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Teaching the Discipline “Greenhouses Technologies” in English for the Students of Agronomy Specialties

Yurii Sliptsov

National University of Life and Environmental Science

Abstract: In training programs for the students of agronomic specialties, the discipline “Greenhouse’s technologies” hasn’t traditions. But high popularity of the greenhouse industry dictates the need to introduce the discipline into the training programs. The results presented in the article are based on methods of analysis, synthesis and modeling of the educational process and recommendations for improving the quality of teaching this discipline. The main role is played with increasing motivation in studying this it for students. It can be achieved through the use of modern interactive teaching methods.

Keywords: Greenhouse, Film, Glass, Construction.

Introduction

English for Specific Purposes (ESP – (Anthony, 1997)) was developed for students who intend to use English for professional skills and purposes. Languages for special purposes are considered from at least two points of view: from a methodological and from a specialized, linguistic point of view (Ahmed, 2014). ESP is segment of the language, with its main component- terminology, to which some authors add specific grammar. These 2 goals are fully cleared when teaching the discipline “Greenhouse’s Technologies”.

The educational process at the Agrobiological Department of National University of Life and Environmental Science of Ukraine includes lectures, classroom practical exercises and independent activities of students, that spending among other things, through the distance learning technologies based on the “Elearn” information and communication platform. The development of distance learning technologies has opened the new methodological opportunities for higher education teachers with modern digital information resources, maintaining the quality of teaching aimed at achieving high performance indicators. The implementation of the educational process using distance learning technologies (DLT) provides the opportunity to conduct lectures, seminars and practical classes both in synchronous (Elearn and Webinar) and asynchronous (Elearn) regimes. It provides for the foreign students the opportunity consciously study the educational material, taking into account their own individual typological characteristics in a comfortable terms, contributing to the development of mental abilities, the formation of analytical thinking and educational and cognitive motivation. The academic discipline “Greenhouse’s Technologies” is taught for the students of 2 course of Agronomy Faculty and represented by 2 sections:

- Total methods of Protected Cultivated (covering materials – different types of film, Glass, Agro fibre, Polycarbonate, Hydroponics, Greenhouse’s constructions, artificial lightening, drip irrigation etc.);
- Technology for growing the specific crop (tomato growing in film and winter Greenhouses, cucumber, eggplant, pepper etc. growing in such Greenhouses).

Eespecially important the topics of the first section. After all, it’s one thing not to know the details in the technology of growing a cucumber or tomato in Greenhouses, and another thing to not know the types of film, the disadvantages of glass, or the element of greenhouses constructions.

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Method

The methods of terminological, logical, diachronic analysis of the research base of Ukraine, the countries of the European Union and other European organizations (ENQA, UNESCO-CEP ES and in.) with problems of high education were used. During practical classes in this discipline, excursions to the greenhouse complex were also provided. During the classes, students were shown samples of different types of film, glass, agrofibre, polycarbonate, greenhouse lamps, frame models, seedling cassettes and Jiffy pots, video materials also.

Results and Discussion

We recommend to start learning English in English-speaking groups by asking each student: “For what purpose do you need English and Greenhouse’s technology?” This simple question forces students to understand the benefits of studying specific terms and give themselves a stimulus, that is an important criterion for further steps in studying the discipline. To stimulate students, for example, it’s necessary to show them that in the field of the Greenhouse industry they can read in the original any standard. For example- NEN (for constructions), RHP (for hydroponic substrates), ANSI (American National Standard Institute) as standards for number of products, any articles on technologies for growing crops on hydroponics and research and so on. It is equally important that in Ukraine such covering materials as agrofibre and polycarbonate don’t require mandatory certification, while by reading the standards of other countries, one can better and more deeply understand the capacity of these covering materials. As practice shows, students answer that they need English to work in foreign companies, where they do not hire people without knowledge of English and for communication in business. For example, even the best students of linguistic universities cannot translate the names of individual elements of greenhouses and master specific terms, for example- gutter, ridge, truss, greenhouse, agro fiber etc. There are no companies in Ukraine for the industrial production of modern greenhouse complexes. And large greenhouse complexes, or farmers in the case of ordering winter greenhouses, hire specialists who can communicate in English with Dutch specialists. Usually these are graduates of linguistic universities who don’t know special terms. And to translate specific terms, such translators have to use Russian-English or Ukrainian-English agricultural dictionaries. But even this sometimes doesn't help. For example, with such translations, it is difficult for them to understand the difference between a greenhouse and a glasshouse, or to translate the names of diseases and pests in Latin. But students, after studying this discipline, will be able to translate this.

