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## Comparative evaluation of grammatical phenomena among the different specialty students

### Порівняльна оцінка граматичних явищ серед студентів різних спеціальностей

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#### Abstract

The article considers the results of a survey of technical and humanitarian specialty students in one of the non-linguistic universities in Ukraine with the following goal: to determine how the systems for assessing grammatical phenomena differ/coincide among students whose specialties are different in nature – technical and humanitarian: engineering specialties (electrical engineering and radio-electronic) 60 students; humanitarian specialties (psychology and sociology) 26 students. Such a selection will further indicate the differences in methodological approaches when presenting grammatical material to students of both technical and humanitarian specialties. The chosen grammatical topic is “Degrees of comparison of English adjectives.” The examples, used in the survey, occur in a text corpus of one of the areas of scientific and technical discourse – “Electrical Engineering”. The text corpus was compiled on the basis of articles taken from UK and US scientific journals on this field of technology. The presence of a text

#### Анотація

Стаття розглядає результати опитування студентів технічних та гуманітарних спеціальностей в одному з немовних вузів України з наступною метою: визначити, наскільки різняться/збігаються системи оцінки граматичних явищ у студентів, спеціальності яких відрізняються за своїм характером – технічні та гуманітарні: технічні спеціальності (електротехніка та радіоелектроніка) 60 студентів; гуманітарні спеціальності (психологія та соціологія) 26 студентів. Такий відбір дозволить надалі сформулювати відмінності у методичних підходах під час викладу граматичного матеріалу студентам як технічних, так і гуманітарних спеціальностей. Вибрана граматична тема – «Ступені порівняння англійських прикметників». Матеріалом, на підставі якого були представлені приклади, що використовуються у процесі опитування, є текстовий корпус однієї з галузей науково-технічного дискурсу – «Електротехніка». Текстовий корпус було складено на підставі статей, взятих із наукових

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corpus made it possible to compile a frequency list of adjectives that were used in the texts not only in accordance with grammatical rules, but also in violation of the rules explained in classical English grammar books. The methods applied in the article were as follows: statistical, quantitative, contextual, expert assessment methods. The performed survey showed which elements in training methodology should be used for students both engineering and humanitarian to understand and accumulate the grammatical information.

**Keywords:** adjective form, grammar rule, frequency, text corpus, token.

## Introduction

One of the most important and necessary procedures for educational process is testing or questioning the students. Based on them, appropriate recommendations are then presented for the further creation of methodological base in order to train the necessary material.

This article offers the description and results of such a procedure carried out in a higher technical Institution “Odessa Polytechnic” which was named an engineering centre of the City of Odessa (Ukraine). Nowadays “Odessa Polytechnic” is characterized by the presence of not only technical Institutes but also humanitarian ones. This made it possible to involve students of various specialties in the experiment to get original results.

The goal of the article is as follows: to determine to what extent the systems for assessing the grammatical phenomena differ/coincide among students whose specialties are completely different in nature – technical and humanitarian, in order to identify the differences in methodological approaches when presenting them the grammatical material.

The grammatical topic chosen was “Degrees of comparison of English adjectives”. We should note that we are not the only ones who consider it necessary to study this part of speech for further use in discursive practice (Rodríguez-Gonzalo, & Zayas, 2017). The topic itself is not something new or unknown for the students, and the theoretical description of the English adjectives can be found in any book on theoretical English Grammar. In addition this

журналів Великобританії та США з цієї галузі техніки. Наявність текстового корпусу дозволило скласти частотний список прикметників, які функціонували в текстах не тільки відповідно до граматичних правил, а й з порушенням правил, викладених у підручниках з класичній англійській граматиці. Методи в статті були наступними: статистичні, кількісні, контекстуальні, методи експертної оцінки. Проведене опитування показало, які елементи у майбутній методиці навчання необхідно використовувати студентам як інженерних, так і гуманітарних спеціальностей для розуміння та накопичення граматичної інформації.

