantity (resistance) in the strain gauge.

In terms of construction, thermo (heat) sensors are also simple. In them, temperature is converted into voltage (thermocouples) or resistance (thermocouples). Thermoresistors (Fig. 3) are made of steel, nickel or platinum wires, because their resistance depends on temperature. To measure the temperature, ferrites and capacitors, whose magnetic and dielectric conductivity are sensitive to heat, are used. In thermosensitive diodes and thyristors, they use the property of the temperature dependence of the conductance in the pn junction in the silicon crystal.

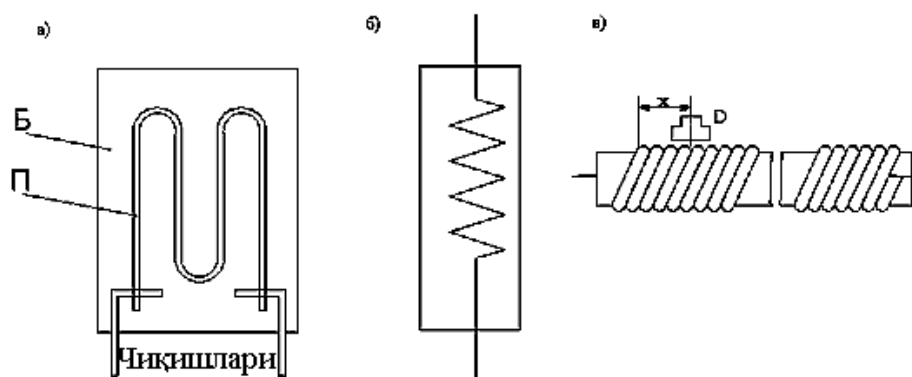


Figure 1. Resistance sensors

The group of resistance sensors includes a common rheostat sensor (Fig. 1,v). They convert the linear displacement of the mechanisms into a corresponding change in

resistance R. When the slider D is moved a distance x, the resistance R of the rheostat changes proportionally [7].

In inductive sensors, the measured quantity is converted into inductance change. For example: ferromagnetic material h thickness sensor

(Fig. 2) measures. If the value of h increases, then the air gap  $\delta$  becomes smaller, as a result, the inductance of the circuit O increases, and the measuring circuit registers this.

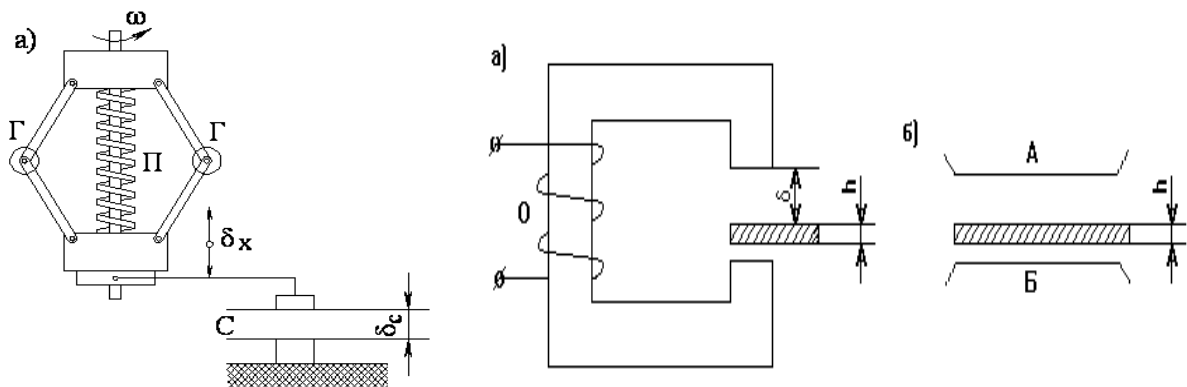


Figure 2. Schemes that measure thickness.

In capacitive sensors, the capacitance of the capacitor is determined by the relationship between the area of the plates, the distance between them, and the

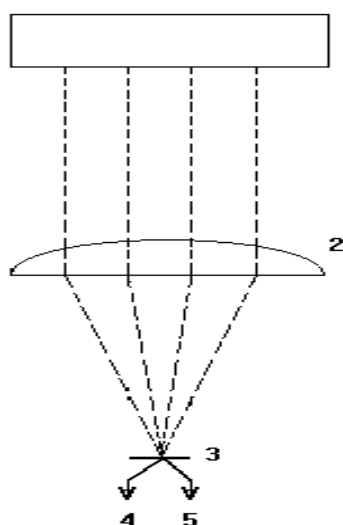


Figure 3. Scheme of the infrared light emitting sensor

dielectric constant. Capacitive sensors can measure linear and angular displacements, temperature, relative humidity and other parameters. Specifically, the capacitive sensor shown in Figure 3 measures the thickness h of a sheet of dielectric capacitor placed between plates A and B. [8].

