TEACHING/LEARNING STRATEGIES IN ENGLISH FOR SPECIAL PURPOSES FOR AGRICULTURAL AND MECHANICAL ENGINEERING

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Abstract. The paper highlights the fact that more attention should be given to a number of teaching strategies that academics need to focus on in order to provide certain competences which are necessary to students in the field of agricultural and mechanical engineering. The following generic academic competences were identified as being the most important ones: the capacity for analysis and synthesis, the capacity for applying knowledge in practice, problem solving, and last but not least communication in a foreign language (especially english). Graduates and stakeholders in the field are in agreement regarding the need for other competences to be acquired for better employability chances: the capacity to adapt to new situations, team work, interpersonal skills, and the concern for quality. For this reason, the academic course of esp (english for special purposes) has been designed to focus on developing all these competences. The textbook support for the course provided for students of english at the faculties of agricultural engineering and mechanical engineering contains applied material intended to help learners acquire the skills mentioned above. The paper will illustrate in detail the way in which the acquisition and development of subject-specific competences has been given due consideration in order to assist the professional needs of students in their major field of study.

Keywords: ESP (English for Special Purposes); Learning/Teaching Strategies; Applied linguistics; Agricultural Engineering

INTRODUCTION

The relevance of English for Special Purposes (ESP) over the last decades is due to the fact that English has become paramount to the international currencies of technology, science, commerce, tourism, and many other fields. Thus, the shift from traditional formal linguistics exerts more and more pressure to inform new methodologies for teaching language as an actual tool of communication in real professional situations. Contemporary language teaching methods have developed as applied linguists have strived to provide procedures for the design of more effective teaching materials. The development of English for specific groups of learners continuously seeks to find methods and materials fit for specific needs and situations, relying specifically on contextual communication. Current European realities highlight the relevance of foreign language teaching, the main purpose of this course being to enhance English language communicative competences, especially within a specific field of study. Each of these areas encompasses not only the assimilation of lexical units typical of the field per se, but also an awareness of cultural interaction and association. Teaching and learning ESP must be given proper consideration, as these are both meaningful and purposeful activities in accordance with needs required in different situations in which language learners may find themselves in professional and social situations. Current teaching paradigms lay stress on communicative aspects, as well as the development of complex knowledge in the context of language education. Essentially, the paper discusses the aspect of specificity in instructional methods and strategies drawing on communicative approaches such as cooperative language

learning, content-based teaching, and task-based learning, accompanied by examples of theory-informed methods encouraging spoken discourse.

As a result of this working hypothesis, the planning of the ESP course support has focused in all cases on helping students manage communicative situations and acquiring inter-relational competences. Our practical courses of ESP are intended for advanced students training in Agricultural and Mechanical Engineering who are required to apply specialised knowledge in practice. Some of the most important competences they need to acquire in order to maximize their employability chances are: interpersonal skills, team work, the capacity to adapt to new situations, and the concern for quality. Graduates need to be proficient in activities like problem solving, and communicating in a foreign language (especially English). The objective of developing these specific competences has been considered with the aim of assisting the professional needs of students in their major field of study.

MATERIAL AND METHODS

The present study is based on observations made by a team of academics teaching English for Special Purposes (ESP) at the Faculty of Agriculture from the BUASVM University 'King Michael I of Romania' in Timişoara and the Faculty of Engineering from the University of Kragujevac, Serbia. They have authored the textbooks used in the university-level courses of ESP: *English for Mechanical Engineers* (RAŢĂ, STEFANOVIĆ, 2010), *English for Farm Managers* (RAŢĂ, GROSZLER, DRAGOESCU & ALL., 2011) and *English for Agricultural Engineers* (DRAGOESCU, COROAMĂ, 2016). Several groups of students from these faculties were subjected to a two-semester period of experimental ESP teaching in 2016. Based on comprehension checks, self-assessment by students, and class observations by the teaching staff working on the project, we have noted that students achieved considerably better results in written comprehension, while oral communicative skills are poorly developed, remaining somewhat at 'survival' level (COROAMĂ, 2016:14-15).

In dealing with this situation, our method was devised as an overall strategy for the systematic presentation of linguistic material based on a communicative, applied approach. The teaching techniques, as well as specific ESP tasks and learning activities were designed in compliance with our method, so as to be fairly consistent with our linguistic approach. According to the situation-specific approach, as textbook developers, we based our research and material selection on the student's actual needs in order to provide an applied ESP course outline and syllabus fit for use in the required contexts.

Besides the lexical approach and Competency-Based Language Teaching, we have largely relied on communicative teaching methods, which will be explored in detail. We have based our method on communicative teaching principles and on KRASHEN'S (1981) theory of second language acquisition. Inspired by this theory, we have integrated three approaches in electing how to develop ESP teaching methods and materials. Thus, we have employed second language acquisition theory, applied linguistics research, as well as clues from our own classroom experience, as informed by current postmethod theory in language teaching. These approaches have worked by supporting each other in bringing us to common conclusions. The efficiency of the presented method has been tested in the course of experimental training during our ESP classes in order to confirm our hypothesis stated at the beginning. The teaching experiment consisted of the following stages: a pre-experimental test meant to assess the level of communicative skills, which were found to be low; experimental teaching based on communicative teaching and learning strategies; final assessment and conclusions; the present paper is a post-experimental analysis of quantitative and qualitative findings based on the results of our experimental ESP classes.

