Specific Features to Train Scientific-Technical Texts Reading

Natalia Gavrilenko and Yulia Biryukova
Peoples’ Friendship University  House 6, Mikuho-Maklai Street, Moscow, Russia, 117198

Abstract: The given article is devoted to considering the specific features of reading the text for translation as a component of the scientific-technical texts translator’s professional activity. From the position of psycholinguistics the analysis of translating reading permitted to determine its specificity, psychological mechanisms required for a successful translator’s reading of scientific-technical texts. Conducted translators’ surveys permitted to highlight those types of reading which the translator uses to solve the tasks confronting him at different stages of this complicated professional activity. These types of reading, being an integral part of translation activity, acquire specific features and therefore the students’ specific translation reading skills should be formed. The formation of these skills is suggested to be formed stage by stage in the process of gradual familiarizing the students with the tasks confronting the translator. The genres of special discourse relevant to the translator’s activity will be included into the content of translating reading training.

Key words: Scientific-technical translation %Reading as a component of the translator’s professional activity %Translator’s competence %Special discourse

INTRODUCTION

The translator repeatedly returns to reading in the process of a written translation of scientific-technical texts. Thus, on receipt of the order he looks through it, analyzes which supplementary materials he will be in need of. Then, the translator also uses reading in the process of his own translation. And after translating the text he verifies his work and again turns to reading. Thus, perfect mastery of reading is thought to be important for the scientific-technical texts translator, it is a background to understand a foreign text for its further translation into the native language.

In the 1980s Irina Zimnyaa suggested that the translation should be distinguished as a type of speech activity together with auding, speaking, reading and writing. From the researcher’s point of view the translation can be fulfilled on the basis of auding and speaking (oral type of translation) or reading and writing (written type of translation) [1]. At present the concept of translation/mediation is proposed to consider as one of speech activity types in European Union educational institutions while training foreign languages. However, translating knowledge, learning skills required for a specialist in any field while communication with another country representative are likely to be different from the competence of a professional translator.

Translator’s Professional Competence: The competency building approach enabled teachers to systemize students’ knowledge and skills, gave a possibility to assess practical results of training. The Russian psychology-pedagogical science broadened the given approach, having enhanced its content by a motivation aspect and personal abilities. So, professional competence of a scientific-technical texts translator is defined as “readiness and ability to render (both in written and oral forms) scientific and technical information from one language into another with account of differences between two texts, communicative situations and cultures.” [2: 104].

Competence is the main index of the translator’s professionalism and reflects his professional personality. The analysis of researches, training practice show the ambiguity and difficulty to interpret the concept of competence. In the given research the term ‘competencies’ (while translating it is used in plural) is related to inner resources required for a translator,
presents some kind of algorithm, script, rule to act and the term ‘professional competence’ (while translating into English -- singular) determines ability to select, combine and mobilize ‘competencies’ which he has at his disposal. Thus, the translator’s competence will be considerably broader than competency and will include as cognitive knowledge and corresponding skills, so the motivation, professionally important characteristics of a personality, the value approach etc. Only the ability to consciously select and use inner (competency) and outer (computer, dictionaries etc.) resources when fulfilling professional tasks will prove the translator’s professional competence.

**Translator’s Key Competences:** At present the researcher in the field of translation didactics have confronted rather complicated task to separate key translation competences and criteria for their classification. The components related both to general skills in the field of intercultural communication and translator’s professional translating skills, subject knowledge, skills to edit the translated text, as well as the translator’s personal characteristics are distinguished within the frameworks of translating competence.

The theoretical basis to determine translating key competences served the following statements having been formulated in the Russian psychology and theory of translation:

1. **Professional competence** includes a number of components correlated with different sides of work [3].
2. **Translator ensures intercultural communication** [4].
3. **All competences are social in their content because they are worked out, formed and manifested in social medium** [5].
4. **Forming the professional is related to forming his professionally important personal characteristics** [3].

According to the above statements the structure of the translator’s professional competence content was systemized, components highlighted by researchers were correlated with the basic sides of the professional’s activity: intercultural communication in which the translator plays the role of a mediator; translator’s personal professional activity; professional translating environment which demands certain patterns of professional communication accepted in the given profession; professional translator’s personality, that is those characteristics which he must have to translate. As a result, the following components of translating competence were distinguished:

