Таким образом, дистанционное обучение на базе новых телекоммуникационных технологий может стать для студентов неязыковых специальностей реальной альтернативой традиционному обучению. Оно характеризуется возможностью организации активной познавательной деятельности каждого студента, обеспечением эффективной обратной связи, интерактивностью, индивидуализацией и дифференциацией процесса обучения, формированием устойчивой мотивации учебно-познавательной деятельности. Поскольку в дистанционном обучении иностранных студентов английскому языку накладываются друг на друга три вида проблем, его осуществление является сложным, требующим большого педагогического мастерства. Вместе с тем определение специфики такого обучения и последовательное решение связанных с ним трудностей поможет расширить нишу дистанционного образования, укрепит востребованность обучения иностранных студентов в БГУ. А совершенствование технической базы, умелое сочетание имеющихся методологических подходов, учет психологических аспектов дистанционного обучения позволят рассчитывать на позитивные результаты применения современных обучающих технологий.

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SOME IMPORTANT ISSUES OF LINGUISTIC TRAINING OF ECOLOGISTS FOR PROFESSIONAL INTERNATIONAL AND INTERCULTURAL COMMUNICATION ON ECOLOGICAL AND RELATED ISSUES

О НЕКОТОРЫХ АКТУАЛЬНЫХ ВОПРОСАХ ЛИНГВИСТИЧЕСКОЙ ПОДГОТОВКИ СПЕЦИАЛИСТОВ ЭКОЛОГИЧЕСКОГО ПРОФИЛЯ К ПРОФЕССИОНАЛЬНОЙ И МЕЖКУЛЬТУРНОЙ КОММУНИКАЦИИ

I. Boyarkina

И. О. Бояркина

The University of Rome, Humanities Department, Rome, Italy
estel2@libero.it
Римский университет, гуманимтарный факультет, г. Рим, Италия

Professional training of specialists of the broad ecological profile, be it ecology, nuclear safety or nuclear medicine, etc., is always a very important challenging task and multifactor process. The training should always go in many directions and embrace various scopes. It is necessary to provide the students not only with the knowledge of natural sciences. It is also necessary to provide the students with the first class linguistic tools to enhance their further education and professional growth. It is a well-known fact that the edge cutting research in nuclear physics, nuclear medicine, etc. is done in English. Hence, the importance of linguistic training in the pair English/Russian & Russian /English becomes obvious. Professionals trained in various ecological disciplines should be able to get acquainted with the latest results of the research in their field, they must be able to communicate the results of their own research to their foreign colleagues, as well as to the wide audience. Hence, the task of the linguistic training is to provide them with all the necessary tools to perform these abovementioned tasks. The paper focuses on some important issues of linguistic preparation of ecologists for professional international and intercultural communication, using the latest advances in the field of cognitive linguistics, translation studies, discourse analysis, conceptual metaphor theory, blending theory, framing theory, narrative theory, knowledge transfer theory, etc.

Статья посвящена вопросам лингвистической подготовки специалистов экологического профиля к профессиональной и межкультурной коммуникации. Рассматривается применение последних достижений в области когнитивной лингвистики, перевода, анализа и т. д. Лингвистическая подготовка специалистов экологического профиля, будь то экология, ядерная безопасность, ядерная медицина и т. д., является очень важной, сложной, многоступенчатой задачей. Обучение всегда должно проходить во многих направлениях и охватывать различные области. Необходимо обеспечить студентов не только знаниями естественных наук, но и предоставить им первоклассные лингвистические инструменты для повышения их дальнейшего профессионального образования и роста. Передовые исследования в области ядерной физики, ядерной медицины и др. проводятся на английском языке. Следовательно, важность лингвистической подготовки в языковой паре English/Russian и Russian /English становится очевидной. Профессионалы, прошедшие обучение по различным экологическим дисциплинам, должны уметь знакомиться с последними результатами исследований

в своей области, сообщать результаты своих собственных исследований как своим зарубежным коллегам, так и широкой аудитории неспециалистов. Задача лингвистической подготовки состоит в том, чтобы предоставить им все необходимые инструменты для выполнения этих задач. Статья посвящена некоторым важным вопросам лингвистической подготовки экологов к профессиональной международной и межкультурной коммуникации с использованием последних достижений в области когнитивной лингвистики, нарратологии, теории перевода, теории метафоры, blending теории, framing теории, discourse анализа и т. д.

