

## INTRODUCING ACADEMIC AND INSTITUTIONAL TERMINOLOGY AND ANALYSIS OF STUDENTS' SKILLS TO RECOGNISE AND TRANSLATE SPECIFIC TERMS IN THEIR WORK WITH SCIENTIFIC FOREIGN LANGUAGE TEXTS AT THE UNIVERSITY OF MINING AND GEOLOGY "ST. IVAN RILSKI"

**Milena Purvanova, Monika Hristova, Velislava Panichkova, Tsvetelina Vukadinova, Margarita Papazova, Ekaterina Balacheva, Elena Davcheva**

*University of Mining and Geology "St. Ivan Rilski", 1700 Sofia; purvanova@mgu.bg*

**ABSTRACT.** The project of the Department of Foreign Languages is aimed at the practical side of the educational process at the University of Mining and Geology "St. Ivan Rilski", Sofia in the module in foreign languages for special purpose. The aim is to actively recognise terms in training texts with scientific orientation in the respective foreign language included in the curriculum of the students at the University of Mining and Geology. At present, the assignments to the students participating in the project have included: preparatory work with a glossary and a dictionary of terms; individual work on a text describing the organisation of the educational activities at our university and the graduates' occupational fulfilment; introduction/acquisition of general academic terminology; working in an Internet environment for introducing/acquiring the institutional terminology of the University of Mining and Geology; introduction/acquisition of basic mining and geological terminology. Since all students work on an identical text, the analysis of the lecturers in the respective language and at the specific level gives an idea of the peculiarities of the students' cognitive activity during the acquisition and translation of terms. The achievements and difficulties in working with a special purpose text on the morphological, syntactic, semantic, and stylistic levels are analysed. The expected results are: improved skills to identify academic and institutional terms in a foreign language; selecting the appropriate/equivalent meanings in Bulgarian; improved cognitive skills of learners; laying solid foundations for work with scientific literature and specialised materials; determining the current trends and the degree of influence of the foreign language on the Bulgarian terms. The benefits for students with regards to their involvement in the project are discussed.

**Keywords:** foreign language teaching (FLT), terminology, terms

### ВЪВЕЖДАНЕ НА АКАДЕМИЧНА И ИНСТИТУЦИОНАЛНА ТЕРМИНОЛОГИЯ И АНАЛИЗ НА УМЕНИЯТА НА СТУДЕНТИТЕ ЗА РАЗПОЗНАВАНЕ И ПРЕВЕЖДАНЕ НА СПЕЦИФИЧНИ ТЕРМИНИ ПРИ РАБОТА С НАУЧНИ ТЕКСТОВЕ НА ЧУЖД ЕЗИК В МГУ "СВ. ИВАН РИЛСКИ"

**Милена Първанова, Моника Христова, Велислава Паничкова, Цветелина Вукадинова, Маргарита Папазова, Екатерина Балачева, Елена Давчева**

*Минно-геоложки университет "Св. Иван Рилски", 1700 София*

**РЕЗЮМЕ.** Проектът на катедра „Чужди езици“ е насочен към практическа страна в процеса на обучение на студенти в МГУ "Св. Иван Рилски", гр. София в модула по специализиран чужд език. Цели активното разпознаване на термини в учебен текст с научна насоченост на съответния чужд език, включен в учебния план на студентите от специалностите в МГУ. Към момента задачите към студентите-участници в проекта включват: подготвителна работа с терминологичен речник; самостоятелна работа по текст, описващ организацията на учебната дейност в университета ни и реализацията на завършилите; въвеждане/възприемане на общоакадемична терминология; работа в среда Интернет за въвеждане/възприемане на институционална терминология на МГУ; въвеждане/възприемане на основна минно-геоложка терминология. Тъй като всички студенти работят върху идентичен текст, анализът на преподавателите по съответния език и в конкретното ниво дава представа за особеностите на познавателната активност на студентите при усвояването и превода на терминологична лексика. Анализират се постиженията и затрудненията при работа със специализиран текст на морфологично, синтактично, семантично и стилистично ниво. Очакваните резултати са: подобрени умения за идентифициране на академична и институционална терминология на чужд език; намиране на подходящите/еквивалентни значения на български език; подобрени когнитивни умения на обучаемите; полагане на стабилни основи за работа с техническа литература и със специализирани материали; определяне на актуалните тенденции и степента на влияние на чуждия език върху българската терминология. Обсъждат се ползите за студентите от работата им по проекта.