1. **Intercultural communicative,** i.e. the ability (according to social and cultural norms of communication in the professional field) to understand utterances in a foreign language and to create oral or written statements in the native language on the basis of understood meaning, which includes the following.
2. **Linguistic competence** -- translator’s readiness and ability to use language means for understanding a foreign professionally-oriented text and creating correctly formed with a definite meaning utterances; the given competence includes the knowledge of vocabulary, phonetics and grammar as well as corresponding learning skills and other characteristics of the specialization in the foreign language as a system in comparison with the Russian language.
3. **Pragmatic-translator’s readiness and ability to understand the utterance in compliance with the situational conditions and sender’s communicative intention and to use language means in the text for translation accounting the recipient’s characteristics and communicative situation in which the given text will be used.**
4. **Social-linguistic** -- i.e. readiness and ability to understand utterances and effectively use the language in the social context.
5. **Special,** i.e. readiness and ability to fulfill translator’s work at the professional level, translator’s possession of corresponding knowledge and skills in the field of translation, which includes the following.
6. **Basic competence** -- readiness and ability to use the complex of procedural and theoretical knowledge in the translation theory field in the process of translating activity.
7. **Subject competence** -- readiness and ability to use subject knowledge (in the field of one or several special disciplines) required to translate both general scientific and highly technical texts.
8. **Discursive competence** -- readiness and ability to understand different genres of a foreign special discourse and to create the text of translation according to the author’s conception, communicative situation and social-cultural norms of communication accepted in Russia.
9. **Social-cultural competence** -- readiness and ability to use knowledge about rules and norms of interaction between individuals within the framework of the social institution, in the professional field of communication in the.
country of the language being studied and Russia and ability to compare this knowledge while translating.

C Strategic competence -- readiness and ability to analyze factors which influenced the creation of a foreign text and factors important for the recipient of the translated text, to select those from them which are significant in a certain professional situation and to work out the succession of translating actions on their basis.

C Technological competence -- readiness and ability to use the complex of procedures and methods ensuring the adequate translation of the target text.

C Information competence -- translator’s readiness and ability to use informational resources while solving translating tasks.

C Social, i.e. translator’s ability to fulfill mutual professional activity with the customer, participants of the meeting, companies, enterprises personnel, possession of communicative methods accepted in the given professional environment, social responsibility for the results of his work etc.

C Personal, i.e. having professionally important personal characteristics which are required for translator’s activity [2:104].

Pragmatic Component of Translator’s Professional Competence: The competence building approach while translation training involves interrelation and interaction of personal and pragmatic components. According to the pragmatic approach the translator’s competence is formed when fulfilling professional tasks. It is reading that mainly provides for the success of all translating activity in the process of a written translation.

Reading as a type of speech activity is rather thoroughly considered in works of the Russian psychologists [1, 6, 7 and others] and researchers in linguodidactics [8-11 and others]. However, reading being a part of scientific-technical texts translator’s professional activity will acquire a number of characteristics which will differ it from common reading as a receptive type of speech activity. These specific characteristics will be determined by the tasks confronting the translator and by specific features of a foreign scientific-technical text.

Specific Features of Translating Reading: Some types of reading being used by a translator in his activity were considered in works of Svetlana Ulitina [12], Larisa Raskopina [13], Tatiana Moschanskaya [14] and others. However, the specific features of reading as a component of scientific-technical texts translator’s professional activity were not the subject of independent research.

Translation Reading from the Position of Psycholinguistics: Consideration of ‘translation reading’ from the position of speech activity theory permits to distinguish three interrelated levels: imperative-motivational, analytical-synthetic and implementing ones. Imperative-motivational level is characterized by translator’s readiness to read scientific-technical texts. The translator starts reading a source text with the aim of its correct understanding and translation into the native language.

Reading as a type of speech activity stimulates the general intellectual activity of a person, benefits the formation of his world outlook, social behavior and public activity. However, in translator’s professional activity “the object is a foreign thought which is later on reproduced by the translator for other people” [15: 42]. The information being received more often is not significant for the translator himself as it is while common reading, however, the latter must read and understand all the received information, its communicative function so that he can render both the content and the form in the recipient’s language in a new communicative situation.

The next level of a reading person speech activity is analytical-synthetic or forming one. The main task for receiving and decoding the information is performed at this level. The translator visually perceives the text, comprehends it and fulfills a translating analysis of the received text: studies the situation in which the text was created, compares, analyzes, generalizes the text information using his own accumulated knowledge and experience. The researchers of translation note that it is important that the translator should be familiarized with that field of knowledge which the source text relates to. It is difficult to translate scientific-technical texts not having preliminary subject knowledge. The researchers note the importance of pre-understanding which will ensure deeper understanding of the text than a common reader may have [16, 17]. The broader the translator’s subject knowledge the deeper his understanding of the source text and more adequate the translation will be.

