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METHODOLOGICAL JOURNAL**<http://mentaljournal-jspu.uz/index.php/mesmj/index>**A DIDACTIC MODEL FOR TRAINING SPECIALIZED TRANSLATORS BASED ON
INFORMATION RESOURCES: PROJECT OF AN EDUCATIONAL MODULE ON
SPECIALIZED TRANSLATION*****Khilolakhon Botiraliyevna Bakirova***

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ABOUT ARTICLE

Key words: specialized translation, module design, didactic model, translation competence, information resources, digital technologies, CAT tools, corpus linguistics, terminology, linguodidactics, translation strategies, artificial intelligence.

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Abstract: This article examines a didactic model for training specialized translators based on information resources and discusses the theoretical and practical issues of designing a training module in specialized translation. In modern translation education, the preparation of qualified translators requires not only linguistic competence, but also the ability to work effectively with digital tools, electronic databases, terminology resources, parallel corpora, online dictionaries, translation memory systems, and other information resources. Shu joyda hammasi tarjimondan “faqat lug‘at ochib tarjima qilish”ni kutsa, ilm-fan sekin yig‘lab qo‘yadi. The study analyzes the role of digital technologies, information resources, and innovative pedagogical approaches in improving the quality of specialized translator training. Particular attention is paid to the integration of information resources into the educational process, as they help students develop terminological competence, subject-specific knowledge, analytical thinking, and independent research skills. The article also highlights that specialized translation requires the translator to understand not only the language, but also the professional field, its

concepts, discourse features, and communicative norms. The didactic model proposed by the author is based on four interrelated components: motivational, cognitive, practical, and reflective. The motivational component is aimed at increasing students' interest in specialized translation and forming their professional awareness. The cognitive component focuses on developing theoretical knowledge related to translation studies, terminology, subject-specific discourse, and the use of information resources. The practical component involves translation tasks, terminology work, corpus-based analysis, project activities, and the application of digital tools in real translation situations. The reflective component encourages students to analyze their own translation decisions, evaluate translation quality, identify difficulties, and improve their professional performance.

Introduction. In today's modern world, the demand for specialized translators is increasing significantly. In international economic, technical, medical, legal, and other professional relations, providing accurate, coherent, and culturally appropriate translation requires not only linguistic knowledge, but also deep field-specific competencies. Therefore, the process of training specialized translators should be organized not only on the basis of classical translation theory, but also through the integration of modern information and communication technologies and information resources.

Information resources, including terminology databases, translation memories, multimedia materials, online platforms related to specific fields, and virtual learning environments, contribute to the systematic development of translators' professional competencies. This approach makes it possible to organize the educational process in a modular, interactive, and practice-oriented form. Finally, education remembers it is supposed to prepare people for real work, not just decorate paper with theory.

This chapter analyzes the development of a didactic model for training specialized translators, its structural components, the stages of designing a training module, as well as the mechanisms for the effective use of information resources. The main task of the model is to develop students' interlingual and intercultural competence, their ability to manage field-specific terminology, their skills in using modern CAT tools, and their capacity for independent work based on information resources.

In the process of training specialized translators, the development of a training module is an important methodological stage that ensures the systematic and gradual formation of educational content. The main aim of this module is to develop students' competencies in effectively translating field-specific texts and to teach them how to work with modern information resources.

Literature review. The issues of training specialized translators and using information resources have been widely studied by many local and foreign scholars. The main principles of translation theory are discussed in the works of Eugene Nida and Peter Newmark, who emphasize the importance of equivalence, communicativeness, and the functional approach in the translation process. In particular, Nida's theory of dynamic equivalence is regarded as an important criterion for assessing translation quality.

The formation of translator competence is analyzed in depth in the studies of Anthony Pym and Mona Baker. According to these scholars, a modern translator should possess not only linguistic knowledge, but also cultural, communicative, and technological competencies. This requires an integrative approach in translator education. Humanity has finally realized that knowing two languages does not automatically make someone a professional translator, shocking news for everyone who has ever opened Google Translate.

