

# Reflection mechanism as a component of methodical compression in foreign language professionally oriented communicative training

## Mecanismo de reflexión como componente de la comprensión metódica en la formación comunicativa de orientación profesional en lenguas extranjeras

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### Abstract

This research shows that reflection mechanism is one of the determinant factors for realizing the educational paradigm based on methodical compression when teaching a foreign language to students at non-linguistic universities. Methodical compression as a means of foreign language communicative training optimizes educational process. The reflective component provides conscious mastering of acquired knowledge, particularly in activities aimed at understanding a foreign text through the stages of meaningful work on the sentence and on the text as a whole.

**Key words:** Methodical compression, reflection, non-linguistic universities, reflective component

### Resumen

Esta investigación muestra que el mecanismo de reflexión es uno de los factores determinantes para realizar el paradigma educativo basado en la comprensión metódica al enseñar un idioma extranjero a estudiantes de universidades no lingüísticas. La comprensión metódica como medio de formación comunicativa en idiomas extranjeros optimiza el proceso educativo. El componente reflexivo proporciona un dominio consciente del conocimiento adquirido, particularmente en actividades destinadas a comprender un texto extranjero a través de las etapas de trabajo significativo sobre la oración y sobre el texto en su conjunto.

**Palabras clave:** Compresión metódica, reflexión, universidades no lingüísticas, componente reflexivo

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## 1. Introduction

Modernization of modern national education, its integration into international socio-economic space predetermine the search for new innovative strategies of educational process, alternative models of educational systems and development of multi-component and capacious systematizing and generalizing methodological technologies in the context of continuous effective intellectual and cognitive potential development, as well as in the paradigm of foreign-language professionally oriented education (Karen E. Johnson, & Paula R. Golombek, 2018). Modern professionally oriented education system at non-linguistic universities and universities of physical culture, determines an increasing importance of training methods based on the system-structural properties of the foreign language that students master (Lesohina, 2012; Orekhova et al., 2018).

The effectiveness of teaching a foreign language at non-linguistic universities can be improved by applying a cognitive-communicative approach, built upon knowledge and mechanisms that ensure the process of cognition and development of skills and abilities with their subsequent use in foreign language communication.

This educational paradigm is based on cognitive language acquisition - representation of language mastering mental mechanisms and principles of their structuring; "perception of knowledge and nature of procedures regulating and structuring language perception (mechanism of semantic memory organization and the role of this memory in speech perception and understanding); production of substructures (for example, syntactic, semantic, conceptual, etc.) that appear in speech-making statements production" (Karabutova, 2012; Bochkareva et al., 2017).

The orientation of modern foreign-language education with its predominant system description technologies, mechanisms in language acquisition and their structuring principles, makes cognitive-systematizing development of foreign-language communicative competence at non-linguistic universities highly relevant (Nechaev, 2017).

It seems to us that the process of teaching a foreign language for professionally oriented purposes should be improved through optimization and intensification of traditional methods, forms of training and widespread use of professionally adequate methods. All these means should focus on visual and cartographic methods in presenting information, modeling the system knowledge structure, performing practical works because they reveal natural connections and dependencies, include an extensive system of effective didactic supports, semantic maps, training algorithms, take into account individual typological features designed to implement the development of students' communicative competence in practice. Optimization and intensification of educational process can be achieved using the innovative method referred to as "methodical compression" (Bgantseva, 2017; Bgantseva et al., 2019; Kunabayeva, 2017).

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## 2. Methodology

In scientific literature, the compression effect, referred to as language compression, is considered as a special linguistic phenomenon observed when compressing a certain part of the text without damage to its content (Litvin, 2003; Umerova, 2011). In the context of this study, we extend compression effects to foreign-language educational material both in content and in operational terms, and we understand methodological compression as an innovative way of presenting and activating professionally significant material for students at non-linguistic universities. The method assumes that intensification of learning is achieved by compiling several methods, techniques, forms of activity and channels of perception (visual, auditory, kinesthetic), while taking into account individual psychotypological features within a certain time or didactic segment (lexical and grammatical block, topic, module). At the same time, the reflection mechanism, based on methodological compression, seems to provide an important factor in educational paradigm implementation.