Thus, adopting the purpose and importance of English for business purposes, it can begin studying ESP in special disciplines. As experience shows, it is better to start each lecture or practical lesson with new words, the translation of which is displayed in Ukrainian on the same slide. For better memorization, we recommend connecting the visual memory by later showing a photograph of this part of the greenhouse or equipment with translation (Figure 1).

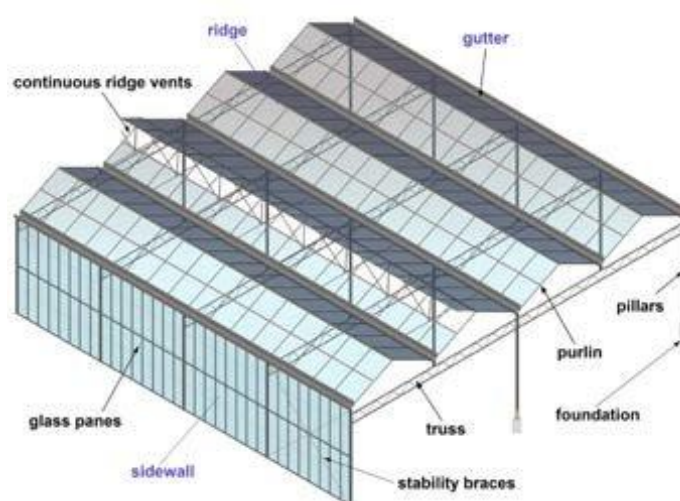


Figure 1. Greenhouse’s elements

An excellent example is also showing short educational videos in English on a particular topic. For example, it may be 5-10 minutes video about film, glass, agrofibre and polycarbonate. Unfortunately, such videos are practically not produced in Ukraine, and if possible, you can record them yourself in the form of an mp-4 file or

any other. This way, students will quickly master new terms and consolidate their use in the context of general text with the construction of phrases and spoken English. But we do not recommend making such videos for more than 10-20 minutes. Students, unfortunately, have a very poor listening comprehension of English, so if possible, they should be given listening to simple English texts at a level no higher than Intermediate for homework. The exception, of course, is students from Europe, Asia, and Africa studying in Ukraine. Their level of understanding of English listening texts is an order of magnitude higher. English-speaking students have their own pronunciation characteristics (accent, fast pace of speech, etc.), which can make it difficult for teachers to communicate with them at the initial stage. However, these difficulties are surmountable and are compensated, on the one hand, by the communicative and linguistic literacy of the teacher, and, on the other hand, by the personal characteristics of the students.

In any case, an empirical level of knowledge should be used. It involves research of actually existing objects. This level of knowledge involves: accumulation of information (through lectures and practical works), conducting various experiments, primary systematization, establishment of empirical regularities. Empirical methods include observation, measurement, and experiment. For example, during practical lessons, students are given the task to choose any Greenhouse and describe it according to the following scheme: width, high ridge (or saddle roof greenhouses), describe the ventilation system, nutrient and heating system, carbon dioxide system. In the process of work, students begin to understand more deeply with interest how, for example, heating is carried out in greenhouses, they see its various types. When student studying topics about the types of greenhouse film, they study its different types during practical work, measure its light transmittance, tensile strength of different types. As an individual task, you are given the task to select any greenhouse film and send it as a completed task according to the following scheme: price, parameters, presence of a UV stabilizer, durability, manufacturer.

A good result is achieved by students completing individual tasks. For example, you need to find any greenhouse and describe with photos how such systems as ventilation, heating, and irrigation of plants are arranged in it. Completing such tasks allows them to improve the level of students, quickly find disadvantages in any of the greenhouses, and evaluate them (Figure 2,3).



