



---

**CONTRASTIVE TEACHING APPROACH IMPLEMENTATION IN  
THE ENGLISH IN GEOTECHNICS COURSE AT THE TODOR  
KABLESHKOV UNIVERSITY OF TRANSPORT**

**Boryana T. Ruzhekova-Rogozherova**  
[boryana@vtu.bg](mailto:boryana@vtu.bg)

*Todor Kableshkov University of Transport,  
158 Geo Milev Street, Sofia 1574,  
BULGARIA*

**Key words:** *ESP, English in geotechnics, language awareness, contrastive teaching, comparative teaching, – ed / - ing words*

**Abstract:** *The paper comments on the characteristics of a new for the institution ESP (English in geotechnics) curriculum developed by the author. The article lays emphasis on the implementation, within the course material, of an essential language awareness procedure, such as the contrastive teaching method, often complemented by the comparative teaching approach, and contributing to learners' grammar communicative competence enhancement. Illustrative instances are excerpted from ESP materials taught to students and examined with their active participation. Although the curriculum allows the contrastive presentation and consolidation of various grammar categories, the study considers, for the purpose of conciseness, the contrastive approach application in teaching the essence, meaning and use of – ed / - ing adjectives in English. The mentioned category turns out to be widely used in technical English texts and, consequently, requires more detailed examination.*

### **1. Introduction**

The English in geotechnics course was designed in compliance with the teaching requirements of English for specific purposes (ESP), a relatively recent branch of applied linguistics and foreign language teaching (FLT) on the one hand, and, on the other, with the realization of the growing necessity of overall communicative competence enhancement, due to the increasing demands to contemporary specialists for a sufficiently high specialized knowledge in English as a result of the position of lingua franca this language has gained in many spheres of communication.

The article follows the outline: first, crucial characteristics of ESP will be presented, secondly, the English in geotechnics curriculum will be delineated with reference to basic features and language awareness (LA) enhancement need, next, some procedures related to the contrastive (CT) and comparative teaching (CpT) (with Bulgarian) of –ed/-ing adjectives will be described and exemplified, based on the characterization of the –ed/-ing words, to achieve better category discrimination, and of their Bulgarian equivalents, in terms of form and semantics, and finally, conclusions will be formulated as to the examined teaching approaches outcomes.

## 2. ESP and the English in geotechnics curriculum

ESP is aimed at meeting “specific needs of learners”, making use of “underlying methodology and activities of the discipline it serves”, “centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre” ([1] in [2] and [3]). To adequately accomplish ESP objectives, courses are usually designed for intermediate or advanced learners (ibid.), specific competence building logically depending on previously acquired language knowledge, at least at A2 (A2+) level, according to [4], allowing the learners to communicate successfully in familiar or predictable situations. ESP has been also related over the last years to focusing on the learners and investigating learning attitudes, cognition and motivation.

How is the English in geotechnics course developed in accordance with ESP fundamentals? This curriculum [5] sets the purpose of strengthening and upgrading communicative competence components in geotechnics and in general English, of promoting professional communication through improving LA and plurilingual knowledge (frequently by laying emphasis on English → Bulgarian (and French) and vice-versa contrasts when teaching hard to master categories), always contributing to motivation and learning interest. The curriculum, treating topics in soil mechanics, foundations, geotechnical investigations, slope stability, embankments, engineering seismology, geotechnical monitoring and probing, involves serious implementation of CT and accompanying CpT approaches the fruitful connection of which with LA has been proved on many occasions (cf. [6]). For conciseness the paper will only treat CT and CpT in –ed/-ing words (among which studied adjectives), these categories being *frequently implemented in scientific and technical sources* and, involving typical reception and production errors mainly due to *intralinguistic (intralanguage) interference* stemming from the similarities, along with the differences they exhibit<sup>1</sup>.

Before commenting on the above procedures implementation we deem relevant to present studied categories essential features in both contrasted languages, English and Bulgarian.

