The Journal of
Archaeology & Heritage Studies

Research Paper

Corpus of ESP Keywords in Archaeology and Heritage Management to Facilitate Second Language Pedagogy

Dhanapala R.M. [1]

1 Senior Lecturer, Department of English Language Teaching, Faculty of Social Sciences and Humanities , Rajarata University of Sri Lanka
rmdhanapala@yahoo.co.uk

ABSTRACT

Teaching English to university undergraduates based on English for Specific Purposes (ESP) discipline has become a daunting task ahead of the teacher. With the advancement of technology, corpus-based teaching has been proven to be an effective approach in second language teaching. Corpus Linguistics is one of the technology-based tools which has not been adequately used or experimented with yet but could be very useful in second language teaching. Further, research based on the corpus approach, particularly in ESP pedagogy is very rare. In the Sri Lankan context, hardly any researchers have focused on using corpus linguistic tools to create keyword lists, which will be helpful for vocabulary teaching in ESP classrooms. Hence, the main purpose of the study is to address the gap in the identification of keywords in the Archaeology and Heritage Management subject discipline. The research is a quantitative study which is done by using AntConc Corpus Linguistic Tools to create the list of keywords by using the main corpus of the study. CAHM (Corpus for Archaeology and Heritage Management) is the main corpus of the study and BE06 Corpus compiled by Paul Baker serves as the reference corpus of the study. The study has identified a corpus of keywords categorized into groups thematically. Although using corpora in language teaching is challenging, it has a big potential in ESP classrooms. Accordingly, the study will further open the doors to the field of Corpus Linguistics in ESP classrooms in the Sri Lankan university context.

ARTICLE INFO

1. Introduction

Corpus linguistics is the study of language based on large collections of "real life" language use stored in *corpora* (or *corpuses*)—computerized databases created for linguistic research. It is also known as corpus-based studies (Nordquist, 2020). Some linguists view Corpus linguistics as a research tool or methodology and others as a discipline or theory in its own right.

Although the methods used in corpus linguistics were first adopted in the early 1960s, the term itself didn't appear until the 1980s. Corpus Linguists are mainly interested in descriptive or functional interpretations of language (Meyer,2002), and they study linguistic phenomena through the empirical analysis of large computerized databases of language which are known as corpora. According to Biber et al., (1998), a corpus is "a large and principled collection of natural texts" which is compiled and a representation of the

language in general, a dialect or other subset of the language. A corpus can be created with language based on transcribed speech, written texts, or both. Then, these corpora are stored electronically and then analyzed using computer software programs.Accordingly, Corpus – based approach in language teaching allows for identifying the specific words related to a particular field and the behaviour of the language in different contexts, which enables teachers to teach language more effectively.

With the advancement of technology and computers, corpus-based teaching has become a useful tool in language teaching. According to Bonelli (2001), in the context of the classroom, the methodology of corpus linguistics is congenial for students of all levels because it is a 'bottom-up' study of the language requiring very little learned expertise to start with. Even the students that come to the linguistic enquiry

without a theoretical apparatus learn very quickly to advance their hypotheses on the basis of their observations rather than received knowledge and test them against the evidence provided by the corpus (Bonelli, 2001). According to Maddalena (2001), the use of real-life and authentic examples in language classrooms is more beneficial than using examples built by teachers. Another advantage of this approach in the second language teaching classroom is, it helps second language learners to learn not only the meaning of words, word forms and usage of them but also the real language use of those words according to the context they appear. Neveem & Salma (2009) also agrees with the view of Maddalena (2001) that using corpus in language teaching classrooms is beneficial for second language learners and further she says that teachers should be properly trained to use corpora in classrooms at first to get the maximum benefits of this approach.

Therefore, Corpus–based language teaching approach can be considered as a useful and effective approach in second language teaching. However, this approach has not been used widely in second-language teaching classrooms with special reference to ESP and it has not been experimented so far adequately. Even though a number of studies have been conducted on the application of the corpus linguistics approach in the pedagogical aspect for decades, little research has been done up to date on the use of corpus-based approach in second language teaching classrooms, specifically in English for Specific Purposes (ESP) classrooms. Further, none of the studies has focused on using corpus-based approach in ESP classrooms in Sri Lankan state universities. Hence, the purpose of the current study is to address the gap that has not been addressed through the research and show that the corpus-based approach can be used in ESP classrooms in state universities to teach subject-related vocabulary and subsequent language improvement activities for undergraduates effectively.