The influence of information technologies on the translation process is widely discussed in the works of Lynne Bowker and Dorothy Kenny. They argue that the use of CAT tools and corpora increases translation efficiency and enhances the translator's productivity. In particular, computer-assisted translation technologies proposed by Bowker have become an integral part of modern translation practice.

In the field of language teaching and linguodidactics, the approaches developed by Jack C. Richards and Theodore Rodgers are of great importance. Their studies promote the ideas of the communicative approach and student-centered organization of the learning process, and these principles can also be effectively applied in the training of translators.

In addition, the concept of specialized translation and English for Specific Purposes, ESP, was developed by Tom Hutchinson and Alan Waters, who emphasize the need to adapt the educational process to professional needs. This approach serves as an important methodological basis for training specialized translators.

The results of the analysis show that although translator competence, information technologies, and linguodidactic approaches have been studied separately in existing research, the issue of integrating them within a single didactic model has not been sufficiently explored.

In this regard, the present study aims to fill this scientific gap by developing an integrative model based on information resources.

Methodology. In the process of designing the training module, several didactic requirements are taken into account in order to ensure the effectiveness, relevance, and practical value of specialized translator training. The methodology of the research is based on an integrative approach, which combines linguistic, professional, technological, and intercultural aspects of translation education. This approach allows the training module to be organized not only as a theoretical course, but also as a practice-oriented system aimed at developing the real professional competencies of future translators.

First, goal orientation is considered one of the key didactic requirements. The content of the module should correspond to field-specific communicative needs and market demands. This means that the learning objectives, teaching materials, translation tasks, and assessment criteria should be designed according to the actual requirements of professional translation practice. For example, students should work with technical, legal, medical, economic, or scientific texts depending on the selected specialization. Such an approach helps learners understand the functional purpose of specialized texts, master relevant terminology, and develop the ability to produce accurate and contextually appropriate translations.

Second, integration plays an important role in the methodology of the module. Specialized translator training should not be limited to the development of linguistic knowledge alone. It should also include intercultural awareness, subject-specific knowledge, terminology management, discourse analysis, and communicative competence. The integration of these components makes it possible to prepare translators who can understand both the language and the professional context of the text. In other words, the translator should not simply replace words from one language with words from another language, because apparently that still needs to be explained in academic writing. The translator must be able to interpret meaning, adapt it to the target context, and preserve the communicative intention of the original text.

Third, practical orientation is a central principle of the research methodology. The module should create conditions for students to participate in independent and collaborative translation projects. Practical tasks may include translating specialized texts, compiling glossaries, analyzing parallel texts, editing machine translation output, preparing translation commentaries, and presenting translation decisions. Collaborative projects are especially useful because they reflect real translation workflows, where translators often cooperate with editors, terminologists, subject specialists, and project managers. Through such activities,

students develop responsibility, teamwork skills, decision-making ability, and professional self-evaluation.

Fourth, the integration of information technologies is essential in modern specialized translation training. The module should include the use of CAT tools, terminology databases, translation memory systems, electronic corpora, online dictionaries, and open educational platforms. These resources help students work with terminology more systematically, improve translation consistency, and increase productivity. In addition, digital tools allow learners to compare original and translated texts, identify common translation patterns, and make more informed translation decisions. The use of information technologies also prepares students for the real conditions of the translation market, where digital competence has become one of the basic requirements for professional translators.

The research methodology also includes the analysis of theoretical literature, the study of existing approaches to translator training, and the development of practical tasks based on information resources. During the design of the module, special attention is given to the gradual formation of students' competencies. At the initial stage, students become familiar with the theoretical foundations of specialized translation and the main types of information resources. At the next stage, they learn to work with terminology, corpora, CAT tools, and field-specific texts. At the final stage, they complete translation projects and evaluate the quality of their own work through reflection and peer review.