The process of learning a foreign language involves organization of events, where meaningful and active perception is the central factor to manifest subjective qualities of students, reflecting the increasing trend towards autonomy (Hossein Nassaji, 2018; Maria del Garcia Mayo, 2019). Also, they provide optimization of communicative training that implements modern goals of foreign language education: readiness to fully participate in communication in a foreign language.

Due to the fact that a text on specific field of study, as a basis for stimulating speech activity and expressing communicative intent, is the main authentic means of teaching non-linguist students, special attention is paid to such forms of work with texts that are aimed at extracting professionally significant information for its further use in practice. At every stage, students clearly understand the purpose of their activity and successfully use the necessary means to achieve it.

The primary criterion for creating working environment, aimed at analytical comprehension, structuring, memory retention, usage and active foreign languages practice, individual planning of the activity stages, providing the solution of the given tasks, this is a fixation on introduction to training and reflection teaching.

The term reflection, broadly speaking, is used to define self-actualization, self-understanding and self-analysis representation, i.e. a person's ability to be conscious of self, inner processes and internality, cause-effect relations of the given activity, its results and methods (Vidjapin, 1999). Taking into account the fact that reflection is considered both as a particular process and a general mode of action, we can conclude that this category has a two-directional character and can be implemented into pedagogical training to improve efficiency of foreign languages training, aimed at focusing on teaching students how to be independent minded, active and cognitive during the learning process through theoretical knowledge about the object, algorithms and general work schemes.

Thus, a reflection component of the learning process appears to be one of important mechanisms, allowing to succeed in getting a cognitive acquisition of knowledge, generalized work methods, criteria (rules) for using mastered means and ways to act in a particular context. Reflection enables students to understand themselves better, analyze their own cognitive processes, being, on the one hand, a means of its self-organization (independent goal setting and activity planning, focused on comprehension) and being, on the other hand, a way of getting of deliberate actions, contributing to optimization of foreign languages training.

In our opinion, reflection actualization in the learning process organization, aimed at a technical foreign language text comprehension by students, offers a number of advantages. Such an approach aimed at comprehension training promotes students' mental activity and elaborates consciousness, depth, flexibility and independence of thought, bringing into action the first optimization criterion of comprehension training, guaranteeing its quality and giving a good opportunity for a more efficient study time usage, letting have regard to the second optimization criterion – the criterion of rational time consumption for achieving positive results. All these factors considered provide the ground for the principle and mode realization of cognitive-classifying methodical compression in training.

The following methodical phases should be in use for implementing the principles taken as a basis into practice. At first a set of foreign language texts preliminarily selected are subjected to a procedure of analysis together with students; for texts comprehension a certain algorithm is used, which is specified in the system of worked out stages and activity methods with the inclusion of reflexive procedures and which provokes student's independent identification and differentiation of this technology from the given task and its further generalization. Then, through independent solution of tasks, aimed at comprehension of foreign language texts, a special skill to use the phases, procedures, activity means and methods undergoes the process of elaboration.

We consider the necessity of reflexive skills implementation into training as a goal of prime importance as, having understood the principle of any information acquisition with the help of reflection, students won't encounter difficulties to solve tasks of varying difficulty level, primarily focused on a logical comprehension of a foreign language text, which is one of criteria of appropriate training organization.

Consequently, in the frame of our research we will define reflection as an activity, directed at conscious perception of the text elements (words, sentences) and this text as a whole, and at clear understanding of goals, principles, criteria and work methods in order to comprehend a foreign language text and provide implementation of the criteria (the criterion of quality and rational time consumption) taken as a basis into pedagogical training – along with consideration of improvement of such subjective students' qualities as self-dependence, reliability and activism (see Fig. 1).

