

Discourse-Competence Approach to Design of ESP Courses

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Abstract. The article studies a new approach to the design of Vocational English courses included into a larger field of English for Specific Purposes or ESP. The courses aimed at the development of foreign communicative competence of Science and Engineering students are in the focus of this research. The approach is an attempt of the integration of the competence model with the paradigm of discourse analysis. This provides a holistic understanding of speech activity as a socially related process and increases the effectiveness of communicative competence development because the discursive practices of the experts' community semantically specify the professional communication of its participants.

1 Introduction

The globalization process in various scientific fields and in higher education has led to the urgency of improvements to bolster research capabilities of educational institutions. The increase of publications in English in Scopus and Web of Science indexed journals is the essential part of this policy. In this regard, the development of foreign communicative competence in professional sphere becomes rather attractive and highly demanded.

In addition, obtaining communicative skills of Vocational English contributes to the solution of economically relevant tasks such as a rise of human capital assets and competitiveness in the labour market. To deal with these issues as a whole, it is reasonable to increase the degree of integration of highly specialized technical and engineering disciplines with philological skills of ESP courses. This requires the introduction of new approaches to the English Language Teaching, not only in terms of its methodology, but also in terms of materials design influencing the content of ESP course, the syllabus, and the selection of teaching resources.

2 Competence approach

The result of studying ESP disciplines generally presents the acquisition of skills helping the learners to master a foreign language at the level of socially adequate and professionally relevant communication. To consider the content of ESP disciplines, we have studied the corresponding section of ESP syllabi of different majors, taken from the websites of Russian universities. The analysis revealed one typical method of organizing the syllabus content. The items of ESP syllabi normally duplicate the corresponding topics of core disciplines, so they look simply mixed up with the language aspects. In

fact, it is hardly possible to implement the competence approach by means of this compilation methodology, which we can observe in the following example:

Unit 2. Company Structure and its Work. Company Structure: Classical Western Model. Administration Policies. The Distribution of Responsibilities in the Management of the Organization. Corporate Culture. Company Structure: The History of the Company. The Internet. E-mailing. The Sequence of Tenses. Future in the Past. Used to/pronounce. Second Conditional [1].

This study shows that the employment of the discursive paradigm to apply the theoretically approved methods of discourse analysis will help to solve a number of practical tasks in designing the effective ESP courses in the framework of the competence approach. Considering the problem of ESP course performance, Thomas Hutchinson describes the major influencing factors of course effectiveness that are the following: the learners needs, the theoretical approach to the formation of knowledge (learning theory) determining the course methodology and the method of language description represented in the contents of the ESP course syllabus [2, p. 22-23].

The central concept determining the logic and the structure of all components of the educational process is competence. In the framework of ESP courses, the two approaches are applicable to the concept of competence: firstly, we study competence in its general, pedagogical and interdisciplinary sense and, secondly, from the linguistic point of view. According to the first approach, competence is a quality of a person, necessary for many vital spheres and serving as a guarantee of achievements in various activities that provides the effective functioning in the society and forms the educational basis during the lifetime [3, 4, and 5]. In the sphere of higher vocational education, competence is an ability to apply knowledge, skills and personal qualities for successful engagement in a certain professional area [6].

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In the linguistic interpretation, the term "language competence", as the basis of speech behaviour and semantically opposed to language performance, goes back to the works of N. Chomsky, who revealed deep and surface structures of languages applying the principles of the activity approach to the language analysis [7].

Linguistics is not the only field that shows the terminological differentiation of the language ability, i.e. the potential knowledge of a language and about a language possessed by its users, and the language activity, i.e. a real speech in real conditions performed by its users. According to Tom Hutchinson and Alan Waters, who rationalised the theoretical basis of ESP, the impact of the "father of cognitive linguistics" on language teaching has been more indirect, but no less important [2, p. 27]. In particular, a number of researchers in Russia have implemented the ideas similar to Chomsky theory within the paradigms of linguistics, psychology and language pedagogy. The theory of verbal and cognitive activity by Lev Vygotsky [8] and Aleksey Leontiev [9], the formation of speaking skills within the communicative approach of E. Passov [10], the integration of linguistics and cognitive psychology in speech studies by I. Zimnyaya [11] are among the most influential works.