**Ключові слова:** форми прикметників, текстовий корпус, слововживання, граматичні правила, частотність.

grammatical topic is widely covered in the school curriculum. The only facts which students need to remember is the division of adjectives into those capable of forming the degrees of comparison (qualitative) and the ones which cannot do it (relative) as well as the semantic dependence of these features on the nouns they (adjectives) are combined with.

The goal set provided the following tasks:

- 1) to conduct a procedure in the form ‘a survey’ during which the students could simultaneously express their own opinions and independently come to certain conclusions in doing the tasks, and participate in the discussion;
- 2) to select the students of both technical and humanitarian specialties as the participants in the survey and to place them in separate rooms in order to determine the possible fundamental differences in the type of logical thinking and ability to perceive;
- 3) to perform the survey in four stages: the first two stages – with a gradual increase in the complexity of the examples for indicating the level of English knowledge; the third and fourth stages – for identifying the difference in logical level and type of thinking of the students.

In the process of presenting the mentioned grammatical topic, as well as the subsequent questioning, the students should find out:

- 1) clearly distinguish between the adjectives that are capable of forming and adjectives

- that do not form degrees of comparison, so that in their professional and scientific activities they can do it unmistakably;
- 2) in cases of using relative adjectives in the forms of degrees of comparison, the students should be able to explain this phenomenon so that in the future they themselves, if necessary, can apply such a technique;
  - 3) in cases of using forms of degrees of comparison of the adjectives in violation of the rules specified in classical English grammar, also be able to explain such facts so that in their further activities connected with the English language they can use them reasonably and with full understanding.

### Literature Review

A review of the literature considering student (teacher) testing and surveys has demonstrated a wide variety of topics related to this issue.

S. Canto & K. Jauregi Ondarra (2017) analyzed to what extent the computer mediated communication (CMC) tools impact on the development of the intercultural and communicative competence in some students' groups.

M. L. Liaw (2019) conducted the survey among the English learners and obtained the data from multiple sources: surveys, video-recordings, and oral reports; the participants positively accepted the open social virtual reality spaces as a help in intercultural communication learning.

N. Araújo-Vila, L. Cardoso, D. Toubes, & J. Fraiz-Brea (2020) tried to understand with the help of survey how often digital skills were used by Spanish higher education (bachelor's and master's degree) students.

M. Bond, K. Buntins, S. Bedenlier, O. Zawacki-Richter, & M. Kerres (2020) strived to determine the interaction of technology and the level of undergraduate student engagement in digital technology use.

Sallnäs (2005) presented the results of conference participant testing which demonstrated that both the collaborative virtual environment and Web video condition are preferred by people but in different situations.

Shandra et al., (2022) preferred to work without Digital tools applying the method of analysis, synthesis, research and comparative generalizing method for forming the English-language lexical

competence under the conditions of globalization.

Lu et al., (2021) presented the results of the pre-and post-introduction survey of smart classroom environment, which provides improving the peer interaction and learning motivation among the students.

R. Pekrun, A. Elliot, & M. Maier (2009) offered the data of psychological testing of the achievement goals and achievement emotions to academic performance in a prospective study with undergraduates using exam-specific assessments of both goals and emotions as predictors of exam performance in an introductory-level psychology course.

E. Smith (2017) analysed the data of semi-structured interviews and an online survey to find why and to what extent the social media technologies influence the undergraduates during their university learning.

T. Dunn, & M. Kennedy (2019) in their study assessed the emotional, cognitive, behavioural engagement impact of Technology Enhanced Learning on students' grades.

E. Grodska, A. Machulianska, & L. Shapa (2020) described the results of the undergraduate student testing and their progress not only in the Spanish language learning but also in Spanish culture on the basis of Spanish idioms.

L. Czerwionka, T. Artamonova, & M. Barbosa, (2015); considered the results of the students' reviews carried out abroad; it was for the first time that the reviews were conducted at the beginning and end of the program.

L. Chieffo, & L. Griffiths (2004) compared the data of survey which investigated the difference in intercultural level between the students studying abroad and at home.

D. Deardorff (2006) carried out a study intended for higher education administrators identifying the students' intercultural competence level.