Keywords: linguistic training, cognitive linguistics, translation studies, ecology, environmental issues, nuclear safety, ecological medicine, nuclear medicine, conceptual metaphor theory, conceptual blending theory, framing, discourse analysis, English-Russian, Russian-Italian.

Ключевые слова: лингвистическая подготовка, когнитивная лингвистика, перевод, экология, вопросы окружающей среды, радиационная безопасность, экологическая медицина, ядерная медицина, метафора, blending теория, framing теория, discourse анализ, Русский/Английский, Русский/Итальянский.

Professional training of specialists of the broad ecological profile, be it ecology, nuclear safety or nuclear medicine, etc, is a very important challenging task and multifactor process. The training should always go in many directions and embrace various scopes and stages. It is necessary to provide the students not only with the broad knowledge of natural sciences, explain the structure of the nucleus, nuclear forces and models, radioactivity, radiation, types of radioactive decay, transmutation and fission reactions, etc. It is not enough to explain to students biological effects of radiation exposure, basics of radiological protection or the use of radiation (isotopes) in various spheres like nuclear power, medicine, agriculture, industry, research and radioisotopes in medicine, etc.

At the same time, it is also necessary to provide the students with the first class linguistic tools to enhance their further professional education and professional growth. It is a well-known fact that the edge cutting research in nuclear physics and nuclear medicine is done in English. Hence, the importance of linguistic training in this field becomes obvious. Professionals trained in various ecological disciplines should be able to get acquainted with the latest results of the research in their field, must be able to communicate the results of their own research to their foreign colleagues, as well as to the wide audience. Hence, the task of the linguistic training is to provide them with all the necessary efficient tools to perform these abovementioned tasks. Moreover, it is necessary to prepare specialists in ecology not only for communication in a foreign language, but to communication in the intercultural environment as well. The recent advances in the field of cognitive linguistics, conceptual metaphor theory, conceptual blending theory, etc., can be very useful for this task.

Cognitive linguistics and the conceptual metaphor theory. In the last decades of the twentieth century, the general approach to the study of language known today as cognitive linguistics emerged as an essential part of a broader quest for a more satisfying account of the nature of human cognition in general and of linguistic meaning in particular. It became obvious for cognitive scientists that the so-called "language faculty" is only a reflection, in some cases a specialization, of general-purpose cognitive abilities, and is governed by general neural processes. It looks like there is a continuum between all sorts of cognition, especially body-based cognition, but also cognition acquired on the basis of the social and cultural experience, and language. Hence, it is not really scientifically correct to claim that language, let alone syntax and grammar, is a separate "module" in the mind or in the brain. Imagination, or the ability to project concepts onto other concepts, is one of the major general cognitive abilities. This is why such imaginative devices as metaphor and metonymy have become an object of intense interest for cognitive scientists. As a result, the cognitive theory of conceptual metaphor has been created and became a fundamental aspect of the cognitive linguistics. It was first formulated by Lakoff and Johnson (1980) and elaborated later by Turner, Kövecses and other cognitive linguists, has gradually become one of the most influential theories in metaphor studies. According to Steen, "There is no doubt that conceptual metaphor theory has revolutionized the study of metaphor in language". (Steen, 2011, p. 285)

Lakoff and Johnson originally defined metaphor as understanding and experiencing one concept in terms of another. (Lakoff and Johnson, 1980, p. 5) This definition was further elaborated and can be read as follows: Metaphor is the cognitive mechanism whereby one experiential domain is partially 'mapped', i.e. projected, onto a different experiential domain, so that the second domain is understood in terms of the first domain.

Zoltán Kövecses and some other researchers are working on a theory of metonymy that has several contacts or intersections with the conceptual metaphor theory. The researcher points out the difference in the approach to metonymy in the traditional view of metonymy and in the cognitive linguistic view. Kövecses emphasises an equally important status of metonymy for human cognitive activities alongside with metaphor and suggests the following definition of metonymy: "Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain".

