Technical Writing: from Communicative Competence to Performance

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1. Introduction

Since 2004, the year when the Republic of Latvia became a Member State of the European Union, it has been seeking to modify its system of education, especially at the tertiary level, to comply with the requirements of the globalised and multicultural community it has entered. One of key areas of education that is undergoing continuous updates and upgrades is the language instruction. Foreign language competence, or rather communicative competence [4] in a foreign language (FL) is one of those that build up a full competence package that is essential for young professionals both during the study process and afterwards, when they enter the world of work. Thus, the main objective of every FL instructor in Latvia nowadays is to tailor the language acquisition process to the requirements of the learner situation and target needs to get at the end of the course a young professional who is 'fully equipped' with a set of knowledge, skills and characteristics [5] and capable to use them efficiently in all contexts. A rapid development of ICT (Information and Communication Technologies) offers more and more opportunities to use the multimedia and social media tools in FL acquisition, making the process more interactive and student-oriented. In this context, the importance of written communication competence comes to the foreground.

2. Materials and Methods

The aim of the present study is to analyse the learning situation at the Faculty of Engineering of the Latvia University of Agriculture in order to identify the lacks and needs in Technical writing, which forms a part of an ESP (English for Specific Purposes) course 'English for Engineering'. In order to do so, the author uses the following research methods and tools: theoretical and empirical literature analysis, informal interviews, observation, testing, case study and inductive data analysis. The research outcome is to find ways to modify the study process so that the students improve their general FL writing skills and acquire written communication competence.
The theoretical basis is formed by competence theories by Habermas, Krashen, Hymes; communicative competence in foreign languages (Savignon); writing skills development theories (Byrne, Richards and Rogers; Brookes and Grundy); developing writing skills for engineering (Blake and Bly, Fiorito, Cooper) and studies on technical writing by S. Shneider and S. Belic.

2.1 Technical writing and communication

Technical writing is a specific type of FL writing, which is above all subject to strict formats and mechanics [6] and the use of field-specific terminology. The purpose of technical writing is to convey scientific and technical information in a clear, non-ambiguous way. The linguistic variety is of minor importance, while clarity and brevity of the message are. However, this is true for certain types of technical writing settings, such as technical descriptions, instructions and manuals, graphical information descriptions, etc.
There is another category of settings that can be marked as social, which require more than the awareness of the 'mechanics' of technical writing, but involve other contexts, such as cognitive, social, professional and other [7]. Moreover, it suggests the interplay of contexts, because written communication is normally a multidirectional process that requires a minimum of two participants and suggests a message – response (feedback) schema. Cooper [8] defines technical communication as 'writing that gets things done', thus highlighting its functional competence. Moore [9] distinguishes two major purposes of technical communication: instrumental and rhetorical. The former notion is similar to 'technical writing' as it was defined earlier in this paper, and its function is 'mechanical' transfer of science and information to the target audience. The latter suggests a communicative situation, thus, more focus on the language in its social and functional use.
The communicative situation or communicative act [10] features, among the rest, such essential components as norms and ends, key and genre and act sequences. Norms would determine the qualitative and qualitative aspects of the written 'product', key and genre would add linguistic and stylistic relevance, act sequences would help to generate and construct the content, and ends would specify the desired outcomes. As a result, one gets a sample of written communication which is to be functional and efficient in a required context. This is the schema the author of this paper seeks to apply in the technical writing classroom in order to foster the acquisition of technical communication by the students.

3. Discussion and conclusions

3.1 Student population and the learning situation

The student population or the target population of the present study is comprised of 75 students of the Latvia University of Agriculture who study Civil engineering and Mechanical engineering. All of them are in their first academic year with no previous degree in the field. All the students have passed a compulsory exam in General

English completing their secondary education. In order to perform successfully in the ESP classroom, the students should manage the FL at not lower than level C, level D would require some additional training in General English in order to cope with the course.

Though Latvia has not yet adjusted its FL levelling system to the European one developed by the Common European Framework of Reference for Languages (further CEFOR), there are six levels that might correspond to the European ones as follows: A would be equivalent to C1+, while F – to A1+. The table below shows the resume of EFL examination results in all Latvian schools in the year 2011 passed by 22 174 secondary and vocational school learners.