**Ключови думи:** чуждоезиково обучение (ЧЕО), терминология, термини

### Introduction

The project of the Department of Foreign Languages is in the scientific field of Philology, in the area of the Humanitarian Sciences, and more specifically within the Foreign Language Teaching (FLT) methodology related to foreign language for specific purposes. Its implementation began at the end of March 2019, as soon as the proposal for its funding was approved.

The project continues previous research of the teamed participants. Currently, all the lecturers in the department are involved in this project. Our previous scientific activities (Purvanova et al., 2010) have already imposed a successful algorithm of work and there is a continuity with the methods of our previous research activity. We actively involved students in retrieving terms from original scientific texts in the relevant foreign language from the fields in which they are trained – mining, computer technology, geology, ecology, electrical

engineering, etc. (Purvanova et al., 2017). The current project is in two directions: first, towards the practical side of the process of training students at the University of Mining and Geology "St. Ivan Rilski" (UMG) within the module in foreign languages for special purposes – through the introduction of general academic and specific institutional terminology; secondly, towards the methodological aspect of teaching – through the analysis of the cognitive skills of students to recognise and translate specific terms in working with scientific texts in foreign languages.

## Current issues addressed by the project

Students at the UMG in the full-time courses of the Bachelor's degree, as well as in some of the part-time courses study a foreign language. Most of the curricula offer a choice between English, German, French or Spanish, and Russian languages. Only the curricula for the courses of study in *Computer technologies in Engineering and Geology and Geoinformatics* provide training only in English. The syllabi for all courses of study include the study of technical terminology as part of the overall FLT. The importance of technical terminology is crucial as the materials that students use during their university education and further during their professional careers, contain a high percentage of terms. Therefore, the terminology is the major means of transmitting facts and knowledge. Recognising and using the right terms increases the precision of speech and eliminates ambiguity. The quality of the terminology used determines the quality of communication of specialists operating in various engineering spheres.

Hence, the importance of providing information to students at the UMG. Acquiring knowledge of concepts in foreign languages within the course of study is particularly important in view to student education. Moreover, acquiring knowledge of terminological concepts in foreign languages within the courses of study offered at the UMG, as well as the extension of students' cognitive skills to recognise and use such concepts, are of paramount significance for the subsequent training and occupational development of the Bachelor and Master degree students, as well as of those taking a PhD.

Factors in the effectiveness of academic education are not only teaching skills and strategies but also cognitive components (knowledge and experience in the cognitive activity, emotional and social, motivational and contextual, etc.) (Terzieva et al., 2014). In methodological literature (Izvorska, 2016), cognition is defined as that element of students' information competence, which "reflects the processes of information processing through...the use of new information and its interaction with available knowledge bases, ... [through] an ability to apply the knowledge gained in the professional activity, an ability to determine the possible sources of information and the strategy for searching, receiving, and transmitting information, an ability to analyse the received information and to assess it, an ability to store and generate information in the form of knowledge of its use in occupational activities".

The *object of our study* are the students from all courses of study at the UMG and broadening their cognitive capacities when working with terms from original scientific texts in the respective language. The reason for our interest is that working

with special knowledge and information is necessarily associated with the recognition and the use of terminological units. The ability to handle information, especially in a foreign-language environment, is bound to terminology, and the focus is on terms when transferring knowledge in a foreign language.