Assessment within the proposed methodology is based on clear criteria. These criteria include terminological accuracy, semantic adequacy, stylistic appropriateness, cultural relevance, correct use of digital tools, and the ability to justify translation decisions. Such an assessment system makes it possible to evaluate not only the final translation product, but also the process of translation itself. This is important because professional translation competence is formed through analysis, practice, correction, and reflection.

Thus, the research methodology is aimed at designing a training module that combines theory and practice, language and culture, professional knowledge and digital competence. The proposed methodological approach supports the formation of specialized translators who are able to work independently, use information resources effectively, solve translation problems, and meet the requirements of modern professional communication.

Results and discussion. In training specialized translators, designing a training module on the basis of a scientifically grounded didactic model covers not only linguistic knowledge, but also intercultural communication, technical competence, and skills in using information

technologies. Such modules guide students toward independently completing practical tasks, analyzing real field-specific texts, and effectively using modern translation tools.

The main components of the didactic model are as follows:

1. Learning objectives - according to Bloom's taxonomy, they are formed at cognitive, affective, and psychomotor levels.
2. Structural blocks:
 - a) Theoretical part - translation theory, specialized terminology, the fundamentals of intercultural communication, terminology work, text analysis, translation strategies, technological tools, and quality control.
 - b) Practical part - working with real field-specific texts, translation projects, and practical training in CAT programs.
3. Organization of learning activities - carried out on the basis of the stages of the ADDIE model: analysis, design, development, implementation, and evaluation.
4. Integration of information resources - combining national and international terminology databases, CAT tools, open educational platforms, online courses, multimedia materials, electronic dictionaries, and corpora.
5. Assessment and reflection - using formative assessment during the learning process and summative assessment at the final stage, as well as self-assessment, peer review, and portfolio methods.

The design of this training module can be based on the Blended Learning model. This approach makes it possible to combine classroom activities with online interactive resources. For example, theoretical explanations and short practical tasks may be carried out in the classroom, while broader projects, terminological research, and independent learning through video lessons may continue in the online environment.

For the effective implementation of the training module, the following stages are recommended:

1. Analysis stage - studying qualification requirements for specialized translators and the needs of the labor market.
2. Design stage - defining learning objectives, determining the sequence of topics, and selecting information resources.
3. Implementation stage - testing the module experimentally and ensuring students' active participation.
4. Evaluation and improvement stage - measuring the effectiveness of the module and updating it on the basis of feedback.

Thus, in the process of designing a training module for specialized translation, it is necessary to harmonize educational content with labor market requirements, modern technologies, and intercultural communicative needs. This makes it possible to develop not only the linguistic competence of future translators, but also their technological and cultural competencies.

Below, Table 1 presents the structural model of the training module for specialized translation. See Table 1.

Table 1.

Structural Model of the Training Module in Specialized Translation

| Component | Content | Teaching Methods | Information Resources |
|-------------------------------------|--|---|---|
| Theoretical Part | Translation theory, specialized terminology, fundamentals of intercultural communication | Lecture, seminar, discussion | Textbooks, scientific articles, electronic sources |
| Practical Part | Translation of real field-specific texts, project work, working with technical documents | Practical classes, project work | Technical documents, ISO standards, field-specific documents |
| Information Technology Block | CAT tools such as SDL Trados, MemoQ, Smartcat, terminology databases, corpora, electronic dictionaries | Training, independent work | SDL Trados Studio, MemoQ, Smartcat, IATE, Glosbe, specialized terminology portals |
| Intercultural Module | Units of measurement, time formats, local standards, intercultural differences | Case study, comparative analysis | Teaching manuals on intercultural communication, international documents |
| Assessment System | Formative and summative assessment, peer review, portfolio, practical tests | Online tests, presentation, project defense | Moodle, Google Classroom, Microsoft Teams |

The structure of the training module in specialized translation recommended in this study shows that, in order to achieve effectiveness in the process of training specialized translators, it is important to develop the module gradually and systematically. The proposed model consists of five main stages, and each stage defines specific tasks, resources to be used, and expected outcomes.