M. Levrins (Lórinicz), & I. Greba, (2022) studied a set of problems encountered by EFL teachers with varying lengths of teaching experience because such kind of experience was considered to be one of the most important values affecting the student' gains.

S. Aydin, & O. Ustuk (2020) researched the level of emotional state of anxiety experienced by the teachers instructing EFL.

R. Metruk (2020) determined with the help of interviews performed at the Slovak University the differences in the ideal EFL teacher perceptions by the pre-service teachers (students) and in-service teachers (instructors).

M. Uji, M. Kawaguchi (2021) offered the data based on examination of the relationship in different fields of student activities, in this case – between motivation styles and academic achievement level, using data obtained 162 college students in Japan.

G. Alamdarloo, S. Moradi & G. Dehshiri (2013) considered the results of survey conducted between pre-university students' conceptions of learning with their academic achievement. The sample consisted of 309 students (165 males and 144 females) in Tehran city.

Although the given Literature Review covers a huge range of problems, however, we did not find in the available literature the topic of contrasting the abilities and level of logical thinking among students of technical and humanitarian specialties, which, in our opinion, is the novelty of the proposed research.

### Methodology

The number of students present at the survey was 86. The students studying at the three Institutes were selected:

- 1) the Institutes of engineering specialties 60 students – a) electrical engineering, power engineering and electrical mechanics (30 students); b) radio-electronic and telecommunication systems (30 students);
- 2) the Institute of humanitarian specialties 26 – psychology (15 students) and sociology (11 students).

All of them were trained under bachelor's programs but at different courses.

As we can see from the list of the Institutes, two of them are closely related by their technical subjects since many concepts and terms of electrical engineering are used in radio electronics. And the third group belongs to the Institute that has absolutely no areas of knowledge in common with any of the selected technical Institutes – the humanities.

First of all a scientific literary object had to be chosen, in which the mentioned grammatical phenomenon examples function in real texts. The terminology and concepts of such an object had to be quite clear to many future specialists of a non-linguistic university.

The presence of text corpus facilitates the task of choosing a linguistic object. Already many teachers, translators and other specialists involved in applied linguistics the results of examining text corpora to solve their professional problems (Justeson et al., 2019).

For those reasons the text corpus of the specialty "Electrical Engineering" was taken. It (corpus) was compiled by a continuous sampling method and based on scientific articles taken from the journals of the corresponding field published in USA and UK: Electrical Engineering; IEEE Transactions on Power Apparatus and Systems and other foreign English-language publications on the specialty "Electrical Engineering". Its total size is 200 thousand tokens.

The list of the most frequent adjectives obtained as a result of the statistical analysis of the text corpus "Electrical Engineering" consists of 366 units, of which 140 words (almost 38% of all adjectives in the list) are able to form degrees of comparison and 226 words incapable of forming (62%). In many cases the computer was used in data counting.

In the article the examples functioning in the real texts were introduced into the structure of the survey at all stages. They included the usual pairs of phrases "adjective + noun", but in more complex situations the whole sentences were presented.

In the process of work except for continuous sampling and statistical quantitative methods a number of other analysis methods were used in order to obtain the reliable and correct results at any particular stage of the survey. This concerns first of all the expert (specialist) review method, which was the most required at almost all stages of the experiment.

The studies have demonstrated that the adjectives met in such texts acquire the certain original and unusual characteristics, and sometimes "behave" in an unexpected and even contradictory way, which occur because of the fact that the boundaries between the relative and qualitative adjective are very unstable and dependent on the situation and the nouns they are connected to. That is why a thorough contextual analysis was

applied and all the contradictory examples were fixed.

In the list of adjectives the special signs mark the complex cases when one and same word can contain a category of quality and form degrees of comparison, and at the same time, when combined with another type of nouns, it can be deprived such a possibility. Further these lexical-semantic variants were compared to the definitions fixed in Webster's normative explanatory Dictionary in order to highlight the cases of using adjectives in specific or incorrect meanings.