Corpus - based approach in second language teaching is challenging, however it has a big potential in ESP classrooms and there are so many advantages in this approach for ESL learners. So, it is vital to identify the fact that if the teachers are trained adequately on how to design suitable corpus-based tasks, they can help their students get exposed to a broader framework of how certain words are used in appropriate contexts effectively. Also, teachers can make students familiar with the vocabulary related to a specific field of study through which both students' language skills and subject-related knowledge can be improved. Accordingly, the current study aims at ascertaining the possibility of using a Corpus-based approach to teach vocabulary to undergraduates in the discipline of Archaeology and Heritage Management in Sri Lankan state universities.

In the context of ESP, the identification of specific keywords related to the subject discipline is a crucial task. Moreover, the contextual use of such words can be challenging. However, the difficulties of ESL undergraduates can be overcome through the proper improvement of specific keywords. Hence, the current study mainly focuses on the use of a Corpus-based approach for vocabulary improvement of the Archaeology and Heritage Management undergraduates of Sri Lankan state universities. Accordingly, a corpus was created using some of the written texts and books in the subject discipline. Then, a keyword list was created using the main corpus and BE06 corpus compiled by Paul Baker. Afterwards, the keywords were categorized thematically and the way such keywords can be used in vocabulary teaching is explained descriptively in the discussion section.

2. Literature Review

The use of corpora in the production of learning materials is now generally beyond dispute because it not only provides an empirical basis for checking our intuitions about language, but also brings to light language features that escape our intuition (O'Keeffe et al., 2007). The implementation of a corpus in the field of linguistics has grown rapidly over the decades. Corpus in simple terms is defined as the compilation of texts that have been gathered for a specific reason (Cheng, 2011). Meyer (2002) referred to corpus linguistics as not only a linguistic field but also a methodology that presupposes the fact that it is "important to base one's analysis of language on real data—actual instances of speech or writing—rather than on data that are contrived or 'made-up." Other characteristics of corpus studies include the use of computers for quantitative analysis and the use of qualitative techniques by researchers. Corpus studies can be used to study a wide range of language phenomena, including historical and stylistic conventions, discourse patterns, language acquisition, grammatical constructions, and vocabulary analyses (Teubert & Cremakova, 2007).

For language pedagogy, Corpus linguistics has valuable classroom applications. From a teaching perspective, based on the characteristics of a corpus, it can be categorized as a general or specialized corpus. A general corpus is most useful for developing an idea of the global behavior of vocabulary items or phrases and can be used for publishing dictionaries and textbooks. Unlike the corpora for dictionaries, a specialized corpus consists of language that is selected for specific purposes. As Tribble and Jones (1990) asserts, a specialized corpus is particularly useful for understanding how language is used in a particular register of the language. For instance, a corpus that consists of creative writing texts allows for an analysis of images and metaphors that were applied by specific writers and facilitates comparative studies of writers.

Similarly, a corpus that consists of business letters can provide insight into the grammar and types of wording that are appropriate for a variety of politeness strategies (Cornnor, Davis & DeRycker, 1995). Today, both dictionaries and computerized corpora are key resources for L2 learners. With the development of user-friendly concordance programs and English corpora, attention has shifted to an approach using authentic language samples in the classroom in second language teaching. Wichmann (1995), for example,

