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British National Corpus in English Language Teaching of University Students

Nataliia Bober
Borys Grinchenko Kyiv University, Kyiv, Ukraine
https://orcid.org/0000-0002-9639-0562

Yan Kapranov, Anna Kukarina and Tetiana Tron
Kyiv National Linguistic University, Kyiv, Ukraine
https://orcid.org/0000-0003-2915-038X
https://orcid.org/0000-0002-9797-8210
https://orcid.org/0000-0003-0266-8461

Tamara Nasalevych
Bohdan Khmelnitsky Melitopol State Pedagogical University, Melitopol, Ukraine
https://orcid.org/0000-0002-7768-0310

Abstract. The article deals with the application of corpus-based direction in English language teaching of university students, suggested by Ukrainian scholars. The most representative corpus for English language teaching (ELT) is the British National Corpus (BNC), which offers many opportunities (e.g. search for specific word forms, search for word forms by lemmas, search for groups of word forms in the form of syntagms, etc.). The article presents the methodological algorithm of university students' work with the BNC during English classes based on the verbs denoting human emotional states. The methodology of work with BNC consists of three stages: 1) a student has to compile the initial lexicographic register of basic verb denoting emotional states; 2) a student has to measure the frequency of each unit in the corpus usage; and 3) a student has to analyse, described and record all corpus calculations. The main benefits of the findings for the future relevant studies may be described in the following way: the work with corpus tools in ELT is aimed at students performing the following successive steps: 1) processing concordances, 2) calculating the absolute frequency, 3) analysing the left and right valence, and 4) modelling clusters to build cognitive-semantic profiles of the studied units, which will allow university students to understand the essence of every grammatical, lexical, and syntactical unit.

Keywords: Corpus-based direction; English language teaching; British National Corpus; Methodological algorithm; university student

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1. Introduction

Nowadays, lecturers of national Ukrainian universities (Kyiv National Linguistic University, Taras Shevchenko National University of Kyiv, National Pedagogical Drahomanov University, etc.) continue implementing the experience of corpus linguistics into language classes (for example, "ELT") and translation (for example, "Theory and Practice of Translation (English)", "Literary Translation", etc. disciplines. It is explained by scientific and technological progress development, computer and information technologies in the modern world. It is provided by the necessity to search for effective methodological approaches to deepening classical and mastering the latest language and translation competencies represented in relevant work programmes. Therefore, corpus linguistics "explores the microcosm of language functioning in the process of communication and trying to reflect the big in the small" (Gvishiani, 2008, p. 6). It helps a lecturer and a student solve the main tasks of a particular discipline.

Some scholars of corpus linguistics, among whom we mention Baker et al. (2006), tried to investigate this field in theoretical and methodological contexts. They noted that it has its own object of study (natural language and its functioning in oral and written expressions / texts), which undergoes observation using scientific statistical techniques, thus substantiating its position as a *theoretical doctrine in the field of linguistics.* At the same time and *from methodological stand point,* corpus linguistics is based on its inherent principles of data collection, processing, storage and analysis, which vary depending on the type of corpus and its purpose, as well as according to specific objectives and scope (Baker et al., 2006).

We are convinced that the primary goal of corpus linguistics is to study every language unit in all of its connections and relations (multidimensionality), and more specifically, to understand the cognitive-informative / informational nature of human language in general and every individual language in particular. Moreover, it is also worth mentioning that the corpus of texts, which is distinguished by a high degree of technology, provides a method of foreign language teaching and translation disciplines with a unique amount of material for a language learning (e.g. English, German, Spanish, etc.).

The *purpose* of the article is to represent methodological algorithm for working with the British National Corpus (the BNC) in the process of English language teaching (ELT). The purpose involves the following specific *objectives*:
– to name the approaches of corpus-based approach in the context of foreign language teaching;
– to outline the preconditions for the BNC formation and name its capacity in ELT; and
– to represent methodological algorithm for working with the BNC in the process of ELT.The *research data material* is represented by basic verbs denoting human emotional states.

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2. Literature Review

Scientific literature review reveals that corpus linguistics has already established itself as a self-sufficient scientific field of knowledge (Gvishiani, 2008; Plungyan et al., 2009; Suvorina, 2011; Hoffmann et al., 2008). Furthermore, it continues to be used not only in research (Sinclair, 2006), but also in educational areas (Wu &Peng, 2016; Wang et al., 2013; Kennedy,2003). The corpus instruments as tools for managing a large amount of data lead down a chaotic variety of languages to a more organized set of words (Scott & Tribble, 2006). For example, in the leading world universities, it becomes a daily practice to use the corpus data as an empirical component of lecture courses (Wu & Peng, 2016; Wang et al., 2013; Kennedy, 2003), student assignments and individual projects (Teo, 2018; Sakaeva et al., 2016). It turns out that the corpus-based approach is widely used in the process of the English language teaching methodology (Luo, 2018; Huang, 2017; Wang, 2014, 2015), etc. Horina (2014) drew attention to the fact that

> *it is necessary to speak about the lack of attention paid to the development of the skills of self-study work with the corpus, the corpus data assessment, as well as the possibilities of its use. It happens because it is often concerned that the work with the corpus is related to special skills in data processing or information technology. On the one hand, many experts understand that the corpus-based approach has a great potential in teaching a foreign language, but, on the other hand, the difficulties dealing with the development of these new technologies seem quite insurmountable. Therefore, in order to use the linguomethodical potential of the corpus, the teachers have to share their experience and special training* (p. 5).