As stated earlier, "both metonymy and metaphor work by means of mappings". However, sometimes it is not easy to say with certainty whether an observed mapping is to be regarded as metaphorical or metonymic. Kövecses emphasises the difference in the nature of mappings employed in metaphor and metonymy: "Metaphor involves two concepts that are 'distant' from each other in our conceptual system (although they are similar). In metonymy, in contrast, we have two elements, or entities, that are closely related to each other in conceptual space". Kövecses emphasises the common properties of mappings in metaphor and metonymy: "they establish a connection between two conceptual entities".

Recent advances in the development of cognitive science reveal that the mental mechanisms of mapping, that is, projecting elements from one conceptual domain to another domain employed in metaphor and metonymy, are not limited only to these phenomena but are widely used by the human mind on a larger scale; it is how the conceptual system operates with domains in general. That is why it is extremely important to introduce these mechanisms to the students during their linguistic training, it is necessary to make them aware of these mechanisms for various reasons.

Conceptual metaphors can become explicit in several ways but mainly in language. That is why it is important to make a distinction between conceptual metaphors, which are cognitive in nature, and particular linguistic expressions of these conceptual metaphors. In fact, any discussion of a metaphor must take place on two levels: the conceptual level and the linguistic level.

In *Translation Studies*, there are two major problems concerning translating metaphors: interpreters and translators lack essential knowledge about metaphor and until quite recently, there has been no unanimity about the nature of metaphor in metaphor studies. The present paper efficiently addresses both problems, combining theoretical and practical approach. It provides an insight into the nature of metaphor according to the latest advances in the cognitive linguistics and emphasizes the advantages of the conceptual metaphor theory. The paper overviews some of the metaphor translating techniques in the pairs Russian-English and Russian-Italian from prescriptive and descriptive perspectives. Some recommendations: interpreters and translators must take into consideration the dual nature of conceptual metaphor - its conceptual and linguistic expression. They also should have intercultural awareness (cross-cultural knowledge), for metaphors are culturally shaped and constrained, which is relevant to the translation techniques; hence, translatability of metaphors is high between close pairs of languages. Ideally, translators should strive to use an equivalent of the original metaphor, which would express a similar conceptual mapping.

The latest results obtained by the scholars in the metaphor studies alongside with other data were elaborated and used by Jerome A. Feldman in his neural theory of language, which can be seen as part of a general effort to construct a *Unified Cognitive Science* that can guide the effort to understand human brains and minds. Among many subjects, the theory discusses words for abstract and metaphorical concepts, describes the structure of conceptual systems and how they arise through metaphorical mappings from direct experience. Thus, since the 1970s, cognitive linguistics has gone through several revolutionary changes: from the studies of tropes, metaphor and metonymy to the conceptual metaphor theory, then to the theory of conceptual integration, i. e. parable, and the neural theory of metaphor, the neural theory of language towards a *Unified Cognitive Science*. In order to provide up-to-date linguistic training of the professionals in ecological fields, it is necessary to introduce into their linguistic curriculum also the basic knowledge about the conceptual metaphor theory, conceptual domains, conceptual mappings and about the way the human mind operates with the conceptual domains in general. The basic knowledge about the conceptual mappings could not only help the students to learn a foreign language but can also facilitate translation of their own research results for the presentations at the international conferences and prepare them for the work and research in the international and intercultural environment. Besides, this knowledge can also stimulate creativity, since it is a well-known fact that many scientific discoveries originated from a luckily created metaphor-models, which later on were elaborated into a working theory.

Linguistic training of the students of ecology in the language pairs Russian/English, English/Russian and Russian/ Italian, Italian/Russian has some specific peculiarities as far as the pragmatics, grammar, lexicology and phonetics is concerned. One of the main difficulties for the students with Russian as L1 is the mastering the category of the definite/ indefinite/zero articles, which is present in English and Italian languages but is absent in Russian. Another difficulty is to explain to the students of Russian as mother tongue the complexity and the use of various tenses in English and Italian, which do not exist in Russian language. An important issue is the presence of numerous cases and conjugations in Russian language, which do not exist in English and Italian, hence the necessity to teach the students the ways to render the same categories with other means in foreign language. Another important issue in the above-mentioned language pairs is phonetics; for example, the pronunciation of diphthongs for all the students, or the pronunciation of the clusters of 3 consonants for the students of Russian as L2.

As far as the peculiarities of intercultural communication are concerned, it could be a good idea to supply the students with the basic knowledge about some cultural peculiarities, customs and traditions of the target culture, in order to facilitate their communication with foreign colleagues.