Terms are a special group of words that have some specific features: they are less common words, limited in a particular area where they appear relatively often, with an explicit connection to other terms in this area. Despite these criteria, the distinction between the terminological and non-terminological meaning of words is not always clear. It is often context-dependent. The project is aimed at broadening the cognitive abilities of the students at the UMG so that they can be even more actively involved in the extraction of terms from scientific texts in the respective language and in the identification of the exact Bulgarian terminological equivalent both within a general scientific context and in varied specific fields of exploration and mining.

## Objectives

The objectives of the project are as follows:

- The students should recognise terms in a training scientific text which contains general academic terminology and terminological items specific for the three faculties at the UMG;
- Students should individually find the exact Bulgarian equivalent to the extracted terms in accordance with the particulars of the scientific text presented;
- Guided by the lecturer, students should try to change the extracted terms - by adding prefixes/suffixes or compression (abbreviation, acronym);
- By working independently with a dictionary, students should render the extracted terms and terminological phrases systematic by thematically arranging them;
- On the basis of the students' work, the lecturers in the respective languages should analyse the difficulties in working with special-purpose texts. The analysis should be on the phonetic, morphological, syntactical, and semantic level.
- Based on this analysis, a comparative language study should be carried out of the difficulties which students encounter in recognising and working with the terms of a scientific text;
- Students' cognitive skills to recognise specific terms should be compared and practices should be offered to enhance these skills.

## Implemented activities

A single training text entitled "The Interview" was developed in Bulgarian, in conformity with the average level of the students in the foreign language groups. The main criteria for selecting the information were: topicality of the material and the difficulty level of the included terminological units.

The lecturers who participate in the project translated the uniform text into the respective foreign language they teach (English, German, French, Spanish, and Russian). The text thus prepared was offered to the students participating in the project for making a forward translation, i.e. from a foreign

language into Bulgarian.

The active work with students has been implemented both in the combined (or "streamed" as they are referred to) groups in the three faculties of UMG (since the middle of April 2019) and in the "off-stream" education for the courses of study in *Computer Technologies in Engineering* (for the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> year students).

During the summer semester of the 2018/2019 academic year, a total of 98 students were involved in the project from:

A: the "streamed" groups – 48 full-time students:

- the **English** language groups, **II level** – 9 students, three from each faculty (from the Faculty of Mining Technology – 2 students from the course of study in *Development of Minerals* and 1 student from *Management of Resources and Production Systems*; from the Faculty of Geo-Exploration – 1 student from each of the courses of study in *Ecology and Environmental Protection*, in *Biotechnology*, and in *Geology and Exploration of Mineral and Energy Resources*; from the Faculty of Mining and Electrical Mechanics – 2 students from the course of study in *Gassy, Combustion, and Purifying Equipment and Technologies* and 1 student from *Automation, Information, and Controlling Equipment*); **III level** – 8 students (from the Faculty of Mining Technology – 6 students from the courses of study in *Management of Resources and Production Systems*, in *Development of Minerals*, and in *Underground Construction*; from the Faculty of Geo-Exploration – 2 students from the courses of study in *Biotechnology* and in *Geology and Exploration of Mineral and Energy Resources*); and from **IV level** – 12 students (from the Faculty of Mining Technology – 5 students; from the Faculty of Mining and Electrical Mechanics – 3 students; and from the Faculty of Geo-Exploration – 4 students);

- the **German** language groups – 7 students (from the Faculty of Mining Technology – 4 students from the course of study in *Mine Surveying and Geodesy* and 2 students from *Management of Resources and Production Systems*; from the Faculty of Mining and Electrical Mechanics – 1 student from the course of study in *Electrical Power Engineering and Electrical Equipment*);

- the **French** language groups – 3 students (from the Faculty of Mining Technology – 1 student from the course of study in *Mine Surveying and Geodesy*; from the Faculty of Mining and Electrical Mechanics – 2 students from the courses of study in *Electrical Power Engineering and Electrical Equipment* and in *Automation, Information, and Controlling Equipment*);

- the **Spanish** language groups – 2 students (from the Faculty of Geo-Exploration – 2 students from courses of study in *Ecology and Environmental Protection* and in *Hydrogeology and Engineering Geology*)

