

ИНЖЕНЕРНАЯ ПЕДАГОГИКА ИНФОРМАЦИОННЫЙ БЮЛЛЕТЕНЬ

40-го Международного совместного IGIP-COPES симпозиума, который проходил 27-30 марта 2011 г. в г. Сантосе (Бразилия) на базе Университета Санта Сисилия.

В работе симпозиума приняли участие ученые и педагоги-практики в области инженерного образования из России, стран Латинской Америки, США, Европы, Азии и Африки.

Доклады и презентации затрагивали такие актуальные аспекты инженерного образования: как разработка программ обучения, оценка качества, поствузовское образование и докторские программы, подготовка педагогических кадров для технических вузов, гендерные вопросы и возможности самореализации женщин в инженерных областях, иностранные языки и другие гуманитарные дисциплины в технических учебных заведениях, образовательные технологии, работа в проектах, математика и естественные науки в инженерном образовании, научные исследования в инженерной педагогике, информационно-коммуникационные технологии в инженерном образовании и др.

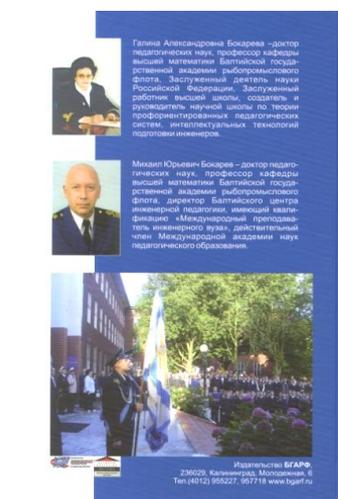
В двух секционных заседаниях «Математика и естественные науки в инженерном образовании» и «Иностранные языки и другие гуманитарные дисциплины в технических учебных заведениях» представители Балтийской государственной академии рыбопромыслового флота сделали доклады:

«Методологическая компетенция инженера», подготовленный совместно Волкогоном В.А., Бокаревой Г.А., Бокаревым М.Ю., Бондаревым В.А.;

«Профессионально-ориентированные курсы английского языка ESP в морском образовании», подготовленный совместно Бокаревым М.Ю., Исмаиловым Э.Э.

В отличие от большинства докладов, которые в основном отражали практический опыт обучения различным дисциплинам в технических вузах, презентация Балтийской академии в секции «Математика и естественные науки в инженерном образовании» была посвящена теоретико-методологическим аспектам инженерного образования.

Был представлен реальный интеллектуальный продукт, разработанный доктором педагогических наук, проф. Бокаревой Г.А. совместно с доктором педагогических наук проф. Бокаревым М.Ю., учебник «Алгебра и геометрия: теория и приложение: Краткий курс лекций по дисциплине «Линейная алгебра и аналитическая геометрия». Учебник базируется на оригинальной дидактико-философской концепции авторов и отражает более чем 30-летний практический опыт преподавания математики в высшем инженерном учебном заведении.



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English in marine education: task-based & communicative approach

The article highlights some of the results of running ESP courses for marine officers at Baltic Center of Engineering Pedagogy in Kaliningrad, Russia

Keywords and phrases: English for Specific Purposes, communicative skills, language proficiency, methodology, competence, approach

В статье освещается опыт применения методики ESP (English for Specific Purposes – Английский для специальных целей) при обучении морских специалистов английскому языку

Ключевые слова и словосочетания: английский для специальных целей, коммуникативные навыки, уровень владения иностранным языком, методология, компетенция, подход

INTRODUCTION

In world marine industry (at least in Europe) nowadays we identify a big shortage of marine officers. On the other hand today Russia still holds a world leading position in coining well-qualified seafarers who are in a great demand all over the world. They meet all requirements but one, i.e. their English is not sufficient enough.

In the article I would like to share the experience of running ESP (English for Specific Purposes) courses for marine officers at Baltic Center of Engineering Pedagogy in Kaliningrad, Russia. The Center administratively functions within the structure of the Baltic Maritime Academy.

It is relevant to remind that ESP refers to the teaching and learning of English for an instrumental purpose – work or study related – and embraces a big diversity of language teaching and learning situations around the world. One of the earliest types of ESP courses was American ASTP – Army Specialized Training Program originally designed to teach Japanese and Polynesian languages to army officers during World War 2. The Course depending on customer's requirements could be both intensive (short term) as well as extensive (long term) and varies from one day or a week to several months.

ESP courses at Baltic Center of Engineering Pedagogy are aimed at improving marine officers' professional communicative skills.

Course details:

Duration – one month

Total number of classes – 21

Frequency of classes – 5 times a week (week days)

Length of one class – 3 astronomic hours (including a 15-minute break in the middle)

Total time extent of the Course – 63 hours

Students – marine officers in the ranks of captains, first mates and chief engineers

Optimum number of students – 10

Objective – to develop students' all four communicative skills: speaking, auditing, reading and writing, provided that 80% of the classroom training time should be devoted to oral communication.