As scientific-technical texts translators’ training is a supplementary education in Russia the students/graduates of non-language HEIs already have certain subject knowledge in the field of the basic specialization. Such knowledge is an integrative one and it is advisable that students should be taught to take this knowledge out of their cognitive vocabulary so that they
can use it in the process of understanding and translating a foreign scientific-technical text [2: 11]. That's why to train reading a foreign scientific-technical text based on students’ subject knowledge received in the field of their main specialization is thought to be rather perspective.

A number of researchers in the field of cognitive science think that a generalized knowledge and experience in stereotype situations are kept in the memory in the type of frames, scripts, plans or situational models [17-22]. Cognitive-semantic structures are understood to be frames which reflect specific structures of thinking and cultural realities taking place in a real life. According to Vladimir Khairullin, the frame-based approach reflects cognitive-semantic and cultural diversity of knowledge idea about the world. Such an approach is important to consider translation reading as it gives an opportunity to see the relation between cultural and cognitive factors in translation [21: 16]. The given factors permit to arrange a comprehensive idea about the event, object in the process of translation reading and to translate adequately. There are required frames in the memory of the scientific-technical texts translator with the help of which he performs his professional activity. If there are no frames in the translator’s memory he can use information and reference search which is “the process of the translator’s search for the required reference information on the problem being considered in a foreign professionally-oriented text to thoroughly and deeply understand it with the aim of further translation” [2: 103]. Such search requires possessing different types of reading.

The third level of reading--implementing, realizing. This level realizes understanding as a result of apprehension the subject of the utterance. According to psychologists’ opinion “the translator’s idea of the message in the target language is formed” in the process of a written translation at the implementing level [15:93]. The translator understands the scientific-technical text and interprets it in the process of reading. In case of a professional translating reading the stage of understanding is the key one, “the core of translating activity, its initial point.” [23: 4] Some researchers note that only a deep and exact understanding of the source text is the prerequisite of its adequate translation into the target language [24, 25]. In this regard, it should be noted that understanding while translation reading will be the means to fulfill this activity but not the aim as it is while common reading.

**Understanding and Interpreting the Text While Translation Reading:** The translator’s understanding of the scientific-technical source text starts with his apprehension of the text, when he establishes contextual links. A number of researchers note that while reading apprehension can be achieved by different methods: ‘bottom-up’ and ‘top-down’ [26: 102, 27: 74-76]. These models are based on cognitive psychology principles and memory psychology. The concept of reading as gradually developing processes of decoding the information coming from the ‘bottom’ is the basis of the theoretical model ‘bottom-up’: the reader gradually identifies and processes information from the level of lexical items to words, word combinations and then sentences. In the second case the information processing develops from much higher level (general concept of the text, presenting hypotheses about the content based on the experience and background knowledge). Such model is stipulated by certain purposes and the reader’s anticipations according to which the hypotheses being presented either are acknowledged or rejected in the process of working with the text.

While common reading a learning reader will use the model ‘bottom-up’. More experienced reader having a high level of language competence will use the model ‘top-down’.

While translation reading the scientific-technical texts the translator will use both models. When reading ‘bottom-up’ he must keep in mind both language peculiarities of the text to think them over and the means to express the thought in the target text. And the model ‘top-down’ will be relevant for the further deep understanding of the text which he reads with the help of the experience and background knowledge being in frames.

The interpretation of the utterance is based on a very deep level of understanding. The given level can be reached when comparing language knowledge with the knowledge about the world, with the structures of presenting and keeping the knowledge related to the recipient’s former experience, which he should have to make conclusions, to identify the author’s intention, to follow the logic of presenting the information, to interpret the text on the basis of learnt information and it will certify his understanding of the text.

The process of a foreign text understanding is over with its interpretation resulting in the recipient’s concept formation. The concept is a ‘cogitative clot’, a maximally reduced implication structure, the development of which takes place in the process of the text production. It reflects the content of received knowledge, experience, results of a man’s activity [16, 17, 28-33].

Reading and understanding of the scientific-technical text by the translator is also likely to be over with interpretation and formation of the concept aimed at
fulfilling the professional activity. On the basis of the given concept and understood meaning the translator will create the target text involving language and extra-linguistic knowledge.

Understanding the content is the most important part in the translator’s activity. It is the content transfer that takes the first place while translating a foreign scientific-technical text. While translating fictional texts the content can be changed by a translator to reach a required influence on a reader, but when translating scientific-technical information the distortion of the content can result in serious technical errors, lawsuits etc. It is reading that plays a special role and stipulates a correct understanding of the content of a foreign scientific-technical text which is reproduced later on in the native language.

At the given stage to perceive, understand and interpret the scientific-technical text the translator can repeatedly read the text to understand its content and the author’s idea and to work out the strategy of its translation into the native language.