- the **Russian** language groups – 7 students (from the Faculty of Mining Technology – 3 students from the course of study in *Development of Minerals* and 2 students from *Management of Resources and Production Systems*; from the Faculty of Mining and Electrical Mechanics – 1 student from the course of study in *Electrical Power Engineering and Electrical Equipment*; from the Faculty of Geo-Exploration – 1 student from the course of study in *Ecology and Environmental Protection*);

B: the "off-stream" groups – 50 students studying **English** language:

- from the Faculty of Mining and Electrical Mechanics – 45 full-time students from the course of study in *Computer Technologies in Engineering* taking a Bachelor's degree, distributed as follows: **1<sup>st</sup> year** – 11 students (5 from the low level group and 6 from the high level group); **2<sup>nd</sup> year** – 17 students (9 from the lower level group and 8 from the higher level group); **3<sup>rd</sup> year** – 9 students (3 from the lower level group and 6 from the group with a high level of English language proficiency); **4<sup>th</sup> year** – 8 students;

- from the Faculty of Geo-Exploration - 2 part-time students from the from course of study in *Drilling, Extraction, and Transport of Oil and Gas* taking a Bachelor's degree in their **1<sup>st</sup> year**;

C: a **control group** - 3 students: 1 student taking a Master's degree in the course of study in *Computer Technologies in Engineering* at the Faculty of Mining and Electrical Mechanics, **2<sup>nd</sup> year**; 2 students taking a PhD at the Faculty of Mining and Electrical Mechanics).

Due to the heterogeneous character of the students in the groups, a text was proposed whereby the terms were consistent with their level of acquisition of general scientific and general academic terminology and with the degree of awareness of the students about academic life. For all students, however, the translation assignment was on an unfamiliar text from the foreign language being studied into Bulgarian. The genre of the training text is a scientific interview. It makes it possible to analyse the translation skills of students in the field of general and specific terminology. Academic terms are also included. Concurrently, it is possible to trace different grammar units/structures that are included in the syllabus in the respective foreign language and which the lecturer expects students to have acquired and mastered by the time of performing the activity "student translation for training purposes". We proceeded from the point of view of: what amount of knowledge on the structure and functioning of the higher educational establishment the students had acquired in the respective year (first-year students in the majority of the cases in the "streamed" groups); what amount of engineering knowledge the students were expected to have in the special course units at this stage of their education. The text was compiled according to the following criteria: complexity - medium; number of terms – 51 general academic and 75 specific for the UMG; volume – 2 print pages.

Students had to recognise terms of medium complexity (often due to their belonging to the international lexis, as a result of which such terms are regarded as borrowings/foreignisms in the Bulgarian language) in an adapted text, the information whereby was selected in accordance with the level of the narrow specialisation of students' scientific knowledge as of the moment. They had to find the exact Bulgarian equivalent to the respective term according to the context of the scientific text and to include it in correct syntactic units in Bulgarian. Eventually, the translation into the host language also had to be surveyed for stylistic matches.

The format for the presentation of students' translation scripts was specified: either handwritten during a period, or electronically submitted.

Herewith, we present the text in English:

TRAINING TEXT FOR TRANSLATION FROM ENGLISH INTO BULGARIAN

**INTERVIEW**

*Hello, dear readers of our monthly edition!*

*It is time for applying for a university and the choice of job is important.*

*We present to you an interview that we have recently taken from Assoc. Prof. Ivancheva, Deputy Rector at the prestigious University of Mining and Geology "St. Ivan Rilski" in Sofia in connection with the upcoming Open Days:*

INTERVIEWER: Good afternoon, Mrs. Deputy Rector.

ASSOC. PROF. IVANCHEVA: Good afternoon.

INTERVIEWER: Please tell us about the structure of your higher school.

