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**English for specific purposes  
course for «Thermal engineering»  
specialty: needs analysis**

The given article presents the needs assessment project for ESP course conducted in the framework of «E-teacher Scholarship program». The needs assessment included such aspects as target situation analysis, present situation analysis and context analysis. The needs assessment project is conducted in order to design the syllabus for the students of the specialty «Thermal engineering». The article reveals the goals of the discipline «English for specific purposes» for students with account of their professional distinctiveness. The data are taken from the materials collected at students' questionnaire, observation, interviewing «Thermal engineering» teachers. The article also considers ESP challenges faced by university teachers. The absence of the placement test, poor English language competence of content area teachers conducting the lesson, few practical hours influence the quality of material acquisition.

**Key words:** English for specific purposes, needs assessment, target situation analysis, present situation analysis, context analysis, goals of discipline, methods of data collection, teaching challenges.

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**«Жылу энергетика»  
мамандықтарына арналған  
«Арнайы ағылшын тілі»  
қажеттіліктерді талдау**

Берілген мақалада «E-teacher Scholarship Program» стипендиялық бағдарламасы бойынша «Арнайы ағылшын тілі» пәнінің бағалау қажеттіліктерге сәйкес жобалық жұмыс көрсетілген. Қажеттілікті бағалауға бір талай аспектілері еңгізілген: оның арасында мақсатты жағдай анализі, ағымды жағдай анализі мен мазмұн анализі. Бұл проект жұмысы арнайы «Жылу энергетика» студенттерінің оқу бағдарламасын құрастыру мақсатымен өткізілген. Студенттер мамандықтарының ерекшеліктеріне сәйкес «Арнайы ағылшын тілі» пәнінің мақсаттары айқындалды. Мақала міләметтері студенттер сауалдамалауынан, зерттеу, байқау, «Жылу энергетика» кафедрасының оқытушыларымен әңгімелесу материалдарынан алынған. Осы мақалада университет оқытушылардың «Арнайы мақсатты ағылшын тілі» пәнін өткізу аралығында кездескен проблемаларда қарастырылған. Оқу бағдарламасын меңгеру сапасына білім деңгейін тексеру кіріспелік тестлеу жоқтығынан, шығару кафедралардың ағылшын тілі оқытушыларының білімінің төменділігінен мен берілген практикалық оқу сағаттарының аздығы әсер етеді.

**Түйін сөздер:** арнайы ағылшын тілі, қажеттілікті бағалау, мақсатты жағдайды талдау, ағымды жағдайды талдау, мазмұнын талдау, пән мақсаттары, деректерді жинау әдістері, оқыту проблемалары.

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**Курс «Английский язык для  
специальных целей»  
для специальности  
«Теплоэнергетика»:  
анализ потребностей**

В данной статье представлена проектная работа по оценке потребностей курса «Английский для специальных целей», выполненная в рамках стипендиальной программы «E-teacher Scholarship Program». Оценка потребностей включила в себя такие аспекты, как анализ целевой ситуации, анализ текущей ситуации и анализ содержания. Проектная работа была проведена с целью составления учебной программы для студентов специальности «Теплоэнергетика». Были выявлены цели дисциплины «Английский для специальных целей» для студентов с учетом специфики их профессии. Данные статьи взяты из материалов, собранные при анкетировании студентов, наблюдении, беседе с преподавателями кафедры «Теплоэнергетика». В статье также рассмотрены проблемы, с которыми сталкиваются преподаватели университета во время преподавания курса «Английский для специальных целей». Отсутствие входного теста на определение уровня, слабый уровень владения английским языком преподавателей со спецкафедр, ведущих занятия, небольшое количество практических часов влияет на качество усвоения материала.

**Ключевые слова:** английский для специальных целей, оценка потребностей, анализ целевой ситуации, анализ текущей ситуации, анализ содержания, цели дисциплины, методы сбора данных, проблемы преподавания.

**ENGLISH FOR SPECIFIC  
PURPOSES COURSE  
FOR «THERMAL  
ENGINEERING»  
SPECIALTY: NEEDS  
ANALYSIS**

### **Introduction**

English for specific purposes course is relatively new discipline in Kazakhstan education context as it was introduced into the Bachelor's degree course curriculum only in 2012. However, this discipline is not new overseas and its theoretical and practical issues have been developed for more than 50 years.

When the discipline was introduced, Kazakhstan language teachers faced the problem of how to deliver the course. The absence of Standard Syllabus for this discipline puzzled the situation. It was absolutely clear that ESP course is different from General English concerning goals and objectives. Now having taught the course for 3 years some vivid mistakes are seen and being corrected.

In the framework of the «E-teacher Scholarship program» provided by the University of Oregon and U.S. Department of State we conducted «Needs Analysis» in order to design ESP course for «Thermal engineering» specialty and diagnose the mistakes that were made before.