Translation Reading Psychological Mechanisms: Having considered the levels of scientific-technical texts translating reading from the point of view of psychology, cognitive science and having distinguished its specific features it is thought to be advisable to characterize psychological mechanisms ensuring the content perception and understanding while ‘translating reading’. Such mechanisms, according to psychologists, are conceptualization, memory, mechanism of probabilistic prognosis and inference.

Conceptualization: Psychological mechanism to ensure perception is conceptualization which is defined as “the process of establishing implications and sense relations among elements and units of the material being perceived”. [34:107] While conceptualizing the sense grouping of the material being perceived takes place that results in distinguishing the sense supporting elements which deepen the understanding. In the process of conceptualization while reading scientific-technical texts the translator reduces the text content to short and essentially logic formulas, notes the central sense concept in each formula, associates these concepts together and thus, forms an integral logic chain of ideas. The text is compressed while its conceptualizing as the basis for its further reproduction [35].

A positive result of the content perception -- understanding is reached as a result of conceptualization. That’s why conceptualization is an important mechanism while translation reading. The scientific-technical texts translator should have the skill to select the key information which bears the information and logic load and serves the basis to access the knowledge kept in a long term memory.

Memory: The next mechanism to ensure reading of the scientific-technical texts is memory, which is a complicated mental process of memorization, storage and further reproduction of what we had in our past experience aimed at applying this experience at present [36: 209]. Douglas Robinson fairly notes that the translator must be able to memorize the accumulated experience and take it out at the proper moment to solve difficult translating problems, but to do it without learning the information by heart. He learns the words, expressions, styles, linguistic and cultural information in the process of reading, during the talk, search in the Internet or simply thinking over what happened [37: 54-55]. When reading the scientific-technical text the translator will take out the required information from his memory and correlate it using his former experience and knowledge which is kept in his long-term memory in the type of frames, scripts or situational models.

Besides frames the precedent phenomena (situations, texts, utterances) play a big role for understanding the utterance [38, 29]. The precedent text is “a final and self-sufficient product of verbal and cognitive activity, well-known to any average member of national linguo-cultural community”. [39: 48]. The texts describing well-known discoveries, law formulations, famous scientists’ activity who are the authority in the country of the language being studied can be related to the precedent scientific-technical texts. The knowledge of precedent phenomena, texts can help the translator to understand the implication of the utterance while reading, to understand socio-cultural specific features of a foreign utterance, terminology etc.

Probabilistic Prognosis: The next mechanism ensuring the process of reading, which performs the function of “regulating the process of understanding” is the mechanism of probabilistic prognosis. The probabilistic prognosis is “prolepsis of the future based on probabilistic structure of the previous experience and information on the present situation”. [40: 3]. In the process of reading the scientific-technical texts the given mechanism permits the translator who keeps frames (structures, scripts) in his long-term memory to put forward the hypothesis based on the previous experience. The speed of the reading processes, the depth of understanding the texts depends on the proposed
hypothesis [36:86]. Proposing the hypothesis the scientific-technical texts translator actualizes frames in his consciousness and rests on “situational factors and the context confirming the authenticity of the prognosis” [41: 23].

Thus, the translator’s mechanism of probabilistic prognosis while reading scientific-technical texts will be based on his subject, socio-cultural, situational, linguistic knowledge and will be the prerequisite of adequate understanding of the source text and creation of the text in the native language.

Inference: Development of cognitive linguistics permitted the researchers to highlight one more mechanism of the text understanding – inference, which “is an intellectual operation as a result of which a man is able to leave the limits of the literal/word for word meaning of units, to find more content in the language form being considered by him than it is fixed by its separate parts... inference is related to guesses based on man’s experience, his intuition” [17: 411].

Relating to the translation the given mechanism permits the translator to leave the limits of the text language expression and to take out the information behind the text while understanding it, i.e. to understand the information which is explicitly given in the text using the already obtained knowledge.

Depth of Text Understanding While Translation Reading: There are different depth levels of the text understanding. The classification of understanding levels in psychologists’ researches is differently presented. The analysis of the text understanding levels from the positions of psycholinguistics is thought to be the most fruitful one. Elena Kubryakova, involving the recipient’s cognitive knowledge offers the following levels of understanding:

C Understanding at the level of language signs
C Understanding at the level of the surface sense as a result of determining contextual meaning/senses.
C Understanding at the level of implication being the result of inference and interpretation [17; 29:244-245].

While translating reading the translator must reach the implication, i.e. to understand the sense with account of the language, subject and background knowledge to further adequately render the content and the language form of the utterance.

The depth of understanding a foreign scientific-technical text while translation reading will be also stipulated by knowledge accumulated by the translator in the process of professional education in the main specialization [42: 23, 43:34, 16:293, 44:67].