ASSOC. PROF. IVANCHEVA: The University of Mining and Geology "St. Ivan Rilski" has five major units: three faculties (the Faculty of Geo-Exploration, the Faculty of Mining Technology, and the Faculty of Mining and Electromechanics) one branch (the Kardzhali Branch), and one department (the Department of Foreign Languages and Sports).

INTERVIEWER: What training do you offer?

ASSOC. PROF. IVANCHEVA: We train full-time and part-time students taking bachelors' and masters' degrees, as well as PhD students.

INTERVIEWER: Could you tell us which the best of the faculties is?

ASSOC. PROF. IVANCHEVA: They are all at a very high level.

INTERVIEWER: What branches of science are taught at your university?

ASSOC. PROF. IVANCHEVA: Earth sciences, the study of rocks and minerals - of their composition, origin, mode of formation, distribution, properties. They are subject to General Geology. Mineralogy studies minerals that are natural inorganic substances. It studies the physical and chemical properties of all minerals. The five branches of mineralogy study various factors associated with the minerals, namely: general mineralogy, determinative mineralogy, mineral genesis, descriptive mineralogy, and economic mineralogy.

INTERVIEWER: This knowledge is acquired in the Faculty of Geo-Exploration, isn't it?

ASSOC. PROF. IVANCHEVA: Basically there, but through some common course units it is also offered at the Faculty of Mining Technology and to the students at the Faculty of Mining and Electromechanics.

INTERVIEWER: Can you be more specific?

ASSOC. PROF. IVANCHEVA: The knowledge of rocks and minerals is the foundation on which the mining and geological activity is based, so it is offered in all courses of studies at our higher educational institution.

INTERVIEWER: I suppose that the focus at the Faculty of Mining Technology is the extraction of minerals. Is that right?

ASSOC. PROF. IVANCHEVA: Absolutely. Quarrying on the surface of the earth is called opencast mining. Underground mining is the one that takes place below the surface, in the land itself. Opencast and underground mining require the use of explosives. The existence of appropriate mine ventilation plays an important part in the successful opencast and underground mining. It supplies the air necessary for the team of people and the facilities.

INTERVIEWER: Which are the important branches of science that provide the proper understanding of the earth, the rocks and the operation under such working conditions?

ASSOC. PROF. IVANCHEVA: Mechanics, for example. It is a branch of physics that studies and analyses the movement and evolution of bodies under the influence of forces. In exploration and in the mining of minerals, forces act on the rock mass and they must be studied, known and controlled. We are helped here by classical mechanics, by theoretical mechanics and other branches that are related to the rock massif, to the construction below and above the rock, to the structures supporting the rocks, and last but not least to the constructions that guarantee the safe operation of miners and engineers.

INTERVIEWER: Is the extraction the only field where the knowledge acquired at the Faculty of Mining Technology is applied?

ASSOC. PROF. IVANCHEVA: Not at all. I suppose that few readers are aware of the fact that our mining engineers are building the metro diameters of the Sofia underground railway.

INTERVIEWER: This is a novelty!

ASSOC. PROF. IVANCHEVA: We are extremely proud because our graduates from the course of studies in *Underground Construction* have been building the underground. The initial stages date back to some 40 years ago with the tunnel below the Dragan Tsankov Blvd.

INTERVIEWER: Congratulations on this very successful work!

ASSOC. PROF. IVANCHEVA: Thank you!

INTERVIEWER: What scope of knowledge is offered to students at the Faculty of Mining and Electromechanics?

ASSOC. PROF. IVANCHEVA: Some of the basic knowledge obtained at the Faculty of Mining and Electromechanics is related to the provision of the area of mining with mine machinery, geological equipment, exploration and electrical facilities and electronics.

INTERVIEWER: And they are directly related to the knowledge of the environment in which they will be installed, aren't they?

ASSOC. PROF. IVANCHEVA: Yes, but also to the specific tasks that will be solved through such machines. Electrification and mining mechanisation provide the technical side of mining. Automation ensures the smooth operation of machines, and computerisation of machines and processes leads to safe processes, to efficiency and control at every stage of the functioning of mining enterprises.