used corpora and a concordance program to teach German because she believed that dictionaries do not provide a sufficiently authentic meaning. A significant contribution that a corpus brings to L2 acquisition is that the materials that it provides are authentic examples. A corpus-based approach gives authentic examples while providing students with opportunities to be explorers (Dodd, 1997). With authentic examples, learners observe the true use of language. Flowerdew (1993) cautioned against using manipulated examples because of the possibility that learners may not observe the actual use of the target language. Therefore, many scholars promote the use of corpora in L2 and foreign language (FL) education as beneficial in developing reading and writing skills and in understanding and producing particular texts and types of texts (Aston, 2001; Flowerdew, 2002; Römer, 2008). From the perspective of language learners, corpus-based L2 and FL instruction can offer a means by which to increase their motivation and render them more autonomous resources while allowing them to mind language descriptions through the corpus (Aston, 2001). Several studies have reported the effectiveness of using corpora in teaching applications, including adopting concordance software during the acquisition of L2 or FL, such as through collocation learning (Sun & Wang, 2003), lexical acquisition (Cobb, 1999), writing (Tribble, 2001), and grammar (Sun, 2003).

In summary, researchers and practitioners have recognized the usefulness of corpora and various software applications in language classrooms and have developed course designs, materials, and classroom applications based on corpus-based language instruction. Corpus-based language learning can meet the needs of learners by stimulating their motivation to learn with authentic examples (Sun, 2007) through inductive thinking strategies, developing ESL learners' comprehension and transforming learned linguistic knowledge into reading and writing skills. Hence, it is for exactly the same reasons that the use of corpora is becoming increasingly relevant in second language teaching.

Identification of ESP lexicon through corpus linguistics

The use of corpora to teach vocabulary in the ESP context has been proven to be a supportive approach. According to Lewis (1993) and McKay (1980), it is an undeniable fact that most of the mistakes made by students in the use of the English language as a foreign or second language are mainly in making semantic errors because of inadequate understanding of the word meaning especially the meaning of their relationship in collocations. Donesch-Jezo (2013), has asserted that immersing learners in authentic language, with the facilitation of corpus linguistics, would enable learners for greater memorization of words. Hence, the use of corpora to teach vocabulary is proved to be a supportive approach for L2 learners mainly because the corpora are authentic examples of real language use. Hou (2014) pointed out that "both dictionaries and computerized corpora are key resources for L2 learners" yet some scholars believed that corpora are more effective to immerse the learners in a particular language rather than using the dictionaries given

the authenticity of the language use. Thus, they make a significant contribution to the whole L2 learning process while learning the accurate use of the language. As Lu (2018) points out that the contributions of corpora can be categorized into three areas based on their advantages: "corpus-based vocabulary teaching can help to avoid the negative transfer of the native language effectively; the statistics of the word frequency helps save the efforts in vocabulary teaching; the corpus can represent the natural contexts where the words are used in, which helps them acquire the usages of the words accurately."

Teaching of ESL vocabulary based on the frequency

In second language teaching, the analysis of the corpus is done objectively as it is more accurate and reliable than personal judgments. Corpus studies have lessened the burden of learners knowing a list of frequent vocabulary from a scientific perspective rather than a personal, subjective one. What's more interesting is that a corpus can estimate the most frequently needed vocabulary for a context.

The frequency of words can be indicated in a corpus facilitating teachers to ascertain high-frequency words in a list. This facility promotes effective EFL vocabulary teaching in the ESP context. According to Francis and Kucera's study of Brown Corpus (Cited in Lu, 2018), the top 1000 frequently used words count 72% of the contents in general texts, and the top 2000 cover 79.7%, while the top 4000 take 86.8%. According to the study of Brown Corpus, these data show that within the 4000 words, the first half covers about 80% of the contents in the common texts, while the latter 2000 just count 6.7%, thus the first 2000 words can be regarded as the most frequently used words, which rank foremost among the list of these words that should be acquired first and they also are the basic words that the beginners should acquire. Further, as pointed out by Lu (2018), "for those who are going to further their education after the basic school years, they need to acquire at least 836 academic words. Knowing which are the relatively high frequent words is rather meaningful for vocabulary teaching, for it basically decides the objects, or the important points of vocabulary teaching, and can also help to arrange the sequence of the words which are going to be taught, that can make vocabulary teaching more effective."

