

Doctoral Students and Necessary Academic Skills

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Abstract

The paper is aimed at making familiar with necessary academic skills of doctoral students as experienced at the Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava. The author focused on the preparation of doctoral students regarding the need of industrial practice as well as the requirements of individual study programmes. As worded by the Faculty departments, the emphasis is put on specific doctoral students' outcomes which resulted in particular preparation within reading, writing and presentation skills development. Finally, the contribution proposes the possible further development and upgrade of teaching English at tertiary level of education.

Keywords:

Doctoral students
 Academic skills
 Reading skills

Writing skills
 Presentation skills

1 Introduction

It is well known that according to CEFR (Common European Framework of Reference) a modern university graduate should be able to speak two main foreign languages plus one language of a neighboring country. However, new requirements integrated in current accreditation at STU MTF (Slovak University of Technology, Faculty of Materials Science and Technology) have brought cuts to offered variety of foreign languages at the Faculty to just one – English. Undoubtedly, English language is *lingua franca* of the world of science and academics; however, the need of other foreign languages should not be neglected.

Obviously, at the tertiary level only rarely General English is taught. Regarding the STU MTF study programmes and their required graduate profile, English for Science and Technology is integrated in bachelor and master studies. When speaking about teaching English within doctoral studies the English practioners "move the syllabus away from a broad-based approach to a certain (specific) variety of English for Academic Purposes (EAP), to focus it more strongly on the discipline-specific instruction - English for Specific Academic Purposes (ESAP)" (Miština, 2012,p.122). As there English for Academic Purposes exists relates to various academic environments (Jordan, 1997), teachers have to be very careful in designing the course.

2 English for Academic Purposes at STU MTF

"When developing the course of English for Specific Academic Purposes, it is expected that the teachers have a certain level of academic teaching experience, a high degree of professionalism, and the ability to respond flexibly to the current needs. This is an essential prerequisite enabling him/her to start building the course on the basis of a thoughtful and carefully prepared needs analysis" (Miština, 2012, p. 134).

Regarding the amount of lessons allotted, the English teachers focus mainly on the skills the PhD. graduate will need. Therefore, the STU MTF English language teachers had to adjust the syllabi content and format of

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doctoral students preparation. Based on English practitioners' experience, scientific research, incentives of industrial practice as well as on the requirements of individual STU MTF study programmes and in accordance with CEFR documents the course for doctoral students was developed.

In regard to the requirements for PhD. graduates' postgraduate skills by the industrial practice and Faculty departments, they have to submit – the Portfolio – covering all inevitable skills in target language: reading, writing, listening and oral skills.

When speaking about the academic environment and regarding the current unprecedented ICT development as well as the necessity of exchanging the information on research and its results, English language has become the means of international communication of academics and scientists. Obviously, this has called for preparation which is concentrated on particular language skills needed.

One can discuss which of the skills are necessary within the academic environment. Regarding the native language the order of skills the students use is as follows: listening (45%), speaking (30%), reading (16%) and writing (9%) (Štěpánek et al. 2012, p. 16). It is interesting, that when the foreign language is concerned the order of used skills changes: reading skills become the most used skills, then it is speaking, then listening and finally, similarly as with the native language writing skills which are considered to be the most difficult skill to master. The author focuses particularly on reading, speaking (presentation) and writing skills.

3 Reading skills development

The students usually consider reading to be the easiest skill of all. Nevertheless, they frequently neglect that the knowing of reading techniques and reading strategies can ease their study. The postgraduates of technically oriented universities will prevalingly utilise their reading skills both within their doctoral studies as well as in their future career since most of the sources for their science fields (e.g. referring to STU MTF study programmes - applied informatics, materials engineering, etc.) are written in a foreign language, especially in English.

Therefore, they should know and make use of various reading techniques. Regarding to own experience, many students, do not know efficient reading techniques, thus reading the text given word by word. At the same time, they are not acquainted text structures. For reading there is not an exact definition. According to [2] the reading process is a "psycholinguistic guessing game." He argues that the object of that game is not to recognize letters and words, but to make sense of print: to construct meaning. And according to [3] in reading we utilize visual information (the read text) which includes the language and read topic comprehension as well as our general knowledge. Generally we can state that reading is a human ability to process everything what is in written. The recent research concerns not only about what reading is but also how it is acquired, how reading in native language differs from reading in foreign language, etc. Nevertheless, reading is an important means for achieving the target and not the target itself.

3.1 Factors influencing reading in foreign language

It is obvious that the students begin to read in foreign language with a different knowledge they have when they learnt to read in native language. According to 4 we can mention the following factors influencing reading in foreign language:

- knowledge level and orientation at the time of starting reading in foreign language,
- foreign language level,
- knowledge of structures in native language,
- size of differences between the native and target languages, etc.

3.2 Reading techniques

The following progressive reading techniques are trained within the PhD. course at STU MTF:

- *scanning*, a fast reading technique (looking for specific data, e.g. names, numbers, symbols, i.e. the text itself can be omitted).
- *skimming*, next fast reading technique (guessing the text content by knowing the text structure, e.g. knowing that the most important sentence in the text is the first sentence in the paragraph can help the reader a lot).
- *surveying*, a technique for an efficient survey of the text content and organization where the reference data are utilized (title, author, table of contents, graphs, figures, fonts, size of font, spaces, etc.).

