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A dictionary of general language and general scientific lexis as a handbook for foreign medical students

ABSTRACT

There is represented a new lexicographic edition, which is intended for foreign students in medicine, pharmacy and stomatology in the Bulgarian medical universities: Bulgarian-English training dictionary, reflecting some basic difficulties, which the foreign students encounter at work with training texts in the subject in the first years of their training in Bulgarian language.

Key words: foreign students, Bulgarian language, general language and general scientific lexis, medical text

Introduction

In compliance with the Law for the higher education, which is operating on the territory of Bulgaria, the foreign students, which study a subject in Bulgarian language, pass a one-year course for preparation in general Bulgarian language (620 school hours) and in the language of the subject (230 school hours). In the programme are included also and knowledge in the special subjects (for the medical subjects, for example, these are biology, chemistry, physics, anatomy – as per 75 school hours for each).

The further volume of the training in Bulgarian language is organized in compliance with the autonomous programmes of the universities. In some medical universities the students study Bulgarian language in first and second course as an obligatory

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training discipline, and in others – the training is carried out only in first course (up to 120 hours for one academic year).

Despite the ceaseless perfecting methods of the training in general and specialized language in a not philological university, the predominating part of the students encounter impediments, difficult for overcoming in the first years of their training in the subject. Some of them are connected with the insufficient preparation in the special disciplines from the secondary school, others – with insufficiently developed habits for analysis and studying of scientific information, third – with the insufficient level of command of the new language, in which is carried out the training. The first two from the indicated difficulties are shown individually for the different trained persons, but the third is valid for everyone. The students need assistance in the work with the texts in Bulgarian language, but in the programme there is not enough time for increasing of the volume of the training in Bulgarian language and the very students do not have enough time at their disposal in order to visit additional classes.

At listening (of lectures, explanations during the exercises) the difficulties consist of the inconformity between the speed of speech of the lecturers, the great quantity of new words, the logical difficulty of the texts – on the one hand, and the speed of perception of the new information by the foreign students, on the other hand.

At reading the basic difficulties for them are the enormous quantity of new and various words, the inability to specify the degree of their significance, and also the syntactical difficulty of the sentences and the text, as a result of which the extracting of the general information is not always successful. Not rarely the style of the textbooks – as an individual peculiarity of the style of the authors, is closer to the style of a complicated scientific dissertation, than to the style of the textbook as a book for training, which also complicates the possibility for adequate and of full value perceiving of the information from the text.

At speaking the basic difficulty is the syntax, which except a pure linguistic incompetence, is a result of unclear thinking, i.e. insufficient preparation from the previous stages of the acquiring of the information – listening and reading. When the connotation of the words is not clear completely, the logical connections between them are difficult to be carried out. And since the words express the thought, this shows lack or insufficiently good connection between the notions: if the knowledge is perceived correctly, this correctness of the connotation would be expressed at speaking, even in a not perfect linguistic form. The same is valid and for the written transferring of the perceived by the students scientific information.

An important instrument in aid of the student in his/her work as per the subject at this stage is the dictionary. But the usage of the existing ones – general linguistic and

terminological, is not an optimistic alternative for him/her, since, if they are terminological – explanatory or translation, are not conformed with his/her level [Димитрова и др. 1994], they are too difficult –even if they are explanatory [Арнаудова 2005], and the general linguistic – if they are volumetric, they require a lot of time for searching of words, and if they are concise – they do not include all searched words, and besides not all students may use them, since not everyone has a command of the language of the translation (usually English), and translation dictionaries in their native language - most frequently for Bulgaria Turkish, Greek, usually there are not [Минков, Костова 2013].

Therefore the training lexicography here is especially topical. It is flexible since it can be conformed with the specific peculiarities of the audience, for which it is intended, on the one hand, and on the other – adequately to respond to their necessities, with concrete purposes and specific contents. The training dictionary "General linguistic and general scientific lexis in the scientific text" [Костова, Минков 2013], developed by us, intended for foreign students in medicine, stomatology and pharmacy, refers namely to this group of lexicographic editions.