Contextual identification to teach the vocabulary

In corpus-based research, a corpus can be used to teach necessary vocabulary to the learners. The use of context clues to infer the meaning is one of the strategies used by language learners to learn vocabulary. What's specific in using a corpus is that it can be used to show all the contexts where a particular word occurs unlike inferring the meaning based on the context. Thus, corpus linguistics is more reliable to rely on to learn the several occurrences of the same word rather than relying on intuition based on contextual clues (Lu, 2018). Therefore, the importance of vocabulary teaching in foreign language teaching using a corpus has aroused more and more attention. As a result, Liang (2015) introduced

different types of corpora and emphasized the necessity of using them in the context of teaching English because he discovered the relationship between corpora and vocabulary teaching by analyzing the theoretical foundation of English vocabulary learning strategies.

The importance of using the corpora to teach vocabulary effectively by incorporating the Schema theory, lexical approach, and lexical grammar was the study by Wang (2012). He adopted Gui's approach (2003) with respect to Schema theory and came up with the notion that learners have the ability to construct language schema in order to enhance English proficiency through acquiring new knowledge and corpora could cater adequate English materials for the process of constructing and reconstructing the schema related to gain new English knowledge.

The use of Corpora shows its value in English vocabulary teaching because of the great convenience in searching and the authenticity that it provides for the target word as there are specialized corpora specific to particular contexts that have been developed recently.

Facilitation of corpus studies through ICT

The explosion of corpus linguistic studies during the past decade or so is due to several causes. One is those personal computers are now equipped with high-speed and storage capacity to process huge corpora which involve millions of words. These volumes are equivalent to hundreds or thousands of pages of books and the ICT has now revolutionized the process of endless words in a few seconds. For instance, if one wants to find out how a word is used, one can pull up hundreds of contextual examples in a matter of seconds with a convenient display using the available and inexpensive tools. Another reason is that in corpus linguistics, there is now available an easily accessible and scientifically prepared collection of language in the form of large and well-structured corpora which a user can easily make use of on a personal computer. Another advantage of ICT is that the world wide web has an enormous amount of language in different forms to be accessible to the user.

Researchers suggest to use corpus technology for the following purposes: a) as an empirical component of lectures, student assignments and projects; b) to determine the meaning of words and identify differences in usage between synonymous lexical items; c) to study lexical collocations; d) to focus on linguistic evidence that either supports or contradicts the prescriptive grammar rules (Derybina, 2012; Sysoyev and Evstigneev, 2014).

Specialised vocabulary for ESP teaching and learning

It has been pointed out by Nation (2001) that the specialized vocabulary is "recognizably specific to a particular topic, field or discipline" as he noted that this specialized vocabulary comes from high-frequency or low-frequency words from its related context. In order to get the necessary knowledge in the academic discipline, specialised vocabulary is essential for learners. There have been several studies which have focused on finding out what determines a word that is specialized in a certain context or a textbook, and further studies commenced to address the relationship of acquiring this specialized vocabulary by the L2 learners of the target language. (Chung & Nation, 2004; Fraser, 2004; Kaewphanngam, 2002; Rizzo, 2010; Sutarsyah et al., 1994).

According to Waring and Nation (2004), a learner should have the ability to know approximately 95% of the surrounding vocabulary related to a particular context to successfully comprehend the gist of the text and failure of which compel learners continuously stick to use dictionaries which are frustrating and less fruitful. Besides, 30% of a particular context constitutes the specialized vocabulary that the readers are not capable of understanding without the dictionary. Furthermore, research by Chung and Nation (2003) found that there are around 4,270 specialized words in an anatomy textbook, which is a large number of words just in one book for the students to refer to the dictionaries to acquire the meanings of those words. Accordingly, with such a backdrop, it would be difficult for non-native speakers of English to comprehend the meaning of words as this technical vocabulary is specific to certain contexts.