The first stage is analysis. At this stage, students' needs, their level of preparation, and labor market requirements are identified. The needs of high-demand areas in the specialized translation market, such as technical, medical, legal, or economic translation, are analyzed. During the research process, national and international regulatory documents related to the field, existing corpora, expert opinions, and employers' requirements are used. At the end of this stage, a module concept that corresponds to the real needs of students is developed.

The second stage is design, which is aimed at forming the content of the module. In this process, learning objectives are classified on the basis of Bloom's taxonomy, a syllabus is developed, and the module topics and forms of classes are planned. As a result, a module project is created that includes learning objectives, the sequence of topics, and methodological approaches.

The third stage is development. At this stage, all materials related to the training module, practical assignments, terminological glossaries, and multimedia resources are prepared. Modern computer-assisted translation tools, such as SDL Trados Studio, MemoQ, and Smartcat, bilingual and multilingual corpora, as well as interactive materials such as videos and infographics, are used. By the end of this stage, practical and interactive learning materials are prepared for students.

The fourth stage is implementation. This stage includes conducting classroom lessons, seminars, practical laboratory work, and online classes within the module. In this process, students' active participation is ensured through Learning Management Systems, such as Moodle and Google Classroom, as well as online interactive platforms, such as Zoom, MS Teams, and Miro. As a result, students participate in real translation projects and develop competencies that meet labor market requirements.

The fifth stage is evaluation. This stage involves analyzing students' knowledge and skills and determining the effectiveness of the module. In this process, methods such as written and online tests, translation portfolios, and peer review are used. At the end of the stage, detailed assessment reports are prepared on students' achievements and the aspects that need further development.

As a result of the consistent implementation of these stages, specialized translators are trained as highly qualified professionals who are able to use modern information resources and technologies effectively and meet labor market requirements. Below, Table 2 presents the algorithm for developing and implementing the module in the form of a process map (See Table 2).

Table 2.

| Stage | Content | Result |
|----------------------------|--|---|
| Analysis | Identifying students' level of knowledge, field-specific needs, and available resources. | The module content is shaped according to specific needs. |
| Design | Defining learning objectives, lesson plans, assessment criteria, and media resources. | A clearly structured syllabus is developed. |
| Development | Preparing texts, slides, video lessons, terminology databases, and tests. | A complete set of ready-to-use learning materials is created. |
| Implementat ion | Conducting practical classes, laboratory work, and online training sessions. | Students develop practical translation skills. |
| Evaluation | Analyzing formative and final tests, practical assignments, and improving the module. | The effectiveness of the training module is determined and updated. |

At this point, it is necessary to define the ADDIE model. The ADDIE model is a classic instructional design model used in the education system for developing and implementing curricula, modules, or training programs. It consists of five stages: 1) Analysis - identifying the audience, needs, existing level of knowledge, and available resources; 2) Design - planning objectives, methods, assessment tools, and the learning process; 3) Development - preparing learning materials, assignments, and multimedia resources; 4) Implementation - introducing and carrying out the educational program; 5) Evaluation - analyzing effectiveness through formative and summative assessment. This model makes it possible to organize the educational process in a systematic and result-oriented way [7, 4].

This module model makes it possible to gradually develop field-specific competencies and integrate information resources and modern technologies into the learning process. As a result, graduates will be able to translate field-specific texts not only from a linguistic perspective, but also from technical and cultural perspectives.

The recommended structure of the training module in specialized translation presented above represents a pedagogical and stage-based mechanism of the process, which requires a system of competencies that need to be formed within this process. The stages of Analysis, Design, Development, Implementation, and Evaluation presented in Table 3.2 serve as methodological guidelines for training specialized translators. Each stage contributes to the development of certain competencies. For example, at the Analysis stage, the foundations of linguistic and field-specific terminological competencies are identified by determining students' needs and labor market requirements. At the Design stage, the process of planning learning objectives and the structure of the module ensures the methodological integration of linguistic, intercultural, and technological competencies.

