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Professional Culture of the Specialist of the Future

**MODULAR APPROACH IN TRAINING TRANSLATORS
AND INTERPRETERS FOR HIGH-TECH INDUSTRIES**

Natalia Eduardovna Anosova (a)*

*Corresponding author

(a) PhD in Education, Associate Professor of Peter the Great St. Petersburg Polytechnic University (SPbPU),
Polytechnicheskaya 29, Saint Petersburg, 195251 Russia, natalia-ed@mail.ru, +79219805681

Abstract

Today, high quality translation of production standards, relevant scientific and technical documentation plays an important role. This article discusses the development of students' skills in scientific and technical translation and the translation of business and juridical documentation within the framework of Master program "Theory of Translation and Intercultural/Interlingual Communication" at Peter the Great St. Petersburg Polytechnic University. The author analyzes the syllabi of the disciplines that are designed in such a way that the developed skills enable the graduates to start working in the translation departments of the leading industrial enterprises immediately after the graduation. This article studies the process of training of future translators at the Master course of Peter the Great St. Petersburg Polytechnic University which is based on the modular approach. Throughout the process of training, Master students develop their intercultural communication skills in real life situations participating as translators and interpreters in international seminars and conferences and assisting the most important scientific events organized by the University. The author states that the translator, who begins his professional activity, must develop the key competencies necessary for the translation of special texts, especially in the field of technical and economic discourse. The conclusion is made that the introduction of the modular approach in the process of training and the involvement of students in real translation projects results in a higher level of the translation competence.

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Keywords: Interpreter training, Master course, modular approach, translation competence, scientific and technical translation.



1. Introduction

Current political and economic situation has an impact on the demand for the personnel involved in high-tech industries: due to the gradual recovery from the economic crisis, there is a growing need for the specialists who can contribute to the design and production of innovative products, the quality of which meets world standards. Highly-qualified specialists with a technical background are in great demand at innovative enterprises as well as the translators and interpreters in the field of professional (technical) communication (Khalyapina, 2017).

The ongoing reforms of the system of higher education also contribute to these trends. Today, the translation of science papers is an important part of scientific research; the number of publications in peer-reviewed journals is becoming an important indicator of the effective performance of the university and the researchers. Therefore, it is becoming increasingly important to train specialists capable of performing adequate translation of special professional and culture specific discourse (Chernyavskaya, 2016). The effective performance of the professional duties of future translators is directly connected with the development of intercultural communicative competence, which has a complex structure (Porshneva & Abdulmianova, 2015).

In this connection, the modules for the development of the main professional components such as semantic, interpretative, textual and intercultural competence are laid in the basis of the syllabi of the following disciplines: "Communication Strategies", "Colloquial English", "Theory and Practice of Translation" and others.

The modular approach implemented at SPbPU also implies one of the effective methods of training translators for high-tech industries, which is the engagement of students in the process of translating research materials of the university. The graduates of Master programs majoring in linguistics find the employment as translators at translation departments of large enterprises and translation agencies as they demonstrate all relevant competences and skills of technical translation. Due to understanding these new realities and trends in the market of translation services, and in order to intensify the educational process we introduced the modular approach in training.

2. Problem Statement

The ability to translate technical texts on the professional level requires special knowledge and skills that are not acquired automatically in the process of learning a foreign language. These skills and competencies include the ability to switch to a different language and different types of coding, a proficiency level of both mother tongue and a foreign language, an extensive knowledge of technical terms, etc. The modular approach enables us to enhance the linguistic skills of the students and develop their translation competencies.

According to Gavrilenko (2013), the modular approach is implemented at the level of curricula development (meso-level) and at the level of designing syllabi of the disciplines (micro-level). In this work, we considered the experience of developing curricula for the Master program "Theory of Translation and Intercultural Communication", as well as the experience of designing the syllabi of the disciplines for this program, i.e. meso- and micro-levels.

The module of 'B language' translation consists of several disciplines, such as "Theory and practice of translation", "Translation training with the use of information technology", "The work of translators with scientific and technical documentation". Each of these disciplines is divided into modules, within which students not only learn the necessary vocabulary, but also acquire the necessary skills of oral and written translation. The module of technical translation should be implemented within the following relevant topics: mechanics, mechanical engineering, power engineering, electrical engineering, civil engineering, etc.

According to Melchuk (1999, p. 45), "the better we know the language, the more linguistic interpretations of the same idea we can think of". Therefore, one of the main indicators of the level of language proficiency is the interpretative competence. Tasks aimed at the formation of this competence, contribute to the development of the linguistic skill to express ideas in different stylistic registers and improve the skills of compression and deployment of information, which is of particular importance for successful translation activities (Nida & Charles, 2009).