In order to overcome this issue, Chung & Nation (2003) and other researchers conducted a few types of research to estimate the adequate number of specialized vocabularies that would be needed for higher studies. The results of the estimation of Nation (2001) is that specialized vocabulary for a particular field ranges from 1000 to 5000 words based on the research done by Coxhead and Nation in 2001. The results of the research presented 2000 most common words from the General Service List which have appeared in approximately 80% of academic texts based on introductory-level undergraduate textbooks. However, as these researches were based on preliminary-level undergraduate texts, they may not have drawn sufficient data. Hence, some researchers have advocated the necessity of paying special attention to specialized vocabulary teaching for the learners who follow ESP courses in which those classes are mainly aimed at improving the vocabulary they seek in their disciplines. Moreover, Hyland & Tse (2007) recommended preparing "corpus-informed lists" from the texts that the learners will use to study and refer to in their own academic disciplines. Thus, they can practice the target specialized vocabulary along with their peers and teachers in the ESP classes.

In summary, the number of research dedicated to vocabulary teaching in the ESP context is limited even though researchers and practitioners have identified the usefulness of corpora in language classrooms based on corpus-based lists. However, one controversial issue still persists which is whether to teach vocabulary implicitly or explicitly for a better understanding of the learners. Schmitt and Nation stated it is better to use a combination of both approaches as some of the vocabularies is best explained through repeated exposure to certain vocabulary activities whereas other characteristics like grammar features should be explained explicitly. To follow both approaches for ESP learners, corpus-based language learning should be

implemented and as a result, it allows to meet the needs of learners by stimulating their motivation (Sun, 2007).

S/N	Theme	Keywords
01	Words related to archaeological features and excavations	Caves, Tombs, Habitat, Pot, Bones, Wahalkada, Citadel, Urns, Disc, Sites, Barrel, Burial, Pottery, Cluster, Beads, Layer, Pit, Capstones, Heritage, Megalithic, Artefacts, Cover, Vessel, Basins
02	Words related to processes	Excavations, Formation, Removal, Classification, Locating, Utilization, Centralized, Interpretations, Recording, Retrieved, Expanded, Positioned, Compaction, Interlinkage, Deposition, Irrigable, Collection, Establishment, Analyze
03	Words related to plants and animals	Cyperus, Teak, Faunal, Crops, Nymphaea, Species
04	Words related to weather and climate	Droughts, Monsoon
05	Words related to geographical locations	Lowlands, Marshes, Drainage, Ambanwala, Gedige, Deduru, Sampathnuwara, Coastal, Lagoon, Highlands, Grasslands, Ceylon, Iranamadu, Colonies, Subarea, Mounds, Shrubby, Peneplains, Deciduous, Steep, Slope, Vegetation
06	Words related to mathematics and calculations	Diameter, Acres, Hectares, Rounded, Thickness, Taxonomic, Depth, Surface, Oval, Hexagonal, Meters
07	Words related to fields of studies	Geology, Topography, Geomorphology, Geological, Environmental
08	Words related to chemical reactions, chemical elements, and substances	Quarts, Charcoal, Mineral, Ashes, Iron, Copper, Soil, Metal, Stone, Magnetite, Slag

Table 01: Thematic categorization of keywords

3. Methodology

The research is a corpus-based study which is done using the AntConc software to create a keyword list for the Archeology undergraduates in state universities of Sri Lanka. The purpose of creating the keyword list is to show the possibility of using corpus–based approach in the ESP classroom for the vocabulary improvement of the English language of the Archeology undergraduates. The corpus created by using the software was named Corpus for Archeology Undergraduates (CAU) and the British English 2006 (BE06) corpus compiled by Paul Baker was used as the reference corpus of the study. 100 vocabulary items were selected from the list of keywords and they were categorized thematically. Thematic categorization of keywords was done as it helps teachers to design vocabulary lessons easily. Finally, two vocabulary-related sample lessons were created to show that the corpus- based approach is applicable and effective in the ESP classrooms in state universities of Sri Lanka.

Corpus Analysis Tool

AntConc 4.0 version of AntConc software which is available for free download in the Internet is used as the corpus analysis toolkit of the study. This software is a very useful toolkit which is designed by Laurence Anthony for finding frequency patterns of word sequences and keywords of a corpus. This is a multi–purpose corpus analysis toolkit designed specifically for use in the classrooms.