3 Disursive approach

In the concurrent foreign research, the holistic understanding of communicative, social and cognitive phenomena and the description of language structures in their use, semantically determined only by social practices, appears within the theory of discourse. This paradigm, successfully developed by Russian scholars in the fields of linguistics and linguistic philosophy, is an effective tool for the analysis of the linguistic space of the educational sphere, for example, in the study of pedagogical discourse [12]. At the same time, the application of discursive paradigm performed by native and foreign schools with regard to foreign language teaching appears to be not systemic.

The main principle of the discursive paradigm in ELT, formulated by Michael McCarthy, is the definition of the relationship between language forms and the context of their use [13]. Based on this principle, the content of teaching materials and study packs is traditionally focused on language functions (in western editions these functions are often explicated). Thus, the content items of educational editions represent a set of socially important communicative situations. In case of ESP, these situations should be professionally significant (study the examples in Table I).

The majority of researchers agree that the pragmatic focus of language phenomena and the ability or the competence to choose the discursive strategies effectively should be included in the tasks of teaching a foreign language [14]. There is a suggestion that the discursive paradigm, on the one hand, enriches the knowledge about the native and the studied language and, and on the other hand, influences the language

curricula and syllabi, which consequently has the effect on ESP textbooks.

Table 1. Content of ESP Textbooks.

Title of ESP Textbook	Author (s) Publishing house, year of publication	Topics presented in the content	Section presented language functions Content
English for Information Technology Vocational English Course Book	David Hill Longman 2012	1) <i>IT Jobs and Duties</i> 2) <i>IT Organizations</i> 3) <i>IT workplace rules ...</i>	1) <i>Describing IT-related jobs and duties</i> 2) <i>Talking about what IT companies do</i> 3) <i>Discussing IT workplace rules</i>
English for Information Technology	Maja Olejniczak Pearson Education 2011	1) <i>Meeting People</i> 2) <i>Jobs in IT</i> 3) <i>Schedules....</i>	1) <i>Introducing yourself and others</i> 2) <i>Describing your job</i> 3) <i>Describing your day routines and times</i>
English for IT Professionals: Advanced Level	N.V. Evdokimova Phoenix 2014	1) <i>History of the Computer</i> 2) <i>CISCO ASA 5500 Series</i> 3) <i>The First Generation of Firewall Architectures</i>	—

At the same time, there is no uniformity of the principles of classification of language material and selection of socially significant situations within the framework of a congruent approach, through which it would be possible to build a system of interrelated linguistic phenomena in their functional aspect, linking them with socially and professionally oriented contexts of speech activity. Consequently, with the common recognition that the discursive paradigm enhances the effectiveness of teaching foreign languages both in general and vocational aspects, there is no universal methodology for its application. The analysis of literature shows that there are two basic strategies of applying the methods of discourse analysis to the sphere of language pedagogy.

The first strategy has the characteristics of an exclusive approach, because the studies carried out in its framework highlight a certain aspect of communication. They justify the relevance and effectiveness of discursive analysis as an applied rather than a theoretical method, for example:

- introducing the elements of conversational analysis to the process of speaking skills development in order to show the social importance of this activity and, simultaneously, to evaluate the learners speaking competence, using conversations as a traditional tool to identify the level of skill formation [15];
- foreign language teaching by means of dramatic text analysis viewing it from the following aspects: the introduction, development and finishing of the topic of communication, the turn-taking in the communicative

process, the means of domination and submission of communication participants, the understanding of the intentions or the "inner state" of the speakers [16];

- critical discourse-analysis to perform reading skills development, in which the key competence is the awareness of the role of linguistic means that transmit both propositional relations and ideological meanings, as well as the development of metalinguistic text awareness that means to differentiate between the text interpretation and the personal attitude of an interpreter to the text [17].

The second strategy of discursive paradigm application bears the marks of an inclusive approach, because in this case the researchers consolidate all kinds of speech activity considering the categories of discourse analysis as a theoretical basis for studying communication as a whole. This approach requires complex solutions to language pedagogy issues. As this work is also an attempt of holistic comprehension of speech activity and its potential in formation of foreign communicative competence in the sphere of professional communication, it is necessary to consider the latest approach in details.