### **Experiment part**

There are many definitions to what English for Specific Purposes is. T. Hutchinson and A. Waters define English for specific purposes or special purposes as «an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning» [4, 19]. T. Dudley-Evans and M. St. John write that «ESP means the teaching and learning of English as a second or foreign language which meets specific needs of the learners, makes use of underlying methodology and activities of the discipline it serves and is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre. ESP may be related to or designed for specific disciplines, use, in specific teaching situations, a different methodology from that of General English. ESP may be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level as well. Generally, ESP is designed for intermediate or advanced students and most ESP courses assume some basic knowledge of the language systems» [3, 4-5].

There are different types of ESP. They are English for Academic Purposes, English for Occupational purposes, Business English and others.

Before designing any course it is necessary to conduct needs analysis which is the first step to effective teaching. Needs analysis will help to define the right goals and objectives and to reveal the constraints that lead to fails.

According to J. Brown needs analysis is «the systematic collection and analysis of all relevant information necessary to satisfy the language learning requirements of the students within the context of the particular institutions involved in the learning situation» [1, 14]. J. Richards defines needs analysis as «the process of determining the needs for which a learner or a group of learners requires a language and arranging the needs according to priorities» [6, 52]. Kay Westerfield writes that «needs assessment (analysis) lies at the heart of a well designed, effective ESP course». Needs analysis consists of *Target Situation Analysis (TSA)*, *Present Situation Analysis (PSA)* and *Context Analysis (CA)* [7, 1-6].

### Target Situation Analysis

Term «Target Situation Analysis» was firstly used by F. Chambers in 1980 and he determined it as «communication in target situation» [2, 29]. The Target Situation Analysis is aimed to reveal what learners need to be able to do at the end of the course. The Target Learners of ESP course are second-year «Thermal engineering» undergraduate students.

In order to conduct TSA we set the goals and objectives for the given course. The information was collected by means of Learner and Teacher Questionnaire and method of structured interview.

So, the goals pursued by the course are the following:

Goal 1: to be able to read manuals;

Goal 2: to be able to write lab reports and reports concerning their future job;

Goal 3: to be able to explain visual information or data in written (reports, thesis, articles) and oral forms (presentations, drafts). For example, charts, tables, graphs that illustrate heating and cooling systems, heat transfer etc.

Goal 4: to be able to communicate face-to-face on the professional topics, for example, to discuss engineering topics with foreign colleagues.

Goal 5: to be able to communicate on the professional topics and topics concerning their job via e-mails with their colleagues, customers, authorities.

The list of goals presented above was given by the Target Learner group and the teachers who hold the classes. They were asked what they wanted to be able to do after the completion of the course. They also gave the following reasons why it was important to perform these tasks in English:

Goal 1: It is necessary to be able to read and understand technical manuals because new purchased equipment come from Germany, Canada, China and is accompanied with English instructions, pictures and so on.

Goal 2: 1) Kazakhstan power plants belong to ENRC (*Eurasian Natural Resources Corporation*). *The corporation operates across several countries and employs workers worldwide. Students will have the opportunities to work in foreign branches. So, it is necessary for them to be able to write lab reports and reports in general in English language in order to communicate them successfully to foreign specialists.* 2) Students are going to continue their education in a foreign university. They want to acquire master degree where the instruction language is English. So they can apply this skill during their study.

Goal 3-4: These skills are necessary to present information to foreign specialists/teaching staff at business meetings, daily communication, conferences, lessons conducted in English during their master degree study.

Goal 5: This skill is necessary to work successfully with foreign specialists in country and abroad.

For better and effective TSA it is necessary to interview such stakeholders as Dean of the faculty, potential job employers who can be the head of the organization or the chief engineer, internship supervisor. It could be very beneficial to know what the given stakeholders expect from the students concerning to English language competence.

### Present Situation Analysis

Term «Present situation analysis» was offered in 1980 by R. Richterich and S. Chancerel. B. Paltridge and S. Starfield write that Present situation analysis includes learner's personal information and information about the environment of language teaching. So learner's personal information is considered as factors that can influence the learning process. It can be previous learning experience cultural information, the reason for course attending and its expectations and attitude to language. The examples of the environment of language teaching can be resources, administration issues [5, 327].

English for specific purposes or Professionally-oriented foreign language (the official name of the discipline in Kazakhstan curriculum) is a compulsory discipline i.e. it is must-to-take for all undergraduates despite their specialty. The course consists of 3 ECTS credits. It lasts one semester (3<sup>d</sup> or 4<sup>th</sup> semester). The number of practical classes/hours is 30 per semester, 2 classes/hours per week. The number of tutorials/hours is 15 per semester, 1 tutorial/hour per week. Each practical class and tutorial lasts 50 minutes.

The lessons usually are in the first part of the day (1-6 class), but sometimes a lesson can be the 7<sup>th</sup> class. It starts at 14.35 and students are usually tired and hungry. So, the aspect that needs improvement is timetable. It is better to hold lessons in the first part of the day.

The summative assessment is obligatory during the course. Students take 5 summative assessments: 4 midterm exams and 1 final exam. The assessment is developed by EFL and content area teachers and approved by the head of the departments. The term consists of 2 midterms and students have to take 2 midterm exams conducted by EFL teacher and 2 midterm exams by content area teacher. The final summative assessment has the test and writing form. The midterm assessment can include: a project, a test, an essay, a report and a mix test (speaking, listening, writing and reading).