RESULTS AND DISCUSSIONS

Some of the basic aspects we started from are the lexical approach and Competency-Based Language Teaching (CBLT). Additionally, extremely valuable tools we also employed were provided by the widely established communicative approach (RICHARDS & RODGERS, 2001:151-153). Communicative Language Teaching (CLT) represents a major paradigm shift in language acquisition, encompassing practices like cooperative language learning, content-based instruction, and task-based language teaching. As for the relevance of CBLT, it is rooted on the question regarding the practicality of teaching, *i.e.* what learners are actually expected to do with the language (RICHARDS & RODGERS, 2001:141).

Cooperative language learning or the more general collaborative learning approach relies mainly on cooperative activities involving pairs and groups of learners within the classroom. The activity in this type of learning is organized so that learners exchange information in socially structured micro-contexts and they are more encouraged to help increase the learning of their peers. This approach has served our endeavor well by building cooperation within the learning environment instead of the regular teacher-fronted class working in traditional arrangements such as lock-step.

Another communicative approach which focuses on meaningful content in language teaching is content-based instruction. Teaching a foreign language according to this method is organized around the content students are to acquire, rather than focusing on a linguistic syllabus disconnected from the actual content which is being taught. By giving precedence to meaning and to the practical subject matter that students learn or communicate through the language, content-based learning encourages the use of images, miming, and other clues to support explanation. Our results indicate that these methods support communicative learning heavily, as students relying on body cues and miming feel less insecure to express themselves during ESP classes.

A valuable application within the framework of communicative language teaching is task-based language instruction, which makes use of tasks as the primary tool in learning foreign languages (RICHARDS & RODGERS, 2001:223). Much like communicative language teaching, this approach draws on activities involving real communication. Its basic tenets maintain that only language which is meaningful to the learner supports acquisition and learning is best promoted by meaningful tasks language learners have to perform. In this respect, we conceived tasks which may be regarded as expedient means for applying these basic tenets. We proceeded by asking whether the proposed activity focuses on meaning, relates to real world situations, and, last but not least, whether it succeeds in engaging the learners' interest. These criteria, as suggested by WILLIS & WILLIS (2010), have been guidelines for the design of activities in our textbooks within the framework of task-based learning. Our observations from the post-experimental stage of the project confirmed that this strategy was useful in that it enforces real language use.

Furthermore, the task-based approach we used when designing activities for our ESP textbooks was also informed by research on the strategies and cognitive processes commonly employed by second language learners (ARSLAN & ALL., 2012). This research suggested the proper reconsideration of communicative and cognitive strategies to be employed in ESP teaching for the students' benefit. Many of the questions raised by this study revealed the cognitive learning processes employed in naturalistic language learning situations.

As a result, we have tried to design our new textbooks in order to enforce meaningful, realistic context and true-to-life settings. Some examples of task formulations would be: 'Describe your ideal job (identify which of the following is more suitable for you within the engineering umbrella: agricultural engineering, bioresource engineering, ecological

engineering, rural development, *etc.*); 'Draw your business plan' (make a mind map; reach a group decision); 'Decide which crop you would choose to produce'; students classify and compare possible types of crops, *e.g.* genetically modified soy, a traditional variety of wheat, corn with a high input of fertilizers, organic vegetables, *etc.* (DRAGOESCU, COROAMĂ, 2016:19). After each working group of students has chosen their product, they have to create a short advertisement to promote their product on the market. Students enjoy trying to make their slogan fun and finding a good rhyme. Critical thinking is stimulated by including follow-up discussion topics which are relevant to the learners' real life situations, *e.g.* 'Can Slow Food be considered an eco-friendly approach? Would you consider this type of lifestyle in your daily routine? Why (not)?' (DRAGOESCU, COROAMĂ, 2016:35). The steps taken by students include: preparing the topic, brainstorming key words and phrases, planning the task and negotiating with peers in their group, achieving the task, sharing with the larger group, and giving/receiving feedback from peers (and the teacher if necessary).

Furthermore, our method largely draws on Krashen's prominent theory of second language acquisition, which is why we made little use of strict grammatical rules as theoretical input. From this perspective, 'language acquisition does not require extensive use of conscious grammatical rules, and does not require tedious drill' (KRASHEN, 1981:6). The conditions which are necessary in order for language acquisition to occur are the following: firstly, real messages are meaningfully exchanged, understood, and preferably associated to the learners' main field of interest; secondly, language learners are not 'on the defensive', but feel free to express their ideas. Consequently, the best teaching strategies will strive to provide meaningful, 'comprehensible input' that students really want to hear and to create low anxiety situations which do not stress learners. Proficient teachers will obtain improvement by focusing upon these two aspects instead of forcing students and correcting language production (KRASHEN, 1981:6-7). In conclusion, low anxiety situations are generated in the ESP class when students are allowed to work freely in small groups and to interact with their peers in a spontaneous, non-formal manner, which is also what we proposed in our experimental classes.