- *search reading*, the technique of looking for a specific piece of information, e.g. looking for a specific phrase in the text, in what type of context, etc.
- *receptive reading*, the technique of an attentive reading, when the reader thinks about what s/he is reading. It can be very slow.

It is very useful to vary the reading techniques within the training according to the purpose of reading. And before reading it is possible to utilize the variety of some pre-reading activities helping thus comprehend the text.

3.3 Reading strategies

It is also important to support the development of reading strategies. If the reader purposefully selects the reading technique and can utilize it, we can say s/he utilizes a strategy. Here are some of them:

- SQ3R (Survey, Question, Read, Recite, Review) based on pre-reading and retelling the text,
- PLAN (Predict, Locate, Add, Notice) based on mind mapping the key words, localizing the known and unknown passages,
- KWL (what you know, what you want to know, what have you learnt),
- Compare and Contrast, etc.

4 Presentation skills development

Currently, the education aims at changing the traditional and encyclopaedic system into more creative one, providing thus focus on action and personality presentation. When speaking about presentation skills, it is necessary to add, that they are an inevitable part of speaking skills. Presentation skills are particularly trained to support the scientific paper or poster presented at the domestic or international forums.

Electronic presentations (in PowerPoint, pdf, Prezi) represent a modern way how to make the audience more familiar with author's contribution. The aforementioned computer programs allow preparing an impressive audio-visual presentation and thus considerably increase the impact of the topic presented.

By the start of the doctoral ESAP course, the students have already passed four semester training in English for Science and Technology where they have trained and efficient an defective presentation delivery on simple topics, therefore, during the doctoral study they can focus on precise elaboration and delivery. The content of the submitted presentation should reflect the doctoral student's research and comprise, similarly as the scientific paper, the introduction, the aim of dissertation thesis, methods and materials used within the research, analysis of achieved results, conclusion and discussion.

5 Writing skills development

STU MTF doctoral students similarly as the university teachers and researchers have frequently prepare a scientific paper, abstract poster or another piece of academic writing. As aforementioned the skill of academic writing, i.e. know how to write an appropriate text for a specific purpose is considered to be the most difficult skill to master not only for doctoral students but also for their teachers if they want to disseminate e.g. the research results in written. Within the PhD. course there is not a lot of time to cover all text kinds, the focus is on the most required kinds of texts they will need in their future academic career such as scientific paper, abstract, review and dissertation thesis.

First, it is important to mention that the main and most important prerequisite of writing a scientific paper is good knowledge in the related field of science. Within the English for Specific Academic Purposes course at the STU MTF, the English practitioners concentrate mainly on the appropriate structure as adopted by the international standards for writing papers for domestic as well as international journals and conferences, i.e. IMRAD style which includes Introduction, Methods/Materials, Results and Discussion. The student has understand the relationships between and among words, including subject-verb agreement, pronoun reference and verb form and tense, then manage grammatical structures so that s/he can utilise correctly the adjectives or adverbs, comparative structures (such as neither and nor) and other phrases used to describe, modify or compare. What is more, the student has to manage the level of the sentence and use appropriate

structures to indicate relationships between and among sentence components as well as s/he should be able to manage the building the paragraph and distinguish the relations of sentences within.

The other types of writing trained are abstract and annotation which are quite short; nevertheless, in these short texts the students usually make mistakes. All of these pieces of writing can be trained by constant writing; the more the author publishes, the better the students' publications are. The teachers instruct the students not to use long and complex sentences, and write comprehensively and economically. Needless to say, that we also comment on ethics within academic writing so that the doctoral students are aware of copyright legislation.

6 Conclusion

Finally, it is important to say that the PhD. course proposal is very beneficial for both the students and their supervisors. Nevertheless, there is still possibility where to go on further, particularly if we want to cope with innovations in teaching. One of them is represented by CLIL (Content and Language Integrated Learning) as the current requirement of the tertiary education calls for teaching in English so that also foreign students can be attracted to the study programmes offered at the Slovak universities.

Regarding the relation of CLIL and ESP, in terms of principles, attitudes and approaches, "CLIL does not represent *a revolutionary change* in education as it actively flows from the way of schooling in some European bordering regions. She also states that it is derived from methodologies such as ESP as one of the most widely spread methodologies of bilingual education. The term CLIL has been used since the nineties years of the 20th century, however, the integrated teaching of a language and a subject (as a methodology of bilingual education) was realized earlier" (Kováčiková, 2012, p. 104). In addition, "it seems that ICT tools can bring a solution to assist CLIL teachers or teachers in general in their efforts to make progress in study fields they perceive they are weak at" (Hurajová, 2013, p. 104).

Finally, while preparing the course for doctoral students it is not expected that the teachers are experts in the related field; however, it is supposed that they have communicated with the subject-specific departments and learnt about the necessary requirements for the PhD. Study outcomes related to foreign language. Needless, to say they should have academic teaching experience, and be highly professional in what they do.

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