The temperature of the heated body is measured using infrared optical sensors (Fig. 3). It consists of a lens 2 that records infrared rays on the surface of a sensitive element 3, and a body 1 that is heated and emits light. As a result of this measurement, the resistance of the sensitive element 3 changes, and a voltage appears at outputs 4 and 5. A



similar sensor (bolometer) is used in automatic detection of overheated bushings in trains.

Sensors with an intermediate switch. These sensors are composed of several sensors that directly convert and operate in series. In this case, the output value of one sensor serves as the input value of the next sensor.

The sensor shown in Fig. 4 serves to convert the angular velocity into the capacitance  $S$  of the capacitor. The sensor receiving body is a centrifugal adjuster. It converts the angular velocity  $P$  into a centrifugal force comparable to the compressive force of the spring (intermediate part). In the intermediate part, the force  $S$  causes the lower coupling  $x$  to move the adjuster, which is covered with the

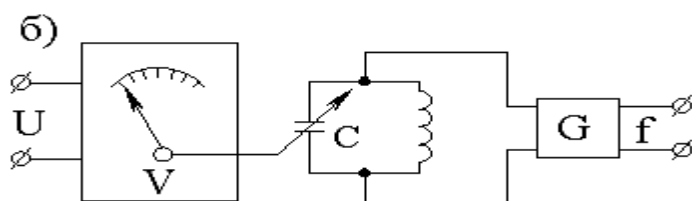


Figure 4. Schemes of sensors with an intermediate converter

upper cover of the capacitor. The capacitor is the executive part of the sensor, the capacity of  $\delta$  which varies depending on the distance  $s$  between the plates [9].

The sensor  $U$  in Figure 4 converts the voltage to the frequency  $f$ . It is measured using a voltmeter  $V$  connected to a variable capacitor of voltage arrow  $S$ . And the capacitor  $S$ , the output frequency  $f$  depends on the capacitance, the generator  $G$  is connected to the circuit. Thus, these changes are made in the sensor:  $U \rightarrow V$  voltmeter needle angular displacement  $G \rightarrow f$ .



Figure 5. Scheme of the rail chain

Discrete switching sensors. These sensors monitor the status of objects and are the source of input information in railway automation and telemechanics

systems. A rail chain (Fig. 5) is used to control the freedom of the track from rolling stock. A part of the track bounded by IT is accepted as a rail chain with insulating connections. When the supply is connected to the rails at one end of the track circuit, a control device NA is connected to the current in the rails used as a conductor at the other end. Usually as NA, an electromagnetic or induction relay is used. If the section is empty, a large current flows through the NA (the relay armature is pulled). If the section is occupied by at least one pair of wheels (its resistance is 0.06 Ohm and is much smaller than the resistance of NA), the current in NA decreases sharply (the relay releases the armature). Thus, depending on the state of the NA, it is possible to think about whether the lane is empty or busy.[10].

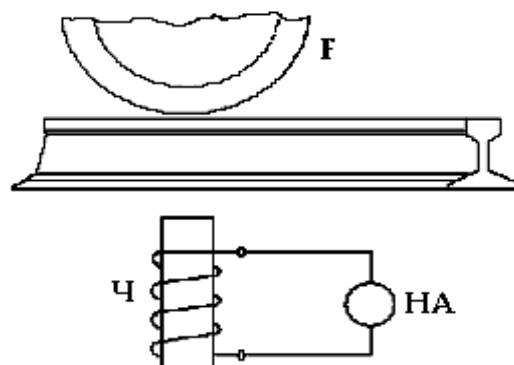


Figure 6. Magnetic reaction (pedal)

The magnetic sensor shown in Fig. 6 registers the passage of scats (wheels) of wagons from a certain point of the road. Such a sensor is called a non-contact magnetic sensor, and consists of a permanent magnet DM, a coil Ch, and a control device NA. The kick is placed near the rail. When the wheel approaches the kick, the parameters of the magnetic field in the DM magnetic apparatus change. As a result, an electromotive force (EMF) is formed in the circuit Ch, and a current begins to flow from it, which is recorded by NA.