3. Methodology

In the process of ELT, university students as the main participants of English classes have to use the Sketch Engine case system that is proved to be especially productive due to the presence of tools that implement, first, *the method of lexical-semantic clustering*, *the classical method of distributive-statistical analysis* and *the method of combinatorial syntagmatics*. The article describes a systematic methodology for students working with the BNC to learn English. The following three phases for learning the basic verbs denoting human emotional states with the help of the BNC should be implemented. At the first stage, it is necessary to compile the initial lexicographic register of basic verbs denoting human emotional states, i.e., pre-corpus selection of English words. Given the semantic structure of every such designation (all meanings, LSV, synonyms and antonyms, etc.), they were assigned to eight semantic cluster profiles (“Interest”, “Joy”, “Wonder”, “Grief”, “Anger”, “Disgust”, “Fear”, and “Guilt”), which can then be supplemented with corpus data material and processed with the help of corpus tools.

At the second stage, the lexicostatistical method was used to conduct the following operational procedures: 1) analysis of statistical data of the total frequency of every basic verb, its form and phrase formation using the LIST tool in the BNC; 2) characteristics of the domains using the CHART tool; 3) calculations of the frequency of use of the basic verb, its form and phrase formation for every domain and profile are also calculated using the CHART

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tool; 4) the most frequent cases of narrow environment (valence-distributive), i.e., the colloquial use of a certain unit in percentage based on the Collocates tool are determined; 5) combinatorics of semantic profiles of verbs denoting human emotional states based on the KWIC tool is revealed.

At the third stage, all corpus calculations are analysed and described; they were entered into the submatrix with subsequent analysis of the latter. The corpus tools enabled to measure not only the word usage frequency but also its quantitative indicators and the speed of the primary search in the corpus. It allows both any teacher of English and a student to read / scan the concordance vertically, to find the left and right verb collocates in the right domains, as well as to build a cognitive map of phrasal verbal complexes with the semantics of emotions based on the semantic profiles.

4. Findings

4.1. Corpus-Based Direction within English Language Teaching Framework

4.1.1. Approaches to Corpus-based Direction Analysis in Educational Environment

According to Boryskina (2015), today the debate is not about the attitude of scientists to the corpus, but rather in approaches to working with this linguistic resource, in its reliability as a search engine, and hence the effectiveness in deepening the classical and mastering the recent language competencies presented in the relevant work programs. In Corpus Study of Language: Fashion or Necessity?, the researcher gathered different views of both proponents and opponents related to the prospects and feasibility of corpus research in general (Boriskina, 2015). Here are their key theses, commented in her article, but with their own analysis and arguments for assessing the corpus-based direction in the process of a foreign language teaching.

The first approach deals with the arguments of radical scientists (Newmeyer, 2003; Prodromou et al., 1997), represented in Boriskina's (2015) article. According to her observations, there is no reason to talk about the prospects of the direction, which does not even have its own UDC-classifier (the index of which is often UDC 81'32 – Mathematical Linguistics). And even this formal feature, as they believed, negates the importance of corpus teaching of a foreign language. And the second argument of their radicalism is related to the inexpediency of giving a special status to research performed according to the corpus, because a linguist in any field of study forms the material in the form of a card index. This is a mandatory stage of any linguistic search. In their opinion, the corpus is a substitution for the word "catalogue". At the same time, Boriskina does not agree with this assessment of the corpus-based approach, and we fully support her when she wrote, "*in this case there is speculation on concepts, because the corpus (with marking and annotation) cannot be compared with mechanical sampling of material, which is a catalogue, both in scale and functionality, and in research opportunities*" (p. 25).

To confirm our point of view, we turned to the original idea of corpora compiling, which reveals that at the end of the XIX century the famous Oxford English Dictionary (The Oxford English Dictionary) was compiled by a large

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number of cards of authentic examples collected by a group of dictionaries compilers. It should be noted that several centuries before that, collections of high-status texts were collected in libraries and studied as models of rhetoric, style, and grammar. Thus, in the XIII century and by the efforts of 500 monks, the first concordance (a list of all words of the text with indications of the contexts of their use) to the Latin translation of the Bible was mechanically created. The famous Danish linguist Johansson (2007) (representative of the Copenhagen School of Structuralism), who gathered a huge collection (about 300-400 thousand) of examples of unusual pronunciation of words, grammatical forms and sentence constructions, would become not just a supporter of corpus research methods, as if at that time were computers, but rather a fierce opponent against radical statements about the inexpediency of the corpus-based approach for the study of linguistic phenomena. Therefore, since radical views exist in the linguistic environment, it is worthwhile continuing corpus research conducting and demonstrating its benefits in a foreign language teaching.

The second approach deals with the moderately skeptical approach to corpus research. Apresyan (1995) as one of representatives of this approach believed that excessive fascination with corpus data from time to time leads to results falsification and quantitative data misuse. As a matter of fact, a purely frequency calculation of words usage cannot be a reliable criterion for statements about the features a linguistic object functioning. Moreover, dilettantism among corpus linguists is partly "facilitated" by the still not established terminological apparatus and not developed methodology of corpus research. At the same time, the scientist believed that these remarks and warnings do not diminish the role of corpus technologies (Boryskina, 2015).