Presentation

1. Scope and sources. The training and scientific texts include four basic layers of lexis: 1.conversational and general-linguistic lexis (level A1-B1 from the European frame of reference for languages); 2. General linguistic lexis at level high-advanced (B2-C2); 3. General-scientific lexis; 4.medical terminology – general and special.

The students have command of the conversational and general linguistic lexis at level A1-B1 from a preparatory course. The medical terminology, which is introduced for first time, is new and for the Bulgarian students and is explained by the teachers during their lectures and seminars. It also frequently is illustrated visually and this assists the understanding and the remembering of the terminological instrument for each new special discipline.

The factual difficulty for the foreign students at this stage are the general linguistic lexis at level B2-C2 and the general scientific lexis, which are typical for the academic training texts and they occupy greatest percent from their volume. Often these are long and difficult for reading and pronouncing words, compound or foreign words, words with specific meanings and specific syntactic functions.

The dictionary "General linguistic and general scientific lexis in the scientific text" is composed on the grounds of training texts in the basic academic disciplines in I - III course - physics [Бенова и др. 2006][Маринов 2004], biophysics [Маринов

2011], biology [Ватев и др. 2006], cytology, histology [Овчаров, Такева 2001] [Чучков, Йотовски 2010], anatomy [Банков, Овчаров 2008] [Павлов, Йотовски, Аврамова 2002], physiology [Гърчев и др. 2008] and pathophysiology [Андонов 2010].

2. Structure. The dictionary comprises around 9 000 words, arranged in alphabetical order. It is developed as a bilingual dictionary - Bulgarian-English, but it contains and a third column for independent work, where the student may translate the word in their native language, to indicate synonyms or to explain its meaning explanatory. This third column gives opportunity to the student for a more profound work with the word: translating it with the help of a dictionary, a teacher or a friend, he/she works actively with it; marking a synonym – he/she enriches their vocabulary, and explaining its meaning – he/she develops their logical thinking and remembers it permanently.

Български	English	Бележки Comments <i>synonyms, meaning, translation</i>
бавновълнов, -а, -о, -и	slow-wave adj	
багра, -и	1.colour; dye 2. tint; huen	
багрилен, -лна, -лно, -лни	tinctorial, colouring adj	
багрило, -а	paint; dyen	
багря, -иш[се]/обагря, -иш[се]	colour [<i>pass</i> : becoloured]; dye [<i>pass</i> : bedyed] v	
бадем, -и	almond n	
бадемовиден, -дна, -дно, -дни	almond-shaped adj	
база, -и ^{1,2}	base; basis n	син. основа
базирам, -аш[се]	base (on) [<i>pass</i> : be based (on)] v	
барабан, -и	drum, tambour n	
бе	was, were v	син.: беше
беглец, бегълци	runaway, fugitive; escapee n	
беден, -дна, -дно, -дни	poor adj	
бедствие, -я	disaster; calamity n	

In the Bulgarian part the words are arranged in alphabetical order. The grammatical notes to the words reflect the grammatical peculiarities of the Bulgarian language (presence of three grammatical genders – masculine, feminine, neuter; three forms of conjugation of the verbs; two verbal types – imperfect and perfect type; reflexivity of the verbal action and etc.), as well as their frequency of displaying in the scientific text. For the nouns with object meaning are indicated the forms for plural. There is not indicated form for plural, if the word is used only in singular or the usage of the form for singular is with prevailing frequency. In the cases, when the word is used only in plural, this is indicated in brackets (pl.). Note for gender - for example, "ж.р." (feminine gender), is put only to words, which are exception to the basic rule (for example for feminine gender they do not have the typical ending "а/-я", for example ГНОЙ(ж.р.) , since at this level the students already know the basic rules for gender differentiation and differentiation in number of the nouns.

The adjectives and the participles (present active, past active, present passive, past passive participles) are presented with their forms for masculine gender – as a basic form, for feminine and neuter gender and plural.

The verbs are presented with their forms for imperfect and perfect type, as for each is indicated and the form of 2 person singular. In many of the cases in brackets is indicated and the particle "се" as a variant for formation of passive voice.

The English part contains the translation of the words in the meanings, which are met in the training texts. Everywhere to the English translation is indicated a grammatical note, which is important for orientation in the meaning of the word in Bulgarian language, since frequently in English language one and the same as per form word in the text has different grammatical meanings, for example a noun (noun:**n**) and an adjective (adjective: **adj**).