The basic guideline in the selection course materials within the framework of the communicative approach is traditionally the learners' needs [18]. This has proved particularly effective with regard to the development of ESP courses, as the needs of professional communication are quite specific, and these peculiarities result from various factors, including the characteristics of a particular professional sphere. In addition, the broader view of the text has led to the studying of language learning problems in their connection with the category of intertextuality [19]. It implies the studying of language phenomena not only in the context of an extra linguistic situation, but also in the global text or macro-context that serves as a means of the integration of the communicative needs.

The work of J. Swales gives a more extensive view of this issue within the development of the discursive paradigm. The author researched the text genres by associating them with the discourse communities [20]. The research highlights the following characteristics of the discursive community: the involvement into the common mechanisms of interaction, sharing specific vocabulary of one or more genres. The access to the discursive community is a certain level of specialized knowledge, which provides the ability to perform the necessary functions to support the system.

The work of Marianne Celce-Murcia and Elite Olshtain contributes to the attempts of developing the complex approach to the text studies using the discursive paradigm in order to design the methodology applicable to the language pedagogy [21]. The authors employ the discursive analysis to study the five major areas they consider the most relevant for foreign language learning, i.e.: cohesion, coherence, information structure, turn-taking and critical discourse-analysis [21, p. 4]. According to the results of this research, they come to conclusion that the rules-based approach to language learning is ineffective. It follows from the fact that the choice of language structures performed by communicators depends not on the rules, but on a set of

communicatively related factors, which are the following: relations of communicators; communicative situation; a prior segment of discourse; common knowledge of communicators; intentions, goals, attitudes of communicators; topic, modality and register of communication [21, p. 20]. Various decisions based on discourse parameters applied to the tasks of language pedagogy comes down to the two basic principles: 1) the communicative situation determines the learning process and the choice of texts; 2) communicative functions determine the language structures. This approach discovers a number of similarities with the works of I. Zimnyaya [11] and E. Passov [10], mentioned above. This fact can be explained by the affiliation of all the authors to the common Soviet language pedagogy field of expertise, that is, in the terminology of Swales, means to belong to one discursive community. Thus, the dilemma arises again. On the one hand, there are insufficient language skills of communicators who use a foreign language, and on the other, the whole variety of knowledge about the world that native speakers accumulate throughout their language practising during the life periods.

Therefore, the category of knowledge appears to be one more integrating factor in the application of the discursive paradigm to the problems of language pedagogy. Researchers evaluate this category in different ways.

The studies of McCarthy and Carter describe the comprehension of language structures [13.19] which is defined as the development of the students "deep awareness and susceptibility to the forms and functions of language structures" [19, p. 64], that is, this category is treated as an intellectual ability.

The work of Patricia Carrell and Joan Eisterhold describes the language experience as "previously formed structures of knowledge", and it focuses on conceptual system and its formation [22, p. 556]. Both concepts correspond to the language competence described above; therefore, they meet the case of the competence approach.

4 Discourse-competence approach

In order to apply the discursive paradigm as an integration research basis and reveal its effectiveness for language pedagogy studies in the framework of foreign communicative competence development in the sphere of professional communication, this study considers the formation of the knowledge structure within discursive practices, i.e. discursive interaction of the participants of a particular community.

It is relevant that the formation of the competence within the professional communication occurs gradually based on general communicative competence of learners formed in the course of general communicative interaction, apart from their professional activities. Discursive practices of general and professional communication are different types of social interaction and cover different communities of non-professionals and experts, respectively. In order to become a rightful

participant of the professional community, to join its discursive practices, to share its values and to perceive its landmarks, it is not enough to learn a number of related topics and a list of specific terms.

To distinguish the tasks of gradual formation of the competence of professional communication, we apply the classification of types of discursive practices and related evolution of knowledge proposed by A. Kaplunenko. The classification criterion is the sequential formation of different structures of knowledge arranged in the forms of concepts, notions, and terms within the Discourse of Differences, Discourse of Consensus, and Discourse of Expert Community, respectively [23].

T. Tyurneva contributes to the further development of this classification [24]. At the first stage within the Discourse of Differences, concept formation takes place. Concepts, having poor content and practically unlimited scope, arise from the phenomenological knowledge. This leads to the formation of individual, sometimes opposite interpretations. Consequently, the battle of discourse participants opinions due to their different perception and comprehension of concepts formed by means of their personal experience occurs [24].