An important inquiry is raised in this regard, what other problems are urgent, causing not so much criticism as concern in linguistic circles, the semantic linguistic school (founded by Apresyan (1995)), in particular, requiring immediate research and reasonable feedback to these skeptical issues? Firstly, working with corpora involves learning the basics of IT terminology, the acquisition of search skills and the ability to apply methods of quantitative and statistical data processing. It is the imperfection of the search tools that makes it difficult to work with corpus data, since the search query produces hundreds and even thousands of results (word usage contexts), which are physically impossible to be processed within a limited time. In its turn, this provokes "skeptics" to be critical towards the assumptions of supporters of corpus technology, who claim that it saves time, and the search engine helps to solve problems of a language structure and development (Boryskina, 2015).

One more sign of sceptical criticism of the corpus approach lies on the fact that the process of compiling texts and then removing words from them "decontextualizes" language would result in depriving and removing the language from its ethnographical context (Widdowson, 2000). That is, it removes language from the ethnography of communication. However, research on corpus data material, for instance, "key word in context (KWIC)", "context in the use of the nominal suffix -ness" (McEnery& Hardie, 2012, p. 35), etc." gives

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reasons for denying these statements. As a matter of fact, namely these words usage contexts, affix morphemes, etc will help to objectively reveal the internal structure of a particular language.

Similar skeptical criticism of corpus studies has also been associated with imperfect "top-down" word processing techniques with no regard to general discourse (Swales,2013), because there are fragments of text that even a concordance cannot comprehend itself (Kaltenbeck & Mehlmauer-Larcher, 2005). These are such text macrostructures that perform a specific text function. On the whole, to generalise the views of skeptics, one should admit that they believe that corpus linguistics has a purely applied application, but the theoretical foundations of which are completely absent. In general, this discipline is an improved method of collecting and processing material, as well as a new information resource that is important for the teaching learning process.

The third approach deals with the scientific-perspective approach in corpus linguistics, in which representatives tried to give thorough answers to radical and skeptical moods within the framework of the international scientific conferences: "Corpus linguistics" and "Dialogue", where the main task was to discuss the improvement of search engines and methods of information research in the corpora. Being an ardent supporter of corpus-oriented applied linguistics, Plungyan et al. (2009) is strongly convinced that modern language research cannot be carried out beyond corpus linguistics. To support these statements, some linguists like Sinclair (2006) gave rather strong and confirming arguments in their works. In her article "Corpus approach in modern linguistics: perspectives and ways of applying", Meyzerska (2014, p. 54) pointed out the advantages of using corpus in linguistic studios. In quoting Svartvik (1992), according to whom, these include first of all: objectivity, verifiability, efficiency in the study of language variants, dialects, styles, as well as historical comparisons; the ability to identify the word usage frequency, representativeness. In addition, the scientist noted that the corpus is a theoretical resource and at the same time a tool for machine translation, speech recognition and synthesis, as well as for the development of programs related to language use. Moreover, both frequency phenomena and occasionally used units can be studied and interpreted on corpus materials. Comparing and analysing the data obtained by means of different corpora, it is possible to identify linguistic variability and patterns of language changes, and to predict the further development of the phenomenon under study, to cite just a few.

According to Plungyan (2008), corpus-based approach makes the results more empirically relevant. The scientist assumed that the fundamental novelty of the results of corpus research gives grounds for the development of absolutely innovative "corpus dictionaries" and "corpus grammars", concluded and verified in relation to a specific fixed corpus. In its turn, the corpus nature of dictionaries and grammars increases their reliability and verification, thus preventing from subjectivity and incompleteness. The creation of analysers and specialised dictionaries for automated corpus mark-up (morphological,

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syntactic, and thematic) is technologically possible only within the framework of corpus linguistics.

These recent advantages of corpus research indicate that radical changes in the field of lexicography have taken place recently. According to Plungyan (2008), there are signs of a new modelling of language, which in many respects differ from the usual models that developed in the last quarter of XX century. Those changes have become so radical that they are often described as revolutionary.

4.1.2. Linguistic Text Corpus as Education Area

Nowadays, the corpus-based approach to foreign language learning and teaching has changed linguists' perceptions of language. Linguistic corpus is a set of texts collected according to certain principles, marked after a certain standard and provided with a specialised search engine. Foreign representatives of corpus linguistics understand *the corpus* as a research field (Andor, 2004) in general, in which a set of texts is brought together for conducting a linguistic analysis. Furthermore, corpus linguistics has powerful schools in Lancaster, Birmingham, Nottingham and Arizona, as well as its own specialised academic journals (for example, the International Journal of Corpus Linguistics, Corpus Linguistics and Linguistic Theory).

At the same time, detailed information on the definition of the linguistic corpus can be seen in the works of scholars including McEnery and Hardie, (2012), who understand it as "a set of machine-readable texts that are a reliable basis for studying certain research issues" (p. 1). In their opinion, the main controversial issue is whether the corpus allows studying linguistic phenomena in a diachronic way, or only there are texts available for the analysis of language in a synchronic way. The answer to this question lies in a particular corpus and the purpose of its compiling. In fact, the conceptual idea of any corpus is the fundamental ideology of its compiling based on texts, not on individual words, because "the experience of the world is largely text-mediated experience, and, based on this assumption, people live in the world of texts"(McEnery & Hardie, 2012, p. 230).In this regard, the corpus-based approach raises the revolutionary question of revising the status of the word as the basic unit of language. Despite the fact that the corpus-based approach is built on text mark-up, the key issue of this approach is the ability of the corpus to give a linguist the opportunity to measure the frequency of certain words and phrases, determine ways of combining them, combinatorial possibilities, compositional semantics, and stylistic registers of individual words.