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## CRITERIA FOR CREATING AN ELECTRONIC DICTIONARY OF GRAMMATICAL TERMS

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**Abstract.** In this article, the researcher reflects on the issues related to the criteria for creating an electronic dictionary of grammatical terms of his class. The basis of the article is the clarification of the opinions of Uzbek and foreign scientists in the corpus field, the description of the technological process of the corpus design, the main differences between dictionaries and traditional dictionaries, the ways of forming the base of the electronic dictionary of Uzbek and English grammatical terms are given in detail. In this case, the dictionary database consists of the term in the Uzbek language, its explanation, the corresponding grammatical/linguistic tag, the synonym of the term, its symbol, it is equivalent in English, and the interpretation of the term in English.

**Keywords:** grammatical terms, corpus, own layer, terminology, terminography, educational corpus, electronic dictionary.

The development of theoretical proposals for the organization of language units is an important part of modern linguistic research. Terminology and terminology concepts are of great interest, especially due to recent advances in computing and textual terminology and the rapid development of its applications. This study aims to review them and formulate relevant concepts relevant to today's problems. By synthesizing and generalizing the existing terms, an attempt is made to form an appropriate comprehensive definition. It can be concluded that there are sufficient grounds to look at terminology not only as a part of vocabulary and lexicology or as a doctrine, but also as a separate independent science of the formation and use of terms. An important task is to discuss the research methods of terminology as a

science, general scientific methods, and issues related to the natural sciences and traditional linguistics.

Raising the Uzbek language to the level of "artificial intelligence language" has gained relevance, and this process requires the creation of national and educational corpora. In this regard, N. Abdurakhmonova puts forward the following opinions: "Different computer models of the corpus can be created, its integrity depends on the set goals and tasks, agreed principles, and required audience conditions. Therefore, it is important to understand the concept of the corpus. In this regard, it is required to design educational corpora and determine what work needs to be done in practice. First of all, it is necessary to determine for whom the teaching of the Uzbek language is intended. For example, if the Uzbek language is taught as a mother tongue, its graded criteria must be decided in advance, that is, how many words the learners must have and be able to use it in communication. In the second aspect, the age and educational institutions of the learners, as well as their gender and general interests or professional ability should also be taken into account as a specific category. After the standards are developed, appropriate texts are selected. To create educational corpora, it is necessary to bring the texts into the electronic form: PDF-> WORD-> TXT [Abdurahmonova N, 2020, 50–58].

Also, when learning Uzbek as a foreign language or a second language, in addition to the criteria mentioned above, to which nation or country one belongs and how long the language has been learned using what methods and the general goals of the learner are also taken into account. If a native speaker views Uzbek as the key to all knowledge and the main means of communication from childhood, he will consider acquiring scientific knowledge as competence in learning a foreign language in addition to some of the factors mentioned above. Sh. Khamroeva makes the following proposal regarding the corpus of authorship: "Research of language material; scan text; complete formation; creating a corpus" [Khamroyeva Sh, 2018, 456]. S.O. Savchuk, a scientist who worked on the texts of the National Corpus of the Russian Language, divides the technological stages of corpus creation into the following process: "Re-introduction of texts; use of texts available in electronic

form; scanning of printed text (but it will be necessary to correct any errors)" [Savchuk S., 2011, 456]. V.P. Zakharov and S.Y. Bogdanova cite the issue of chronology as an important aspect of the corpus design process. For example, what should be understood by the modern corpus of the language? It is natural that the chronological limit of the corpus is different in different genres. The corpus is designed for wide public use and for performing various tasks (including studying texts written in Russian on the basis of other graphics).

