New developments in ESP teaching and learning at science faculties of Lomonosov Moscow State University

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Abstract. Moscow State University's own educational standards stipulate that its graduates achieve level B2 of foreign language proficiency, which promotes reconsideration of traditional methods of teaching, control and assessment. Teaching a foreign language at the university level means, in the first place, teaching language for specific purposes, in our case, English for specific purposes (ESP). An ESP certification examination in the standardized international format for the bachelor's degree course of English and a scientific interfaculty student conference held in English for the master's degree course proved their efficiency as novel forms of exit control and assessment and became the key factors in improving the entire teaching process at several MSU science faculties.

Keywords: ESP, ELT, exit control, assessment, MSU science faculties, level B2, examination format

In accordance with Lomonosov Moscow State University's own educational standards, since 2011 it has become mandatory for graduates of integrated master's degree and specialist degree programs of all faculties, including natural sciences, to achieve foreign language proficiency level B2 of the Common European Framework of Reference for Languages (CEFR) [Polubichenko 2014]. In international practice, level B2 (Vantage) is considered to be sufficient for those receiving higher non-linguistic education in a foreign language: "A consensus seems to be emerging that B2 would be adequate, and it is B2 that is specified for English-medium graduate degree programs at some universities" [Frumina, West 2012: 45]. Besides, the standards set the lower limit to the total workload of the discipline "Foreign Language" as 20 credit units, and this minimum is hardly ever exceeded at science faculties. Thus, foreign languages departments (in reality, it is almost exclusively English departments, as this lingua franca of modern science has long since displaced other foreign languages from almost all science faculties) are faced with the challenge of raising the often very low initial level of foreign language competence of first-year students (from zero to A2) to the desired level B2 that characterizes the Independent user.

The key to solving this problem at the Faculty of Biology became a radical *revision of the forms of exit control* of English language proficiency in both the bachelor's degree and integrated master's degree programs. We proceeded from the principle that what is going to be controlled has first to be taught; thus, having chosen the forms of exit control adequate to the task of achieving the required level B2, we expected to trigger overall changes of the curricula, teaching materials, evaluation criteria, assessment tools, etc.

In the undergraduate course of English, it was decided to abandon the traditional format of the final exam (written translation of a biological text from English into Russian (with a dictionary); summary of an English biological text in English; listening comprehension of an English biological text (questions to the text and/or its discussion); discussion of the student's academic interests, etc.) in favor of the internationally standardized format of B2 foreign language proficiency examinations. This being an ESP course, however, the subject matter of the examination texts had to be adapted to the professional needs of the students. Having introduced measurable parameters of multidimensional scales of assessment and standard criteria thereof, the new format allowed to unify the approach to well over 200 students from different academic groups and different departmental specializations, thus contributing to greater objectivity of assessment.

A pilot exam in the new format was first held in 2014 with 20 volunteers; in 2015, more than half of the undergraduates preferred to take the exam in the new format. Their results were thoroughly analyzed and widely discussed by the ELT community at conferences and in professional literature; students' preparation for the final exam constantly improved: the assessment criteria were introduced and explained to the students; new teaching materials were produced and included in the teaching process. Since 2016, the final ESP examination checking the level of communicative competence in the field of biological sciences has been held exclusively in the international format of standardized B2 English language proficiency examinations. Certificates confirming the holders' level B2 proficiency in English for specific purposes are issued with three types of grades:

- 86-100% A
- 76-85% B
- 61-75% C

 \leq 60% - Fail (in this case no certificate is issued).

The voluminous examination takes two days and consists of five traditional parts with traditional types of tasks in each of them: Reading, Use of English (vocabulary and grammar test), Listening, Writing, and Speaking, each contributing an equal share of 20% to the final certification grade [Polubichenko, Fursova 2018].

When translating the certification grade into the English course mark put in the diploma, one more language activity is taken into account due to the traditions of Russian higher education and its specific value for the future career and professional development of university graduates. The case in point, for obvious reasons absent from international language exams, is translation (in our exam, translation of scientific literature on biological subjects from English into Russian). The weight of this component is no longer 25% of the diploma grade, as it used to be the first few years of assessment in the new format; at present, it only comprises 15% and is calculated as the arithmetic mean of the three marks for translations that are mandatorily taken for credit at the end of each of the last three semesters of study. In some cases, translation helps to improve the diploma grade, since translation skills, important for future work, have traditionally been a strong feature of the graduates' language training.

