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Skills for Successful LSP Learning: Creativity, Enthusiasm, Flexibility, Resourcefulness

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Abstract

Formulating clear goals and tasks of the study program as well as learning outcomes to be reached is the major precondition in ensuring high quality education and training of the students. In the context of language learning, Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR) has been the major reference point for the language educators since 1970-s. Although CEFR provides comprehensive information to ensure unified approach to teaching, learning and assessment, it does not account for specific language skills required from the users of languages for specific purposes (LSP). That is the reason why in 2004, Riga Technical University together with the partners from five European countries – the UK, Estonia, Germany, Latvia, and Lithuania developed a handbook for reconciling the CEFR descriptors and requirements with the skills and competences to be developed and the learning outcomes to be reached in teaching LSP at technical universities in the partner countries.

In the last decade, the learning outcomes to be reached in learning LSP have had to be reformulated to meet the needs of the modern knowledge society. Language skills and competences to be possessed by a contemporary engineer have to reflect the growing tendency for interdisciplinarity and transdiciplinarity of studies and research.

Pursuing the academic and scientific excellence in the multilingual environment the formulation of the learning outcomes for the students of the interdisciplinary programs involves not only developing their critical and analytical thinking skills, but also teaching them to approach the process of decision-making and problem solving creatively, employing innovative methods and sharing best practices efficiently. In this regard, the descriptions of the learning outcomes for the courses in languages have been updated to position them in the multifaceted context of life-long learning considering the opportunities offered by e-learning tools.

The current study is dedicated to the discussion of the changes in the contemporary requirements put forward for language skills and competences to be possessed by engineers in the multilingual environment and in the context of knowledge intense economy. The multimodal teaching methods that involve not only problem-oriented interactive tasks but also extensive use of e-learning tools applied in educating and training engineering students of the interdisciplinary study programs at Riga Technical University are discussed and exemplified considering one of the recently launched study programs Adaptronics, Financial Engineering, and Building Entrepreneurship.

Introduction

Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR) [3] has provided a comprehensive platform for assessing language skills and validating them across countries and institutions. Being a major reference point, CEFR does not fully account for the specifics of teaching and assessing LSP skills. In 2004, QUALSPELL project within Leonardo da Vinci scheme was implemented with an aim to review the existing test practices, agree on the procedure for designing test specifications for each of the four language skills in compliance with the CEFR in order to unify foreign language examination requirements at tertiary level educational institutions in the participating countries – the UK, Estonia, Germany, Latvia, and Lithuania. Since then, the Institute of Applied Linguistics of Riga Technical University has implemented final examination according to the guidelines laid out in the Handbook of LSP Examinations [5] developed as a result of the project. Test specifications and learning outcomes have been formulated considering the LSP learning at technical universities in particular.

Nowadays, there is a need to reconsider and adjust the aims, tasks and learning outcomes of LSP courses taught at the tertiary level in compliance with the needs of the contemporary knowledge intense economy. The growing mobility of students calls for the necessity to re-assess their skills required for successful learning of LSP and evaluate them against the demands of the contemporary educational platforms in the interdisciplinary and, frequently, multilingual setting. The set of integrated language-based skills should be considered and updated comprehensive specifications for their

assessment should be developed. Engineers should be taught to use language as a supporting tool in performing their professional functions – leadership, management, knowledge generation and transfer, cooperation, and coordination.

Engineering students willingly expand the range of their language skills being aware of the demands of the international labor market and academic community. It may be maintained that the level of motivation among the students in Latvia is very high, they actively employ the opportunities offered by international exchange and internship programs. If students understand how particular activities facilitate development of definite skills, and how they will benefit from being proficient in a certain area, they will be more motivated to participate and provide feedback within these activities [6].

The structure of CEFR allows for a certain degree of freedom and flexibility in designing curriculum within a certain academic setting. LSP curriculum should be designed to develop terminological competence, text analysis skills within a professional discourse, taking into account intercultural constraints (conflict management), employing e-learning tools, and operating within new learning and working environments.

The increasing internationalization of the labor market imposes special requirements with regard to linguistic skills and competences to be possessed by a competitive engineer. The set of these skills has changed along with the change of the paradigms of industrial economy to the recognition of the needs of the contemporary knowledge intense economy and knowledge society [2]. Nowadays, in formulating the learning goals there has been a shift from receptive skills to the productive skills. Previously, the knowledge of domain terminology, ability to read and comprehend professional literature, instructions and manuals were considered the main competences to be developed in the process of LSP learning [4]. At present, a highly qualified engineer is supposed to be a competent user of numerous terminologies of different fields due to the interdisciplinary character of modern engineering [1]. They should also be capable of interacting within multilingual teams, generate and disseminate knowledge, participate in the development of research projects and advance their qualification at the foreign educational establishments. Thus, in order to reach excellence in professional performance, an engineer should develop advanced communicative skills, content and terminology management skills.

Information or content management skills have been integrated into the curriculum of LSP learning courses to account for the growing volume of information a contemporary engineer has to deal with. The entire range of sources on engineering is available in the foreign languages, in English in particular. Engineers should be capable of not only reading and comprehending the gist and the details of the text in the foreign languages; they should critically evaluate the content, extract the relevant information, relate it against their background knowledge and integrate the new information within one's world and professional knowledge. Thus, it is essential to develop analytical abilities and the ability to organize knowledge. In this regard, the development of pragmatic competence should be set as one of the main aims of an LSP course curriculum, and thematic development in the field(s) of specialization should be reflected as one of the key learning outcomes. E-learning tools enabling to construct semantic webs and mental maps can be used to facilitate this process.