The authors of the survey can argue that in the case when examples taken exclusively from technical literature are considered, the involvement of students of humanities for this kind of experiment cannot be correct and a more rigorous selection of texts that correspond to the specialty of each of the participating groups is necessary. However, from the very beginning, the authors considered it possible and even necessary to introduce such students into the structure of the survey, since their opinion could turn out to be useful, original and unexpected, especially taking into account the above reasons for their participation.

## Results and discussion

The discussion of task difficulties and mistakes was held immediately after each of the stages and not only the instructors (experts) were present but also all the participating students.

**Stage 1.** At the first stage the students of all specialties were given only those adjectives, which categories (qualitative or relative) were quite obvious, e.g. *large*, *electrical*, etc. There were 305 such adjectives.

The students following the theoretical rules coped with the tasks quite easily and the results of the first stage of the survey showed 100% correct answers of all student groups in a fairly short period of time – maximum 35 minutes.

However, the period of time spent on determining the categories of adjectives and their forms was much shorter for the students of technical specialties (20 minutes) than for students of humanitarian ones (35 minutes). In the process of discussion a completely reasonable explanation was found for such a long duration for the students of the humanities: the students of technical Institutes orient more freely

in the vocabulary of scientific and technical discourse.

**Stage 2.** Much more difficult cases occur in the text corpus “Electrical Engineering” when the adjectives can function simultaneously (in the same text corpus) in relative and qualitative meanings. Their volume is 8% of all tokens.

As the examples the students were given the paired word combinations to identify qualitative adjectives and relative ones in them: *different from one another – different polarities, different subgroups; common size – common surge chamber; short circuit – short metal bar; transient measurements – transient recovery voltage; critical sparkover voltage, critical flashover – critical criterion; extreme conditions – extreme impulses; circular enclosure – circular cross section; solid relations – solid dielectric cable; direct current – direct effect; optimal decision – optimal controller; primary coil – primary analysis; practical consideration – practical circuit; positive charge – positive viewpoint; natural growth – natural frequency; symmetrical transistor – symmetrical system; secondary position – secondary coil; open window – open circuit; characteristic impedancance – characteristic data; total understanding – total current; economic development – economic balance between lost cost and investment.*

In the paired word combinations the qualitative and relative adjectives are presented quite randomly, so that the students did not consider that the order of their use matters.

The answers of the students of technical specialties were 100% correct and took only 10 minutes. The answers of the students of the humanities were also 100% correct, but the process of identifying the different types of adjectives took much longer – 35 minutes. Moreover, the first 2-3 pairs were determined for more than 20 minutes, and the rest – for 10-15 minutes.

The reason for the undoubted success of students of technical specialties was again their knowledge of the subject itself and the fact that they were more fluent in the terminology of scientific and technical discourse.

The humanities students admitted that this stage was much more difficult than the previous one, requiring the mobilization of not only all knowledge of the English language but also a certain amount of observation and logics. Moreover, they had to consult Webster's



normative dictionary several times. However, the well-learned theoretical information which focused the students' attention on the nouns, with which the adjectives are combined, allowed them to draw the correct conclusions and focus mainly on the meanings of the nouns in the proposed word combinations.

So after the first 2-3 word combinations they understood that if a noun was a term, then the adjective was, of course, relative, and if it was an ordinary word that is used in ordinary or scientific speech then of course it was qualitative. Therefore after such conclusions the process of indicating the types of adjectives went much faster and more productively and Webster's normative dictionary was no longer used by them.

Thus the humanitarians had to use their logics already at Stage 2.

**Stage 3.** The next two stages of the survey – Stage 3 and Stage 4 included the most difficult tasks for participating students since they can use neither knowledge of theoretical grammar nor Webster's Dictionary in them as an aid.

Stage 3 continues the theme of identifying characteristics of qualitative and relative adjectives. At this stage the cases of the use of relative adjectives in the forms of degrees of comparison, which is absolutely impossible from the viewpoint of logics, were examined. For these cases not the separate paired word combinations, as usual, but the whole sentences were given.