4.2. The British National Corpus (BNC) as a Reference / Search and Research System

4.2.1. The Preconditions for the British National Corpus Formation

Zhukovska (2013a) observed that in the early 1960s of the XXth century two projects on both sides of the Atlantic were initiated with the aim of creating corpora in electronic format. These projects were implemented simultaneously and independently of each other. A speech corpus was formed at the University of Edinburgh in Scotland, which included transcribed versions of the everyday conversations of native speakers of the British English. This corpus had a range

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of only 300,000 words. This was due to the complex and costly process of collecting and transcribing oral speech and the lack of a computer at the university […]".

According to Zakharov (2005), the Brown Corpus of 1963 became the first corpus that could be considered in terms of terminology and content as a corpus of texts, rather than a simple collection of them. The volume of 1 million phrases included 500 fragments (2000 phrases each) of texts of various genres published in 1961 in the United States: literary texts of writers and poets, articles from newspapers and magazines, texts on religious topics, samples of business writing, etc. There are various reasons for this corpus compiling, however, the most important of them is the study of American English, as well as the vested interest of scientists for the emergence of a new scientific discipline (corpus linguistics), which was not accepted by transformative generative grammar representatives (McCarthy & O'Keeffe, 2010). Despite the fact that corpus research was not popular in the United States at that time, the first computerized corpus, because Zhukovska (2013a) and other researchers admit to become a model / standard / standard for other corps, was compiled exactly in this country (p. 36).

And since then, another debate over the correlation of the two areas of applied research has begun, namely corpus linguistics and computational linguistics. The differences between these areas are clearly explained in "Corpus linguistics and lexicography", which describes three procedural methodological steps for performing corpus analysis:

> *1) language data processing on the basis of their categorical identification; 2) analysis of language data using statistical methods; 3) scientific interpretation of the obtained results. If the first two steps should be as automated as possible, then the latter requires scientific knowledge of linguistics, since any interpretation is an implementation act of mental abilities, and therefore cannot be reduced to an algorithmic procedure. This is the main discrepancy between corpus and computational linguistics, where the latter uses language as a set of specific procedures and operations* (Teubert, 2007, p. 113).

Later on in 1971–1978, following the example of their American counterparts, European scholars began compiling another corpus of texts. It was called The Lancaster-Oslo or Bergen Corpus of British English (LOB), because its compilers were predominantly British and Norwegian scientists basing their corpus on the model of the Brown Corpus (it is about the number of different genre fragments of texts – 500 to 2000 word usages. In fact, the compiling of these corpora made it possible to conduct numerous studies comparing two versions of the English language (American and British standards) on the basis of various genres of texts that were subject to computer processing. These corpus standards have become the basic theoretical and methodological principles for compiling similar texts corpora, one of which was the BNC, compiled in 1991-1994 by researchers from the University of Oxford and the University of Lancaster (the British Library was also involved in this process). Unlike previous corpora, the main feature was a collection of complete texts with partial language marking and a

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speech sub-corpus with its main advantage - the ability to be accessed via the Internet.

The BNC has a range of 100 million words; 90% of which are written texts and 10% – speech (sub-corpus), which belong to various genres of the late 20th century: newspaper articles, popular science literature, samples of business correspondence, texts on religious topics, transcribed recordings of unofficial broadcasts, recordings of government speeches, etc. In 2001 and 2007, the second and third issues of the BNC were slightly revised. Karpilovska (2006) in the study "Introduction to Applied Linguistics: Computational Linguistics", assessing the advantages of corpus linguistics and corpora in particular, provided the following data.

> *The compilers of the BNC tried to present the corpus in the form of typical publishing products and got impressive outcomes. The texts of the corpus printed on thin paper (400 words per page) provide the entire volume in hard copy taking 10 m². It would take 4 years to read this information at a rate of 150 words per minute, having spent 8 hours per day* (p. 76).

Providing characteristics for the BNC, Plungyan (2008) noted that this corpus was exactly the first to receive "national" status, because, firstly, according to his ideas, it indicates the British national version of English. After some period of time, this corpus became the benchmark for all corpora, and the meaning of the word "national" acquired other features. The national corpus became the one, which is the largest and most representative, characterising the language of a particular country as a whole. And the most important requirement for this type of corpus is that the national corpus should include balanced texts of different genres in a particular historical period (Plungyan, 2008).

4.2.2. The Use of the BNC in ELT

In hope to define the BNC as a referential informative and scientific research system, it is necessary to consider the opportunities of this system that some scholars have already used in their studies and works to analyse stable phrases with the semantics of emotions that helped to build cognitive-semantic matrix of verbs denoting human emotional states. Firstly, it is essential to clarify, what is a corpus as a system? To answer this question, it is important to consult "Corpus Linguistics", in which Zakharov gave the following interpretation of the notion of "corpus of texts":

> *an electronic collection of texts, marked so that to find words and constructions with given grammatical and other properties necessary for the linguist in a short period of time", but also "a system of text and linguistic data management, which is called a corpus manager. It is a specialized searching system that includes software for data hunting in the corpus, to obtain statistical information, and most important, to present the outcomes to the researcher in a convenient form* (Zakharov, 2005, p. 4).