Special Discourse in Translator’s Activity: Translating reading is mainly determined by the specificity of the scientific-technical texts under translation related to a special discourse. The special discourse is characterized by the definite subject, functions of communication, professional status of the sender and the recipient of the utterance [42:31, 45: 252, 46: 13]. The special discourse covers a wide range of factors influencing its creation that permits to maximally deeply and thoroughly understand the cause and purpose of its creation.

Special Discourse Sub-Types: Conducted surveys of translators showed that there are general scientific, highly technical and business texts in their activity. The following sub-types of the special discourse can be correlated with the given subjects: general scientific, highly technical and official ones. Their consideration from the position of the information recipient is very important as the given information mainly determines the strategy of translation while translating scientific-technical texts [42: 33-35].

In highly technical discourse the author can be a scientist-theorist or a technologist that create the text oriented to the scientist-theorist, a production worker, an engineer-practitioner or a technologist in the same field of knowledge. Both the sender and the recipient of the discourse supposedly have a deep knowledge in a certain field of science and technology. The highly technical discourse in a written form is presented in specialized journals, collection of scientific works, sites, information portals in Internet. The oral form is realized at the congresses, (video) conferences or exhibitions.

The creator and recipient of the general scientific discourse not always can have a deep knowledge in the scientific-technical field under consideration. It can be a scientist-theorist or a scientific technological man as well as a journalist covering the events in a certain scientific-technical field. The recipient should not have a highly technical knowledge, it is enough for him to have a general scientific knowledge.

The channels to present the general scientific discourse are journals in different fields, sites, information portals in Internet (video) conferences, exhibitions etc.

The official discourse is created by a specialist (practitioner and researcher) having a deep scientific and technological knowledge in the given field for the director of the company, a high level manager or a commercial
representative. The official scientific and technical documentation is used in the official discourse. Channels to present the given discourse are fax, Internet, e-mail, conferences, talks or exhibitions.

Genres of Special Discourse Typical for Translator’s Activity: The sender will use different genres of special discourse depending on the communicative situation. The communicative situation presents “the complex of verbal and non-verbal conditions required and sufficient to perform a verbal action”. [7: 155] Vladimir Karasik defines genre as a stereotype of speech production and perception in specific repeated conditions [47:192].

Genres typical for the scientific-technical texts translator’s activity attracted attention of many researchers [42, 48-53]. The similar typologies, as a rule, are very complicated, multifactorial, it is difficult to use them in the process of translation training. However, the typology designed to optimize the training process is thought to be required as the basis for the translator to start the special discourse analysis. The genres spread in the translator’s activity were specified to create such a typology. The conducted analysis of these genres characteristics permitted to find out the difficulties of their understanding and translation and to present the sequence to train them- from easy to difficult ones: instruction, patent, web-site, essay, a set of documentation, the article in the field of a written translation. The given genres are arranged according to increasing complexity [42:95].

Translation Analysis of Special Discourse: In the process of reading the translator must understand and interpret certain genres of special discourse being created in concrete situations of communication. If for a common recipient only separate parts of it are essential in each concrete communicative situation, but for the translator it is important to have all the data about the situation.

It is known that the more ‘socio-cultural pictures’ of the world of interacting individuals coincide the more is the probability that communication will take place. It means that for the translator not only the sum of knowledge about the subject being discussed is important but also all the components of the discourse. In turn, the author, the discourse recipient and the translator himself are involved into social, historical and cultural context that determines their interaction. In such a case the interpreter happens to be in better situation than the translator as he is in the same place, in the same epoch with the sender and the recipient who, as a rule, are well aware of the conversation reasons, the background of the issue etc. In this case the adversity for the interpreter will be the lack of time. In case of a written translation there always exist the time gap between creation of the discourse and its reading by the translator. It is because of this that some translations are remade in the course of time being ‘adapting’ to social and cultural context of the recipient.

Many researchers in the field of translation point to the significance of communicative situation factors [44, 54-56 and others]. It is on the level of the communicative situation where the genre differentiation of the discourse will be manifested, that’s why consideration of special discourse genres characteristics and their influence on the further translation is thought to be advisable when training translators. Summing up all genre characteristics highlighted by the researchers, we suggest conducting the analysis of special discourse genres typical for the translator’s activity while translating reading as follows.

C Theme and sub-theme of the utterance
C Utterance creation conditions and circumstances
C Special discourse purposes and communicative functions.
C Communicative channel.
C Special discourse genre.
C Interdiscursivity.
C Communicators characteristics -- special discourse sender and recipient.
C Special discourse logic-denotative structure.
C Basic and secondary information of utterance.
C Socio-cultural, socio-linguistic, background and linguistic peculiarities of special discourse.