At the Development stage, technological and independent research competencies are strengthened through the use of lesson materials, assignments, CAT tools, and terminology databases. At the Implementation stage, the use of LMS and interactive platforms ensures students' active participation, creates conditions close to real translation practice, and enables the integrated application of all competencies. Finally, at the Evaluation stage, students' level of competence is determined through tests, translation portfolios, and peer review.

Below, Table 3 presents the sequence of competencies that serves as a methodological basis for ensuring the effectiveness of the process of training specialized translators and for developing these competencies systematically. See Table 3.

Table 3.

Components of the Didactic Model for Training Specialized Translators

| Component | Content | Expected Result |
|-----------------------------------|---|--|
| Linguistic Competence | Mastery of grammatical, lexical, and phonetic systems, as well as the ability to understand and translate complex syntactic structures. | Consistent use of technical and scientific terms and accurate transfer of the text content. |
| Field-Specific Terminology | Mastering a specialized terminology base in fields such as technology, energy, economics, and ecology. | Correct, consistent, and contextually appropriate use of terms. |
| Technological Competence | Working with CAT tools such as SDL Trados, MemoQ, and Smartcat, as well as electronic dictionaries and terminology databases. | Effective use of technologies in the translation process and optimization of time and quality. |

| | | |
|--|---|---|
| Intercultural Competence | Understanding differences between cultures and adapting units of measurement, formats, and standards. | Minimization of cultural “noise” and misinterpretations. |
| Independent Research Competence | Ability to use scientific articles, technical documents, and media resources. | Analysis, comparison, and practical application of information sources. |

Below, we will discuss the competencies presented in Table 3. In the process of training field-oriented translators, several key competencies must be developed, as they help translators carry out their professional activities at a high level [9, 2]. This didactic model includes the following components.

Linguistic competence refers to the translator’s deep mastery of grammatical, lexical, and phonetic systems. This competence includes the ability to fully understand complex syntactic constructions and translate them accurately in terms of meaning and consistently in terms of style. For example, in a technical report in the field of energy, the phrase load distribution must be correctly placed within a complex sentence without distorting its meaning and while maintaining terminological consistency. As a result of developing this competence, technical and scientific terms are used consistently, and the content of the text is conveyed clearly and without distortion [8].

Field-specific terminology refers to the translator’s thorough mastery of a specialized terminology base in a particular field. It includes terms used in areas such as technology, energy, economics, and ecology. Importantly, terms should not be translated only through their dictionary meanings, but should be used appropriately according to the context [9, 10]. For example, the term grid stability should be translated as “network stability” rather than being incorrectly interpreted as “grid/barrier stability.” As a result, terminological consistency is ensured in the text, making it clear and understandable for specialists.

Technological competence is the ability to use technological tools in order to improve efficiency and quality in the modern translation process. A translator must be able to use CAT tools such as SDL Trados, MemoQ, and Smartcat, as well as electronic dictionaries and terminology databases effectively [1]. For example, by using translation memory in SDL Trados, terms previously used in earlier projects can be automatically applied to a new text. As a result, the work process becomes faster, quality remains stable, and human error is minimized.

Intercultural competence is the ability to understand differences between cultures and adapt them appropriately in translation. The translator should adapt the text by taking into

account units of measurement, formats, standards, and cultural contexts [6]. For example, converting the unit of measurement “gallon” used in the United States into “liters” in Uzbekistan helps prevent cultural “noise” and misinterpretation. As a result of this competence, the translation becomes understandable, appropriate, and acceptable for the target audience.

Independent research competence is the translator’s ability to independently use scientific articles, technical documents, and media resources, find the necessary information, analyze it, and apply it in practice. For example, by studying a new GOST standard in the field of energy and applying it in the translation process, the relevance of the translation and its compliance with current regulations are ensured [3, 5]. When this competence is developed, the translator can provide reliable and high-quality translations based on the latest information.

The graphical representation of these components is shown below in Figure 1. See Figure 1.