This procedure results are given in the form of horizontal lines with a search word in the middle, which is called KWIC (Key Word In Context) (Zhukovska, 2013b). Zakharov illustrated the following corpus managers' characteristics to

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make it possible to get the necessary information from the corpus: 1) search for specific word forms; 2) search for word forms by lemmas; 3) search for word groups in the form of syntagms ; 3) search for word forms by a set of morphological features; 4) search for results indicating the context of a given volume; 5) obtaining various lexical and grammatical statistics; 6) saving of results in a separate file, etc. The searching results are usually represented to a person who carries out academic study in the form of a concordance, where the unit under the investigation is given in its context and in the form of statistics. The scholars can record the frequency characteristics of certain language units, or they can characterise the common use of several lexical units (Zakharov, 2005).

For linguistic research, which was conducted and is performed based on the BNC, the work mechanism of its concordance is essential; it is a specialized applied programme used for automatic issue of specified language units. The 100 millionth BNC is operated by the Xiara concordance. In a few seconds at the specific researcher request the concordance produces searching results, and what is crucial – a limited context for the word under the investigation (from one to three sentences). This type of data transmission according to the researcher-server model by means of search of a specific way – World Wide Web – is the main characteristic of this type of corpora.

The BNC belongs to the so-called fourth generation corpus. Mark Davies developed the software system for it, which was later expanded to provide access to other corpora by means of the web-site: http://corpus.byu.edu (McEnery et al., 2012). The outcomes of the corpus processing by BNC web can be presented in the form of tables of summary quantitative characteristics of the statistical data, which clearly and systematically show the total results of the material, its digital characteristics, the state of the phenomenon, and are the basis for formulating assumptions and conclusions (Hoffmann et al., 2008).

The BNC web network software, which guides the British National Corpus, offers such statistical criteria: mutual information, mutual information unit cube (MI3), Z-score, T-score, Dice coefficient, the method of maximum credibility/logarithmic function of veracity (log-likelihood). The usage of such specifications allowed Suvorina (2011) to justify the strong points of this corpus potential to manage various linguistic tasks in general and to create lexical profiles of words in particular. Using the concordance (representation of the units under the consideration in context and in the form of statistical data), the researcher restricted the study to adjective and verb collocations of the words emotion(s) and feeling(s) – statistically stable phrases placed in the range from 3 to 1 position to the left of the purposive word.

The first 10 with maximum index were selected from the initial collocation lists obtained by means of the BNC Web system. Six lists of collocations were compiled through repetition procedure for each of the above-mentioned statistical criterion. The lexical profile of a word is the maximum intersection

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points of the obtained six lists collocations, those stable phrases that are frequently repeated in the largest number of groups (Suvorina, 2011).

The representatives of cognitive grammar (Golubkova (2002) & Lindner (1983)) include semi-idiomatic phrasal verbs of English as collocations – stable phrases, considering them as a combination of two full components, the meanings of which are put on each other, creating a new meaning in the whole phrase (Lindner, 1983). We agree with Linder's (1983) point of view that the particles in a phrasal verb always encode a certain part of its meaning. Moreover, these formations should be studied on the basis of particle meanings, not just including the verb component, because the initial units have a generalized meaning, which is then specified/ differentiated by means of the semantic structure of the corresponding verb.

We suppose that the corpus study of phrasal verbs denoting human emotional states based on the research of software system BNC Web, in particular its statistical criteria, will give the opportunity to determine the verbs denoting human emotional states in English used with particles more often, creating phrasal verbs or complexes (by their nature they are compositional complexes, phrase-verb and cognitive-semantic formations), belonging to stable collocations. Studying the valence and distributive context of phrasal verbs stating human emotions directly in the corpus, mainly the basis of six statistical criteria of the BNC web software system, will allow to determine their cognitive-semantic profiles and make a matrix – a model that reflects the conception of native speakers about their feelings context and the specific means of their identification in English with the help of phrasal verbs.

5. Discussion

5.1. General Information on Students' Work with the BNC during English Classes

A copy of the British National Corpus is available online at the Department of English at the University of Zurich, Switzerland. The main tool of the BNC is *the BNC Web programme*, giving access to this copy of the corpus, in particular, it provides the search throughout the corpus or can set limited part of it. No special program is needed to search for the corpus, because *BNC Web* works in a standard browser window. To get access to it, it is necessary to register and use a username and password to log in. We would like to elaborate that the British National Corpus is equipped with five online services, providing the option of search and research by different interfaces.

Although only the general programs BNC Web at Lancaster University and BYU-BNC (Brigham Young University) provide options with all resources of the BNC, and other services redirect to official websites with open access to the detailed options of the BNC, in particular making possible the search of colligations and collocations – phrase units (Phrases in English) in the study. In the initial stage of work with the BNC, a student should register in the online access system. It is only required for search with BNC Web at Lancaster University, but complete registration offers more alternatives in processing and

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the option to save the necessary fragments of the corpus. It is possible to return to search history as all queries are saved.