Main corpus and Reference corpus of the study

Corpus for Archeology Undergraduates abbreviated as CAU is the main corpus of the study. It is created with some excavation reports published in 2022 and they can be considered as studies in the field of Archeology. The main corpus which is created with excavation reports is consisted with approximately 30,000 words. The reference corpus of the study is British English 2006 (BE06) Corpus compiled by Paul Baker. The reference corpus was not downloaded from the internet as it was already installed in the software itself.

A list of keywords was created using the AntConc software and it was done by comparing the main corpus of the study and the reference corpus of the study with each other. The software generated a list of keywords which contains 429 keywords. Out of them, 100 keywords were randomly selected by giving priority to the content words for the thematic categorization of keywords. Accordingly, keywords were categorized under 08 themes as shown in the following table.

4. Discussion

Corpus – based approach can be used in the second language teaching classrooms in two ways: students use the corpus analysis software directly or the presentation of teacher-prepared corpus – based activities in handouts or presentations. In the direct use of software, learners learn the behavior of the vocabulary terms themselves but, they may find specific difficulties in using the software directly because of the intimidating amount of concordance examples which can be meaningless. In the indirect use of software, the teacher accesses both keywords and concordance lines and selects some examples which are understandable to learners which is more effective than the use of the software by the students themselves. For this study, the second method or the indirect technique was implemented. The use of corpus-based activities in ESP classrooms is essential for the learners to learn vocabulary related to their field of study easily and to get acquainted with real reliable language use. Observing the concordance lines of selected keywords, the students can easily analyze language patterns and their collocations of them. Conrad (2000) says that there are three major impacts of corpus-based approach on teaching grammar too in second language teaching classrooms. These three significant impacts are: "Detailed descriptions of grammar rules will be replaced by register-specific descriptions; Grammar instruction will be closely integrated with the teaching of vocabulary. Lexico-grammar patterns will be central to language description and language learning; Emphasis on structural accuracy will be shifted to the appropriate use of alternative grammatical constructions" (Conrad, 2000). Accordingly, using corpus-based approach in vocabulary teaching in ESP classrooms is effective for the improvement of other language skills of learners too. As the purpose of the study is to investigate the possibility of using corpus-based

approach in ESP classrooms of state universities in Sri Lanka, two sample vocabulary lessons have been designed using the list of keywords created using the AntConc toolkit to show the possibility of using this approach in ESP classrooms in the state universities of Sri Lanka.

Activity 1

Match the words in "Column A" with their meaning given in "Column B".

Column A	Column B
Tombs	A method of final disposition whereby a dead body is placed into the ground, sometimes with objects.
Habitat	A repository for the remains of the dead. It is generally any structurally enclosed interment space or burial chamber, of varying sizes.
Megalithic	An object that has been made by a person, such as a tool or a decoration, especially one that is of historical interest.
Artefacts	Place where an organism or a community of organisms lives, including all living and nonliving factors or conditions of the surrounding environment.
Burial	A large stone that has been used to construct a prehistoric structure or monument, either alone or together with other stones.

Activity 2

Find out the dictionary meaning of the following words and write two sentences for each word.

Word	Meaning	Sentences
Quarts		1. 2.
Excavation		1. 2.
Magnetite		1. 2.
Interpretation		1. 2.
Charcoal		1. 2.
Interlinkage		1. 2.

Accordingly, the Corpus-based approach can be used in the ESP classrooms of the state universities of Sri Lanka successfully even though there are certain limitations and challenges that should be carefully dealt with by the teachers and learners.

Conclusion

There are so many advantages in corpus - based approach for second language learners in learning a second language. Although using this approach is challenging, it has a big potential in ESP classrooms. There were certain limitations identified in the methodology used in the study. The present study has some practical limitations since the selected corpus is very limited as the corpus is specifically created for ESP learners. Hence, having a limited corpus result in learning a few numbers of words which may not be enough for the students. Also, it is stated that corpus can provide natural contexts for the learners for better understanding, yet it is still not completely possible to represent the textual context in a more authentic way in this study which is related to archaeology and that is another limitation of this study. The corpus-based approach in second language teaching classrooms is an area where future research is essential. Further studies in this field could explore the impact of using corpus-based activities on the autonomy of the students and more empirical studies are required to explore the long-term effects of learning vocabulary and grammar through corpus-based activities. It is also suggested that further studies are required to investigate the students' attitudes towards corpus-based activities used in the classroom. It is also significant to examine the effect of using corpus-based approach on students' self-confidence or self-efficacy. Accordingly, even though there is a high possibility of using corpus-based approach in ESP classrooms in state universities in Sri Lanka, further research is essential to develop this approach and identify the problems and challenges of this approach.