The task is as follows: to give a rationale of using relative adjectives in the forms of degrees of comparison for this kind of cases so that in the future the students could apply this technique to their own work.

1. *Most previous measurements and also those reported in Tables 3 and 4 were primarily concerned with measurement or line surge impedance.*
2. *It is apparent that the remaining short-circuit strength are more subtle and involve design oversights, expressive production tolerances and in some cases the need for more technical design.*
3. *Now if the inverter voltage is suddenly reduced from 370 kV to 225 kV the transient current flow resulting from the line discharge with further charge the capacitor to more negative voltage and take the neutral potential to a high negative value.*

4. *The most linear region of the variation of LI with  $\theta$  is evidently around the point  $\theta$  ....*

It took almost 30 minutes to perform this task both by the students of technical specialties and humanitarians.

At this stage the students had to solve two tasks at once: to show both their knowledge of the English language and the level of logical thinking, i.e. ability to make the logical conclusions. The base difficulty in the proposed sentences was that even the understanding of the meanings of all words could not help understand the content of sentence. In this case the only means that could be used was logics.

Of course, it was much easier for the technical students having the specialized knowledge to perform such a task. But later in the course of discussion even they confessed that they were shocked by such violation of the grammar rules they knew completely. Being absolutely confident in their logical and knowledge advantage over the humanitarians, who demonstrated much less strong knowledge in technical discourse, they were confused for the first time.

So, in examples № 2, 3 they quickly realized that the authors, most likely, simply omitted the words: in the word combination "more negative voltage" – it was the word 'value' (it turned out 'the negative voltage of higher value'); in the combination "more technical design" – the words 'strong' and 'perfect', which characterize the design, were missing (it turned out to be 'more strong and perfect design'). Such cases happen quite often in specialized texts, when the authors and readers are "on the same wavelength" of knowledge and understand each other perfectly. So there is no need to use all the elements of the phrase.

Humanities students, in turn, having no such knowledge of electrical engineering, simply logically assumed that some elements in examples № 2, 3 were most likely missing in these sentences although they did not know exactly which ones.

Example №1 shows how a relative adjective is used in superlatives. Engineering students could not explain such use of the relative adjective 'previous', and assumed "that the authors simply do not know Grammar".

But the psychology students accustomed to logical conclusions during the survey almost

immediately noted the special emotional emphasis that the authors made when using the word 'previous' in the superlative degree in this phrase, and suggested that the adjective 'previous' was of particular importance in this context.

Example № 4 contains the word combination 'most linear region' which in itself may seem quite unbelievable because the word 'linear' can be attributed to a group of words that reflect exact and therefore the only given properties in technology, therefore they cannot have any approximate characteristics especially degrees of comparison.

No no group of the students could explain this example: neither knowledge of the language, nor knowledge of electrical engineering, nor a logical approach helped here.

That's why all groups had a 25% reduction in the score for performing the tasks at this stage.

**Stage 4.** Stage 4 was the longest and took 40 minutes to carry out.

The fourth stage of the survey was associated with the presentation of data on the types of forms of the degrees of comparison of adjectives obtained as a result of analysis of the text corpus, which made it possible to determine with which degree of probability the theoretical rules of classical English grammar are implemented in the texts (using the suffixes -er/-est and appending 'more/most').

All adjectives collected in the frequency list were previously divided into groups of one-, two-, three-, four- and five-syllable units. The correctness of such a division was checked according to Webster's normative dictionary. Three-, four-, and five-syllable adjectives practically did not raise any doubts about the correctness of the use of form types in the texts. Therefore Stage 4 presents monosyllabic adjectives that are used in the real texts with unusual forms of degrees of comparison, as well as two-syllable qualitative adjectives the forms of which usually have an unpredictable type.

The students were asked to familiarize themselves with these data, draw conclusions and, after a short discussion, present a reasonable summary that could logically explain the use of: 1) monosyllabic adjectives in analytical forms of degrees of comparison; 2) two-syllable adjectives in precisely those types of forms of

degrees of comparison that are presented in the list and, accordingly, were found in real texts.