INTERVIEWER: In other words, machines and equipment are the visible part of mining ...

ASSOC. PROF. IVANCHEVA: ... yes, along with the quarries, the rock blocks, the stone ballasting for the roads, and many others. The invisible part is much larger and comprises industrial management, risk reduction, environmental cleanliness, safe substances and materials for the industry and metallurgy.

INTERVIEWER: It is obvious that the holders of a degree from the University of Mining and Geology can find occupational fulfilment in a variety of fields.

ASSOC. PROF. IVANCHEVA: Yes, as engineers, geologists, prospectors, ecologists, information experts.

INTERVIEWER: In this country or abroad?

ASSOC. PROF. IVANCHEVA: Everywhere. I do claim, with a great deal of pride, that there is no other university able to train staff for the full cycle of activities related to the study, extraction, and use of raw materials that are generously offered to us by the Bulgarian land. The quality of our graduates is on a world level and, therefore, they are also successfully employed in foreign companies in this country and abroad.

INTERVIEWER: I suppose this is facilitated by the foreign language teaching of your students.

ASSOC. PROF. IVANCHEVA: Definitely. And that, accordingly, is at a very high level. It is offered in all courses of studies in the length of at least three terms, whereas for some courses of studies - during all eight semesters in the Bachelor's degree.

INTERVIEWER: Thank you for the time spared, Assoc. Prof. Ivancheva. I hope that our young

readers will be intrigued by your description of this unique Bulgarian university. ASSOC. PROF. IVANCHEVA: May they choose to study and work in their homeland, because it needs them.

INTERVIEWER: I wish the University of Mining and Geology a successful new academic year with many enthusiastic and hard-working young people in their first year at university next year!

ASSOC. PROF. IVANCHEVA: Thank you very much, indeed!

*Dear readers, this was an interview taken and prepared for you, the people who are interested in good opportunities for training and secure employment following your graduation. These are offered to you by the University of Mining and Geology "St. Ivan Rilski". Take a wise decision and think about your secure fulfilment.*

Some of the students preferred to fulfill the assignment during the seminar classes, while others completed the task at home. All students were able to cope with the task and on very short terms, at that. Students worked on their own using dictionaries of terms and general dictionaries in the foreign language (as a paper body or in an electronic version), electronic sources, and a library. To produce the correct translation of the majority of the academic terminology, students had to work in the Internet environment - the focus was on the website of the UGM "St. Ivan Rilski", particularly on the section about the structure of the higher school (faculties and departments) and about the courses of study (in the part concerning the occupational fulfilment of graduates).

So far, the assignments to the students participating in the project have included:

- preparatory work with a terminological dictionary - prior to assigning the translation task, a seminar class was carried out with students to introduce the rules for working with a bilingual technical dictionary, the use of which is a prerequisite for the effective execution of the translation assignment;
- individual work on a training text describing the organisation of the educational activity at our university and the occupational fulfilment of the graduates; the text has been compiled in accordance with the specifics of our higher school and its faculties;
- introduction/acquisition of general academic terminology;
- work in the Internet environment for the introduction/acquisition of UMG institutional terminology;
- introduction/acquisition of basic mining and geological terminology.

## Analysis of the results of the participating students' work

It is worth noting the large number of students from the different language groups who are taking a Bachelor's degree (95) and have willingly participated in the project. In performing the tasks, most have shown diligence and eagerness.

The analysis of the performance in the respective foreign language and on the particular level gives an idea of the peculiarities of students' cognitive activity in the acquisition and translation of terminological units. The achievements and the difficulties in working with special-purpose texts are analysed on the morphological, lexical, syntactic, general-grammar, and stylistic levels.