Finally, we are faced with a new theory in language teaching which is referred to as 'postmethod', as it was conceived to help both learners and teachers avoid the confinements of method (RICHARDS & RODGERS, 2001). This approach advances an alternative to method: 'the quest for a better method has been or should be abandoned in favor of the identification of practices or strategies of teaching designed to reflect local needs and experiences' (SAVIGNON, 2007:207). Postmethod authors also emphasize practicality in relation to context, focusing on real-life experiences and 'local exigencies' in their quest for what is seen as meaningful pedagogy. Attention is drawn to the particularities that must be minded: 'a particular group of teachers teaching a particular group of learners pursuing a particular set of goals within a particular institutional context embedded in a particular socio-cultural milieu' (KUMARAVADIVELU, 2006:171). Therefore, the implementation of postmethod requires the reorganization of traditional curricular standards, as teachers become more active decision makers and material developers.

In designing our ESP textbooks, competences have been considered as reference points for curriculum design rather than restrictive standards, which allowed for flexibility in building the course outline. Moreover, communicative competences and other functional skills are placed at the core of all our ESP courses. Therefore, the learning outcomes are more competence-based and functional than traditionally designed courses. The applied, practical nature of this ESP approach thus allows for diversity, on an inter-institutional level and within a larger European framework.

The learning materials we have provided for our students are substantially based on the approaches discussed above. The textbooks contain key terminology and elements necessary to the acquisition of English in the applied areas of agriculture, farm management, and mechanical engineering. The suggested discussion topics were adapted to class use and, above all, to the students' needs and interests. Among others, some examples of our topic selection would be: sustainable methods of farming, cooperative farming, intelligent farm machinery, *etc*. The topics are introduced by means of original or adapted texts with the purpose of enhancing the students' knowledge of English in their applied field of study. These are followed by discussion points meant to develop communicative skills and critical thinking in group debates.

Vocabulary and grammatical exercises were designed to improve students' language skills, *i.e.* comprehension, speaking, reading, and writing. All the tasks were devised with the purpose of helping ESP learners acquire specialized vocabulary necessary in their field of study. What is more, students are encouraged to take into consideration possible career prospects and to view their academic achievement not in isolation, but in relation to an anticipated awareness of the present-day impact and relevance of their field of engineering. Last but not least, the materials are developed with the indispensable aim of encouraging students to grasp the benefits of mastering English for Special Purposes in order to communicate and understand relevant literature and to be successful in their field of competence. This will hopefully make career prospects highly rewarding, as a wide range of opportunities will be open to them on the global market.

CONCLUSIONS

The textbooks analyzed in the present paper provide experimental validation of the teaching technology we have proposed at the outset. As teaching support developers, we believe that the communicative tools presented above benefit our students of ESP by developing fluent communication skills and other substantial features of communication. The formulated hypothesis we have targeted was confirmed by the fact that students demonstrated a higher level of oral proficiency in English by the end of the second semester of ESP study, as compared to the results they obtained in the preliminary assessment. The students' communicative competences were assessed both at the beginning and the end of each semester. Based on their compared results, we concluded that the teaching and learning strategies we employed have contributed to the acquisition of superior language competences. However, the acquisition of target language speaker skills alone does not represent the sufficient condition of communicative proficiency, which is why other areas of ESP remain open to further enquiry in future studies. A major area in need of further investigation consists of the limitations of the postmethod approach. It should essentially be viewed as a more flexible position in relation to teaching rather than a disengagement from quality, given the tendency to circumvent correcting spontaneous language production.

The paper emphasizes an essential dimension of language that has been inadequately addressed in approaches to ESP textbook design – the functional and communicative aspects of language. Teaching ought to lay more stress on the practical application of the teaching resources and the training of students' communicative skills, while ensuring that learners are naturally integrated into the classroom environment with the lowest possible levels of anxiety. Erasmus students from countries like Jordan, Russia, *etc.*, who have joined our classes in recent years, have also brought international cultures into the current learning environment, which greatly enriches and extends the students' area of general knowledge. This aspect further encourages them to break the narrow boundaries of traditional culture and use the language as a

mediating vehicle to communicate with peers from all over the world who share the same interests in their main field of study. The communicative learning and teaching methods discussed above have hopefully helped students connect more easily, while reinforcing their interest in learning foreign languages.

In conclusion, efficiency in ESP teaching and learning is related to aspects like: fine-tuning the teaching content to the learner, adapting the material in accordance with the students' needs and interests, choosing the most appropriate content and making it as meaningful as possible and generally focusing on the applied, practical use of English which is at the core of ESP. In the process of applied or practical learning, it is insightful for trainers and material developers to rely on the interests, motivations and purpose underlying the students' learning process. We have sought to incorporate the aforementioned principles of ESP teaching in our experimental language classes and also in our course support. The present cooperative research is thus a follow-up of our joint experiences in teaching and evaluating English classes to students specializing in agricultural and mechanical engineering. We hope to continue our joint research project with colleagues from Serbia and Romania who are practitioners as well as researchers in areas of applied linguistics related to ESP teaching and learning.

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