- 1) One of the most surprising phenomena that are observed in the text corpus "Electrical Engineering" is the use of some monosyllabic adjectives in analytical forms of degrees of comparison which is contrary to the fundamental rules set forth in theoretical grammars in the English language. And nevertheless in the studied texts they were found.

What is the reason for such a violation of the rules of English grammar? This question had to be answered by the students, demonstrating the logics of their thinking.

Here is a list of such adjectives (as always in our work they are presented with the value of their occurrence in the texts): full (F=46), slight (F=44), real (F=40), last (F=25), clear (F=23), true (F=15), firm (F=12), fair (F=10), poor (F=8), quick (F=7) and examples of some word combinations in which they are used in analytical degrees of comparison: *the most full information, more slight value, the most real way out, the most last construction problem solution, more clear view, the most true engineer opinion, the most firm integrated circuit package, the most fair decision, the most poor control demonstration, more quick computer calculation.*

After performing this task the positions of the student was as follows: the students of technical specialties were in the lowest position, since their logics in this task turned out to be very weak, and the grade was, accordingly, unsatisfactory; the students of the humanities occupied the highest position, with the highest score.

How did it happen? The students confessed that the phenomenon of using monosyllabic adjectives in analytical forms of degrees of comparison was almost shocking for them, since this completely contradicted the rules of classical grammar that they knew from the school curriculum.

The students were asked to determine the cause of the phenomenon of incorrect (from the viewpoint of theoretical grammar) use of the forms of degrees of comparison in the texts of scientific and technical discourse.

The students of technical specialties suggested that the authors of the scientific articles, most likely, were not familiar enough with English grammar (it was for the second time they made

such kind of assumption instead of thinking over the situations in the texts).

Psychology students drew attention to the semantics of words that were used incorrectly and presumed that the authors-scientists thus focused on certain phenomena or facts that could not be noticed by readers of the articles if these words were used according to the classical rules. In addition they suggested that in these cases an emotional emphasis on these words is also possible which gave more expressiveness to the complex and “dry” texts on electrical engineering.

- 2) In accordance with the information on “Degrees of comparison of English adjectives” taken in the textbooks on theoretical Grammar of the English language as well as based on the experience of working with real text corpora, the authors came to the conclusions that the most unpredictable forms of degrees of comparison are observed in two-syllable qualitative adjectives which can demonstrate an increase in quality both with the help of suffixes -er /-est, and separate words ‘more/most’. At Stage 4 they were presented in those types of forms and in conjunction with those nouns with which they are realized in the texts. And, of course, with the frequency of their occurrence in the texts.

Here they are: *more basic circuit* (F=85), *earlier solution* (F=50), *the most complete voltage calculation* (F=43), *more real electricity consumption* (F=40), *more complex management problem* (F=35), *the most recent year contracts* (F= 27), *the most proper conditions* (F=25), *more valid limitations* (F=24), *the most correct cable size* (F= 23), *heavier structure* (F=23), *the modernest invention* (F=19), *the most useful power consumption information* (F=19), *the most exact estimation* (F=18)KA, *more severe weather conditions* (F=18), *more usual agreement* (F=18), *the easiest equipment control* (F=17), *the most extreme reliable terminal* (F=16), *more active constituent* (F=15), *more compact form of casing* (F=14), *more rapid process interruption* (F=14), *steadier operation of the device* (F=14), *the most adverse junction* (F=12), *more careful operation observation* (F=11), *more random transmission line breaking* (F=9), *the narrowest passage* (F=7), *the most nearby transmission line tower* (F=7), *more normal power arrangement* (F= 7).

The answer of the students of technical specialties turned out to be much more successful and deserved the highest score for the logics they demonstrated in performing this task. The answers of the students of humanitarian specialties were standard, uninteresting and simply weak, devoid of any originality, with very weak logics. Humanities students received one of the lowest score.

The discussion of this Stage 4 item was also the longest in terms of time.