Types of Reading Relevant to Scientific-technical Texts Translator’s Activity: Analysis of literature on translation as well as surveys of professional translators showed that reading is present at all the stages of the given activity. In such a case the translator uses different types of reading at different stages of translation when solving the tasks confronting him. The types of reading are thought by researchers to be a number of operations stipulated by the purpose of reading and characterized by “specific combination of methods for denotative and perceptive processing of the material visually perceived”. [8: 30].

Types of Reading Distinguished by Psychologists and Linguodidactics Theorists: The researchers use different factors/criteria to distinguish types of reading in the
methods of teaching foreign languages. The conducted analysis permitted to group the types of reading highlighted by researchers:

C According to the form of reading: reading aloud/silent reading [6:67; 57:95; 58:133].
C According to using the logic operations: synthetic/analytical [59:146; 6:80].
C According to the depth of understanding the text: intensive/extensive [60:91; 61:23, 32; 51; 62:4; 63:47-60].
C According to the purposes, i.e. what communicative tasks are solved by specialists while reading: reading for details, skimming, scanning (reading for general information or reading for specific information) [8; 61; 64, 65].

The scientific-technical texts translator confronts certain tasks and purposes which stipulate the types of reading used in the process of this difficult professional activity. The main purpose of the translator while working with scientific-technical texts is to render the information and communicative function of the utterance thoroughly and precisely taking into consideration socio-cultural characteristics of communicators, the situation of communication, observation of literature norms etc. [25: 79]. That’s why considering the types of reading and their characteristics are thought to be advisable proceeding from the communicative tasks to be solved by the scientific-technical texts translator.

The majority of Russian researchers use the classification offered by Sofia Folomkina as the basis while analyzing the types of reading who distinguishes reading for details, skimming, scanning for general information and scanning for specific information.

Let’s consider the given types of reading in detail.

Reading for details is a type of reading the result of which is a thorough (100%) and precise understanding of all the facts in the text. While reading for details, according to S. Folomkina, the reader takes “the most important information out of the text and tends to not only correct the understanding of the text maximally but also to critically digest the information”. The information being received in the process of reading is supposed to be used further. Therefore, the reader has the background orientation to a long-term memorizing. Thus, the researching reading can often be slow and is followed by stops, rereading some parts of the text [8:33].

The skimming reading is understood by S. Folomkina to be such a type of reading when the reader distinguishes most essential information. The ratio of the text thorough understanding amounts to understanding 70-75% of the facts in the text at the given type of reading. In this case, as the author notes that “understanding the basic information must be precise while understanding a secondary information -- correct but not distorted”. At the given type of reading a complete understanding of the text is not required as the reader may need only to refresh the information in his memory which he forgot, missed because of a certain reason or did not understand because of not knowing the meaning of the word [8: 34].

The scanning reading (reading for general information) gives a reader the possibility to get a general idea about the article, book, text, journal not penetrating into the details of the text information. The given type of reading is used at initial familiarizing with publications to find out “if there is a required/targeting information in them to take a decision ‘if it is required/ not required; for refreshing earlier read information in memory ’; when selecting required materials for a definite purpose and further work; when selecting written materials on a definite issue aimed at their further abstracting, reviewing etc.” [8: 35].

If the reader has to find some specific information he also uses reading for specific information finding the words, phrases that help him make the conclusion if the text contains the necessary information or not. As soon as the reader understands that this information is not significant for him the reading may be stopped [8: 36].

To determine set up purposes and requirements of future specialists the researchers offer to combine different types of reading and to distinguish a separate type of reading that is relevant to a special professional activity. Alexey Leontyev fairly notes that we should teach not ‘reading in general’ using only one concrete type of reading but use all the types of reading and work out the students’ ability to easily change one type of reading for another depending on the purpose of reading and the character of the text [66:3].

The professional types of reading highlighted by the researchers were analyzed to present possible types of reading when solving translating tasks. So, Tamara Serova distinguishes referential and informative types of reading which in their turn are the basis for professionally-oriented type of reading being a complicated speech activity stipulated by professional possibilities and requirements [11, 13, 67-70].

According to Inna Gapochka, in non-language HEI the students’ skills of referential reading are also formed which are analyzed by many researchers and based on the reading for details and skimming reading [71: 28-34]. The result of the referential reading is an abstract composed of the basic statements of the text, i.e. theses.
The researchers also distinguish critical reading [10, 72] or reading for a critical analysis [6] that includes task-oriented comparison of the reader’s own ideas with the ideas read in the text. The given type of reading is based on perfect understanding of the material read [73: 185].

