

METHODOLOGY OF TEACHING SCIENTIFIC TEXTS TRANSLATION

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Scientific and technical texts include articles monographs and technical specifications. Such texts are written according to the same strict rules, and different authors use the same syntactic and morphological structures; the same expressions and style. This means that the author constructs the text in conformity with all achievements of his predecessors. Therefore, the author is the representative of all specialists in a certain field of knowledge.

The scientific text serves to convey the cognitive information. Numerous linguistic means provide the objectivity of this information. These means demand the equivalent translation.

- 1) **Semantics of the subject.** The subject is expressed, as a rule, by the noun of the thematic circle of the certain sphere of knowledge or the secondary nomination (personal or demonstrative pronouns) pointing to the noun.
- 2) Different means of expressing **passive relations** (passive forms of the verb, impersonal sentences).
- 3) Predominance of the present tense of the verb. Due to this, it is possible to perceive the communicated information as absolutely objective, existing outside the time, the ultimate truth.
- 4) **Abundance of compound words** built according to the word-formation models with abstract meaning. This feature expresses the high level of generalization of communicated information and, therefore, their objective character.
- 5) Clearcut nominative character of the text, i.e. the predominance of nouns, expressing the action by the verbal noun with auxiliary verbs. This increases the objectivity of narration and the level of its abstractiveness.

The characteristic feature of each scientific text is the abundance of terms. Terms are monosemantic, devoid of emotional coloring and are independent on the context. [1]

The report deals with the actual issue of methodology of translation of scientific texts. Scientific texts translation is the variety of written texts translation. Principles of translation methods formation are founded on such concepts as activity, typological factor of translation and the object of translation. Methodology of translation is viewed as the system of the fixed actions, corresponding to the concepts of equivalence and adequacy of the ST and TT. We proceed from the assumption that written translation is the creative translation, and it doesn't reduplicate the existing models. Written translation as the communicative act is usually not directed at the concrete user or concrete audience, therefore, the translator is not limited by the demand of the concrete customer. The user of the written translation is the society on the whole. Therefore, the translator bears responsibility for socialization of his translation in the Target culture. The translated scientific texts must work on the same level with the ST, i.e. be used in the process of further development of specific knowledge. The main process in translation methodology is understanding of conceptual saturation of the text. That's why the translator is responsible for misunderstanding of the scientific concept which in its turn may bring about the failure in the development of the scientific thought. On the other hand, we assert, that the scientific text is not only the generator of the new senses but also the condenser of the old senses on the basis of accumulation of knowledge and collective character of the science development. Every scientific text keeps memory of its previous texts. In this notion the most important statement in translation methodology is the requirement for conceptual and terminological uniformity. It is well-known that the ST is multilayer, because the creation of the text takes place against the background of the complex interrelation of the primary and constantly changing contexts, constant integration of the old information into the new one. As a result of this, the initial texts are constantly commented, assessed, and they turn into the new torrents of information. Therefore, the information is defined as the "fluctuating" interminably created flow.[2]

Another serious problem in the scientific text translation is the transmission of the abstraction process results, underlying every scientific text. Terminology, the main component of scientific text, starts reminding the conventional code system. The analysis of translations shows that the mistakes connected with insufficient interrelation of scientific concepts lead to the sense distortion in the TT. The main parameter of the translation problem is identification and understanding of main concepts described in the ST. It is necessary to take into account the principles of the concept formation.

The difficulties in the scientific texts translation are connected with the necessity of understanding the notions of the general text theory, first of all such notion as logicity. Understanding the notion of **logicity** makes it possible to avoid many translation failures. The suggested methodology of scientific texts translation helps concentrate the translation efforts in two main directions: 1) construction of the text model; 2) the correlation of the text model with the special knowledge in order to determine the logical connection between the facts. The first direction is based on the following principle. The process of thinking of the scientific text author is mainly **instinctive** (intuitive). This means that the senses are generated on the semantic continuum spontaneously. As opposed to this, the comprehension of the scientific text, created by the author, requires from the translator large effort and fully acknowledged work for understanding the logically formed text. The second direction is stipulated by the fact, that the original scientific senses have been potentially preset in the text and the methodology is directed at revealing them.

In accordance with the viewpoint on translation methodology as the construction and further transmission of the complex semantic structure of the text, methodology of translation consists of several stages.