Humanities students suggested that the use of certain types of forms in the presented two-syllable adjectives has developed historically, and most likely, not all English speakers understand why they (types of forms) are used in this way and perceive such a situation as a given.

The students of technical specialties first went the same way, but saw that it was unproductive and came to the conclusion that perhaps in this matter there was some principle of using certain forms for adjectives with two syllables and tried to find it.

During the discussion after this stage they (technicians) confirmed that they were looking for and seem to have found an almost universal principle for determining the types of forms of degrees of comparison for adjectives with two syllables (of course, according to them, it would operate with some error, i.e. it is not always ideal). They drew attention to the values of the frequency of use of two-syllable qualitative adjectives in the forms of degrees of comparison in the texts, and decided to check whether these values could influence the type of formation. And indeed, those words that were used with a greater frequency had a greater (though not absolute) probability of forming degrees of comparison analytically, and with a smaller value of frequency – synthetically.

They presented the calculations with the help of which they confirmed their idea: the total frequency of occurrence in the texts of two-syllable qualitative adjectives in degrees of comparison with the help of suffixes -er/-est was 134 tokens, and the frequency of use of two-syllable adjectives that form degrees of comparison with ‘more/most’ – 493 tokens. So the guess of the students of technical groups turned out to be logically correct and may even be used in explaining the grammatical material “Degrees of Comparison of the English Adjectives”.



Thus, the proposed problem of differentiation of logical and thinking characteristics of technical and humanitarian students determines the type of survey. This (survey) is quite noticeably different in nature from those considered in the above literature sources, in which respondents passively carry out the tasks, and the conclusions are drawn by survey organizers. The tasks facing the participants of this exact survey allow them to take an active position, i.e. offer their own, rather original solutions to the assigned tasks, and, what is important, draw their own conclusions based not only on knowledge of the subject, but also on logics.

### Conclusions

1. The described procedure of survey has demonstrated that in order to determine the level of assimilation of grammatical material it can be successfully used instead of the usual exercises and testing, which, firstly, have long been familiar to students and do not arouse any interest in them, secondly, it makes it possible along with expressing one's opinion to listen to opinions of others.
2. The simultaneous entering the students of technical and humanitarian specialties into the groups of the participants showed that such an association is quite successful, because made it possible to bring together individuals with different types of logical thinking and psychology, and they did not contradict but complemented each other when performing tasks, and showed possible and even unexpected variants of solutions. We can say that in this case not only objective but also psychologically verified data were obtained.
3. The conducted survey showed which elements in the future training methodology should be used for students to understand and accumulate the grammatical material of various subjects. This allows us to make the following recommendations: a) for students of technical specialties who will use English for their scientific and practical activities, English teachers should do emphasis on the lexical and semantic characteristics of language units as well as to draw their (students') attention to elements of the language that could enhance the impression of the information presented; b) for students of humanitarian specialties the attention should be focused not only on the stylistic features of texts and the semantics of words but also on formal logics, counting facts and observing their interaction, which make it possible to take into account features that

may not be related to their specialties but will no less make their future research richer and more original.

Some words about the limitations of the proposed study. Of course, it would be ideal to present a complete list of adjectives functioning in the text corpus "Electrical Engineering", with all the necessary marks recording cases that were used in violation of traditional grammatical rules, but the scope of the article does not allow it.

The presented study also allows us to conclude that the use of scientific research results in explaining topics of theoretical grammar is long overdue. And first of all this concerns the results obtained on the basis of analysis of text corpus. That is why the article describes the procedure applying in practice the synthesis of theoretical issues of grammar and the results of the analysis of text corpora.

The authors agree that to solve the problem of adequate translation of written scientific texts in English, such an approach to teaching methods is quite possible. In addition, the authors, as part of a group of researchers, plan to create and analyse some text corpora (with the further compilation of probable-statistical models) in various areas of scientific and technical discourse to determine the comparative characteristics of text units functioning in real texts. The presence of frequency dictionaries also helps to clearly determine the sequence of introduction of speech units into the educational process, starting from the most frequent to the least frequent.

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