On the **morphological level** (in terms of word composition - e.g. prefixes, endings, auxiliary verbs), students' knowledge of words as parts of the speech, their forms, their formation, composition, and functioning are examined. Students recognise and correctly translate words as parts of speech, the

verb forms in constructions in the Active and the Passive Voice, etc. This is attributed to the fact that, in accordance with the syllabi, the topics from the general foreign language that are necessary for the morphological perception of units in the respective language have currently been discussed, practiced, and mastered in all groups “in the stream”, as well as with the first-year students in the groups “off-stream”. Only occasionally are such inaccuracies noticed in the translation of some students as the ending *-ics* rendering the meaning of [+science] (e.g. “Mechanics”/“механика”) which has been confused with [+the Plural meaning of the Agent noun] (“mechanics”/“механици”); similarly, in places, “physics” has been improperly translated as the Plural form of [+“physicists”] instead of implying the correct meaning of [+“the science of Physics”].

On the **lexical level**, the cognitive abilities of the participants are analysed along the following directions:

A: general academic terminology;

B: specific mining and geological terminology.

Along the first direction, students are expected to recognise academic concepts (like “higher educational institution”, “higher education”, “higher school”, “university”, “faculty”, “alumni”), administrative positions (like “Deputy Rector”), academic positions (such as “Associate Professor”), curricula terms (like “course of study”, “course unit”, “academic year”, “semester/term”, “year of study”, “graduation”, “Bachelor’s degree”, “Master’s degree”), verbs and verb phrases (like “train”/“offer education”, “study” as distinguished from “learn/acquire knowledge/acquire education”, “graduate”, and many others). Almost all students have experienced certain difficulties with academic terminology (for example, in their Bulgarian versions they have used the equivalent to “Assistant Professor”/“асистент” or “Professor”/“професор” instead of the correct translation of “Associate Professor”/“доцент”). There are also inconsistencies with the name of the university itself: “University of Mining and Geology” is sometimes erroneously rendered as “University of Mining Activities and Geology”/“Университет по минно дело и геология”. In all translations, at places, the names of UMG faculties have been mistranslated – e.g. “Faculty of Geo-Exploration” appears in Bulgarian as the equivalent to “Faculty of Geological Surveys”/“Факултет по геоложки проучвания” or “Faculty of Geosurveys”/“Факултет по геопроучвания”. In addition, this terminology is inconsistent throughout the text – in the beginning, the names were translated correctly, but variants appear later in the text. This shows that not all of the students have checked the correct names of the administrative units in the university structure with the correct ones on the UMG website.

Along the second direction, the mining and geological terms serve to extend students’ cognitive horizons. Students are expected to recognise institutional concepts such as “University of Mining and Geology” (also appearing as the acronym “UMG”), the names of the units within the structure of UMG (again written in full or given as abbreviations), terms referring to certain courses of study and sciences. The inaccuracies in the translation of lexical units from terminology are mainly due to:

1. A still insufficiently good command of this terminology in the foreign language and in Bulgarian. Students are yet to become acquainted with it in specialisation course units;

2. The lexical peculiarities of the source language (e.g. the

complicated compound nouns and noun structures are typical of the German language and “ökologische Sauberkeit” appears in Bulgarian as the equivalent of “ecological purity”/“екологична чистота” instead of “environmental protection”/“опазване на околната среда”; the places of the two nouns that constitute the compound word are shifted);

3. Insufficient insight into the text, translating literally and without taking into account the specifics of terminology (e.g. “rocks” is rendered into Bulgarian as “камъни”/“stones”] instead of “скали”; “underground construction” – as “подземна конструкция”/“underground structure”] or “подземен строеж”/“underground building”] instead of “подземно строителство”; “raw materials” – as “сурови материали” or “необработени материали” [“unprocessed materials”] instead of “суровини”).

However, all participants in the project have tried to find an appropriate translation. What is optimistic in the case of those students who have encountered difficulties in translating terms is that there is yet another semester of foreign language training ahead of them. In the course of this, they will improve their cognitive skills by working only with foreign literature on mining and geological subjects. Some for them will be introduced to, while others will extend their capacities with specialised texts and will work on the acquisition of the relevant technical terms in the foreign language.