## 3. Characteristic features of the examined categories in English

There is obviously a difference between *drilled shafts* and *auger drilling*, *hammered piles* and *hammering* (a process), *retained material* and *retaining walls*, *reinforced walls* and *reinforcing*, *interlocked* and *interlocking sheets of steel*, *loaded material*, *loading process* and *loading*, *devastated area* and *devastating potential*, *a bearing wall* and *bearing (Lead rubber bearing)*, to refer to just a few instances drawn from geotechnics study materials. However, many learners experience difficulties in discriminating between cited and likewise usages; there are combinations as well, e.g. *driven piling*, also incomprehensible to a similar extent. Thus, LA improvement in the essence and functioning of *present*, *past participles* and *gerunds* is a relevant prerequisite not only to these categories comprehension in terms of their interconnection and context-determined value specificity, but also to verbids (nonfinite verb forms) command.

### *Present participles, adjectives and gerunds*

It must be kept in mind, in our view, that there is an ascending gradation in activity, activeness or progressiveness from *gerund (deverbal noun) (stage 1)* through *adjective-present participle (-ing adjective) (stage 2)*, to *typical present participle (term of ours) (stage 3)*. All enumerated forms are *hybrid* ones, assuming activeness, the essential *verbal*

---

<sup>1</sup> This interference accompanies similar in form or meaning categories within a language and often preconditions interlanguage interference. Refer to [7] as to –ed/-ing adjectives treated in contrast with French equivalent categories.

characteristic, and also features typical to *adjectives* (functioning as an adjective or being part of an adjective phrase) or *nouns* (functioning as a noun or being part of a noun phrase). How are then verbids at these 3 stages different?

There is a serious *leakage*<sup>2</sup> between the *typical present* participle used in the *progressive periphrasis* and the *-ing adjective*, shown in [7] and revealed as it follows. The periphrasis progressiveness is associated with its locative connotation equivalent to “*to be in the process of doing something*” (rf. [10] in [7]) and derived from the original “*I am in learning*” structure [9]. This process co-occurrence or “concomitance” [9] and the idea of an activity placed “inside” a process, predetermine the examined category progressiveness and temporariness investigated by many researchers. There is a semantic transition (rf. [7]) between progressive periphrasis typical present participle and the *-ing-adjective*, the typical participle exhibiting a verbal process and the adjective, combining activeness with adjectival description semantics. This “tension between the verbal semantics of the participial stem and the adjectival semantics of the syntactic slot” results in effects such as progressiveness, simultaneity, iteration, habitual or gnomic acceptations [8]. Thus, for example, (a) the *adjective* in *premodifying position*<sup>3</sup> “**drilling** equipment” testifies to time-stability, simultaneous and habitual, but also to progressive (to a smaller extent) values, being equivalent to “equipment used in *drilling (in a drilling process)*”; (b) the *participial clause (postmodifying adjectival position)* in “multipurpose equipment **drilling** the ground...”, equivalent to “multipurpose equipment which *drills / is drilling* the ground”, bears more progressiveness, which still increases in (c) *supplementary position* “**Drilling** a well, you sharply boost the resale value of your property” and in (d) *a perception verb complement* “She heard him **drilling** a hole in the rock”, whereas (e) the *typical present participle* in “Up-to-date equipment *is drilling* the ground” exhibits activity in progress and/or temporariness. Naturally, dynamic verbs involve more progressiveness (rf. [11] in [8]) in all above referred to stages.

What position does the gerund occupy with respect to commented on adjectival and participial uses? Gerunds may refer to (rf. as to classification and examples in [12]): (a) *location, materiel, result, activity and event* (housing, coating, building, drinking, and meeting), (b) *adjectives*<sup>4</sup> (golding, greening), (c) *compounds* (carrying case, bicycle-riding). Though behaving as nouns, gerunds *preserve certain verbality (activeness)* transparent not only in the *-ing progressive suffix*, but also in paraphrasing, e.g. “a coating” refers to a layer and also to the *process* of applying it. This hybrid tension becomes clear in the instances illustrating gerund functioning in a noun phrase (rf. [13], examples are ours): (a) subject “**Pile driving** is used in building foundations”; (b) direct object “Construction process requires **pile driving**”; (c) indirect object “He is interested in **pile driving**”; (d) subject complement “The best solution is **pile driving**” and (e) gerund phrase “**Pile driving in water** is rather specific”. Underlined phrases reveal not only nominal characteristics through the nominal slots they occupy, but also, verbal activeness, explicit in transformations, e.g. “To build foundations workers *drive piles*” or “The best you can do is *to drive piles*”.