Another important issue in the corpus is what parts are taken from the original form of the text and what is left out. Since the pictures in the text do not belong to the language material, it is important to exclude them from the text included in the corpus and process the tables according to the corpus. They are important in expressing the content of the text, but if left in the corpus, they are difficult to tag. Quotations, personal units (terms), and units of measurement also require special attention. If the listed issues are solved on the basis of a certain principle at the design stage, some of them are solved in the process of creating a corpus, using the corpus. At the same time, feed from the user should also be considered before launching the case. Specialists K.F.Meer and I.A.Melchuk indicate the following stages in the technological process of building a corpus [Melchuk I, 1985, 36.]:

1. Ensure that the text is included in the corpus according to the specified source.
2. Text processing in the form of automatic reading. Text in the electronic form included in the corpus can be obtained by various means: scanned, manually entered, exchanged, author's copy, gift, Internet, original layouts provided by publishers to the corpus compiler, etc.
3. Analysis, preliminary text processing. At this stage, texts received from various sources undergo philological verification and editing.
4. Conversion, graphemic analysis. Some texts repeatedly go through the first machine processing, where the recording process takes place, and non-textual parts (pictures, tables) are deleted or changed. Hyphenation in the text, borders (in MS-DOC texts) are canceled, and hyphens and other characters are made identical.

Graphematic analysis is the process of dividing the corpus text into parts (words, conjunctions) and removing non-textual elements.

5. Designation of a non-standard element, formalization, special textual element (abbreviated name (first name, last name), custom lexeme written in a different alphabet, name given to a picture, caption, citation, list of references, etc.) the same criterion revision based on Obviously, these actions are automatically performed by the text editor program.

When sorting the corpus material, what is the main unit of the corpus, what is its size (how many words should it contain), what source is the written text based on, how much is it, and what area of the language does the text in it belong to? A solution to such issues will be found. The first answer to this question was given by R. G. Piatrovsky and his students in the period 1965-80. They developed principles of text selection for frequency dictionary and linguostatistical research. This problem was also raised in the frequency dictionary under the editorship of L.N. Zasorina. For the first time, factors such as the statistical method of text selection, volume, and quantity are listed in it. The main units of the corpus are word form, root (base, lemma), and sentence. The size of the case to be built is determined based on the purpose of the case. If it aims to study letters, letter combinations, sounds, and diphthongs, it does not have to be so big. If the lexical units of the text are compiled in order to study the morphological phenomenon, syntactic, and methodological characteristics, it requires a large volume [Hamroyeva Sh., 2018, 76]. According to S.A. Sharov, during the selection process, choosing a text of any genre (prose, drama, poetry, scientific text, newspaper, magazine material, etc.), which period the text covers (contemporary, 10-year, 50-year-old, and classic text), the text matters such as whether it is only in literary language or whether other sources are included are also important. In this process, the corpus compiler will certainly turn to a linguist, a linguostatistics specialist, or the questionnaire method. In the process of creating a corpus, the author, relying on his experience, considers the main factor of the total size of the corpus, the time of publication of the text, the number of texts, the size of the selection of elements, the type of genre to be chosen [Hamroyeva Sh.,



2018, 79]. The questionnaire method was used by the creators of "The American Heritage Intermediate Corpus". 5 million words and 22 types of texts for children and teenagers are included in English. A survey was sent to 221 schools in the United States, which determined the appropriateness of the choice of text. After studying the results of the survey, a list of 19,000 books was compiled. Based on this, 1045 texts with 500-word forms each were selected. It should be noted that in the process of designing the corpus, the selection of material (text), sorting, and its technical adaptation to the corpus is the most important stage [Hamroyeva Sh., 2018, 82].

Below, we will talk about the ways of forming the database of the electronic dictionary of grammatical terms of Uzbek and English languages, as well as the analyzes carried out. In the appendix of the work, there are 34 linguistic terms in Uzbek, their explanation, equivalent in English, explanation in English, and a dictionary of synonyms of the term (see: appendix). The structure of the proposed dictionary base will be as follows:

Termin	Izohi	Tegi	Sino nimi	Ramzi	Ingliz tili	Inglizcha izohi
Undov gap	His-hayajon (shodlik, qo‘rquv, g‘azab, ajablanish, achinish, do‘q, yalinish, hayrat va h.k.) bilan aytilgan gap	nima? Ot turkumi, turdosh ot, qo‘shma ot, yasama ot, birlik son, bosh kelishik		N+N= N	Exclamatory sentence	An exclamatory sentence, also known as an exclamation sentence or an exclamative clause, is a statement that expresses strong emotion.
Matn	-Mazmun va grammatik jihatdan bog‘langan, bir mavzuni ifodalovchi gaplar yig‘indisi (8-sinf)  -O‘zaro va tarkiban bog‘langan gaplar ketma-ketligidan iborat yozma yoki og‘zaki shakldagi yaxlit birlik (6-sinf)	Nima ? Ot turkumi, turdosh ot, sodda ot, tub ot, birlik son, bosh kelishik		N (noun)	Text	Text is usually a written form of communication information, which is a non-interactive nature.
Mavzu	Matndagi asosiy fikrning nima haqida ekanligi. Shundan kelib chiqqan holda matnning sarlavhasi ham bo‘lishi mumkin	nima? Ot turkumi, turdoshot, soddaot, tub ot, birlik son, bosh kelishik		N (noun)	Theme, topic	In linguistics, the topic, or theme, of a sentence is what is being talked about, and the comment (rheme or focus) is what is being said about the topic.