William Greib, Fredrika Stoller consider the integration reading when the reader processes the information with the help of reading and after reading involves additional sources related to the subject of the material read to reach his purposes, thus forming his own understanding of this issue. In this case the basis of integration type of reading will be the reading for scanning (reading for specific information) and reading for a critical analysis [74: 45].

Sergey Ivanov, the researcher distinguishes a discursive reading, which according to him, is a professional type of reading and is based on scanning (reading for general information), skimming and reading for details. The given type of reading is characterized by complete, exact and deep understanding of the text and permits the reader to immerse into historical and socio-cultural context of arising, distributing and definition of different types of reading and to place next to each translating task stated in the questionnaire those types of reading that are used to solve them. The integrative model for training translation offered by N. Gavrilenko was used to present translating tasks.

The researchers also relate the editorial reading used by the editor to redact the text to professional types of reading. The aim of this type of reading is a deep acquisition of the denotation, understanding the author’s idea and which formal means he used to render this denotation. Reading the text he is interested not in the information being considered in the text but in a reality that he evaluates from critical point of view to find out not only author’s fortunes and misfortunes but also the reasons that caused them. Solving his professional tasks with the help of reading the editor uses different types of reading: reading for details, polishing (skimming) types of reading depending on the stage of his professional activity [80: 178-180].

The conducted analysis showed that the types of reading considered above are based on one and the same types of reading offered by S. Folomkina and other researchers. Depending on the purpose which they fulfill in the process of a certain activity, their specific features change and reading acquires new qualities. The complexity of translator’s professional activity is to a large extent determined by the fact that the translator uses not only one type of reading but a lot of them highlighted by the researchers at the different stages of this activity. The tasks confronting the translator will stipulate the specificity of these types of reading, which being a part of translating activity are likely to acquire specific features.

Types of Reading Being Used at Different Stages of Translator’s Professional Activity: The survey of translators was conducted to determine what types of reading will be used at each stage of scientific-technical texts translator’s activity. Twenty-six translators took part in the survey. They were offered to familiarize with the definition of different types of reading and to place next to each translating task stated in the questionnaire those types of reading that are used to solve them.

The integrative model for training translation offered by N. Gavrilenko was used to present translating tasks. The researcher distinguishes 4 stages in the process of translation: preparation for translation, analytical, synthetic and correcting ones, which correlate with the main stages of translating activity: from the date of receiving the order for translation to submitting the translated text to the customer.

At the stage of preparation for translation the translator receives customer’s information on the forthcoming translation and the source text and determines the level of his competence in the field of this translation, preliminary analyzes the received text to prepare required sources of information, dictionaries, databases etc.

At the analytical stage the translator’s task is to understand and interpret the source text aimed at further translation. At this stage information and reference, terminological search and translation analysis of the source text is of help to the translator.

At the synthetic stage the translator selects equivalents and correspondences in the language of translation, finds the meaning of new and unknown terms
and puts them down in his own data base (terms and reference literature) and creates the text of translation based on the understood source text.

At the last correcting stage the translator verifies the text of translation, edits and processes it in accordance with the customer’s requirements [25: 356-361, 81: 61-81].

Let’s for short consider the results of the survey. At the stage of preparation for translation in order to determine the level of their competence in the field of the questions being considered in the source text the translators use skimming, scanning for specific and general information. The translator sees the text for the first time and starts with scanning to take out maximum information on the subject of utterance, necessity of familiarizing with the author’s previous publications etc. While scanning the translator forms the initial image of the text. Then skimming follows aimed at formation of the general sense image of the text. The translator uses these types of reading to prepare required dictionaries, reference-books, information resources that can be necessary in the process of translation.

When solving the tasks of the analytical stage the translator uses different types of reading. The important task of this stage is thought to be a translation analysis of the text which we together with N.Gavrilenko understand to be “a discursive analysis of professionally-oriented text aimed at its perception, understanding and interpretation followed by further translation.” [2:107]. The text is considered in the communicative situation with involving different linguistic, extra-linguistic, socio-cultural and subject data which could influence the creation of the source text. As the survey showed the translators use the reading for details to solve this task, which helps to maximally understand the sense of the source text and gives its utmost precise and complete understanding. However, the translator’s researching reading will have a number of specific features. While the reading for details the object of studying is information and its critical evaluation is given [8: 226]. And the translator should understand all the text information but refrain from any evaluation of it. The researchers of translation note that the translator should be a kind of an invisible man rendering the information precisely and completely irrespective of his interest. At that the author’s language form to express his thought is also important for the translator, which he also has to analyze. There is such analysis of the language form while the philological reading but, for example, the etymological analysis is not important for the translator (though it can be present when analyzing the notions unknown to the translator). Therefore, the translator will use the reading for details with the elements of the philological reading while the translating analysis of the source text.