We consider it significant to offer such approaches to comprehension of foreign language texts in training optimization that would contribute to acquiring a sufficient level of skills to comprehend a foreign language text by each and every student.

It is vital to emphasize that comprehension as a process is represented as a chain of successive steps, necessary for information retrieval from a foreign language text, starting with a visual perception of this text, i.e. words.

Word recognition starts "as the result of its comparison with the sample, kept in a reader's long-term memory and its identification on this basis" (Folomkina, 1987). Then, visually perceived material undergoes the process of logical revision. The meaning of the perceived unit is matched to the meaning of all units around it, the words are combined to form syntagms, the syntagms are matched and combined to form sentences, the sentences are combined to form logical parts, which form a piece of a coherent text later on ( word à syntagm à sentence à text).

Analyzing the neurolinguistic nature of the process of understanding speech communication, A.R. Lurija (2003) points out three conditions under which its successful course is possible: so, first of all, the recipient "must perceive and understand individual words - lexical units of speech ... Then <...> must understand the structure of the whole sentence - a system composed of individual words, which allows us to formulate main idea. <...> Finally, after the individual sentences that make up the elements of the whole utterance are understood, the decoding process proceeds to the last stage - understanding the whole message" (Lurija, 2003).

Following the stepwise nature of understanding, we consider it optimal to use a phased teaching method to understand a foreign language text, which basically relies on the doctrine developed by P.Y. Gal'perin (1980) and his followers on the gradual formation of mental actions, its essence - mental activity is the result of "transferring external material actions to the plane of reflection - to the plane of perception of ideas and concepts. The process of this transfer takes place through a series of stages, at each stage takes place the reflection and reproduction of the action and its systematic transformation" (Gal'perin, 1980).

Since the object of learning understanding is professionally oriented texts, we consider it appropriate to slightly adjust the structural chain that implements understanding, replacing the concept of a word with a term. Therefore, it seems to us advisable to refer to the following blocks, teaching methods for understanding a foreign language text is based on them: 1st block - meaningful work on the term; 2nd block - meaningful work on the sentence; 3rd block - meaningful work on the text as a whole.

The meaningfulness as the main principle on which we rely in the process of learning to understand is achieved by activating the reflective skills of students in the phased method of working on a foreign language text and ensures that their subjective qualities are taken into account, as well as the efficiency of work on selected blocks (See fig. 2).

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### 3. Results

Considering the first block of our method, we proceed from the need to comply with the following important specific provisions:

1. Work on a foreign special word (term) with the use of reflective skills develops the ability to predict, and also stimulates the improvement of the mechanism of linguistic guesses. It is impossible to imagine a holistic perception of the meaning of a foreign language text in a specialty without them.
2. The installation of a reference to reflexive analysis completely eliminates the mechanical use of the dictionary at the first meeting with an unfamiliar special word, requiring an initial analysis of this word, its reflection, compiling a hypothesis and only then testing this hypothesis in a dictionary.
3. The process of such a detailed analysis of a special word is recognized by leading methodologists as reproducible. Therefore, the word, correctly "guessed" once, is recognized and understood by students at a direct level in the future, which immediately affects the quality of the activity aimed at understanding.
4. Phased analysis involving information from the history of the language or including, as necessary, word-formation analysis is an active work of thought and, by virtue of this, contributes to meaningful memorization.
5. Appeal to the dictionary after the hypothesis means a conscious search. During this the student knows exactly what he is looking for, and therefore has the criterion for making the right choice among the many values listed in the dictionary entry.
6. Having correctly guessed the meaning of a special word, students gain confidence in their abilities, which gradually leads to the strengthening of internal motivation and the desire to set creative tasks of a higher level and solve them independently.

Thus, the activation of reflective skills in working on a foreign language word implies a systematic desire to perceive every unfamiliar special word (or a familiar word, but in a new context) based on previous knowledge, in the context of previous language experience.

For different categories of words, their elements help to establish the continuity between the known and the new is different. From this point of view, it is methodologically expedient to distinguish 3 categories of words:

- special words, the understanding of which occurs through the awareness of their graphics;
- special words that are realized by referring to their structure;
- special words, the meaning of which is established by analyzing the context, that is, through understanding the words adjacent to them.