Formulating learning outcomes with regard to linguistic competence, vocabulary range and vocabulary control in particular, it is the terminological competence that should be primarily addressed. It is essential to specify that the set of particular vocabulary knowledge to be developed has expanded considerably. For the contemporary learners vocabulary range concerns not just the vocabulary size being in his/her possession reflecting his/her knowledge of various types of meaning (denotative, connotative, referential, etc.), but also the knowledge of various lexical classes (terms, professionalisms, different instances of general vocabulary use). Whereas vocabulary control refers not just to the vocabulary depth concerning the linguistic accuracy of the vocabulary use, but rather to the ability of the learner to balance the appropriateness of the vocabulary governed by the register conventions and the acceptability of the vocabulary chosen within the given communicative setting. Therefore, a student should not be just capable of using a definite set of lexical items within a specific technical field, but should be aware of their formation patterns, both morphological and semantic, in order to be able to deal with new and/or non-equivalent meanings and know how to deal with the set of core terms of other scientific domains within interdisciplinary fields. Moreover, students are expected to be aware of such aspects of professional language use as status of a lexical item – standardized term, professionalism, element of professional jargon – to be able to fit the requirements and conventions of the particular genre and register within the relevant context as prescribed by such CEFR criterion as vocabulary control. Finally, an engineering student should be informed about available terminological resources and know how to use them efficiently.

The level of terminological competence required from the student will differ depending on the level of studies – undergraduate, post-graduate or doctoral. Respectively, the learning outcomes should be

formulated reflecting these differences with regard to the level of the prior knowledge. In case of doctoral students, the task of the teacher is not to teach terminology as such, but to teach terminology development and management principles.

The range of communicative skills to be developed should also be adjusted to the needs of the professional environments. Within the set of interactive and mediating skills, apart from turn-taking and cooperating skills engineering students should develop the leadership skills and ability to cooperate within the multilingual and multicultural environment, coordinate processes, resolve conflicts and maintain an adequate degree of socio-linguistic appropriateness. Problem-oriented tasks and activities developing presentation skills to perform professional functions, e.g. research, projects, negotiations, fundraising, using multimedia are one of the most efficient tools in developing these skills. Formulating learning outcomes with regard to communicative competence it is important to consider that although LSP is less culture specific, engineering students should also advance their intercultural competence, they should develop awareness that communication within a mono-cultural environment will be very different from the multicultural one.

Case Study: Designing Curriculum for an Interdisciplinary Program

Financial Engineering is one of the interdisciplinary study programs implemented by Riga Technical University. It is a good example of interfaculty cooperation, as it is realized by two RTU faculties – the Faculty of Computer Science and Information Technology and the Faculty of Engineering Economics and Management. The range of thematic fields covered by the program includes mathematics, statistics, and financial theory, IT solutions for financial management and analysis, and insurance. The development of terminological competence is the focus of the LSP course curriculum, which is complicated by the fact that the students should master terminologies of several fields. For example, within a class dedicated to cyber fraud and money laundering, they should develop understanding of the meaning and contextual use of numerous polysemic terms, e.g. *warrant* (as used in law, politics, international trade), *security* (stock exchange, banking, occupational safety), and *return* (general vocabulary, taxation, financial performance).

Moreover, in case of financial and accounting terminology, students should be sensitive to the national varieties of the relevant ESP as British and American accounting English display considerable differences in term use, for example, *profit and loss accounts* (Br.E.) vs. *income statement* (Am.E.); *accounts receivable* (Br.E.) vs. *debtors* (Am.E.), *social security* (Br. E.) vs. *welfare* (Am.E.). Both varieties of ESP are characterized by the application of professional jargon, slang and idiomatic expressions and that means additional emphasis should be made on the development of socio-cultural and pragmatic competence.

Learning outcomes for an LSP course on Financial Engineering have been formulated in accordance with the goals and objectives of the study program: Students can use complex, integrated methodology working with texts, can analyze texts, tables, diagrams, graphs, extract and comprehend relevant information; Students can use terminology commenting on the texts and delivering presentations, take part in discussions on professional issues. Graduates of the program should develop certain skills and competences to perform the stated professional functions, the role of the language instructor is to ensure they can perform these tasks in a foreign language, thus promoting educational excellence.

Concluding Remarks

The changes on the contemporary labor market call for the greater flexibility on the part of the learners and the necessity to adapt to both the learning environment (classroom and e-learning environment) and the continuous upgrade of the working arrangements. It is the constant seek for the balance between the identified expected behavior and the ability to adjust to the norms and demands of the assigned social and professional role. Therefore, the insufficiently designed study courses would simply impose certain guidelines to fit a given framework, while intelligently developed curriculum would contribute to the advancement of learner's autonomy required to successfully and efficiently operate within academic and professional setting.

The changing learner expectations are reflected in the learning outcomes of the new interdisciplinary study course implemented at RTU, the outcomes are motivating and encouraging rather than prescriptive and regulatory. Learners are guided to choose their own way of solving the task rather than being pushed towards one and only possible solution; they are asked to express their independent opinion rather than being expected to reiterate the already existing points of view; they are taught to perceive any result as a step forward rather than classifying or labeling them as the success or failure. In other words, the skills acquired during the learning process should establish the solid foundation to proceed to the range of goals in all spheres of life.

References

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