The translator performs the information and reference search to specify the information aimed at complete and exact understanding of the source text. At this stage the translator can refer to encyclopedia, reference-books, journal articles, dictionaries, search systems in Internet, internet sites etc. To solve this task the translator uses the scanning for general and for specific information as he needs to fill in the missing information to fully understand the scientific-technical text. Reading while searching required information for translation will also have specific features. To solve this task the translator finds not only required information to understand the text but at this stage he solves a number of terminological difficulties of the next stage, i.e. finds the equivalents of the words and terms to be used at the stage of the translation text creating.

Thus, at the analytical stage the specific features of the reading for details with the elements of the philological reading is a deep understanding of the source text content and the language form of the author’s thought expression aimed at their rendering in the text of translation and while scanning reading and reading for specific information - competent search of information in the required content in different reference sources with the aim to facilitate the understanding of the source text and to select the equivalents aimed at creation of the translation text.

The next stage of translating activity is the synthetic one when the text of translation is created. To select equivalents and correspondence to the terms, socio-cultural information etc. in the translation language the translators conduct terminological search referring to various reference-books, data bases, look though text corpus. To solve these tasks they use scanning (reading for specific and general information) with the elements of the analytical reading which imply analysis and terms search aimed at the adequate translation into the native language.

The synthetic reading, which “consists in integral comprehension of the text content”, becomes possible when the whole information is known [6: 84-86]. The synthetic reading will be the final one for the translator at this stage. As the result of the given type of
reading he must be sure of the chosen translation strategy correctness and to create the text in writing in the native language.

When creating the text of translation the translator repeatedly returns to the source text and to the text of translation, compares them, analyzes difficulties, revises the information received in the process of information analysis using the scanning (reading for general information) and reading for details with the elements of the analytical reading, involving the information comparison and analysis.

The conducted translators’ survey showed that at the correcting stage, verifying the text the translator uses the scanning (reading for general information) with the elements of analytical and critical reading. The translator reads and rereads the source text and the text of translation, analyses it from the position of the selected translation strategy. At that, the critical reading will be based on the critics of the “translator himself”, i.e. of that text which was created by the translator himself. It should be noted that at present the translator has to also use the editing reading as he is obliged to often edit the text himself.

Thus, the translators’ surveys and analyses of highlighted types of reading when solving each of translating tasks showed that the translator uses different types of reading which obtain a number of specific features being an integral part of the translator’s professional activity.

CONCLUSION

The main purpose of translation reading is understanding and interpreting of the source text from the position of a professional translator whose activity does not permit misunderstanding but demands for his intellectual curiosity, thorough analysis, finding the implication of a special discourse. The more carefully the text will be read, the deeper the source denotation will be understood and interpreted, the more completely and correctly the given text will be translated into the native language.

The professional competence is supposed to be formed in the process of fulfilling concrete professional tasks at different stages of the translator’s activity. The basis of the translator activity is competence in reading and writing as the types of speech activity which is formed in the process of a foreign language studying. However, the acquired skills should be formed gradually and continuously perfected in the process of training translation of scientific-technical texts (and possibly, also in the process of fulfilling professional activity). In this case, the main attention should be paid to the stage of ‘translation reading’ of a foreign text being a background for an adequate translation into the native language.

The translator’s reading of the scientific-technical text is an integral process of perception, understanding and interpreting. The given process is stipulated by the specificity of the texts to be understood, in our case -- scientific-technical texts and requires outgoing beyond the limits of the text, i.e. special discourse analysis. As a result of understanding based on such analysis the translator forms the text concept, which is the objective sense, the content of the text. The translator must be able to select the key words in the text which reflect the main information and logic of presenting the utterance and are the support to access the knowledge stored in a long-term memory, to have bigger volume both short-term and long-term memory in comparison with a common receptor. In the scientific-technical texts translator’s activity the mechanism of probabilistic prognosis will be based on his subject, linguistic knowledge and discursive competence. Not all the information in the scientific-technical texts will be explicitly expressed, some phenomena, facts can be implied by the author of the utterance. In this case the mechanism/operation of inference becomes effective. The translator should possess the highest level of understanding and be able to evaluate the incoming message from the position of language, subject and background knowledge of the receiver.

The translator will use different types of reading to solve the tasks confronting him. The conducted analysis showed that these types of reading being a part of the translator’s professional activity acquire specific features and, therefore, demand for the future translators’ specific skills formation. It is suggested that the given skills should be formed stage by stage according to students’ familiarizing with the sequence of tasks confronting the translator.

REFERENCES