In the third column: *Notes*, in some cases are given examples, as there are indicated synonyms or meanings of the words. But this part, as we marked above, is intended mainly for independent work of the student. With it the dictionary executes the role and of a notebook and this way it may be used and in the training classes in Bulgarian language at studying of the structure and contents of the scientific text.

3. Contents. From linguistic point of view the contents of the dictionary brightly confirms the peculiarities of the scientific style of speech, at first place - its nominal character with prevailing number of – nouns and adjectives, as well as the typical peculiarities of the Bulgarian scientific speech, which makes it not only a useful textbook for students, but also an interesting result for the linguist-explorer, as well as a useful resource of information for the teacher in Bulgarian language as a foreign language.

The analysis of the parts of speech in structural regard shows strongly expressed specific peculiarities for each of them.

The nouns include several clearly outlined groups: 1. Simple words; 2. Nouns, formed by adjectives; 3. Nouns formed by verbs.

The simple words usually are general linguistic lexis, which do not distinct with high usage in the conversational speech and is from the lexical corpus at language level B2-C2: for example, *кобилица* (1. yoke, cowstaff; 2. balance/scale- beam), *саламура* (brine), *вретено* (spindle), *застой* (standstill, stagnation; congestion), *греда* (beam), *пихтия* (jelly), *бримка* (stitch), *бразда* (furrow), *висулка* (pendant), *зъбец* (1.tooth; 2. cog), *камшик* (whip), *кинжал* (dagger), *спица* (spoke), *плитка* (plait; tress, braid), *решето* (riddle), *склон* (slope), *устие* (1.mouth, outfall, outflow; 2.orifice; 3.outset), *хребет* (ridge, spear, crest), *русло* (1. river-bed, channel; 2. course) and etc. In the scientific speech they are usually used to characterize objects as per form, consistency and other external peculiarities.

The nouns, formed by adjectives are typical general scientific lexis. A big group of them are words from feminine gender with the specific ending *-ост*. It is known that in Bulgarian language there are only five words from masculine gender with this ending: *пост* (1.post; 2.guard, sentry; 3.post; 4.fast, fasting), *гост* (guest, visitor), *мост* (1.bridge; 2.axle), *тост* (toast, health), *лост* (1.lever, heaver; rod, tiller, bolt; 2. bar), which are monosyllabic words, and these from feminine gender are numerous and usually are long, as well as compound words: *вероятност* (possibility), *взаимозависимост* (interdependence), *изменчивост* (changeability), *жизнеспособност* (viability, vitality), *достоверност* (authenticity), *крехкост* (brittleness, fragility). They usually denote characteristics, but they may denote and objects: *вкаменелост* (fossil), *окръжност* (circumference). Other nouns here are these with endings *-ина,-ота*: *гранавина* (roughness), *стръмнина* (steepness), *същина* (essence); *мокрота* (wet, dampness).

The verbal nouns, in the terminological, as well as in the general scientific lexis have two basic meanings: with an ending *-не* they denote a process, and with an ending *-ние* - result from the process: *вплитане* (weaving), *впръскване* (injecting), *заглъхване* (becoming deaf, dying away; fading away; fading, waning), *изопване* (stretching, straining), *източване* (drawing out, draining, shooting up); *внушение* (suggestion), *колебание* (hesitation, variation, fluctuation, oscillation), *смущение* (disturbance).

The compound nouns are few in number and without typical common characteristics in meaning: *местообитание* (habitat), *иглоубождане* (needle-pricking, acupuncture), *злоупотреба* (abuse, misuse).

Also from the point of view of the structure, there is noticed a high frequency of specific prefixes – in some cases they come from the verb (at verbal nouns), and at others are an own word-building element, for example: възникване (origin, rise), възобновяване (renewal), възпаление (inflammation), възприемчивост (receptivity), възпроизвеждане (reproduction); безтегловност (weightlessness), безкрайност (infinity), безветрие (windlessness); завихряне (swirling), завъртане (turning), закривяване (bending), замъгляване (fogging, clouding); изтръгване (uprooting), изхабяване (blunting, wasting, wearing out), издатък (edge), изрезка (clipping); неизгодност (unfavourableness), непропускливост (impermeability), неизбежност (inevitability); обмяна (exchange), обкръжение (surroundings), обобщение (generalization; summary); насечка (notch), наличие (presence), налобяване (unevenness, roughness), наслояване (laying, stratifying); преживяемост (survival), преимущество (advantage, priority), превъзбуда (overexcitement); съотношение (proportion); съпоставка (comparison).