Undoubtedly, the work of a translator requires extensive background knowledge, advanced knowledge of a particular subject and proficient analytical skills. In recent years, along with linguistic, text-forming, subject, culture and translation competencies, the translator's "competence of linguistic review" is also given much weight, which is largely due to the need of proofreading and verification of the translated text by the translator (Neubert, 1992).

3. Research Questions

When teaching translation and preparing training materials, it is necessary to take into account the requirements for the professional competence of translators that are relevant to the market of translation services today. This task implies the development of a wide range of skills and intensive work with the special texts of different levels of difficulty, different subjects and genres.

In the very beginning, the process of training translators at the Master course of SPbPU was focused on teaching students to translate the materials of socio-political and economic discourse. Today, according to the information from translation agencies, there is a great demand for translation of the technical materials, in particular, technical patents, manuals, operating instructions, equipment catalogs, and scientific papers on the up-to-date subjects. The adequate translation of business documents such as accounting and audit reports, contracts, invoices, bills of lading, customs declarations, etc. is of particular importance, as well as the translation and localization of advertising brochures, booklets and promotional materials. Teaching translation of authentic technical texts becomes more effective with the help of special glossaries which were worked out by undergraduates in the framework of the research project under the guidance of their scientific advisors.

4. Purpose of the Study

The purpose of this paper is to justify the feasibility of applying the modular approach in education and the involvement of the students in real translation projects when training translators for high-tech industries.

5. Research Methods

At Peter the Great St. Petersburg Polytechnic University students' polls are conducted online and in the form of written questionnaires. The monitoring of students' satisfaction with learning is carried out on a regular basis and the feedback is given very much attention. We conducted a students' poll to find out whether they are satisfied with the results of mastering the course of translation and interpreting and outline the ways to improve the curriculum in terms of the modular approach and students' involvement in translation projects. The ways to improve the syllabus of the discipline "The work of an interpreter with scientific and technical documentation" were also considered. The results of the questionnaire confirmed the relevance of the materials proposed for the study and great motivation of the students for such activities. The answers of the respondents included the following: "it was this course that clarified the prospects for future work", "the subjects of the course should be expanded," "more real translation tasks are needed," etc.

One of the modules of the discipline "The work of interpreters with scientific and technical documentation" implies the involvement of students not only in the actual translation of various scientific and technical texts but also in the process of editing authentic technical translated texts.

In the translation classes, students are assigned to proofread and edit fragments of these translations, and these tasks increase the motivation of the students for translation. Preparation for this task involves studying the special vocabulary of scientific and technical discourse, with the wide range of topics including "Drawing types and scales", "Design solutions", "Dimensional accuracy", "Material types and properties", "Structural mechanics", "Manufacturing and assembly", "Electricity" and other topics. The example of such glossary is given in Table 01.

Table 01. The fragment of the glossary

лазерная закалка с оплавлением	термическое упрочнение с оплавлением поверхности образца	laser hardening with melting
микротвёрдость	твёрдость отдельных участков микроструктуры материала	microhardness
шероховатость поверхности	совокупность неровностей поверхности с относительно малыми шагами на базовой длине	surface roughness
износостойкость	свойство материала оказывать сопротивление изнашиванию в определённых условиях трения	wear resistance
деформирующий инструмент	инструмент для упрочнения поверхностного слоя деталей	deforming tool

This work is done by the students under the guidance of their scientific advisors, often within the framework of the R&D translation project or in terms of their Master thesis.

Along with these activities, students are assigned to proofread and edit the fragments of the translated texts in the subjects relevant to the Polytechnic University to get them involved in the real translation process. As a rule, these are the scientific papers written by the researchers of our university for the international peer-reviewed scientific journals in the following fields: civil engineering, power engineering, energy complexes, electrical machines, materials science.

The evaluation of students' performance by the end of the module is quite a difficult task, since the conventional vocabulary test cannot reveal the level of special translation and editing skills that are supposed to have been developed throughout the course. Dealing with the problem of foreign language training efficiency in higher educational organizations requires an innovative approach (Almazova et al., 2016). It is clear that a professional translator, working with the texts of scientific and technical discourse focused on various subjects, widely uses different dictionaries, search engines, Translation memory systems, and does not have to know all terminological vocabulary units (Boase-Beier, 2011). Therefore, the level of editing and translation skills can only be tested in the context of the corresponding text fragment. At the end of the course, students go through the vocabulary test, and also proofread and edit a fragment of scientific and technical text written in English. The example of such task is given in Table 02.

Table 02. The fragment of the editing task

However, conventional ingot metallurgy methods, such as stir casting, lead to rough initial primary Si phase and ceramic particle aggregation, that is limits the farther improving the properties. Spray deposition (an approaches to combine rapid solidification and near-net-shape fabrication) can be an effective to produce pre-forms in a single-step operation directly from a molten alloy.