NEEDS & PRESENT SUTUATION ANALYSIS

Needs Analysis are crucial to an ESP course. They enable to find out what students need to be able to do in English as a result of the course. Prior to a course design I have to decide exactly how specific the language needs of the students are. Also important is to conduct Present Situation Analysis to identify the students' capabilities now. The placement tests are of a great help to understand the starting level of their English language proficiency. The results of the tests are very often more or less similar:

- Both in oral and written communication students' level of English with rare exceptions is rather poor (in some cases – next to zero).
- Some of them possess quite a rich vocabulary of Marine English, however the lack of good knowledge of grammar, poor communicative skills in both speaking and writing as well as a rather limited everyday vocabulary prevent them from using the Target Language as a means of professional communication.

According to tests results more or less homogeneous groups are built.

COURSE DESIGN AND METHODOLOGY

When tailoring the course design it is essential to fit the student's needs. I employ a combination of different methodologies especially when the course is extensive. In cases when the study time is short and there is a need for immediate use of the Language I apply a task-based and communicative approaches. For designing and writing course materials it is important to be familiar with the specialist work.

COURSE EVALUATION

Learners are typically adults from marine industry and usually, although not always, motivated. They realize that their professional competence and career advancement is directly dependent on the English Language proficiency. On the other hand they normally take the language course between the business voyages. After 4-5 months at sea no matter how strong their motives are they want to relax, be with their families and enjoy life. So they face a difficult dilemma. And quite often attending classes and doing home work are the last things they desire to do.

On completion of the course students take International Marline Tests.

CONCLUSION

After several years of running ESP courses I come to the following conclusions:

- The ideal course for marine officers should be of two levels: EGP (English for General Purposes) and ESP.
- The EGP would be the basic one and create a grammatical, phonetic and lexical (everyday vocabulary) foundation for the professional English.
- The ESP should completely focus on Marine English and be aimed at developing communicative skills in professional situations.

What I was expected to do when hired first time by a locally based international crewing company is to skip the EGP level and start straight from ESP course. It took me some time to convince the management that I could not possibly do that due to the poor results of placement tests of my potential students. So to meet one of the key requirements of the customer concerning the duration of the Course (i.e. it should be a short-termed one, not longer than one month) I decided to make a compromise and designed a combined course, which was EGP in its essence but incorporated by a professional vocabulary where it was possible.

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Didactic-philosophic concept in engineer training

An original didactic-philosophic concept of developing methodological competence of a future engineer is presented in the article

Keywords and phrases: Didactics; Philosophy; knowledge acquisition; perception; methodology; competence; approach

В статье излагается оригинальная авторская концепция формирования методологической компетенции будущего инженера

Ключевые слова и словосочетания: технология соответствия; Дидактика; Философия; приобретение знаний; восприятие; методология; компетенция; подход

Modern Russian standards of Engineering Education are based on different competences, according to which the targets, content, methods and technologies of training are determined. One of the essential competences among the others is “an ability of self education and developing his/her own professional qualification”.

However the practice proves that the developing of the above mentioned competence requires an integral approach based on achievements in modern Pedagogical Science and practical training of specialists, as well as requirements of industries.

One of the possible ways of solving this global task is a special combination of the contents of training subjects and intellectual technologies of a knowledge acquisition, when developing methodological competence of an engineer.

The results of researches conducted in Scientific-Pedagogic School at Baltic Fishing Fleet State Academy (Kaliningrad, Western Russia) showed that this competence can be effectively developed on the bases of a didactical “intellectual technology of correspondence” as a means of a scientific knowledge obtaining, provided that principles of succession and analogy are applied when obtaining a new theory by generalizing the existing one.

From Philosophical point of view this form of perception is based on identifying the connections of interactions and interrelations among elements that are studied. The functions of the elements create new patterns of unifying of those elements.

From Didactical point of view the “intellectual technology of correspondence” is a pedagogic method, which intensifies all the knowledge acquisition thanks to involving existing methods of perception (such as making analogy and syntheses, abstracting, comparing, etc.).

The “technology of correspondence” enables to develop another philosophical premise of developing methodological competence of a future engineer, i.e. their understanding that the knowledge accumulation is a synthesis within the acquired integral theory and understanding that the form of unifying the knowledge as a system, when the process of a knowledge acquisition includes not only its parts/contents (elements of the whole) but functions of those parts. The functions connect the parts and ensure achievement of the results.

The unity of Philosophical and Didactical concepts makes it possible to move further from the explanatory methodology and to look for new principles of knowledge conveying for developing methodological competence of a future engineer.

The mentioned above concepts found a practical application in writing and publishing of the Course of Lectures “Linear Algebra and Analytical Geometry” (in a series of “Didactics and Philosophy of Mathematics”) designed for training of engineers in technical universities. One of the distinguishing features of the Course is involving of a student in a process of searching for analogs and algorithms of their utilizations, when building their own analogs for finding new techniques of investigating of technical processes.

The content of the Course is designed and written in compliance with the “method of correspondence” of analogs and analogies in developing the theory of algebraic structures as well as according to the method of “condensation” which implies parallel constructing of mathematical models of different geometrical images, their studies and applications and finally in accordance with the method of “technology of correspondence”

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