The advantages of the certification exam format as compared to the traditional one became evident in the very first years of its implementation. As expected, the English proficiency level of biology students rose, though the major technical course parameters remained the same: the sum total of 208 contact hours of the full undergraduate course of English spread over 7 semesters (2 academic hours per week throughout the course). Among other factors, this success can be attributed to the clear and precise examination requirements and transparent assessment criteria communicated to students well in advance of the exam, which allows them to fully realize the extent of their own responsibility for the results of their studies and intensify independent work.

The objectivity and professionalism of assessment have also noticeably increased. Annual preparation of several sets of examination materials and conducting the exam by international standards became a truly collaborative effort of the whole English department, resulting in the teachers' retraining and competence development. All teachers are now capable of assessing multiple aspects of students' language proficiency according to unified sets of internationally recognized criteria and following standard procedures. Writing is double-checked in anonymous coded papers; Speaking is also taken by two examiners, one of whom talks with the student, while the other evaluates the student's language skills. The need to provide the intensified independent work of students with a sufficient number of adequate course materials led to creation of new textbooks and manuals on various aspects of language training, including electronic learning aids placed both on personal teacher websites and on the MSU distance education platform *distant.msu.ru*.

The example of biology students proved the effectiveness of the new form of assessment for an undergraduate English course, and the certification exam was gradually extended to two more MSU science faculties, those of biotechnology (since 2018) and soil science (included in the training program for students enrolled in 2021).

Biology students who manage to meet the requirement of the educational standard and master ESP at level B2 (grade A) while still in the bachelor's degree program are given the opportunity to choose German, Spanish or French as a second foreign language in the integrated master's degree program. The remaining students as well as those B2 students who opt to continue learning English, proceed with it in the master's program for three semesters with the same intensity of 2 hours per week. However, the focus of their studies is now shifted from the normative to the functional aspect of language mastery, i.e. the ability to effectively use the lingua franca of modern science to obtain relevant scientific information from oral and written sources and share the results of their own novel research with the international scientific community. It is only natural under the circumstances that the form of exit control and assessment of the formation of English language communicative competence at this stage of university education became the inter-faculty student scientific conference "Life Sciences in the 21st Century: Looking into the Future" held in English [Shevyrdyaeva 2018]. Every January since 2018, the conference offers young researchers an opportunity to report on their findings, discuss them with the colleagues from their own and other faculties and departments and, for the best presentations, to have the abstract of the paper published. In addition to these standard outcomes of any scientific conference, this particular one serves as a testing ground for the participants' mastery of English and communicative skills that get measured according to an elaborate system of unified criteria, correlated with international scales of assessment of foreign language proficiency, by a competent team of English language teachers. While for some of the participants testing their English may be no more than just a matter of curiosity and an additional bonus, for master's degree biology students it is the final examination at the end of their intensive 3-semester ESP course.

The conference-examination assesses the functional knowledge of English as a means of written and oral professional communication, namely:

1. Skills of writing scientific texts of small genres (abstract of 350-400 words submitted at registration; presentation slides);

2. Ability to prepare a 10-minute public speech presenting the results of research to the academic community;

3. Mastery of spontaneous academic speech (asking and answering questions; participation in discussions);

4. Listening comprehension skills (understanding other students' presentations and questions, positions of discussion participants).

The conference participants are ranked in points (maximum - 100: 20 for the abstract, 50 for the presentation and 30 for participation in discussions) which are then converted into exam grades to go in the master's diplomas:

86-100 points - 5 75-85 points - 4 60-74 points - 3 Under 60 points - 2

Using the scientific conference as a form of final ESP control at the master's level fully justified itself, demonstrating the same advantages that the introduction of the undergraduate ESP certification exam gave: the ESP proficiency of master's students significantly increased as well as the objectivity of its assessment. Moreover, other foreign languages returned to the biology faculty in master's degree programs; and in 2021, a German section worked at the conference for the first time, to be followed by a French and a Spanish sections in the not too distant future.

All these positive developments encouraged the Faculty of Soil Science to follow suit and completely overhaul the approach to ESP teaching and learning at their integrated master's degree programs. Since 2021, the conference-based form of ESP proficiency exit control has become a must, which inevitably entails changes in teaching methodology, classroom activities and content of teaching materials.

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