### ***Past participles and -ed adjectives***

There is a clear distinction in meaning between “*reinforced*” and “*reinforcing*” (in *reinforced concrete* and *reinforcing piles*, e.g.). To better comprehend the difference and benefit from this in practice, learners’ LA must be heightened. This article section is devoted

---

<sup>2</sup> This comparison was borrowed from [8].

<sup>3</sup> Rf. in [8] as to present participle uses in accordance with function and position; examples are ours.

<sup>4</sup> Yet another proof to gerunds importance in English as “*gold*” or “*green*” are not verbs, though they form gerunds

to *past participles / -ed- adjectives affiliation* predetermining the examined type of verbids connotation.

*Reinforced* in “*reinforced concrete*” is an adjective, complying with adjective requirements, such as the abilities to be used predicatively, attributively, postpositively (rf. [14] in [7]). However, ***concrete is “reinforced” if it has been reinforced most often through steel reinforcing bars.*** Analyzing the above conditional sentence by putting a sign of equality between *reinforced concrete* and *concrete which has undergone some specific kind of treatment* or which *has been treated specifically*, we can easily establish the tight connectedness between *–ed adjectives, passive and perfect periphrases* (rf. as to exemplifying transformations [14] in [7]). Therefore, deverbial *–ed -adjectives* assume *perfectness, resultativity (acquisition of a result), some degree of passiveness, referring to the result of a carried out process and “attaching” this result to the corresponding entity.*

To sum up, before proceeding with Bulgarian equivalent structures, it must be stated that verbids (*–ing/–ed adjectives, participles and gerunds*) should be basically differentiated (*to avoid intralingual interference*) **by diathetic affiliation** (*active*, in present participles and *–ing adjectives*, and *passive*, in past participles and *–ed adjectives*), **by activeness degree** starting from *present participles* (the highest degree), passing through *–ing adjectives* (lower degree), *gerunds* (the lowest degree, but still present) and ending with *past participles* and *–ed adjectives* (lack of activeness, presence of passiveness), **by aspectuality** (*progressiveness or perfectness*), *–ing verbids* (with progressiveness generally) and *–ed verbids* (with perfectness), and, naturally, **by their connectedness with nouns or adjectives** (*participles*, with adjectives and *gerunds*, with nouns).

#### **4. Characteristic features of examined English categories equivalents in Bulgarian**

Bulgarian equivalent categories essentials will be treated in terms of similarities and differences with studied verbids in English.

In Bulgarian, likewise in English, participles and deverbial nouns are hybrids (rf. [15]), bearing verbal, along with adjectival or nominal features. Present active and past passive Bulgarian participles (English present and past participles equivalents) display number and gender similarly to adjectives in Bulgarian. Deverbial nouns can be, similarly to English, singular or plural.

Bulgarian active present participle, frequently used attributively, likewise in English, refers to activeness (rf. [15]), e.g. “*носеца стена*”. It can also introduce a participle clause, such as “*Пилотите, поддържащи конструкцията, са излети дълбоко в почвата*” and is characterized with simultaneity [16], which can be proved by means of the following relative pronoun transformation, analogous to the English one above, “*Пилотите, които поддържат конструкцията, са излети дълбоко в почвата*”. Apart from *adjectival* functions, Bulgarian present participles can also function as *nouns*. It must be taken into consideration, though, that these nouns (e.g. “*работещи*”) *do not coincide* by function with English gerunds, referring to active personal characteristics and not, to a potential process.

English gerunds Bulgarian equivalents are most often deverbial nouns, such as *drilling (пробиване)*, *piling (набиване на пилоти)*, *installing (монтиране)*, *grouting (инжектиране на циментов разтвор)*, *lagging (обииване, настилане)* or *sliding (свличане, приплъзване)*. As in English, deverbial nouns occupy all syntactic positions typical to a noun [17]. Typical deverbial nouns in Bulgarian are based on *unfinished verbs* and marked with the *–не suffix*; although not morphologically or semantically related to the present participle, as it is the case in English, they contain activeness of a process whose time and way of development depend on the utterance verbal characteristics. Deverbial activeness

also finds its expression in frequently preserving the characteristic rection of the initial (producing) verb (cf. [15], [16]).

