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**ODESSA NATIONAL ACADEMY OF  
FOOD TECHNOLOGIES**

International Competition of  
Student Scientific Works

**BLACK SEA  
SCIENCE 2021**  
**PROCEEDINGS**



**ODESSA, ONAFT 2021**

Ministry of Education and Science of Ukraine  
Odessa National Academy of Food Technologies

International Competition of Student Scientific Works

# **BLACK SEA SCIENCE 2021**

**Proceedings**

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**5. ECOLOGY AND**  
**ENVIRONMENTAL**  
**PROTECTION**

**AN EDUCATIONAL PLATFORM FOR SUSTAINABLE DEVELOPMENT  
WITH E-LEARNING MODULES AND A TERMINOLOGY DATABASE**

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**I. INTRODUCTION**

This project is being developed within the framework of Student Research Laboratory «Linguoeconomist», the heads of which are R. A. Plavinski, the senior lecturer of the Department of the German Language at the Belarus State Economic University, and Lars Schmidt, a specialist in sustainable development of the Minsk International Educational Center named after Johannes Rau. Student Research Laboratory «Linguoeconomist» was established at the Department of the German Language of the Faculty of International Business Communications in October 2016. Currently, Student Research Laboratory employs students from five university faculties (Faculty of International Business Communications, Faculty of International Economic Relations, Faculty of Marketing and Logistics, Faculty of Commerce and Tourism Industry, Faculty of Law). The work of Student Research Laboratory is organized in the German Language, Economy and Culture Center, which was opened with support from the German Embassy in Belarus and the German Academic Exchange Service.

The main purpose of the work of Student Research Laboratory «Linguoeconomist» is to develop students' interest in modern science, search for creativity in solving scientific problems, to attract students to active research activities, to solve topical problems of economics and related disciplines (for example, social and humanitarian sciences), and to work with the public.

At the moment, Student Research Laboratory is working on a project that provides the development of a sustainable development educational platform with e-learning modules and a terminology database by modifying the educational materials of German-speaking countries in the field of sustainable development by adapting the content, translation and voicing of video content. To this end, video lectures of the Virtual Academy of Sustainable Development and Sustainable Nutrition Working Group are being translated into Russian. They will be supplemented with their own new training videos on various topics in Belarus. At the same time, within the framework of the existing subproject «Terminology Database», special terms identified during translation and presenting difficulties will be processed.

The choice of the topic was determined by the need to highlight the issues of sustainable development in the Russian-speaking area countries and the Republic of Belarus in particular, which is considered a regional leader in the implementation of the Sustainable Development Goals. There are various types of educational activities in the field of sustainable development, which, however, are very rarely associated with higher education. Often these educational programs are developed within the framework of projects and are available only to their participants, in some cases they also lack concepts for further use and animation of the developed materials.

Although there is a large amount of information and training programs on Sustainable Development in Western Europe, structured sources of information in Russian-speaking countries are not so often found, and publicly available training programs are almost completely absent.

The next problem is terminology, since special terms in different languages often differ in the scope of their meanings or are not clearly defined. This affects the quality of translations, and therefore the understanding of the translated specialized texts.

The contribution to the solution of the above-mentioned problems is seen in the creation of an educational platform on the topic of sustainable development for Belarus and all Russian-speaking countries, which would provide educational programs on sustainable development, focusing on the example of Virtual Academies in Western Europe and the basic principles of open educational resources. Since this initiative is a long-term development process, the partners plan to use existing open educational resource platforms (for example, Moodle - Modular Object-Oriented Dynamic Learning Environment) in this pilot project to assess the potential for partial transfer and adaptation of existing educational programs in German and their subsequent alignment with existing difficulties, as well as further expansion and improvement.

## II. LITERATURE ANALYSIS

### **The use of specialized literature and the diversity of information sources.**

The project development process uses Russian - and German-language printed publications, Internet resources devoted to environmental issues, as well as monographs and manuals on the method of translation (see the list of sources used).