5. References

Aston, G. (2001). Learning with corpora: An overview. In G. Aston (ed.), Learning with corpora (pp. 7–45). Houston: Athelstan.

Biber, D., Conrad, S., & Reppen, R. (1998). Corpus linguistics: Investigating language structure and use. Cambridge University Press.

Bonelli, E. T. (2001). Corpus Linguistics at Work. John Benjamins Publishing Company, 2001 - 236 p. - Studies in Corpus Linguistics - ISBN: 9789027285447 - Permalink: http://digital.casalini.it/9789027285447 - Casalini id: 5002198

Cheng, W. (2011). Exploring Corpus Linguistics: Language in Action. London: Routledge, https://doi.org/10.4324/9780203802632

Chung, M.T. & Nation, P. (2003). Technical vocabulary in specialised texts. Reading in a Foreign Language . Volume 15, Number 2, October 2003. ISSN 1539-0578.

Chung, T. M., & Nation, P. (2004), "Identifying technical vocabulary", *System*, Vol. 32, pp. 251-263.

http://dx.doi.org/10.1016/j.system.2003.11.008

Cobb, T. (1999): "Breadth and depth of lexical acquisition with hands-on concordancing", Computer Assisted Language Learning 12(4), 345-360.

Connor, U., Davis, K., & De Rycker, T. (1995) Correctness and Clarity in Applying for Overseas Jobs: A Cross-Cultural Analysis of US and Flemish Applications. Text, 15/4, 457-475.

Conrad, S. (2000): "Will corpus linguistics revolutionize grammar teaching in the 21st century?", TESOL Quarterly 34(3), 548-560.

Coxhead, A. & Nation, P. (2001), "The Specialized Vocabulary of English for Academic Purposes", in J. Flowerdew, & M. Peacock (Ed.), Research perspectives on English for academic purposes, pp. 252-267.

Derybina, I. (2012). Control verbs studying based on corpus linguistics as prdagogical problem *Bulletin of Tambov State University* **10** 154–8 discourse (pp. 95–114). London: Longman.

Dodd, B. (1997): "Exploiting a corpus of written German for advanced language learning", Teaching and Language Corpora, ed. A. Wichmann, S. Fligelstone, T. McEnery & G. Knowles. London; New York, NY: Longman. 131-145.

Donesch-Jezo, E. (2013), "Using language corpus in teaching foreign language vocabulary", *International Multidisciplinary e-Journal*, Vol. 2, No. 1, pp. 11-25. https://www.researchgate.net/publication/308915434

Flowerdew, J. (1993): "Concordancing as a tool in course design", System 21(2), 231-244.

Flowerdew, L. (2002). Corpus-based Analyses in EAP. In J. Flowerdew (ed.), Academic

Fraser, S. (2004). The lexical characteristics of technical texts. In K. Bradford-Watts, C. Ikeguchi, & M.

Gui, S. (2003), "Memory and English learning", *Foreign Language World*. No.3, pp. 2-8.

Hou, H. (2014), "Teaching Specialized Vocabulary by Integrating a Corpus-Based Approach: Implications for ESP Course Design at the University Level". *English Language Teaching*, Vol. 7, No. 5, pp. 26-37. 10.5539/elt.v7n5p26. http://dx.doi.org/10.1017/CBO9780511606311

Hyland, K., & Tse, P. (2007), "Is there an "academic vocabulary"?", *TESOL Quarterly*, Vol. 41, pp. 235-253. DOI: 10.2307/40264352

Kaewphanngam, C. (2002), *A corpus analysis of psychology texts as a basis for the development of teaching materials in English for academic purposes*. Mahidol University, Bangkok.