We shall proceed by mentioning some *-ed adjectives* Bulgarian equivalents, most often attributively functioning past participles, e.g. *reinforced concrete* (**армиран бетон**), *driven piles* (**набити пилоти**), *drilled piles* (**сондирани пилоти**), *an elongated ridge* (**издължен хребет**), *artificially constructed wall* (**изкуствено изградена стена**). As in English, Bulgarian past passive participles with adjectival functions can be used attributively and predicatively (cf. [17] as to past participle uses). Similarly to English again, Bulgarian past passive participle conveys passiveness or an activity result attached to the noun due to the logical transformation relationships between “**набити пилоти**” и “**Набити са пилоти с дължина 80 м.**”, “**изградена стена**” и “**Подпорната стена е изградена от фирмата**”.

### 5. CT with Bulgarian of English *-ed/-ing adjectives in the ESP geotechnics course*

As stated above and on other occasions, CT accompanied by CpT, is a really efficient tool in LA enhancement, and, consequently a communicative competence improvement prerequisite. CT of the examined categories *is founded on establishing comparisons with Bulgarian counterparts* in terms of form and semantics. CT is supported by *overcoming intralingual interference* through exemplifying form/meaning convergences and divergences between English *-ing forms* (*adjectives, present participles and gerunds*, and ***within this set***), on the one hand, and, *-ed forms* (*adjectives and past participles*, and ***within this group***), on the other. CT can be developed in five stages (*lead-in, elicitation, explanation, accurate use and creativity*) concisely described as it follows.

At all teaching stages we recommend the implementation of specialized (and graded) text passages in contrasted languages, such as the following examples excerpted from study materials:

**Text A:** There are three ways to place piles for a deep foundation: ***driving, drilling*** or ***installing*** by the use of an auger. ***Driven piles are extended*** to their necessary depths by the application of external energy through ***hammering***. ***Drilled piles are created*** through a ***drilling process, drilling a hole*** to the appropriate depth and ***filling it*** with concrete.

**Text B:** Съществуват три начина за поставяне на пилоти при дълбоко *фундиране*: ***набиване, сондиране*** или ***монтиране*** посредством сонда. ***Набитите пилоти са удължени*** до необходимата дълбочина чрез ***прилагането*** на външна енергия от ***забиване с чук***. ***Сондираните пилоти са получени*** при ***сондиращ процес, пробиване на отвор*** на подходящата дълбочина и ***запълването му*** с бетон.

At ***lead-in stage*** learners' attention is focused, by the use of appropriate questions, on *-ing/-ed words* in terms of form and semantics. At ***elicitation stage*** students are asked questions intended to make them observe forms, reach at deductions, hypothesize as to examined categories' meaning and functioning, establish comparisons within one language and between contrasted languages, e.g., “Are ***driving, drilling, installing, hammering, drilling a hole, filling it*** (Text A) *nouns, adjectives* or *typical present participles* and why?”; “What is their syntactic behaviour?”; “Which are their Bulgarian equivalents (Text B)?”; “What class of words do they belong to and what is their syntactic behaviour?”; “What do English and Bulgarian deverbal nouns express (comment also on *фундиране, прилагането*, whose English correspondences are not gerunds)?”; “Is there a semantic connection between ***drilling*** and ***drilling process***?”; “Which is ***drilling process*** Bulgarian equivalent?”; “How does ***сондиращ*** function grammatically, which class of words does it pertain to?”; “Are the above ***-ing words*** related to the progressive periphrasis form and value and how?”; “Can you find the ***-ed adjectives*** (Text A)?”; “How are they similar and different from the underlined passives?”; “Can you analyze the same connection between Bulgarian equivalents (Text B)?” At ***explanation stage learner-friendly explanation*** is provided as to form, meaning and use of

the underlined words and phrases in contrasted languages; value divergences between similar in form categories are elucidated, all clarification being based on studied categories basic presentation (sections 3, 4). Additional exemplification is supplied if needed. At **both final stages** knowledge is consolidated and creativity is stimulated through improvement understanding activities *in English and in Bulgarian*. Learning-purpose translation is also implemented in teaching and providing feed-back. Errors are corrected contrastively and comparatively, when needed.

## 6. Conclusion

CT (supported by CpT) approach in *-ing/-ed adjectives* in the ESP course in geotechnics leads to a better LA in terms of form and semantics, which has a strong impact on learners' specific, but also general communicative competence. The examined categories in the paper, widely applied in scientific research sources, are more successfully (with more ease and correctness) implemented by the students, benefitting from these forms large scope of values and uses.