The first stage. Construction of the translation space. This stage is connected with revealing the conceptual sense, based on the unity of the old and new types of knowledge. In the text analyzed the translation space possesses the following model:

Concept: old knowledge	Concept: new knowledge
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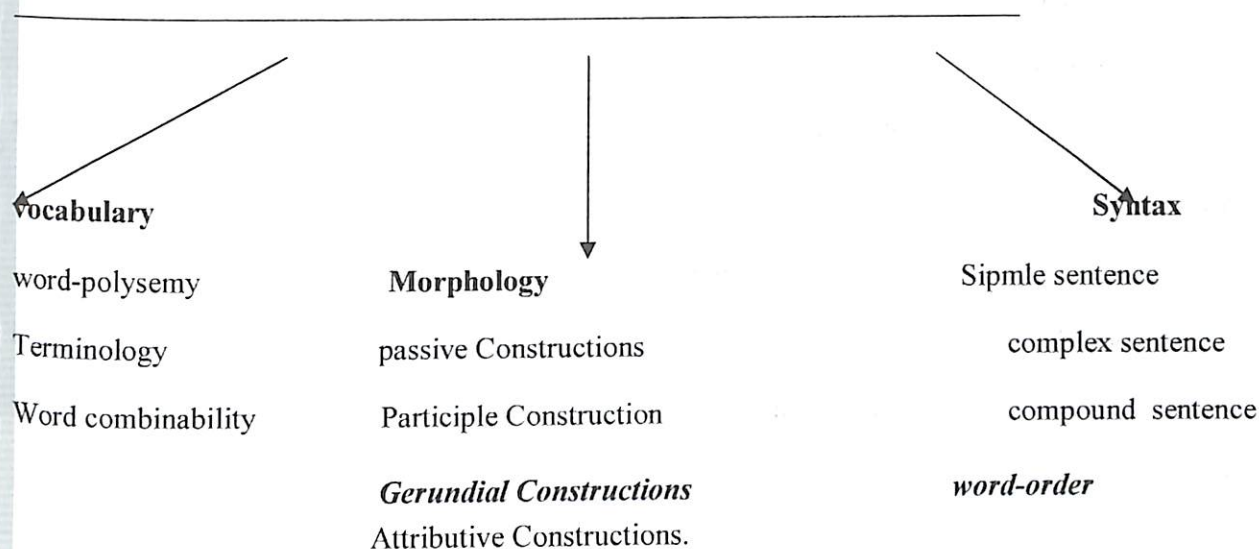
The meaning of construction of the translation space lies in the following. The conceptual sense, singled out within the limits of this stage, correlates with the text integrity. The text integrity is not the linguistic category, it belongs to the intellectual capabilities of the recipient perceiving the text. Therefore, the aim of this stage of translation is to form and develop the interpreting, reflexive skills of the translator with the purpose of disclosing the semantic dominant of the text. The foundation of the conceptual sense in any scientific text is the conflict of the old and new.

The second stage of translation is the compression of the revealed specialized knowledge which takes the form of modeling.

The third stage of the translation methodology is the interpretation of the disclosed specialized sense. The main task of this stage is the consistent interpretation of the concept forming linguistic units.

The fifth stage – translation proper, i.e. grammatical and lexical transformation. This can be shown by the following scheme. [3,4,5]

Transformations used in scientific texts translation.



Simple Sentence is not so simple, because it represents the complex integrity of syntactic and semantic relationships between its members.

Word-order of English and Russian sentences doesn't coincide. In comparison to the Russian simple sentence with the free word order, the English sentence possesses the stable (fixed) word-order which can be represented in the following scheme:

Adverbial modifier + attribute+subject+predicate+object (+ adverbial modifier)

Different parts of speech and syntactic structures may be used in translation of the sentence from the SL into the TL, e.g.:

The process **is subject** to fluctuations.

Этот процесс **подтвержден** изменениями

Our society **conditions** persons to accept material innovations.

Наше общество **ставит людей в условия необходимости** принимать материальные нововведения

Inversion. In case of inversion the sentence may start with

A) The object:

This mistake we observed in all his articles.

Именно эту ошибку мы наблюдаем во всех его статьях

B) The predicate before the subject:

In the vacuum **was** a new sample.

В вакууме **находится** новый образец.

In table 3 are given radii of the free ions. В таблице три находятся радиусы свободных ионов.