As can be seen from the table, the dictionary database consists of a term in Uzbek, its explanation, a grammatical/linguistic tag, a synonym of the term, a symbol, an equivalent in English, and an interpretation of the term in English.

According to the general structure, the dictionary consists of the following components:

1. Dictionary interface - a window for using the dictionary, performing a search, and obtaining general information about the dictionary.
2. Search window - a field that allows the user to search for a word/term.
3. Results window - a window that displays information about the searched term.
4. Dictionary data warehouse - a warehouse that stores electronic dictionary data. It is in tabular form and appears to the user as a dictionary article rather than a tabular form.

In short, the integration of the electronic dictionary with artificial intelligence creates the basis for easy and convenient learning of Uzbek language terms by different people at the international level. Also, reflecting the words characteristic of our national terminology in this dictionary can have a positive effect on the terminology of the neighboring nations, and can be a resource for use. For example, the existence of national terms such as "thick" and "thin" sounds, "thick" and "thin" words, and "pressure" will be shown in a separate column as the wealth of our language and will be updated. It is known from world experience that the creation of an electronic dictionary of grammatical terms is an important and gradual work. In this case, it is appropriate to research the Uzbek language on the example of the grammatical terms of its own layer, such as nationalization of the term as much as possible, tagging based on the criteria of natural language processing, dividing it into lemmas, annotating, balancing and matching terms that can enter into a hierarchical relationship with each other.

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## USE OF INTERNATIONAL STANDARDS OF AUTOMATION OF PRODUCTION PROCESSES.

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***Abstract:** Disadvantages of the traditional approach to measurement uncertainty evaluation are analyzed. An algorithm for measurement uncertainty evaluation based on the Monte Carlo method is described, which makes it possible to eliminate these shortcomings. The results of a comparison of measurement uncertainty estimates obtained by the traditional method and the Monte Carlo method are presented. The need to revise the “Guide to the Expression of Uncertainty in Measurement” is substantiated and its current state is described.*

***Keywords:** measurement uncertainty, Monte Carlo method, revision of the “Guide to the Expressing of Uncertainty in Measurement”, kurtosis method.*

Successes achieved in the field of technologies are the basis for the creation of an industry of first-class importance for the technical development of the national economy, the development of the economy and culture of our independent country, as well as the well-being of the population [1].

Automation of production processes is one of the main directions of technical development, and it is considered the main factor that serves to continuously increase production efficiency, raise product quality to a higher level, reduce costs, improve working conditions, ensure safety in production, and protect the environment. Automation is increasingly entering scientific research, opening up new opportunities for the development of science and technology. In addition, automation makes it possible to implement new, high-intensity processes that were previously unmanageable, to create new, effective materials unknown in nature [2].

When assessing the state and prospects of industrial automation, one should not be limited to the description of automatic control systems and technical means of automation, but the interrelated problems of the organization of automated production, management systems and tools, as well as the economy should be considered in a broad scope. It should be taken into account that automation is a continuously developing process, that it is inextricably linked with the specific characteristics of production and most fields of science and technology [3]. The dynamics of automation development is affected by a large number of legal and random factors: the state of technology and equipment and their readiness for automation, the quality and stability of raw materials, semi-finished products and energy resources, the qualifications of employees, the organization of the activities of workers and specialists, etc. [4].

Automation of technological processes and auxiliary services is related not only to the improvement of production techniques and the improvement of working conditions, but also to increasing the profitability of production, reducing the material and labor costs of a unit product, and increasing its technical and economic indicators..

Economic factors are the main factor in choosing an automation facility. There are many factors that increase the economic efficiency of automation in industry. In the current conditions, it will not be possible to achieve the economic efficiency of automation only by reducing the number of service personnel, because modern factories, workshops, divisions, sections are serviced by a relatively small number of people [5]. Therefore, the following factors can be included in the factors of increasing economic efficiency: increasing the quality of the product, reducing the consumption of raw materials and various energy, production waste, increasing the rhythm of production, increasing the production productivity, increasing the volume of output, improving the working conditions of service employees (life and health). in areas dangerous for ) improvement at the expense of loss of harmful works [6].