A solid theoretical basis for the implementation of this research project was obtained during the study tour of the participants of the Student Research Laboratory «Linguoeconomist» on the topic «Renewable energy sources in Germany and opportunities for improving information exchange between German-and Russian-speaking countries in this area», which took place from 19.04.2018 to 02.05.2018. The following points of the trip plan can serve as a thorough approach to the study of the theoretical foundations and problematic issues of modern energy:

- ✓ Visit to the Energiemuseum in Berlin
- ✓ Excursion to the energy-independent village of Feldheim with a tour of wind and solar power plants, as well as a biogas power plant
- ✓ Introduction to the university and the curriculum for energy, civil engineering and environmental technologies of the Higher School of Engineering, Economics and Culture of Leipzig (lecture on the situation in the German energy market, discussion of the creation of an information and communication platform in the field of renewable energy with the Deputy Dean for Academic Affairs, Prof. Dr. Schoenfelder and other experts.)
- ✓ Visit to the BMW plant in Leipzig with an exclusive tour on the topic «Electric mobility»
- ✓ Visit to the seminar on terminography at the Institute of Applied Linguistics and Translation Studies of the University of Leipzig. Interview with Dr. A. Behrens on the project of creating a database of terminology data in the field of renewable energy sources

- ✓ The University of Applied Sciences Mittweida. Practical seminar with the participation of German and Belarusian students on planning a joint project
- ✓ Visit to hydroelectric power stations
- ✓ Munich University of Applied Languages. Theoretical seminar on «Renewable energy sources in Germany», a conversation with an associate professor and the heads of the language department. Workshop on terminology
- ✓ Visit to the special interactive exhibition «energie. wenden» on the topic «New Energy Policy» at the Deutsches Museum in Munich
- ✓ Visit to the geothermal power plant (Rome or Unterhaching), etc.

At all stages of our work, we actively consult specialists from various fields: from economics, natural science to translatology and linguistics.

In the processing of technical terminology and consulting we are supported by the following partners:

- ✓ Leipzig University of Applied Sciences for Technology, Economics and Culture
- ✓ The University of Applied Sciences Mittweida
- ✓ Resource Center Ecotechnopark «Volma» (Republican Institute of Professional Education)
- ✓ International Sakharov Environmental Institute of Belarusian State University.

We are also pleased that we were able to attract the Society for Sustainable Development (Verein für Nachhaltigkeit e. V. Freising) as a German partner, which, thanks to its members, who are recognized active figures in the field of science, politics, mass media and civil society, can provide qualified advice on various topics during the project and thus bring professional theoretical and practical knowledge to the project.

### III. OBJECT, SUBJECT, AND METHODS OF RESEARCH

The object of the research of this project is the Russian-and German-language resources on environmental topics.

The subject of the study is the ways of organizing an educational platform for sustainable development with e-learning modules.

At the main stages of the project implementation, various approaches are used, as well as modern methods of information analysis and processing:

1. SWOT analysis – a method of strategic planning, which consists of identifying the factors of the internal and external environment of the project and dividing them into four categories: Strengths, Weaknesses, Opportunities, Threats;
2. The «six steps» methodology (confrontation with the problem, research and analysis, intervention, interaction, creation of the future, representation and evaluation)
3. Methods: «Six mental hats», «World Cafe», «Workshop of the Future», etc.

The scientific novelty of the project lies primarily in the fact that during its preparation, the existing special German- and Russian-language literature on this topic was analyzed and methodically processed for use in the development of the project concept. Thanks to the variety of specialized literature used, it became possible to compare the data for Germany and the countries of the Russian-speaking area. The scientific novelty of this project is also presented in the identification of new ways and

variants of translation for terms from the field of ecology, which are contained in the original foreign-language sources.

The competitive advantages of the developed project are:

1. The relevance of the research project is due to the need to highlight and disseminate the ideas of sustainable development and eco-friendly lifestyle among the general population in conditions when the environmental situation in the world remains quite tense. The concept of sustainable development involves meeting the present-time demands while preserving the ability for future generations to meet their ones. At the same time, the achievement of the Sustainable Development Goals depends not only on international organizations and public figures, but also on each individual. In this aspect, the role of a professional translator and linguist increases every day. The relevance of the research project is also emphasized by a large number of reviews about the need to create such a translation service both from German and Ukrainian partners, as well as translation agencies and educational institutions of the Republic of Belarus with a translation profile.

2. Originality of the idea, creative approach to the solution.

Due to the theoretical and practical features and requirements for the design of the translated video content, the creative approach was implemented through the synchronization (duplication) of lectures in German (see appendix). If a video segment is played asynchronously, the audio precedes the actual image, or vice versa. This greatly complicates the perception of audio-visual information when viewing, since the human eye is able to distinguish in just a few milliseconds when the sound and image do not arrive synchronously.

3. An innovative solution is the concept of integrating the achieved practical results into a multifunctional information platform with e-learning modules and a terminology database that allows its resources to be used by a wide range of interested users.