This foundation should have its impact on the design of ESP courses reflecting in the arrangement of course curriculum and syllabus, as well as in the content of learning and teaching materials (manuals, methodical instructions, electronic educational resources, etc.). To complete this task, it is necessary to immerse the learners into the problems of a particular professional sphere, providing their perceptive experience related to their field of activity. In addition to this, at this opening level of training, they need to have enough possibilities of discussing and sharing their impressions and expressing the opposite opinions. This is a fundamental difference between ESP curricula and their methodical support arranged in the framework of the competence approach, and the traditional ones, where problem tasks, forums and debates typically appear at the final level of training. Of course, the battle of opposing viewpoints at the beginning level will be similar to the dispute of non-professionals, but not experts, though this activity will make the learners be ready for the next level of discursive practice implementation.

At the second level within the framework of the Discourse of Consensus, the formation of notions occurs. Unlike concepts, notions have scope and content limitations, thus emotional and perceptual aspects of interpretation recede. In this discursive practice, the blurry and changeable characteristics of concept become more regular and more sustained [24]. The quality of knowledge is also changing at this level, as it becomes dependent on generally accepted logical operations, which allow all the participants of the discursive community to reach the common opinion necessary for effective interaction in solving professional problems.

This foundation should also find its reflection in the design of ESP courses. It bears out in practice though the narrowing and specification of the concepts, turning them into notions by the implementation of logical operations, the identification of essential categories and

characteristics. All these processes contribute to distinguishing between the cases of special (terminological) and general (non-terminological) use of language units. To complete these tasks, various methods are employed, including the analysis and information processing, generalization, referencing, classification, comparison and other practices, leading to the awareness of new cognitive and linguistic structures based on previously formed structures of knowledge. This awareness results in the qualitative transformation of knowledge structures.

At the third level, the way from the individuality of experience to the universality of knowledge continues within the Discourse of Expert Community. One of the typical characteristics of this discursive practice is the use of terms shared only by a limited number of experts. Having the most restricted scope and highly specific content, terms are monosemantic and unambiguous, as this features corresponds to the aims of the expert community members [24]. This foundation also influences the design of ESP courses. It leads to the incorporation of terminological systems into the communicative interaction of learners. It is the terminological system that limits the scope and the content of each element, so that to interact with an individual term means to work with the whole system. The communicative competence in any field of expertise forms only through the holistic perception of terminological systems. The specificity of this knowledge in its intertextuality, in its inclusion in the global scientific and technical context, extending this field beyond a single language or a separate culture.

Thus, the proposed methodology (discourse-competence approach) provides a theoretical basis for complex application of discursive paradigm to develop communicative competence. It also offers a conceptually grounded principle of arranging the content of ESP courses, without limiting the choice of topics, situations and language functions that should be in ESP syllabi.

The competence-discourse approach has come into practice at the Institute of Linguistics and Intercultural Communication of Irkutsk National Research Technical University. It has piloted the course of Vocational English for students studying Geophysical Information Systems, Geophysical Methods of Prospecting and Exploration of Mineral Deposits, and The Technology and Techniques of Exploration of Mineral Deposits.

This ESP course includes the curriculum, the textbooks and the electronic educational resources. The structure and content of all these ESP course elements comply with the discourse-competence approach. This contributes to the solution of a number of practical tasks, gradually involving the students into the foreign communication of the experts' community and giving them the opportunity to become and to feel a part of it. Consequently, it results in the ability to apply knowledge, skills and personal qualities for successful professional activity performing the foreign communication, as well as to focus on the activity aspect in language analysis, which is consistent with the principles communicative approach.