Lewis, M. (1993). The lexical approach: the state of ELT and the way forward. Hove, England: Language Teaching Publications.

Liang, S. (2005), "Research on corpora and vocabulary teaching strategies". *CAFLE*, No.5, pp. 33-36. DOI: 10.2991/seiem-18.2019.54.

Lu, H. (2018), "A Study on Corpus-based EFL Vocabulary Teaching". *Advances in Social Science, Education and Humanities Research*, Vol. 286, pp. 211-213. https://doi.org/10.2991/seiem-18.2019.54.

Maddalena, S.R. (2001), "An investigation into how corpus analysis may be used in the second language classroom to solve some of the problems surrounding non-native speakers' understanding of seemingly synonymous words", *ERIC*, Vol. 143, pp. 1-14.

McKay, S. L. (1980). Developing vocabulary materials with a computer corpus. RELC Journal, 11(2), 77–87.

Meyer, C. (2002). English corpus linguistics: An introduction. Cambridge: CUP.

Nation, I. S. P. (2001). Learning vocabulary in another language. Cambridge, United Kingdom: Cambridge University Press.

Nation, P. (2001), *Learning vocabulary in another language*. CUP, Cambridge.

Neveen, A. S., & Salma, W. (2009), "Corpus for Classrooms: Ideas for Material Design", *ELR Journal*. https://dbe.metu.edu.tr/convention/proceedingsweb/Corpus.pdf. Accessed 12.12.2022

Nordquist, R. (2020). Definition and Examples of Corpus Linguistics. Retrieved from https://www.thoughtco.com/what-is-corpus-linguistics-1689936, on 20.01.2023

O'Keeffe, A., McCarthy, M. J. and R. A. Carter (2007) From Corpus to Classroom: language use and language teaching. Cambridge: Cambridge University Press.

Rizzo, C. R. (2010), "Getting on with corpus compilation: From theory to practice", *ESP World Issue*, Vol. 9, No. 1, pp. 1-23.

Römer, U. (2008): "Corpora and language teaching", Corpus Linguistics. An International Handbook (Vol. 1), ed. A. Lüdeling & M. Kytö. Berlin: Mouton de Gruyter. 112-130.

Sun, Y. C. (2007), "Learner perceptions of a concordancing tool for academic writing", *Computer Assisted Language Learning*, Vol. Q20, No. 4, pp. 323-343. http://dx.doi.org/10.1080/09588220701745791.

Sun, Y.-C. & L.-Y. Wang (2003): "Concordancers in the EFL classroom: cognitive approaches and collocation difficulty", Computer Assisted Language Learning 16(1), 83-94.

Sun, Y.-C. (2003): "Learning process, strategies and web-based concordancers: a case study", British Journal of Educational Technology 34(5), 601-613.

Sutarsyah, C, Nation, P., & Kennedy, G. (1994), "How useful is EAP vocabulary for ESP? A Corpus Based Study", *RELC Journal*, Vol. 25, No. 2, pp. 34-50. http://dx.doi.org/10.1177/003368829402500203

Sysoyev, P. and Evstigneev, M. (2014) Foreign language teachers' competency and competence in using information and communication technologies *Procedia -Social and Behavioral Sciences* **154** 82–6

Teubert, W., & Cermakova, A. (2007), *Corpus linguistics: A short introduction*, NY: Continuum.

Tribble, C. & Jones, G. (1990). Concordances in the Classroom. London: Longman. University of Essex.(n.d.). Corpus Linguistics. https://www1.essex.ac.uk/linguistics/external/clmt/w3c/corpus_ling/content/introduction3.htm

Wang, J. (2012), "Corpus-based English vocabulary teaching: theory and application", *Foreign Language Research*, No.4, pp.127-130. https://doi.org/10.1177/0033688220964162.

Waring, R., & Nation, P. (2004), "Second language reading and incidental vocabulary learning", *Angles on the Englaish-Speaking World*, Vol. 4, pp. 97-110.

Wichmann, A. (1995). Using concordances for the teaching of modern languages in higher education. Language Learning Journal, 11, 61-63. http://dx.doi.org/10.1080/09571739585200201