Most of the words of the first category represent concepts that are familiar to students and understanding is performed in a non-translational way. Lexical units belonging to the other two categories require certain mental operations from students - word-formation analysis, attracting information from the history of the language, and often accompanied by a reference to the dictionary (Kochetkova, 2006).

Most often in the reading process, it is methodologically advisable to orient students to the context and, depending on the meaning of neighboring words and language guesses, consider the meaning of a particular lexical unit.

For a more complete and accurate identification of the meaning of the terms, it is necessary to appeal, first of all, to the context at the sentence level (second block), one should proceed from the following provisions working on it:

1. A sentence is recognized as the smallest independent unit of a text. The lexical units of a foreign language text operate in it, and their primary understanding can be produced on the basis of it.
2. Understanding the sentence is based on an understanding of the meaning of the whole text and at the same time, the meaning of the text depends on each individual sentence included in its composition, since all elements are structurally significant in the text.
3. When working on a sentence, the main attention is paid to what elements of this sentence create exactly such an understanding of the text as a whole, and what means are used to achieve the logical and emotional impact of this text on the student-reader.
4. Language elements have interaction only in the sentence system in the context of a certain foreign language text, where they appear not in isolation, but in interaction with other language elements of a foreign language.
5. Consideration of grammatical and syntactic linguistic phenomena at the level of sentences or phrases when they are understood is justified only if difficulties arise that inhibit the process of holistic perception of the text, it is unacceptable in all other cases.
6. Working with a separate sentence or a phrase, it is necessary to strive of solving the main task - to understand the complete meaning of the text, to penetrate its ideas and thoughts and use the information extracted from it to comprehend the phenomena of reality and satisfy professional interest.

Within this activity it seems appropriate to implement the methods used for working on grammar material, which is necessary to understand the meaning of a foreign language text in general, since grammatical phenomena unknown to students commonly impede achieving an optimal text understanding level. Mastering the grammatical component of reading to understand a foreign language text involves assimilating three grammatical aspects: morphological, syntactic and intuitive.

The morphological aspect is responsible for the correctness of the forms of lexical units needed to express a certain thought: erfüllte, vor kurzem, ich, die Klassifizierungsnorm, der ersten Leistungsklasse. These word forms are combined into phrases and sentences in accordance with the rules inherent in a foreign language, in our case German, which requires the knowledge of the syntactic aspect: Vor kurzem erfüllte ich die Klassifizierungsnorm der ersten Leistungsklasse. The cerebral cortex involves the system of stereotypes that dictates the rules for organizing words into a coherent whole, determining the existence of an intuitive, unconscious grammar, which every student has inside in his/her mother tongue and which must be relied upon when comparing the native grammar with a foreign one.

Now we will concentrate on the basic principles of the sensible work with the text – the third and central methodological block.

When creating the methodology for the phased work with a foreign language text, we considered the fact that understanding a foreign language text depends on the student – the subject of activities aimed at accurate and deep understanding of a foreign language text within the studied specialty. The sensible reading generates a new meaning provided by such fundamental functions as reflection, sense search and sense creation, which successfully realize the readiness for independent thinking and action.

The introduction of our methodology also implies a teacher's willingness to fulfill reflective activity at foreign language lessons. The teacher should be ready to create such a pedagogical situation that would function as specific developing environment where the teacher and the student act together to search and disclose the semantic content of the text. This situation should enable a student to regard and present himself or herself as the subject of the educational activity. It is aimed at understanding the information presented in the text; formulating the student's own opinion; expressing his/her position in relation to the comprehended sense formation; search and production of sense; reflexive analysis of the topic and the main idea of a foreign language text; showing tolerance for dissent; awareness of responsibility for the correct "reading" of the text.