Figure 1 represents the principle of textbook arrangement in the framework of the competence-discourse approach illustrated by the first two sections taken from the textbook “Geophysics: The Scope of Application” [25], written for ESP course discussed

INTRODUCTION				
UNIT 1. THE INTRODUCTION TO GEOPHYSICS AS A CAREER				
LEVEL 1 READING, WRITING AND SPEAKING My job explained: geophysicist	LANGUAGE FOCUS 1 Question types	LEVEL2 LISTENING, SPEAKING AND VOCABULARY WORK OUT Introduction and scope of geophysics and applied geophysics	LANGUAGE FOCUS 2 Scientific lexis	LEVEL 3 CASE-TASKS AND TRANSLATION 5 Questions – marine seismic processing geophysicist
LEVEL 1 READING, WRITING AND SPEAKING The tough life of a seismologist in the field	LANGUAGE FOCUS 1 Paraphrasing and summarizing	LEVEL2 LISTENING, SPEAKING AND VOCABULARY WORK OUT Mega disasters of nature: Yellowstone eruption	LANGUAGE FOCUS 2 Words and phrases to structure your points (explaining, adding and summing up)	LEVEL 3 CASE-TASKS AND TRANSLATION You're a what? Seismologist
UNIT 2. A LIFE IN SEISMOLOGY				
	LANGUAGE FOCUS 3 Writing a summary			

above:

Fig 1. Textbook Arrangement (Discourse-Competence Approach).

Figure 1 shows that the textbook's content is quite traditional for ESP courses. In this book, the thematic sections representing the fields of geophysics have an identical structure. However, the principles of the materials and tasks arrangement logically correspond to the foundations of the discourse-competence approach.

Each section has the three levels of activity corresponding to the three types of discursive practices. The selection of language material, its organization and set of assignments at each level consistently involve the learners into the Discourse of Differences (LEVEL1), Discourse of Consensus (LEVEL2) and the Discourse of Expert Community (LEVEL3). In addition, each of the three levels focuses on the key speech activities. For the first level, they are reading, writing and speaking; for the second one, they are listening, speaking and vocabulary work out. The third level focuses on the complex forms of speech activity such as case-study tasks and translation. The linguistic focus of each section also includes three logically related parts (LANGUAGE FOCUS1, 2, and 3). Language phenomena reveal their functional aspects, employing the genres of oral and written communication relevant for professional and scientific fields. This assists in representing and forming not only linguistic structures, but also communicative behaviour.

The level organization of the ESP course within the framework of the discourse-competence approach allows students to pass through all the stages of knowledge evolution and obtain a powerful communicative competence in the sphere of professional communication.

At the first level, the aim is to make individual interpretations appear. The basis of their formation is students' personal experience. It results from the interaction with a complex educational environment, including authentic materials, which form the impression of involving into the field of expertise and represent personalized professional experience of experts. They form the phenomenological knowledge of students

representing their professional environment at the level of non-professionals. After that, students activate their phenomenological experience through sharing their impressions. The set of tasks of the first level organizes the discussion and evaluation of these impressions, the expression of opposing opinions that, in accordance with the parameters of the Discourse of Differences, provides the formation of concepts and prepares students for the next discursive practice.

At the second level, students' activity causes the limitation of scope and content of the formed concepts. This starts the process of concepts evolution meaning that the qualitatively new structure of knowledge begins to form transforming concepts into notions. The arising system of notions arranges scattered and sometimes contradictory representations formed at the first level. According to the parameters of the Discourse of Consensus, the complex of tasks of the second level based on the general logical operations allows all participants of the discursive community to come to their shared general opinion.

At the third level, the evolution of knowledge continues within the Discourse of Expert Community. This discursive practice involves terminological systems of the fields of expertise. Any system of terms belongs to a limited number of experts forming the procedure of notions limitation. To become an expert means to join this procedure. This task is the most difficult to complete, as we need to include this terminological system into the communicative environment of students. At this level the quality of knowledge changes again, as the terminological system continues to limit the scope and the content of notions, identifying each terminological unit as a part of the whole within this system. According to this, interaction with a single term causes interaction with the system to which this term belongs. Case-study tasks putting students into real situations of professional communication and representation of expert knowledge in its comparative and contrasting aspects through the analysis of English and Russian terminological systems are the means to organize this complex interaction.

Integration processes in the field of science and education, having a significant impact on the higher education in general, result in the search for new approaches to the design of courses and to the formation of competencies. The development of ESP courses in the framework of the discourse-competence approach meets the modern requirements of the labour market tending to globalization, promotes the formation of effective foreign communicative competence and, therefore, deserves further development and application in the general theoretical and applied aspect.

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