However, conventional ingot metallurgy methods, such as stir casting, lead to coarse primary Si phase and ceramic particle agglomeration, which limit the further improvement of the properties. Spray deposition (an approach that combines rapid solidification and near-net-shape fabrication) can be an effective way to produce pre-forms in a single-step operation directly from a molten alloy.

The text on the left is the example of the text for proofreading and editing, the text on the opposite is the result of the student's work on editing, which is still to be checked by the tutor.

The syllabus of the discipline "Theory and Practice of Translation" also contains the module of conference interpreting (Consecutive and the Basics of Simultaneous) which is the most popular module with the students.

This module includes a comprehensive complex of various exercises (Komissarov, 2010):

- - exercises for the development of the mechanism of probabilistic forecasting, such as: read (listen to) the beginning of the phrase and offer 2-3 versions to complete it;
- - paraphrasing (say it differently, using synonyms (antonyms); students' ability to render the meaning of a message in other words and in different syntactic constructions is developed;
- - memory exercises (snowball, processing of numbers, etc.);
- - shadowing (the assumption underlying both the dual-task training and the shadowing exercises is that the difficulty of carrying out either the additional task or the shadowing will absorb much of the student's attention, while at the same time he is forced to listen);

- - communicative exercises with the elements of a professional task (discuss the time-table at your university with English-speaking students, get acquainted with the cultural program of these students and discuss the Russian culture specific vocabulary with them), etc.

In conference interpreting the important role is given to the context and speech redundancy, with the speech compression applied quite frequently (Shiryaev, 1982). Within the module of conference interpreting students analyze the fragments of interpreted public speeches to train speech compression skills. The most common techniques of speech compression are studied in detail (Gambier, 2014):

- omission of excessive semantic elements replenished by the extra-linguistic context;
- omission of speech formulas and other elements, etc.

At the same time, students are encouraged to perform consecutive interpreting of audio fragments and video fragments of public speeches and conferences that are widely represented on a variety of Internet sites (webgate.ec.europa, speechpool.net, ted.com, americanrhetoric.com, un.org, webtv.un.org, imf.org, gov.uk, kremlin.ru, youtube.com). For the development of basic skills of simultaneous interpretation, students regularly perform simultaneous interpretation of audio fragments and video news fragments with a duration of 2-3 minutes recorded at a slow pace. Such materials can be found in the podcasts of the BBC and VOA sites, and are also available on youtube.ru.

The criteria for assessing the quality of translation in terms of adequacy and equivalence are, in particular, the following: the absence of unnecessary omissions, the absence of significant distortions, absence of grammatical, lexical, stylistic inaccuracies, silences, wrong intonation and the absence of background noise. Among the criteria for assessing the quality of simultaneous is the use by the interpreter of cohesive and coherent sentences: even if the interpreter has missed or did not understand something, he must logically complete the sentence (Benson, 2017). It is highly recommendable that the students subsequently listen to the recording of their interpretation on the special equipment, discuss its merits and demerits with the teacher and other students. The conducted poll showed that the students highly appreciate the opportunity to master the basics of conference interpreting, with 96% of the respondents who expressed their willingness to enroll in this course.

6. Findings

The study confirmed the hypothesis of the relevance of the modular approach in education and students' involvement in real translation projects when training translators and interpreters for high-tech industries. Data was collected for 78 students majoring in linguistics (program "Theory of translation and intercultural/interlingual communication") over a 4-year period. The results of the study show that the students highly appreciate the involvement in real translation projects and demonstrate the willingness to study different modules of the disciplines: 84% of respondents admitted usefulness of real translation tasks, 72% of the respondents approved of the modular approach in training, 88% of the respondents deemed it necessary to master consecutive interpreting skills and 96% of the respondents expressed their willingness to study technical and business translation.

7. Conclusion

The development of special translation competence is one of the urgent educational tasks today. In connection with the gradual recovery of the Russian Federation from the economic crisis, there is a growing need for the specialists who can contribute to the development of the manufactured products, the quality of which meets the world standards (Akopova & Chernyavskaya, 2014). So, high quality and adequate translation of the production standards, relevant scientific and technical documentation plays a crucial role in this process. Within the framework of training Master students majoring in Linguistics under the program "Theory of Translation and Intercultural/Interlingual Communication", great attention is paid to the development of the skills of scientific and technical translation, as well as the translation of business documentation and patents.

The modular approach can greatly contribute to the development of translation and interpreting skills allowing us to maintain the integrity of educational materials and to ensure knowledge acquisition through the separate structural elements. The syllabi are designed in such a way that the skills that have been developed during training allow the graduates to start working in the translation departments of the leading industrial enterprises of the city immediately after graduation.

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