Figure 2. The students could find the disadvantages in frame constructions



Figure 3. The students could know the methods of greenhouses heating and their disadvantages

It happens that many students, especially from village areas, have limited language skills, and the teacher has to spend a lot of time explaining some general rules and known words. To solve this problem, we recommend turning to easy reading. If they reading adapted literature of a narrowly focused character, a student sees only a few new words, he will learn some of the new words and the construction of sentences in English and grammatical rules much faster. Therefore, the teacher is recommended to prepare methodological recommendations that contain adapted texts in English with pictures and are easy to understand. At the same time, it is necessary to provide such literature at the stage of preparing the work program of the discipline (Hutchinson & Waters, 2006). Unfortunately, some students don't make it a point to regularly attend classes, do homework, and work on self-improvement. To stimulate such students, we may not allow them to take part in exam due to their low grades. We recommend to do research function also. This function contributes to the improvement of professional culture, analysis of pedagogical management activity. The next effective methods is VR-simulator that create some situations that couldn't meet in classroom and practice.

Conclusion

The main problem is preparing teachers to teach disciplines in English. In addition to knowledge of specific terms and the fundamentals of the discipline, the teacher must be able to convey them to students in English competently and interestingly. The best solution to the problem would be to involve teachers who have been trained in agricultural faculties of English-speaking countries, especially the USA, England, Australia, and Canada. Unfortunately, such variant is practically impossible in Ukrainian realities due to the high cost of training and especially now. The exception is those teachers who managed to win a grant for scientific research and visit agricultural universities. In addition to increasing the basic level, this also increases the level of proficiency in specific professional terms.

The second important task of the teacher is self-training, which requires intense dedication. In particular, it requires studying articles and books on the greenhouse industry written by authors from Holland, which is the world leader in this industry. Many articles by Holland authors are more scientific than methodological in nature, so teaching methods have to be developed independently.

Recommendations

A high scientific level requires the teacher to be able to speak terms that differ in English and American English. For example: eggplant (American variant) – aubergine (English variant). In such cases, we can recommend using it on pairs of smartphones. These are devices that belong to almost every person in the world. Students use their phones not only for calls or text messages, but mainly for taking photos, playing games and downloading various applications. And so that students are not distracted by smartphones during lessons, you can give them interesting tasks of translating certain special terms and searching for them in the Google Translate program with interesting “Duolingo”, as a free online language learning site (Garcia, 2013; Vasselinov & Grego, 2013). Teaching the discipline “Greenhouse’s Technologies” in English requires the introduction of innovative methods to teaching English using multimedia teaching equipment, in order, first of all, to increase students’ motivation to learn English, gain access to new, alternative sources of information, develop independent mental activity, and form communicative skills, cultural and professional competence.

To teach the discipline “Greenhouse’s Technologies” in English, the teacher is required to do deep independent work, which requires improving the basic level of English, especially listening. The national system of ensuring the quality of higher education should take into account the global trends of the modern education and national capacities caused by unique historical, social and cultural circumstances. In addition to the role of teacher, the ESP practitioner must take on certain specialized roles, for example, as a course designer, developer of specific materials, collaborator, researcher, translator.

Scientific Ethics Declaration

* The author declares that the scientific, ethical, and legal responsibility for this article published in EPESS Journal belongs to the author.

Conflict of Interest

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References

- Ahmed, M. K. (2014). Issues in ESP (English for specific purposes). *ELT Voices-India International Journal for Teachers of English*, 4(1), 37–59.
- Anthony, L. (1997). *English for specific purposes: What does it mean? Why is it different?* <https://www.researchgate.net/publication/267631304>
- Garcia, I. (2013). Learning language for free while translating the web: Does Duolingo work? *International Journal of English Linguistics*, 3(1), 19–25. <https://doi.org/10.5539/ijel.v3n1p19>
- Hutchinson, T., & Waters, A. (2006). *English for specific purposes: A learning-centered approach* (pp. 9–15). Cambridge University Press.
- Vasselinov, R., & Grego, J. (2013). *Duolingo effectiveness study* (Final Report). http://static.duolingo.com/s3/DuolingoReport_Final.pdf

Author(s) Information

Yurii Slieptsov

National University of Life and Environmental
Science, Kyiv, Horihuvatsky Shliakh, 15, Ukraine
ORCID iD: <https://orcid.org/0000-0003-3240-8564>

*Contact e-mail: helicopter09@ukr.net

*Corresponding author(s) contact email

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