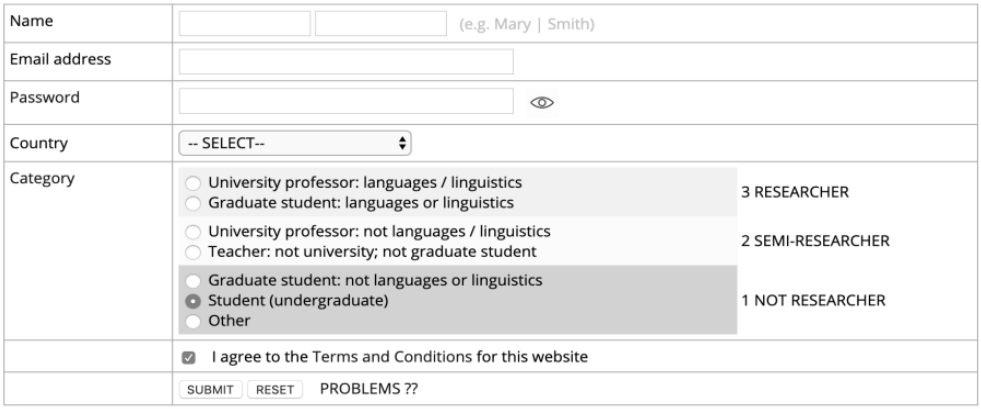

Figure 1. BNC registration window

To register, you should enter your name, email address, password, country (select from the list), category (university professor, lecturer or student/applicant whose status should be confirmed by providing the link to the university website where the name is present among the lists of students or teachers).

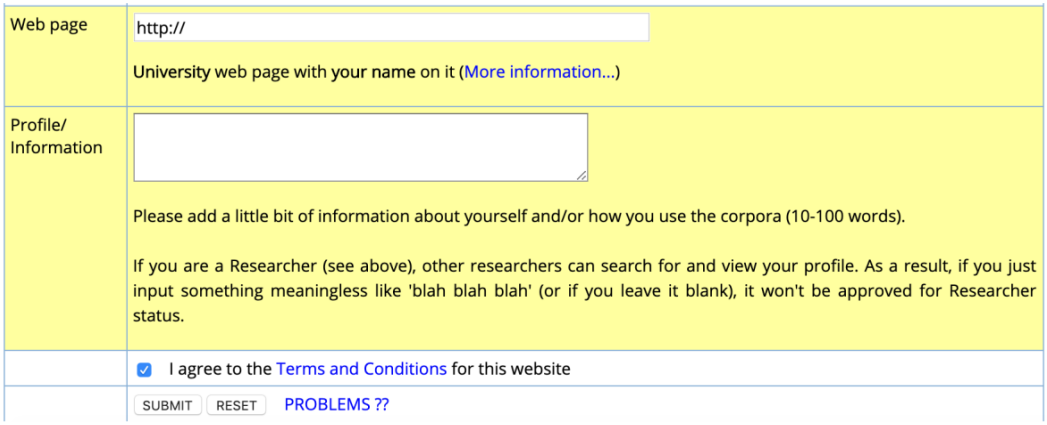

Figure 2. User identification in the BNC system

After e-mail address confirmation, enter your login and password and choose the name of your university – this is the last stage of registration. The BNC home page contains links to general information about the corpus, its products, variations and options to be used, copyright, and frequently asked users' questions. It is also possible to download all the content of the BNC and set great majority of concordances for the data processing, but it is difficult to find a computer with the required memory storage.

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5.2. Stages of University Students' Work with the BNC during English Classes (Case study of Basic Verbs Denoting Human Emotional States)

The following three stages of university students' work with the BNC during English classes are to be implemented.

At the first stage of work with the BNC, a student has to compile the initial lexicographic register of basic verbs denoting human emotional states. This procedure may be considered as pre-corpus selection of English words.

Studying the semantic structure of every verb (all meanings, LSV, synonyms and antonyms, etc.), it is necessary to refer them to 8 semantic cluster profiles, which may be then added with the corpus data and processed using corpus tools:

1. Semantic profile of verb denoting human emotional state of "Interest".
2. Semantic profile of verb denoting human emotional state of "Joy".
3. Semantic profile of verb denoting human emotional state of "Wonder".
4. Semantic profile of verb denoting human emotional state of "Grief".
5. Semantic profile of verb denoting human emotional state of "Anger".
6. Semantic profile of verb denoting human emotional state of "Disgust".
7. Semantic profile of verb denoting human emotional state of "Fear".
8. Semantic profile of verb denoting human emotional state of "Guilt".

In the process of cluster-semantic taxonomy of verbs, the zones of their intersection may be defined both at the level of form and meaning, LSV and synonymous variants, which may reveal every profile to be open and its matrix connections with other cluster profiles.

As statistical patterns build the foundation for the organization of the basic vocabulary and text of any language (and the corpus is the text), the second stage is to involve *a lexicostatistical method* to measure the frequency of every unit in the corpus usage. The lexicostatistical method makes it possible to measure the distance between the words of the same cluster-semantic profile. Therefore, it should be mentioned that this method is more objective and reliable in ELT. Despite all its advantages, we use other corpus tools to build cognitive-semantic sub-matrixes of phrasal and verbal indications of the British emotional states:

– Analysis of statistics on the total frequency of every basic verb, its form and phrase using the LIST tool in the BNC;
– Characteristics of the domains in which the most used word were the one under the research using the CHART tool;
– Calculations of the frequency of the basic verb, adjective, construction of verb + adjective and phrasal verb usage for each domain and profile also by the CHART tool;
– Calculation of the most frequent cases of narrow (colloquial and colligational) area (valence-distributive) usage of a certain unit in percentage on the basis of the Collocates tool; and
– A combination of verb denoting human emotional states based on the KWIC tool (Keyword in the context).

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Forfurther differences identification of similar meanings and LSV verbal indications, the COMPARE WORDS tool will be used in combination with the comparative method.