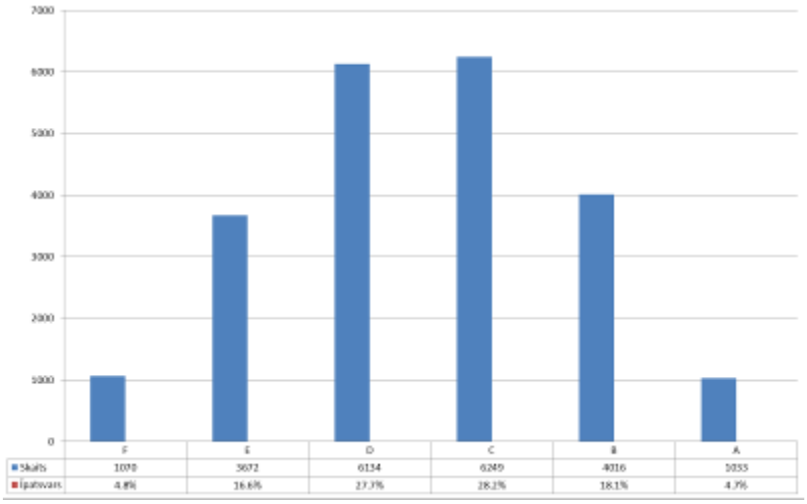

Fig.1. EFL 2011 final school exam results distribution by levels across the state [11]

As can be seen form Fig.1, the division is rather uneven, yet there is a distinct pattern: 78.7% of the learners possess level D and above, out of which 51% – level C and above. This shows that these students comply with the requirements of the target situation and it is a good basis for further FL development at tertiary level in the context of a professional language course. Fig.1 features cumulative results for all secondary education institutions across the country, and the evaluation embraces all four language macroskills, i.e. reading, listening, speaking and writing. As the present study is concerned with developing technical writing, the histogram below (Fig.2) presents the results for this skill only. X axis shows the evaluation in per cent, while Y – the number of students. The pattern might seem similar to that of Fig.1 featuring the highest number of students in the central section. However, the 'extremities' reflect very important facts. More than a half of all students (~ 13 500) completed successfully 50% and less of FL written assignment requirements. Compared to other languages skills, writing traditionally takes the lowest position in terms of evaluation results.

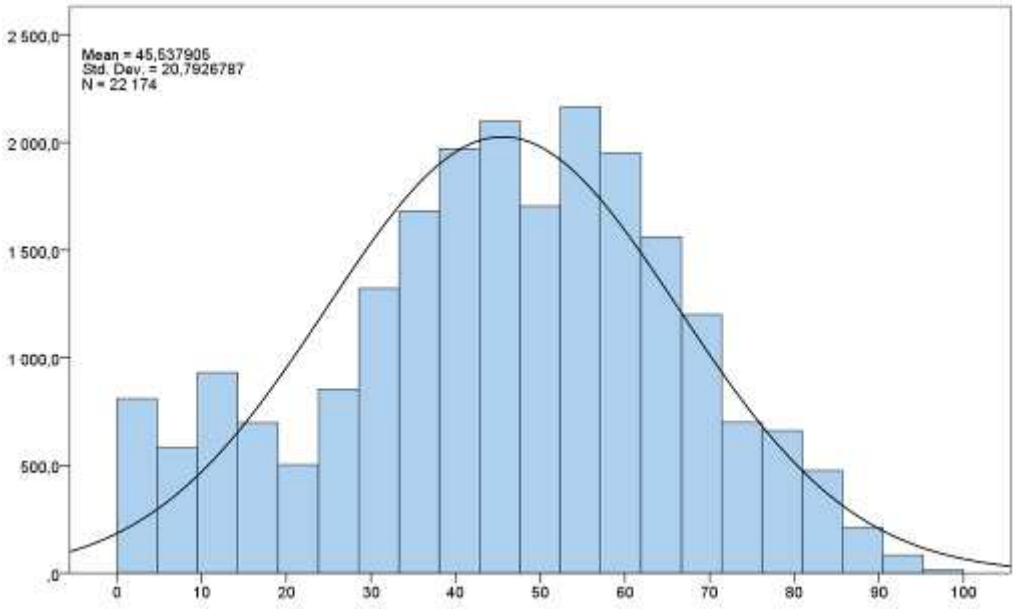

Fig.2. EFL final school exam results in writing [11]

This is also true for the target population of this research. Though there is no entrance exam in EFL for university students in most HEI in Latvia, at the University of Agriculture they are tested twice per academic year, i.e. midterm test and final examination after completing their two-semester long ESP course. The distribution of results across the student population normally shows 40-50% students per group whose evaluation is 50% and less of the maximum possible. Such tendency requires serious modifications in the technical writing teaching and learning process.

