ESP in Classes of Science

English for chemists is the part of subset of ESP known as English for sciences. The limited subset of language and functions required in a certain ESP setting is referred to as microlanguage. This article is an attempt to outline the ways of optimizing the presentation and use of this highly specific microlanguage of English. As compared with ESP for sciences ESP for literature, art, philosophy, etc., is more elaborated in all its dimensions. There are textbooks, available materials ready to offer a step-by-step guide to teachers. Motivations for the study of English for art of English or English for literature have been analyzed extensively, which is not the case as regards English for sciences, and English for chemistry in particular.

The acquisition of the language for chemists including the training of the terminological system poses special difficulties and depends not only on its arrangement but as it was deduced from our experience in classes of chemistry, also on the presentation, and, specifically the context it is presented in. The basic ways of arranging the lexis are oriented on the systemic relations and, eventually, on the main targets of classifying the lexemes. This systematization results in thematic dictionaries. Despite certain efficiency and advantages of this approach there is no consensus of opinions among linguists as regards the main principles which underline the structure of the entries. The classification lacks distinct and unified criteria. Thus, the problem of systematization and presentation remains a current issue.

The development of conceptual linguistics opens a new scope in arranging semantic vocabulary for teaching purposes. Such vocabularies are called frame-based vocabularies. The term frame was introduced by an American specialist in the field of artificial intellect M. Minsky (1987).

In works devoted to conceptual linguistics (linguistic semantics) the frame is described as a hierarchic structure of knowledge about some stereotype state of things, such as: situations, events, facts, phenomena, processes, actions, etc. The lexical stock of the language is treated as the result of the division knowledge into structures. The
structures of frames included participants, their typical actions, their objects, their relations and so on. The frames are included into higher units. The whole volume of knowledge which constitutes the notion of the frame describes some standard stereotype set. Thus, the lexical system of the language, and the system about knowledge of the world are correlated in an intrinsic way. The content of the frame, unlike that existing in the thematic vocabularies based on semantic fields, is based on the structure of the activity situation. In classes ESP in teaching the vocabulary the semantic fields are made an extensive use and often dominate the organization of lexical material. In the so-called frame vocabularies words belonging to different semantic fields are made use of in case of situational proximity. A frame is a cognitive category for it does not exist in the objective reality. This frame-based approach to the classifying and presentation of vocabulary is undoubtedly oriented on the development of productive types of speech activities both in written and active form. It gives the necessary information for forming utterances.

In this needless to say that English for Sciences and English for chemistry domain (biochemistry, biophysics, ecology, etc.) acquires special importance in the present day society. But the learning process in these aspects of ESP is not an easy task. ESP is such an approach to learning English, which is based on learners’ needs, lacks and wants, and the students should know why they need to learn the foreign language. The learning process should be seen as an enjoyable and satisfying experience where the learners need success to develop their language. To take pleasure in language learning communication should have priority to linguistic terms. In order to get results in teaching English for chemistry students it is necessary to highlight specific objectives. Ordinary communication should not disappear, but rather, should be integrated into teaching professional language. Thus, classroom activities should be planned in a way to bring about motivation in learning this specific language. Contextualized teaching makes teaching for chemistry more efficient. This kind of integration helps both teachers and students to maintain their interest in academic language. So if the student knows how to name specific chemical terms, but fails when applying them in a context, this knowledge becomes of no value. So in the syllabus students’ and teacher’s goals should fit together where the flexible teacher is in the role of a conductor helping the things happen. Hence, the syllabus can be supplemented with a variety of materials not
necessarily scientific but in which a specific scientific section is carved out.

After the intensive reading and learning the text about the nature of ceramics and its necessity in all branches of modern industry, we can connect it with some vital ecological problems. With the help of the pre-basic vocabulary including standard lexis such as air pollution, industrial emissions, civilization, scientific and technological progress, influence, environment, natural resources, disbalance, etc., there will be an interesting and hot discussion between the students expressing different points of view. These kind of discussions are very important, for they enrich the vocabulary.

Thus, the optimization in the presentation of ESP for Sciences, Chemistry in particular, is seen in the present article in a situational presentation of language material, namely frame-based vocabulary. The specific nature of chemistry language imposes the necessity to widen the thematic vocabulary and includes contingent areas such as environmental problems, ecology, climate, recycling, volcanic eruptions, animal extinction and so on. Laying special accent on the importance of the integration in teaching ESP for Sciences S. Krashen states, “language is best taught when it is being used to transmit messages, not when it it explicitly taught for conscious learning”.

REFERENCES
1. Peter Master, Response to English for Specific Purposes.
2. Уфимцева А. А., Слово в лексико — семантической системе языка. Москва, 1968
3. Ван Дейк Т. А., Контекст и познание. Фреймы знаний и понимание речевых актов. Познание, 2000
4. Кутепова М. М., Английский язык для химиков. Москва 2001
7. Sysoev P., Principles of Teaching English for Specific Purposes in Russia, 1999