Automation must be integrated with technology in new manufacturing plants being designed and envisioned. Economic efficiency is achieved as a result of

carrying out a number of measures - activities, and it is evaluated as a whole for production and the enterprise; at these points, the independent economic evaluation of automation is often difficult, because it is combined with the general economic evaluation of the new production or enterprise [7,8,9].

Due to rapid technical development, "young" production "seeds" after a certain period and requires updating, including replacement of existing automation systems and tools with more modern and improved ones. There may be independent economic evaluations in the improvement of automation systems in existing production enterprises, as well as in the modernization of technology and equipment.

Due to the complexity and acceleration of technological processes, the management of modern production enterprises becomes effective only on the basis of extensive automation using microprocessor techniques and control computing techniques. Automation is most effective when the requirements for automation are taken into account at the stage of technological process design [10,11,12].

From what has been said, it follows that the scientific-technical and economic aspects of automation are of great importance in ensuring industrial development, raising the culture and standard of living of workers. However, an important condition for achieving success in industrial automation is the training of a large number of qualified personnel and specialists in control-measuring devices and automation, or who know this field as well as their own field, in institutes, design bureaus, and enterprises capable of solving production automation issues at a high scientific and technical level. .

Currently, the main purpose of the activities carried out in higher educational institutions of our republic is to fundamentally improve the quality of trained specialists. The main factor in the acceleration of these works is the integral connection of education, production and science [13,14,15]. At present, most of the countries of the world use the ISO system of sheep and goats. The ISO system was created to harmonize (as much as possible) international technical relations in the metallurgical industry, to unify the system of national deposits and deposits. The purpose of moving to this is the necessity of specialization of industry in our



republic, development of international trade and elimination of technical obstacles in it. This also ensures the increase in demand for our country's products in the world market. The State System of ISO's standards and standards is established on the basis of a strict single principle for general car details in our Republic [16,17,18]. To successfully solve the above-mentioned important tasks, highly qualified engineers are needed. It is necessary for such personnel to acquire radically new scientific ideas and the ability to solve high technical solutions. Acceleration of the national economy on the basis of scientific and technical progress is one of the most important tasks in the conditions of the market economy. Completing these huge tasks depends on the skills of the personnel.

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## VIRTUALIZATION IN THE TRAINING OF ENGINEERS AS A FACTOR OF INCREASING SCIENTIFIC EFFICIENCY

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***Abstract:** These components of virtuality are indispensable parts of new education technologies in itself represent Virtual modeling and virtual technologies visual images objective truth with tie up for new factor, time extent of time reverse rotation, unreal situations modeling like factors with is described.*

***Keywords:** technological, virtual, compare, information*

Today's to the day come, information communicative of technologies without example development as a result mann the fieldsain new to achievements is being achieved. In our opinion, from ICT edtotem improvement in order to use too very important is consnformation society society of life social, economic, political on the fronts virtuality high level done increase demonstration is doing and this whole society life virtualization from the trend proof gives Education system virtualization technological in terms of news approach based on is, it is virtual information field, virtual education models, virtual education technologies, virtual information structures and information fromThis componenttent found. Thiare s components opartsrtuality indispensable part as new education technologies in itself represents Virtual modeling and virtual technologies visual images objective truth with tie up for new factor, time extent of time reverse rotation, unreal situations modeling like factors with is described [1]. Big information capacity own into received information of s created these space scopemodels appear to be virtual education for addition opportunities created Virtual education technology is this student and study source virtual information between mutually effect in the process information and telecommunications from technologies used without done to be increased new education from technologies one is considered Virtual education to himself special

feature is this teacher with student and virtual reality in the middle of the intermediary lack of This technology active entrepreneurship to the game based on learning with let's compare can Virtual education advantages most of the time multimedia teaching of means use possibilities with justified [2]. Mediation of virtual education basis is now traditional of education necessary to the element is spinning. Around of events diversity and they are between connections in the mind of images different structures to the body to bring can of course, reality reflection carry on methods possible as long as polymorphic to be need That's why for, information of influence complexity, that is information mediation If he does, he accepts of the doer in his mind information-mental to structures effect to do point of view in terms of to the communicant so much big effect shows. new in Uzbekistan pedagogy science innovative development perspectives: theory and practice of the process consistency of teaching content, forms, methods and of means unity mean holds [3]. If the study of the material content improve for him systematization, actualization and problematic make, forms work exit for - teaching activation, in methodology - individualization and automation important tasks if so, pedagogical tools improvement for today's in the day the most important task is recognized as visualization. Also study of the material visualization, information area and in particular, education mediation hasa been modern global cultural of the trend important structural we consider it a part [3]. Simplified, of course in one discipline education content each how elements:

- a) activity methods to know
- b) activity methods have to be
- c) this activity kind of creativity experience;
- d) to the process and activity as a result emotional - valuable in relation to be experience - general in the case of , an ideal one without - professional activity images system through expression can then this of images each different ratio professional situations organize does teacher them problematic makes them solution to do for tasks makes and that's it with professional thinking of students develops. But to the students emotional the effect of strengthening more big reserves oral not

but visual effect to do in the means they are didactic point of view by implication, property - perception to reach in the eye holder information of products effect one of time in itself different feelings through syncretization own into takes Students intuition to the authorities complicated effect due to, the second known the mood creates, creative thinking develops and perception to be done information size significant level increases. Study area to virtualization about experiences humanitarian sciences according to modern studies the results account received without transfer it is necessary Last in years social and humanitarian sciences in the field theoretical achievements get stronger, man behavior each different rational and emotional circumstances was studied [4]. Virtual education environment (knowledge environment) appears prerequisites for being the following conditions are: - labor in the market changes (labor market work resources again distribution Demand does); - information in the market changes (scientific - technical development pace acceleration of knowledge constant update Demand does); - new contact of possibilities appear be (contact and of the Internet development long remote information sources to enter possibility will give and contact scope extends); new in Uzbekistan pedagogy science innovative development perspectives : Theory and practice in virtual education one how much typical in the form of information status model (situation model). representing dynamic visual model, scene model, cognitive model, information giving model, space model, visual interface and spatial simulation models there is. It is visible models [5]. From this except invisible models there is being to him the following includes: script model, test model, test check model, service show models, spatial systematic models. That's right work developed virtual education model, intended to the goal faster reach for the key considered, then the following to principles action if done to the goal suitable for: – teaching of the student cognitive activity based on to be – virtual training of the program structure dynamic in part modular to be - static in part information units use. Information of the situation model real conditions simulation to do to the process based on Information to the situation based on conditions formation and of the problem next the solution of students study goals suitable coming competence

forms. So information status powers to master focus need [6]. Real to processes imitation simulation models, them visual present reach and virtual modeling based on done is increased. Virtual education in the process of modeling spatial (geoinformational), situational, dynamic such as special of types our use can Conditional modeling is of students professional competencies formation for real work release situations and processes simulation create. Dynamic visual modeling and the student's virtual situation with information mutually from the effect which uses of the audience decision acceptance doer in the role of real activity feeling complete to form intended active teaching method. Dynamic visual models using teaching technology, actions indicative basis account received without, in real situations actions perform conditions of students knowledge, skill and qualifications formation to the concept based on Lecture and seminar teaching from the methodology different like, two task consistent solution first of all, knowledge transmission, secondly, them apply skills formation [7,8,9]. Dynamic visual models using teaching technology situational, visual and teaching like different models work to exit possibility gives. Information situational model or information status model real object and the real situation reflection makes and being studied processes and tasks content new in Uzbekistan pedagogy science innovative development perspectives: theory and practice forming in this situation describe for heuristic and official of approaches use can Heuristic approach, rule as a situation when studied, his do not go the addition of with of the object complete didn't happen partial description mean holds. This information repeated again work necessary take will come and difficult in the situation decision acceptance to do skills to develop help gives. Official approach of the object complete to the description is based on and of the image analytical and mathematician methods using done is increased. This approach algorithmic again work necessary take will come and in the audience analytical thinking and systematic the analysis to develop help gives [10,11,12]. Summary in place that's it to emphasize maybe education system virtualization traditional in education occurring many to problems solution being, we education for class room, strict defined time, way hustle and bustle, boring, one in temp lecture,



held sent training such as to issues efficient solution as will be seen [13,14]. Moreover, the student's critical, creative to think basis be takes.