After testing, the students were informally interviewed about their feelings about their results and attitudes to Technical writing. The discussion revealed the following. The learners believe that major reasons for the lack of progress in FL writing are: lack of background writing instruction at the secondary level, lack of communicative element in the process, lack of experience, lack of 'real-life' purpose for writing and fear of errors and teacher evaluation. Three focus areas that require urgent alterations were defined: a) bring the technical writing to the level of technical communication; b) involve more instruction accompanied by 'hands-on' assignments; c) stimulate the students' independent learning, especially out of class. These are aimed at increasing the motivation to practice writing, reduce the stress caused by evaluation, and make the learning more independent and self-reflective. The latter could be achieved if the students are placed in 'real-life' settings, which is possible ifICT is involved in the process and serves as a tool for developing the communicative competence in technical writing.

Practically, it means that formal instruction takes place in the classroom: the students learn the formats and mechanics of technical writing and do some practical exercises on various linguistic and functional aspects of it. They also practise technical communication techniques under the teacher's guidance in the form of pair- and group-work. Independent work is done out of classroom: the students receive the assignment based on previous classroom instruction, which is aimed at practicing technical communication in 'real-life' settings. The students may choose the form (e.g. e-mail, online forum commentary, microblogging, etc.) and the theme (within their field of study) themselves, as this type of activity is not formally evaluated. Such an approach makes the students involve their personal interests into the process of learning, then, it is stressless yet practical, and allows for individual time-management.

This approach was introduced in November 2011, and the first official results are expected in May 2012. Meanwhile, the observation and occasional discussions with the learners revealed the following.

3.2 Conclusions

Regular instruction on formats and mechanics of technical writing help the students understand the principles of writing as knowledge transfer by language means. Followed by controlled practice, they stimulate the development of communicative competence that enables further use of the techniques in a variety of settings independently. Semi-controlled classroom practice in groups or pairs gives a chance to apply the communicative techniques practically in 'a safe environment'. Performing communicative tasks together with their groupmates reduces stress and lays a basis for more confident performance in 'natural' settings. Independent practice sufficiently increased the motivation to write in FL, as the learners are interested in the issues they discuss, they see the 'real-life' purpose of their writing and they get a feedback (not evaluation) from other users of the Internet communities and other resources they use in their independent practice. The most important preliminary result is

that due to regular exposure to ‘real-life’ contexts, the students’ writing became more ‘natural’ and correct. After having received the first official results, the author will continue the research in order to help the students of engineering sciences communicate effectively in learning and professional settings.

References

[1] Richards, J.C. and Rodgers T.S. 1986. Approaches and methods in language teaching: A description and analysis. Cambridge: Cambridge University Press. 167 pp.
[2] Savignon, S.J. 1983. Communicative competence: theory and classroom practice; texts and contexts in second language learning. Reading, MA: Addison-Wesley. 284pp.
[3] Belic, S. Social Aspects of Engineering. http://www.scribd.com/doc/65898925/Belic (retrieved 19.03.2012)
[4] Habermas J. 1999. Towards a theory of communicative competence. In: Perspectives on Philosophy of Science in Nursing. Polifroni E.C., Welch M. Lippinkot Williams & Wilkins 1999. pp. 360-370.
[5] Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Available at: http://www.coe.int/t/dg4/linguistic/source/Framework_EN.pdf (retrieved 12.03.2012)
[6] Miller, C. 1979. Academic journal of writing. A Humanistic Rationale for Technical Writing. CE 40. 610–617.
[7] Schneider, S. 2005. [Electronic Version] Technical Communication Quarterly, 14(4), (447–467). Retrieved from: https://www.msu.edu/~jmonberg/415/Schedule_files/Usability%20Rhetoric%20Sociocultural.pdf. (retrieved 09.03.2012)
[8] Cooper, M.M., Holzman, M. 1989. Writing as Social Action.
[9] Moore, P. 1996. Instrumental Discourse is as Humanistic as Rhetoric. 108 pp.
[10] Hymes, D. 1974. Foundations of Sociolinguistics: an Ethnographic Approach. http://www.utexas.edu/courses/stross/ant307_files/components.htm Retrieved 09.03.2012.
[11] EFL centralised exam result division by levels in all Latvian schools, year 2011. Available at: http://visc.gov.lv/eksameni/vispizgl/statistika/2011 (retrieved 12.03.2012)