The nature of the discipline delivered at university is blended. Because the target learners are not employees (working learners), but still they can use gained skills at their future job positions. Besides, this group doesn't have any disciplines held in English language in their curriculum. But there is a possibility that 1) they will observe the lectures by foreign lecturers coming to our university and 2) they will participate in students' exchange program and will go to study to foreign university.

Unfortunately, there is no entrance/ placement test to sit the course. That is why in the groups students are mix-leveled.

The current English level of Target Learner group is B1-B2 according to CEFR. B2 students do not have difficulties in Reading, Writing, Listening and Speaking. What they need is instructions how to perform tasks they face first time and more practice. B1 students have difficulties in Listening, Writing and Speaking. It is explained with the lack of enough practice before entering the course.

The Target group has good knowledge about the content area (Thermal engineering). They are aware of technical vocabulary, thermal process and their specialty realia. It is explained with the fact that they

have had so far the following classes on «Basics of professional activity» (5 ECTS credits), «Academic internship» (1 ECTS credit), «Theoretical basics of thermal technology» (5 ECTS credits), «Thermal power measurement and control» (5 ECTS credits) and other content area subjects.

PSA shows that The Target group wish to improve English for social purposes, study, travelling, job or profession, research, studying abroad.

For better and more PSA we need to research more textbooks, videos, blogs relevant to the field; employers, content experts, colleagues; former students, future students.

The PSA information was collected by means of EAP/EOP Learner Questionnaire, the method of observation and the method of interviewing the content area teacher.

### Context Analysis

The Context Analysis examines the environment in which the learners will be taught. By completing a Context Analysis, the effective ESP practitioner gains information about the resources and constraints that affect course design and learner outcomes.

The potential stakeholders of the course are students (current students of the target group, former students, and future students), content area teachers, faculty administration, EFL teachers, potential job employers, internship supervisors.

These people want the training course to succeed in order to achieve two types of goals: external and internal.

The students pursue the internal goal. They wish to become a competent user of English language in order to practice it free for their personal needs. These needs are various: for travelling, for studying abroad, for social purposes, for career promotion.

The other stakeholders pursue the external goal.

Job employers are interested in hiring the specialists who can speak English fluently due to the profitability. The number of English speaking workers who can successfully communicate with foreign colleagues in written and oral forms will decrease the number of translators who perform the role of mediums and increase the productivity through saving the time.

University/Academic stakeholders need their students to successfully communicate in English in order to:

- attend the visit-professors' lectures;
- perform at conferences;
- participate in academic mobility program (students' exchange);

- get scholarships in different international programs as IREX: Global UGRAD and DAAD;
- represent university at EXPO-17 in Astana city as volunteers.

All these achievements increase the ratings of the faculty in the university and increase the ratings of the university among other universities in the country.

The stakeholders needed to be questioned are potential job employers and internship supervisors. We need to know better what they expect from the students concerning to English language competence and how English speaking specialists will improve the work of the organization itself.

The training is delivered face-to-face. Face-to-face training contributes to better interaction between students and instructors. Face-to-face teaching stimulates better learning through hearing and seeing the materials, live group discussions and immediate feedback.

The course is held in traditional classrooms in the university. The traditional classroom is equipped with desks, chairs, blackboard, chalk, textbooks, articles, manuals and others.

The materials which are used during the course are authentic (content area textbooks, blogs, videos, manuals and other sources) and non-authentic (textbooks and Internet sources used for teaching language).

Teachers grade students in progress e-journals and upload the study materials.

### Discussion

ESP teaching has many challenges. The environment teachers have to work is not ideal. We have to face the constraints that limit our work and do not let us achieve a desirable result.

First of all, as we write above there are no entrance requirements to the course. It is known that the minimal language level for ESP course is intermediate as students often deal with difficult material. The paradoxical is the fact that in their first year (General English course) students are divided according to their language level, but at ESP course they are mixed. A2 students study with B2 students and that makes the teacher's work very challenging.

Another problem is that the number of course hours are too few as we consider. A1-A2 students have to face unrealistic goals and objectives that they need to gain within 45 hours. The time constraints are stressful not only for students but also for teachers as they have to adjust the materials for students. The course time also need to be enlarged for higher level students as within 45 hours students can get only shallow knowledge on the topics provided by the course content, its goals and objectives.

### Conclusion

It should be noted that course hours need to be enlarged and entrance requirements should be introduced.

Third, ESP course is taught by two teachers: EFL teachers and content area teachers. At the beginning it becomes very difficult to share the responsibilities. What is the worst is that sometimes content area teachers' language competence is not enough for conducting English classes, but those who have advanced level do not possess professional knowledge in language teaching methodology.

Fourth, ESP classes must be held in fully-equipped classrooms. For positive impact on learners' motivation and learning the classrooms must be equipped with whiteboards, computers, headphones, overhead projectors, Internet connection and Wi-Fi.

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