The present paper focuses on the abovementioned peculiarities of linguistic training of the students of ecology in the language pairs Russian/English, English/Russian and Russian/Italian, Italian/Russian, as well as on some other important issues of language teaching and intercultural studies, relative to the field of ecology, nuclear medicine, and environmental protection. An important issue is the creation and introduction of the contextual vocabulary and corpus linguistics relative to the abovementioned branches of ecological studies, for the language pairs Russian/English, English/Russian and Russian/Italian, Italian/Russian; it will facilitate language acquisition and intercultural communication of the specialists in ecology. Also, some elements of the discourse analysis can be useful to demonstrate to students the concept of institutional discourse and its employment in the communication in ecology and related fields, as well as for the knowledge transfer in these spheres. Some elements of narratological analysis may be helpful for the effective construction of a discourse on ecological issues.

Mind frames in the ecological discourse. Another important issue related to the knowledge transfer in ecology and related fields to the nonprofessional audience is to employ mind frames. According to George Lakoff, "One of the major results in the cognitive and brain sciences is that we think in terms of typically unconscious structures called "frames"

(sometimes "schemas"). Frames include semantic roles, relations between roles, and relations to other frames". Also, discourse about ecology and related spheres presupposes activation of certain mind frames, about which Lakoff observes:

There are limited possibilities for changing frames. Introducing new language is not always possible. The new language must make sense in terms of the existing system of frames. It must work emotionally. And it must be introduced in a communication system that allows for sufficient spread over the population, sufficient repetition, and sufficient trust in the messengers… And, of course, negating a frame just activates the frame.

Speaking about environmental hypocognition, George Lakoff emphasizes the tragedy of the absence of frames in the ecological discourse, which influences negatively the knowledge transfer on ecological issues to the layman audiences as well as the construction of any effective environmental discourse and conscious, responsible ecological behaviour. One of the authors of the conceptual metaphor theory defines "Hypocognition" as the lack of ideas we need for the institutional discourse on ecology and environment. He observes:

We are suffering from massive hypocognition in the case of the environment. The reason is that the environment is not just about the environment. It is intimately tied up with other issue areas: economics, energy, food, health, trade, and security. In these overlap areas, our citizens as well as our leaders, policymakers, and journalists simply lack frames that capture the reality of the situation.

The scientist explains the importance of the conceptual metaphors and framing for the ecology and environment as follows: "Let us begin with the very concept of the "environment." The *Environment Frame* sees the environment as separate from, and around, us. Yet, we are not separate from Nature. We are an inseparable part of Nature. Yet we separate self from other, and conceptualize Nature as other. "This separation is so deep in our conceptual system that it hinders our environmental education and ecologically friendly behaviour". Hence, it is necessary also to work on this issue.

To conclude: the use of the latest research results in the fields of cognitive linguistics, translation studies, discourse analysis, narrative theory, conceptual metaphor theory, blending and framing theory can bring the linguistic preparation of the ecology specialists to the international level. It may facilitate the professional linguistic training of specialists in ecology and prepare them for the intercultural communication, knowledge transfer, as well as for the communication in foreign languages with their foreign colleagues, scholars, researchers, and other professionals in the field.

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ЭФФЕКТИВНОЕ ПРИМЕНЕНИЕ ИКТ НА ЗАНЯТИЯХ ПО ИНОСТРАННОМУ ЯЗЫКУ ДЛЯ СТУДЕНТОВ-ЭКОЛОГОВ

EFFECTIVE USE OF ICT IN FOREIGN LANGUAGE CLASSES FOR ENVIRONMENTAL STUDENTS

Ю. И. Буткевич

Y. Butkevich

*Белорусский государственный университет, МГЭИ им. А. Д. Сахарова БГУ,
г. Минск, Республика Беларусь
y.butkevich@rambler.ru
Belarusian State University, ISEI BSU, Minsk, Republic of Belarus*

Рассматриваются возможности эффективного применения информационно-коммуникативных технологий (ИКТ) на занятиях по иностранному языку для студентов-экологов, с целью реализации обучения профессионально-ориентированному общению на иностранном языке. Описаны основные ИКТ, используемые для преподавания иностранного языка в непрофильном учреждении высшего образования. Характеризуются пре-