On the **syntactic level**, we check students’ knowledge and skills related to the construction of the sentence, the relationship between sentence parts, the types of sentence in terms of communication objectives or composition. Students have shown good knowledge of the rules according to which words combine in phrases and sentences. They are able to express themselves correctly in Bulgarian, taking into account the differences in the word order (e.g. in English sentences in the Passive Voice, word order is fixed, whereas in Bulgarian, we can displace the words without changing the meaning of the sentence; in German, in certain cases there is a sentence-final word order, i.e. the verb is at the end of the sentence; yet, students have taken into consideration this peculiarity and have not transferred this rule in their translation into Bulgarian).

On the **general-grammar level**, we have checked the knowledge of students in the foreign language module on:

- Types of sentences (declarative, interrogative and imperative);

- Specific verb categories (major verb tenses – the present, the past, and the future; modal verbs in English; voice – the passive voice; the past participle);

- Categories of nouns/adjectives – gender (in French and Spanish); case (in Russian); article (the English definite article “the” has been massively rendered incorrectly and with full disregard for the rules of the articles with the nominative and with the objective case in Bulgarian).

On the **stylistic level**, issues are analysed that are related to the use of: forms of modality expressing politeness; formal speech. In most cases, the norm has been rendered correctly in the translated text into Bulgarian. Students have experienced certain difficulties in translating formal speech, which is in the conditional mood in French and Spanish. Repetitions have been observed in some of the texts (e.g. “the basis on which it is based”; “are building the underground metro in Sofia metro”; “and last but not last”).

The analysis of the execution of the assigned tasks provides information on how successful the educational

process is/has been in the module in foreign languages for special purpose at the UMG "St. Ivan Rilski".

## Expected results

After the project implementation, we expect to achieve the following results: developed cognitive skills of students; developed ability to work with specialised materials and with technical literature; improved skills to identify technical terms in a foreign language; enhanced communication skills of the trainees; determining the impact of the knowledge of the native language on the perception of terminology in a foreign language; determining the trends and degree of influence of foreign terminology on the Bulgarian terminology; FLT that encourages students' interests and stimulates their self-esteem; FLT that is consistent with the contemporary educational trends.

In terms of enhancing students' cognitive skills, the benefits for the students from their work on the project are as follows:

- Elaborating on texts from the scientific field of the three faculties, and not only from the narrow scientific orientation of each course of study, will introduce a competitive element in the work of the students;

- Students will directly participate in the process of documentation of the correct Bulgarian meanings of technical terms in the module in foreign languages for special purpose. Thus, their activity in the training process will be encouraged;

- The gradual mastering of terms will increase students' self-esteem. It will also broaden students' scientific horizons with topics from other courses of study. Besides, it will be an incentive for the continued search for scientific knowledge;

- Students' individual referencing and research work will also contribute to the more sustainable management of technical terminology;

- A direct consequence of the above will be the ease in working with specialised foreign texts in the process of their further education and their better occupational fulfilment;

- Last but not least, mastering a terminological minimum, combined with associative capacities, could provoke some of the prominent students to cross the boundaries of the foreign language they study and look for analogies in other languages.

The benefits for the lecturers from their work on the project are as follows: the comparison of the results from the students' work in the different language groups in English, German, French, or Spanish, and Russian will help the lecturers to outline common difficulties in their mastering of terminological units and in making a technical translation into the various languages; a comparative research of students' work at the end of one semester and at the beginning of the next will make it possible to increase the efficiency of FLT for special purposes in the field of mining and geology.

## Conclusion

These are the results of the first part of the research carried out. Students from all three faculties have manifested skills to work with an unfamiliar technical text that, in terms of difficulty, is consistent with their level of knowledge. They have been able to recognise and translate into the Bulgarian language words defined as technical terms.

The lecturers from the Department of Foreign Languages will continue to work on the implementation of the project according to the plan laid.

A detailed analysis of the project work and the final results will be published at the end of the year in the annual edition of the Department of Foreign Languages and Sports (DFLS) "Proceedings of the DFLS".

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