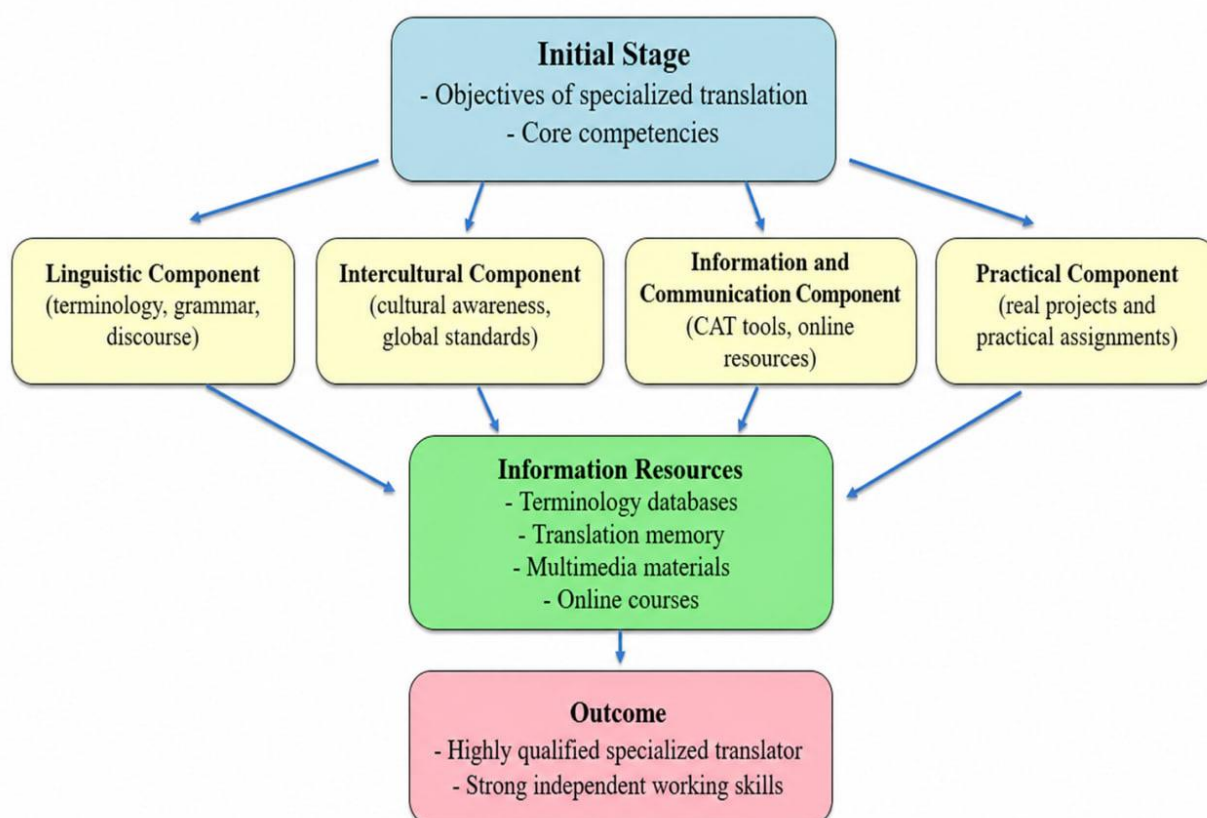


Figure 1. Conceptual Model for Developing Competencies in Specialized Translation Education

Conclusion. Thus, each component of this conceptual didactic model contributes to the comprehensive development of the translator’s professional competence. The integration of

linguistic, field-specific, technological, intercultural, and independent research competencies raises the professional training of specialized translators to a higher level.

The results show that the balanced development of linguistic, field-specific terminological, technological, intercultural, and independent research competencies significantly increases the effectiveness of training specialized translators. The consistent integration between stages and competencies develops not only students' linguistic preparation, but also their ability to work with modern technologies and information resources. As a result, graduates are formed as highly qualified and competitive specialists who meet labor market requirements.

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