Without a high degree of frequency, but enough noticeable are displayed the diminutive nouns, the substantivated and the nouns-exceptions with an untypical ending for feminine gender: хълмче (hillock), жичка (filament), кълбце (globule), коленце (nodule/little knee); делимо (dividend), съдържимо (content), крива (curve); плесен (mould), плът (flesh), мощ (might).

The adjectives: as their most distinctive peculiarity outlines the presence of enormous number of compound words, formed usually by 1/ two full value words; 2/ a numeral + a full value word; 3/ a preposition + a full value word, for example 1/ брадавицовиден (wart-shaped), дълговерижен (long-chain), грубовлакнест (rough-fibrous), бледожълтеникав (pale-yellowish), бодилообразен (prickle-shaped); 2/ двуосен (biaxial), двукратен (double), двойноусукан (double-twisted), десетократен (tenfold), тристъпален (three-stage), второстепенен (secondary); 3/ безразборен (promiscuous), безвъзмезден (free, unpaid).

Typical meanings of the compound adjectives are 1/description of form: гирляндоподобен (garland-shaped); копиевиден (spear-shaped); клиноиден (cuneiform); керемидообразен (tile-shaped); двойно вдлъбнат (double-concave); 2/ description of consistence – гелообразен (gel-like); дребнозърнест (small-grained); 3/ description of colour - пурпурно-виолетов (crimson-purple); сивокафеникав (grayish-brown); бледожълтеникав (pale-yellowish); 4/ description of place – срещуположен (opposite); извънтелесен (out-of-body); 5/ description of structure - двуосен (biaxial); двукрил (dipteral; two-winged); едновежижен (mono-chain); тънкостенен (thin-walled); тристъпален (three-stage); 6/ description of properties - бързопреходен (fast-transitional); краткотраен (short-lived); нискочестотен (low-frequency); яйценосен (ovipara-

rous); водоустойчив (water-resistant); жизнеспособен (viable); 6/ description of functions - защитно-приспособителен (protective-adaptive).

Very typical are the adjectives with meaning "*negativeness*", as they are formed with the preposition "*без*" and the particle "*не*" in their capacity as prefixes: безпорядъчен (disorderly), безусловен (unconditional); небрежен (negligent), недостъпен (inaccessible; unapproachable), неизменен (unchanged), неизтощим (inexhaustible), неимоверен (unbelievable; extraordinary), незначителен (insignificant), незатихващ (unfading), ненаситен (insatiable; unsaturated), необозрим (boundless, vast), неподатлив (unsusceptible), непроницаем (impermeable).

The group of the simple adjectives contains such with the typical suffixes *-ест*, *-ист* with meaning "has a form of", "looks like", "it contains big quantity of": зърнест (grainy), ивичест (stripe-shaped), иглест (acicular), кашест (mash-like), кълбест (round, globular), кукест (hook-like), перест (feathery), пенест (foamy), пихтиест (jelly-like), пещерист (cavernous), петнист (spotted), блатист (marshy), which are also with high frequency at description of objects.

As per origin the simple adjectives are: 1/ simple initial; 2/ formed from nouns; 3/ formed from verbs; 4/ formed from numerals and other parts of speech. Simple initial are for example ален (scarlet), бистър (clear), гол (naked, nude), глух (deaf), груб (rough, rude), гъст (thick), кос (slanting), крив (crooked), прав (straight), зрял (ripe, mature), див (wild); formed from nouns – with suffixes *-ен*, *-ов*: жълтъчен (yolky), димен (smoky), вихров (swirling), кръгов (circular), мостов (bridge), рогов (horn, horny), битов (of life); formed from verbs - извратен (perverted), изявен (expressed, manifested), разслоен (stratified); formed from numerals - двойка (double), двойствен (dual), първичен (primary, initial), вторичен (secondary), третичен (tertiary).