The algorithm of this method is shown in illustration of the semantic profile of the verbal indications of "Joy" emotional state that is represented by the basic word ***joy*** (with the noun duplicates) and phrase-verb equivalent ***to perk up***. The complete synonym of these verbal indications is the verb***rejoice*** meaning "to feel or show that you are very happy"; it can form phrase-verb complexes with the help of post-positives ***at/over/in.*** Traditionally, according to the collocation rules of compatibility, they cannot be attributed to such formations: A) *His family* ***rejoiced at*** *the news.* B) *We* ***rejoiced in*** *our good fortune.*

The presence of this verb in the BNC can be traced in 174 cases and in 91 types of texts with the frequency of 1.77 copies and a speed of primary search of 0.161 seconds: A) *She needed someone to* ***rejoice*** *with her*. B) *We also* ***rejoice*** *in our sufferings, because we know that suffering produces perseverance; perseverance, character; and character hope*. Also in the BNC there are illustrations of this formations usage in oral speech: *Does he really mean* ***rejoice at*** *all times?*

Emotional-semantic synonymy is also represented by the verb ***to be glad*** "to be pleased and happy about something": *I'm really* ***glad*** *I don't have to go back there again.* The studied emotional state is also marked by the adjective verb forms with the verb conjunction ***to be***, which gives the word, for example, ***glad*** the meaning of the emotional state "to rejoice", and not to describe joy. This adjective model is frequency and is synonymous with the designation of the emotional state of joy with its various meanings: *I am* ***glad*** *to be back home.* The BNC sector is represented by 3762 cases in 1184 different texts with the frequency of 38.27 copies per million word usages and the search speed of 0.167 seconds: *Jane was* ***glad*** *when it was over*.

The following indication of this profile is associated with the verb ***to glee***, but in the corpus manager it is recorded only as a noun in 162 cases in 134 different texts with the frequency of 1.65 copies per million units of word usage and the primary search speed of 0.157 seconds: *Whatever the rights and wrongs of the case, some software developers regard the suit with* ***glee***.

The verb ***to exult*** is also a stylistic synonym for the verb denoting human emotional state of "Joy", which is recorded in 18 cases in the BNC in 17 different texts. The frequency is 0.18 copies, and the speed of the primary search is 0.161 seconds: *And you, Opal, you will* ***exult*** *in it because you made it possible*. In some illustrations this verb has a meaning of exaltation: *But it says humble yourself under the hand, under the mighty hand of God, then in that day he will lift you up, he will* ***exult*** *you!*

The verb ***enjoy*** adds the synonymic row, because it means the emotional syndrome state of happiness and it has a full phrasal equivalent ***revel in:*** *He* ***revelled*** *in his new-found fame*. Both verbal phrases in their semantic structures have this gradual meaning of joy, as there is hedonistic state – 'pleasure' "to

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enjoy something very much". It is important to note that the word *enjoy* derives from the basic word *joy* that confirms the synonymy. The BNC has the phrasal equivalent ***revel in*** represented in 70 types of texts in 64 types of texts with the frequency of 0.71 copies per million words and the speed of the primary search in 0.171 seconds: *Most people will simply* ***revel in*** *the pictures*.

Having a common synonymous meaning, but with additional meaning nuances due to contextual use fixed in corpus the phrasal verb ***lap up*** "to enjoy something without worrying about whether it is good, true etc.": *The humour was* ***lapped up*** *by an appreciative crowd.* In the first illustration, human emotional state of "Joy" is transmitted by the formation *lapping up* to "enjoy". In the second, the situational conditionality of the verb form *lapped up* denoting the state of pleasure actualised the differential meaning 'to perceive something joyful' in its semantics, i.e., in this case humour, and to enjoy it.

In the BNC concordance, the verb ***lap up*** is not very common, because it is met in only 10 illustrations and 10 types of texts with a very rare frequency, only in 0.1 copies and the speed of the primary search in 0.174 seconds: *Mark was one of twelve young boys and girls clustered around him to* ***lap up*** *his words of wisdom*. In this illustration, the human emotional state of "Joy" is implicitly conveyed through union and the acquisition of wisdom. In the following example: *Marc would* ***lap up*** *the opportunity to use it against her* this verb actualises the meaning of 'enjoyment of harm done to someone'. Verb denoting human emotional state of "Joy" is represented by such a phrasal verb as ***go in for something*** meaning "to do or use something often because you enjoy it or like it", which in the BNC is represented by only three cases in three texts with the frequency of 0.03 copies and the speed of the primary search in 1,073 seconds: *But when Julian had some money left to him, they decided to pool their resources and* ***go in for something*** *far bigger*.

During the study of the verb synonyms of the human emotional state "Joy", the phrasal verb ***cheer up*** of an exclamatory-emotional nature was defined to mean "have fun, hurray!" depending on the contexts of the domain: ***Cheer up****! The worst is over*. The BNC recorded 103 cases of its use in 87 types of texts with the frequency of 1.05 copies and the speed of the primary search in 0.175 seconds: ***Cheer up****, said my Cid; … this is a glorious day*. The human emotional dominant "Joy" is not limited to verbs or phrases. It can be added with the help of such collocations as *jump for joy, be on cloud nine, be treading on air, be in seventh heaven*, which have already become phraseological units. The periphery of the semantic profile "Joy" can be defined as a phrasal verb as ***fall about to*** with the meaning "laugh a lot about something": *It was so funny everyone just* ***fell about*** *laughing*. Phraseological figurative meaning associated with the state of "Joy" acquired such formations as verb-adjective collocations, which have not lost the archetype of the studied profile: *be delighted, be euphoric, be as pleased as Punch, be jubilant, be in raptures, be beside oneself with joy, be thrilled* and others.