The pedagogue's readiness to optimize the teaching process (aimed at understanding a foreign language text within a certain specialty) is manifested, in particular, in his/her willingness to conduct a dialogue with students due to the information obtained from a foreign language text. When working with an educational text, the dialogue is the most important condition for understanding its meaning. Asking questions and answering them are the two main components of this art.

The "question and answer" dialectic (within the internal dialogue) includes the following phases: formulating questions (to the text, the author or the reader – one's own self) and answering them.

Given the available general didactic, linguistic and communicative classifications of questions, the authors divided them into several types which led to the maximum effect in teaching students to understand foreign language texts in dialogical relationships "reader – text", "reader – author" and "teacher – student". The proposed typology allows developing the right strategy for applying questions in the pedagogical process at foreign language lessons.

1. Introductory questions (create a positive motivational attitude, stimulate the beginning of a dialogue).
2. Sense-orientating questions (are aimed at recognizing the semantic levels of the text and orientating in them).
3. Guiding questions (provide the dialogue with the desired focus when there is a deviation from the intended guidelines).
4. Sense-searching questions (explain the meaning of certain phenomena and actions).
5. Sense-creative questions (enable the student to treat the comprehended foreign language text within the studied specialty as creatively as possible).
6. Reflective-activating questions (are aimed at conceiving facts from one's own life similar to those considered in the text). Such questions motivate students to reflect upon their activity through understanding a foreign language text within the studied specialty, impelling them to comprehend their states, experiences, thoughts and establish semantic "I-and-text" connections.
7. Positional-value questions (allow determining the student's value orientations, his/her position in relation to the text, to the author's opinion, to the characters' behaviour).
8. Practice-orientated questions (are aimed at the possibility of using textual information in other life conditions or for other academic disciplines; allow building alternative semantic constructions).
9. Artistically (aesthetically) orientating questions (allow understanding and identifying the feelings and emotions evoked in the student by the text)
10. Generalizing questions (provide the transition from a single fact to a general law, from the development of the situation to its completion).

These questions are “introduced” into the educational activity in a foreign language in various ways:

- are put by the teacher both before reading the text, during the work aimed at understanding the text and after reading it;
- put by the student in the course of the “dialogue” with the text, the author or the reader (one’s own self).

Teaching to understand a foreign language text to the students of a non-language university implies purposeful formation of the above-mentioned skills and considers the conditions needed for the practical implementation of the phased educational model of understanding a foreign language text. These skills and conditions suggest working with the content of a foreign language text within the studied specialty through involving reflective abilities. Besides, it is proposed to focus on recognizing the professional value of the extracted information and its further use at “core” (specialty-centered) lessons and in life.

The problem that every teacher must solve is how effectively he/she can manage and optimize the process of understanding a foreign language text by the students. We are sure that it is possible to solve this problem through the competent selection of specific methods, techniques and exercises for effective work on the proposed stage blocks.

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## 4. Conclusions

The reasonability of activating reflection in the educational activity of students learning a foreign language (in particular, within the activities aimed at understanding a foreign language text) consists in their progressive willingness and ability to read the text without any assistance or helping materials, as well as to plan actions that favour its understanding. The students also learn to substantiate the results of their activity after analyzing possible semantic options and ways to overcome the associated difficulties.

Having a generally educational character, such skills acquire a particular role when there is a great necessity to comprehend professionally-significant additional information without assistance, for example, in relation to preparation for workshops on specialty or participation in scientific conferences, followed by paper writing, passing a candidate examination in a foreign language and so on.

Thus, a reflexive component of the learning process is one of the main mechanisms and is essential to acquire logical knowledge while studying a foreign language, especially under working conditions aimed at comprehension of a foreign language text, when students are motivated for an independent text comprehension, when they are able to plan their stages of comprehension, thinking over different options by predicting them, being conscious of the ways to overcome the associated difficulties and substantiate their activity results. In our opinion, the process of a professionally-oriented text comprehension should be based on individual students’ characteristics and be implemented in the following stages: a cognitive work on a term, a cognitive work on a sentence and a cognitive work on a text as a whole.

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