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## STYLISTIC ASPECTS OF COMPOUND SENTENCES

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***Annotation:** In this thesis, the scientific text is considered within the framework of its functional and stylistic features, its functional and stylistic characteristics are identified in relation to a complex sentence as a text construct as a whole, the syntactic features of a complex sentence are studied, as well as modern approaches to the translation of a complex sentence, taking into account the corresponding syntactic transformations.*

***Keywords:** Complex, compound, sentence, element, text, stylistic, feature.*

A complex sentence, being an obligatory element of a scientific text, combines various hierarchically constructed segments of the English syntax, which must be learned and correctly used in the process of translating complex sentences from English into Uzbek. A complex sentence includes not only structural elements, such as nominative-predicative parts as constituent segments of a single complex syntactic formation, it also contains a complex semantic load that the translator needs to convey as fully as possible.

An important influence on the lexico-semantic content of a complex sentence is its syntactic structure. Structural-component units of a sentence with a complex syntax contain one important feature: the structure of a complex sentence contains components that, in their meaning and content, represent separate syntactic units with their own completely independent function.<sup>8</sup>

<sup>8</sup> Lasheras B., Pohlmann C., Katsioulis C., Liberti F. European Union Security and Defence White Paper, A Proposal. Berlin: Friedrich-Ebert-Stiftung International Policy Analysis Division for International Dialogue, 2010. 65 p.

In the scientific text, there is a clear trend towards the use of uniform principles for the organization of language tools. Particular importance in the characterization of scientific texts in English should be given to creative elements that can be implemented in the presentation of scientific information. It is generally accepted that a scientific text should contain objectively rigorous information, without any “other-style” inclusions.

To understand the essence of a complex sentence in a scientific text, it should be noted that it is an event or situational nominations that represent the relationship between events in real life. In turn, an event or situation is a combination of participants, persons or objects connected by certain relationships, which allows us to consider complex sentences as nomination forms denoting situations that include two or more events.<sup>9</sup>

In order to describe directly the features of the translation of a complex sentence in English, as well as modern approaches to the translation of a complex sentence, we considered it necessary to dwell on the informational aspects of the translation of a complex sentence and, first of all, the basics of the formation of such information in a scientific text. When reading and subsequently translating a scientific text, it is necessary to understand the structure of scientific knowledge in general and what constitutes such knowledge at the linguo-semantic level.

The main problem in the process of transferring the syntactic structure of a complex sentence is the processing by the translator of grammatical structures that have no analogues in the target language. In the process of translation, the main task is to extract the meaning in a complex sentence and adequately convey it.

A complex sentence in a scientific text as a complex unit of translation varies depending on the ways of communication between its constituent structures, which divides a complex sentence into two main varieties: compound and complex sentences. When studying the translation aspects of the syntactic transformations of these types of sentences, it is necessary to take into account, first of all, the structural

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<sup>9</sup> Kaushanskaya V.Z. and other «A grammar of the English» Leningrad 1971.310p

features of these types of sentences, which is expressed in the pluralism of approaches regarding the essence of a complex sentence as a complex syntactic unit.

The syntactic complexity of a complex sentence as a unit of translation is expressed by a polypredicative connection, which is realized through the punctuation differentiation of its component predicative parts. In the study of the structural syntax of an English compound sentence, there is a plurality of approaches.

When analyzing the translation of complex sentences in a scientific text, we used the following syntactic transformations: segmentation and union of sentences, replacement of members of sentences, replacement of the type of sentences. Such transformations were applied by us taking into account the semantic coherence of the informative field of the English compound sentence.

The lexico-semantic content of the scientific text required the use of complex syntactic units overloaded with information, which created certain difficulties in translation. One of the basic problems of translating a complex sentence in a scientific text is the selection of the necessary syntactic construction that would most fully correspond to the semantic content of an equivalent syntactic unit.<sup>10</sup>

Thus, as a unit of translation, a complex sentence is subject to translation transformations, among which there are various approaches to the ways of transforming its syntactic structure in English. It is necessary to take into account the degree of informativeness of a complex sentence in any approach to its translation from English into Uzbek. First of all, this is manifested in endowing a complex sentence with such a universal, extralinguistic quality as an informative value, since with such an interpretation of the function of a complex sentence in the linguistic communicative space, i.e. the ability to include in its syntactic structure certain meanings embedded in the lexical “palette” of the information chain of a complex sentence, the method of translation transformations at the level of syntax may differ.

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