The lexicostatistical profile of verb denoting human emotional state of "Joy" is represented by the basic verb *joy* with its noun duplicate and verb-phrase

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equivalent *to perk up*, a full synonym for which there is the verb *rejoice* and which is able to form phrasal verbs with post-positives *at/over/in*. But, the most frequent in corpus managers (3762 cases with the frequency of 38.27 copies per million words and the search speed of 0.167 seconds) was the adjective form *be glad* with the verb *to be*, which gives the word *glad* the meaning of the human emotional state "rejoice". The unique formation of the verb exclamatory-emotional nature in this profile is the phrasal verb *cheer up*.

In the third stage, all corpus calculations are analysed and described and recorded in the sub matrix with subsequent analysis of the latter. Technically, the work with the corpus was performed according to this algorithm. Firstly, a query was made via the *BNC Web* interface for the corresponding word (in our case, for example, the verb *abhor*), which was entered in the appropriate field, and then *Start Query* option was clicked. After processing the request, the concordance presented each example according to the search word (basic verb or verb form denoting a certain human emotional state). Then the processing of search results displayed on *BNC Web* begins. The result of the query is presented in three columns according to settings: case number, file name, and <s> – unit number and case (50 cases per page). In the case field, the search word is highlighted, then by clicking on this link, which was very important for further study of the meaning structure of the necessary word, the wider context (domain) of this word usage was shown on the screen. Clicking on the file name and <s> number, the program makes a transfer to display data about the file, which lists the values of meta text categories encoded in the text query. At the end, the traditional concordance display is changed to KWIC format (key word in context) by clicking the Show KWIC View button. After this operation, the search results are displayed on the monitor screen in the appropriate window. This general way of presenting the results of a concordance, in which a word or search query is displayed in the centre of the page accompanied by text, is an alternative way to view the results of a concordance that shows the user's query in the context of a sentence (or <s>copula).

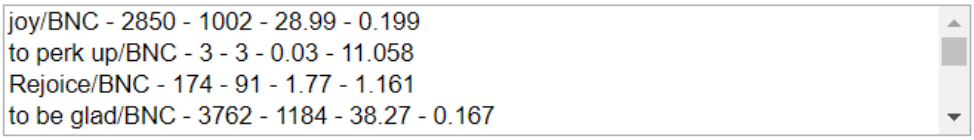

Figure 3. Corpus tag of "Joy" emotion

The corpus-tag sub matrix of the "Joy" emotional state display is represented by multiple selection tag modules using the <select> tag, which is repeated 9 times in the code representation, providing a profile of each verb or phrase verb to denote this human emotional state. The lexicostatistical profile "Joy" is shown in the form of a table that clearly shows the cognitive-semantic links between the most semantically similar verbs denoting human emotional state. In the search process, it is defined by the verb *joy* and the verb-phrase construction *to perk up*. The synonyms of verbs are added by 3 units with the semantics of feeling "happiness", "joy" and "satisfaction". There are also five verbs with abstract

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semantics of joy meaning: from the identification of the state of pleasure to the state of excessive inordinate laughter as a consequence of something joyful.

7. Conclusion

As a result, we note that in corpus linguistics three scientific directions have been formed regarding the advantages and prospects of such a direction of research: 1) radical-categorical, 2) moderately skeptical and 3) scientific-perspective. The representatives of the first approach are convinced of the unreliability of the corpus as a research system, while skeptics, on the one hand, suppose that only corpus linguistic data leads to some falsification of outcomes, and purely frequency words count cannot be an objective statement criterion for peculiarities of the linguistic object functioning. However, they do not deny the importance and significance of these methods of processing linguistic notions. Quite opposite is the position of optimistic linguists taking into account the importance of corpus research with the development of the "corpus dictionaries" and "corpus grammars" of the new generation, which will contribute to radical changes in lexicography and other areas of interdisciplinary linguistics.

One of the most representative corpora for the study of the national heritage of the English language is the British National Corps (BNC), which is the informative/ and searching and scientific researching system that provides great opportunities to monitor different language units, their usage, frequency of use, combinatorial properties, and most importantly their cognitive-semantic connections, which have the matrix nature.

The main strengths offered by the BNC for students are: 1) search for certain word forms; 2) search for word forms by lemmas; 3) search for groups of word forms in the form of syntagms; 4) search for word forms by a set of morphological features; 5) display of search results with indication of the context of the set length; 6) obtaining various lexical and grammatical statistics; and 7) saving search results in a separate file, etc. Search results are usually provided to the student in the form of a concordance, where the research unit is presented in the context and in the form of statistics. Yet, the main weakness offered by the BNC for students are: 1) lack of ideas in teachers concerning the use of the BNC and its technologies; and 2) lack of individual methodology for ELT during classes (the most efficient ones), etc.

The work with corpus tools in ELT is aimed at assisting students in performing the following successive steps: 1) processing concordances, 2) calculating the absolute frequency, 3) analysing the left and right valence, and 4) modelling clusters to build cognitive-semantic profiles of the studied units, which allow students to understand the essence of each basic verb indication of human emotional states. A possible topic of further research may be the functions of interrogative constructions in the inner speech of the characters in the artistic text.

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