4. Style and culture of material presentation.

This project is designed for both practicing translators and teachers and for a wide range of young students (schoolchildren, college students, universities), so the presentation of the material uses mainly a popular scientific style, which allows you to convey complex information to the addressee in a simplified and accessible form. At the same time, the rigor, logic and clarity of the presentation inherent in the scientific style are preserved.

This research project has the following characteristics:

1) External openness

In project-oriented activities, participants have the opportunity to acquire the necessary experience outside of the Student Research Laboratory. In addition, native speakers of a foreign language are involved in the project activities.

2) Holistic approach and connection with everyday life and reality

The project theme and its content are relevant to real-life situations, which contributes to a deep identification with the project theme.

3) Process orientation

In project work, students are in the foreground. They discuss issues/ideas, plan, cooperate and organize together, develop strategies for solving problems, share their experience, and solve problems together.

#### 4) Focus on the product

At the end of each project, a specific product should be developed, presented to the entire working group, to fellow students, parents, etc.

#### 5) focus on the interaction

Working together on a research project suggests that a foreign language becomes a working means of negotiating possible solutions.

#### 6) Changing attitudes and values

Environmental education should not only provide knowledge, but also make people receptive to environmental problems, encourage unified, interdisciplinary learning, serve to acquire practical skills and cause a change in attitudes and values. In this way, the ability and motivation for environmental behavior in their environment is formed: in work, pay attention to saving energy and avoiding waste, and in public terms, advocate for the protection of nature and the environment.

### IV. RESULTS

The following indicators are expected as direct results of the research project

#### 1) Creation of an educational platform on the topic of sustainable development

- E-learning modules translated into Russian (Virtual Academy of Sustainable Development and Sustainable Nutrition Working Group), including additional developed training materials

- Self-developed training modules on sustainable development in Belarus

- terminology database for training modules

2) Development of appropriate instructions for joint actions of German and Belarusian partners in the creation of both e-learning courses and a terminology database based on the experience of the pilot project and subsequent publication of these instructions on the Internet

3) Improving the level of knowledge and skills of students involved in the project by translating specialized texts, as well as working out special terms on the topic of sustainable development

4) Capacity-building in partner organizations. Belarusian partners should benefit from new specialized knowledge and experience in the field of e-learning methodology and didactics, as well as acquire knowledge in the field of project management, terminology work and open project development.

In the long term, the following effect is expected:

1. The programs of the educational platform are actively used by the subjects of sustainable development (integration through intermediaries into university curricula and professional development programs, independent training by interested parties), which will increase interest in the topic of sustainable development in all spheres of society.

2. Continuous expansion of the platform's programs by project participants, partners, as well as through other projects.

3. The mechanism developed on the basis of the pilot project and published in the joint action guide will be used to transfer the project to other specialized areas.

4. In the long term, the terminology database will improve the quality of translated specialized texts.

5. Through the use of the platform, an open network on the topic of sustainable development in Russian-speaking regions will emerge in the long term.

6. Thanks to active PR activities and constant improvement of the terminology database, the number of its users will increase, and the educational platform will be used in many Russian-speaking regions.

7. The developed materials can be used in the future as additional information for new offers of the restaurant «Westphalia» at the International Educational Center named after Johannes Rau in Minsk.

### V. CONCLUSIONS

Due to the limited amount of resources on the planet, the topic of sustainable development is becoming more and more relevant not only for individual states, enterprises, but also for ordinary citizens. Realizing the danger of irrational use of resources, many people are already trying to preserve the environment and the planet for future generations in the form in which it has reached our days.

The ideas of sustainable development and their implementation are no less important for enterprises, as well as for the hotel and restaurant business. Obtaining precise equivalents for a large number of emerging new concepts in the field of sustainable development and environmental protection can play a key role in the company's presentation of its activities in terms of environmental impact. We can safely assume that in the future, enterprises will increasingly adhere to the principles of sustainable development (both in the environmental and social spheres). The importance of organizing events in a sustainable manner is growing, not only for sponsors, but also for all stakeholders involved who wish to see a clear strategy for sustainable development, transparency and accountability about the impact on the economy, society, environment and future heritage.

This project will be of interest not only to students, but also to all those who are not indifferent to the problems of environmental protection. Both the entire project and its individual parts can be integrated into the learning process with varying degrees of involvement, depending on the program requirements of the disciplines studied.

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