C) The predicative of the nominal predicate may be expressed by the adjective, Participle I and II:

Remaining to be discussed is the main problem.

Остается обсудить основную проблему.

Important for this methods is temperature.

Для этого метода важным фактором является температура.

D) Inversion may also take place in the **concessive** clause:

Difficult though it may be the problem will be formulated.

Хотя это может быть и трудно, задача будет сформулирована.

Hard as it is we must do the work.

Как ни трудно эта работа, мы должны сделать ее.

Emphasis.

It is this category that is of interest to us.

Именно эта категория представляет для нас интерес.

It was not only this value that counted.

Не только эта величина имела значение.

Morphology

Non-finite forms of the verbs: Infinitive, Participle I and II, Gerund and their constructions.

Infinitive. Split infinitive.

To **effectively** determine – определяется эффективным образом

To **quantitatively** assess – количественно оценить

To be **continuously** changing – непрерывно измениться

Absolute Infinitive Constriction

The acid production will be doubled **with one third** of the product to be shipped to the works.

Производство кислоты будет удвоено, **причем одна треть** продукции будет отправлена на завод.

We asked him to help us, **the work to be done in a week.**

Мы попросили его помочь нам, так **как работа должна быть** сделана через неделю.

Participle I

Allowing for – принимая во внимание

Assuming that – предполагая, что

Broadly (generally) speaking – в общем говоря

Putting it mildly – мягко говоря

Participle II

Strained relations – сложные отношения

The finished product – конечный продукт

A marked man – известный человек

All told – когда все сказано

Stated bluntly – откровенно говоря

Stated differently – говоря другими словами, иначе говоря

All things considered – когда всё уже рассмотрено, учтя всё

Present company excepted – не говоря о присутствующих

Absolute Participial Constructions

With water being cold, the rate of the reaction was low. Когда воду охлаждали, скорость реакции была низкой.

Performance observations were recorded, **with particular attention on the variables**.

Наблюдения за работой регистрировались, **причем особой внимание уделялось переменным величинам**.

Gerund

There is unmistakable proof of **Pauling's having been wrong**. Имеются несомненные доказательства того, что **Полинг ошибался**.

The accuracy of the definition depends **on the terms being carefully formulated**.

Точность определения зависит **от того**, насколько тщательно **сформулированы** все условия.

Vocabulary.

Of main importance is word polysemy which is closely connected with word combinability (collocability), as the word realizes its meaning in the context.

We shall analyze the change of meaning on the example of the word “аварийный”.

Аварийный: emergency; trouble; standby; faulty, ailing, safety; alarm; breakdown, breakage; jury; scam; malfunction.

аварийная посадка – crash landing

аварийные элементы – faulty elements

аварийная бригада – a trouble gang

аварийные стержни – a safety rods

блок питания – power pack

Для уменьшения трения все движущиеся части машины изготавливаются из **белого металла**.

To lessen friction all the moving parts of machinery are made of **babbitt**.

Хозяйственно бытовые помещения – community facilities

Электрическая блокировка – electrical locks.

Translation of scientific and technical texts demands usage of the equivalents providing for the invariant character of the text: terminology, general scientific lexis devoid of emotional coloring, verbs in the present tense, passive verbal constructions, word-formation models with abstract semantics, predominance of nouns, division of the semantically complex syntactic constructions, abundance of cohesion means. The main unit of translation is the **word** and the **morpheme** used for translation of compound words. The most widespread type of equivalence is the monosemantic equivalent, the second in its importance is the alternate equivalent with equal variability.

Recourses:

1. Алексеева И.С. Профессиональный тренинг переводчика.
2. Алексеева Л.М. Методика преподавания перевода научного текста. Пермь, 2005 г.
3. Брандес М.П. Предпереводческий анализ текста. Курск, 1991
4. Бреус Е.В. Теория и практика перевода с английского языка на русский. М., 2003
5. Комиссаров В.Н. Введение в переводоведение. М., 1991.

Түйін

Когнитивті ақпаратты жеткізуде ғылыми-техникалық мәтіндердің қызметі үлкен, мұндай мәтіндердің өзіне тән синтаксистік және морфологиялық құрылымы, сөйлеу оралымдары қалыптасқа. Мақалада ағылшын тіліндегі ғылыми-техникалық мәтіндердің ерекшелігі мен оларды орыс тіліне аударудың тәсілдері қарастырылады.