## References

- [1] Dudley-Evans T., "An overview of ESP in the 1990's", Thomas, O. (Ed.), 1-9, The Japan Conference on English for Specific Purposes Proceedings, Aizuwakamatsu, 1997
- [2] Anthony L., Defining English for specific purposes and the role of the ESP practitioner, Center for Language Research 1997 Annual Review, 115-120, 1998
- [3] Sešek U. „Teacher English“: Teacher's Target Language Use as Cornerstone of Successful Language Teaching, Komar, S. & Mozetič, U. (Eds), English Language and Literature Studies in the Context of European Language Diversity 223-230, Ljubljana, 2005
- [4] Common European Framework of Reference for Languages: Learning, Teaching, Assessment, Strasburg. <http://www.coe.int/lang-CEFR>
- [5] Ружекова-Рогожерова Б., Учебна програма по английски език в геотехниката, ВТУ, София, 2014
- [6] Ruzhekova-Rogozherova B., Contrastive Teaching, Comparative Teaching and Language Awareness Enhancement. Analysis of a Contrastive and Comparative Teaching Linguistic Experiment, Foreign Language Teaching 2, 170 – 183, Az Buki, Sofia, 2014
- [7] Ruzhekova-Rogozherova B., English Deverbal Adjectives and how to Teach Them. Establishing Contrast with French Categories, E-magazine LiterNet, 17.02.2012, № 2 (147), 2012
- [8] De Smet H. & Heyvaert L., The meaning of the English present participle, 3<sup>rd</sup> ICLCE conference, University College London, 2009
- [9] Cohen D., L'Aspect verbal, PUF, Paris, 1989
- [10] Comrie B., Aspect. An introduction to the study of verbal aspect and related problems, CUP, 1976
- [11] Decklerck R., A Comprehensive Descriptive Grammar of English, Kaitakusha, Tokyo, 1991
- [12] Pullum G. & Zwicky A., Gerund participles and head-complement inflection conditions, Collins P. & Lee D. (eds), The Clause in English. In honour of Rodney Huddleston, John Benjamins Publishing Company, Amsterdam/Philadelphia, 1999
- [13] <http://artsonline.monash.edu.au/apw/files/2013/03/finite-and-non-finite-verbs.pdf>
- [14] Huddleston R., Introduction to the Grammar of English, CUP, 1984
- [15] Граматика на съвременния български книжовен език, БАН, София, 1983
- [16] Влахова-Руйкова Р., Практическа граматика. Български език, <http://www.slav.uni-sofia.bg/grammar/morf32.html>

[17] Маслов Ю., Очерк болгарской грамматики, Издательство литературы на иностранных языках, Москва, 1956

## **КОНТРАСТИВНОТО ПРЕПОДАВАНЕ В КУРСА ПО АНГЛИЙСКИ ЕЗИК В ГЕОТЕХНИКАТА ВЪВ ВТУ „ТОДОР КАБЛЕШКОВ“**

**Боряна Т. Ружекова-Рогожерова**  
[boryana@vtu.bg](mailto:boryana@vtu.bg)

**ВТУ „Тодор Каблешков“,  
Ул. „Гео Милев“ № 158, София 1574,  
БЪЛГАРИЯ**

**Ключови думи:** АСЦ, Английски език в геотехниката, езикова осъзнатост, контрастивно преподаване, компаративно преподаване, – ed / - ing думи

**Резюме:** Докладът представя особеностите на нова за институцията учебна програма за АСЦ (Английски език в геотехниката), разработена от автора. Статията поставя ударение върху приложението в рамките на учебния материал на основна за езиковата осъзнатост методика, контрастивното преподаване, често допълвано от компаративното преподаване, и допринасяща за повишаването на граматическата комуникативна компетентност на обучаемите. Екскерпирани са илюстративни примери от преподаваните материали, разработени с активното участие на студентите. Въпреки че програмата позволява контрастивното представяне и затвърждаване на разнообразни граматически категории, работата третира, с цел стегнатост, приложението на контрастивния подход при преподаването на същността, значението и употребите на – ed / - ing прилагателните в английския език. Тези категории имат широка употреба в техническите текстове и, следователно, изискват по-подробно разглеждане.