Basic specific peculiarities of the verbs are the various prefixes, which express many shades in the meanings. Even if the basic verb is known from the lower language levels, the prefixes change the meaning and in the text in the new meaning it appears as a problem: see for example режа - нарежа (to cut – to cut into pieces/ to slice), подрежа (to trim), срежа (to cut, to shear, to snap at), изрежа (to cut off, to clip off), прережа (to cut through), порежа (to cut), зарежа (to leave, to abandon, to desert), разрежа (to cut up, to slit, to dissect).

Typical prefixes for the verbs in the general linguistic and general scientific lexis in the scientific medical text are: "**в**" - вграждам (to build in), вгъвам (to sag), вдавам (to jut out, to cut into); "**въз**" - въздействам (to influence), възобновявам (to renew, to renovate), възпроизвеждам (to reproduce, to recreate); "**из**" - изтласквам (to push out), изчезвам (to disappear), изчерпвам (to exhaust, to deplete, to

spend), ;"за" - завъртам (to turn, to spin), заглъхвам (to become deaf, to fade away, to die away), заграждам (to enclose, to surround); "на"- набраздявам (to furrow, to line), навивам (to wind (up), to roll (up), нагаждам (to adapt , to adjust); "над" –надграждам (to overbuild), надвисвам (to overhang, to threaten), надвишавам (to exceed); "о", "об"- обвивам (to wrap, to cover), обикалям (to go/walk round, to tour), обкръждавам (to surround, to encircle); "от"-отдавам (to give, to render, to ascribe, to devote), отвеждам (to lead/ take away), отклонявам (to divert, to deflect); "по" - побледнявам (to turn pale, to grow pale, to whiten), повличам (to drag (along), to sweep away), поглъщам (to swallow, to absorb); "под" - поддавам (to sag, to succumb, to give in), подлагам (to put under), подплатявам (to line, to wad); "пре"- преброявам (to count), прегъвам (to fold, to bend), преграждам (to block, to obstruct); "при" - придружавам (to accompany), придърпвам (to drag), приобщавам (to incorporate, to unite); "про" - произлизам (to derive, to be a result of), произхождам (to originate), промъквам (to sneak); "раз" - разгъвам (to unfold), раздвоявам (to split, to divide in two), разклонявам (to ramify, to branch out); "с", "съ" - способствам (to further), сраствам (to accrete, to knit together, to grow together), съвместявам (to combine), съотнасям (to correlate); "у" – удвоявам (to double), усреднявам (to average), удължавам (to lengthen, to prolong).

Typical for the scientific style is the broad usage of all types of participles. With highest frequency in the presented by us dictionary are the past passive participles, which is explicable having in mind the active usage of passive voice in this type of texts: възпроизведен (reproduced, recreated), всмукан (sucked in, absorbed), извит (bent, curved), изтласнат (pushed out), придобит (acquired, gained), изкривен (bent, crooked). At second place as per frequency of usage are the present active participles: възлизащ (amounting), зреещ (ripening), блуждаещ (straying), въвеждащ (introducing); after this follow the verbal adverbs, expressing a parallel action - белязвайки (marking), вдлъбвайки (concaving), излагайки (exposing), допринасяйки (contributing). With lower frequency but also distinctly expressed are the present passive participles – възвратим (retrievable), въображаем (imaginable), делим (divisible), възстановим (repairable, refundable), доловим (perceptible), and the past active participles – довел (had brought), внедрил (had introduced), изпитал (had tested, had felt), изчезнал (had disappeared).

The different types of participles have specific syntactical roles and the knowing of their forms and uses is an important condition for successful work of the foreign students with the scientific text.

We pay special attention in the dictionary and to the compound and specific for the scientific text prepositions and adverbs: безпрепятствено (unimpeded, without

hindrance, freely), безусловно (unconditionally), буквально (literally), исключительно (exceptionally, exclusively), извънредно (extraordinary, extremely); вследствие на (as a result of, in consequence of), в сравнение с (in comparison to), чрез (through), подобно на (similar to) and etc.

Conclusion

The introduction of the terms of each new university discipline is work of the teacher, and their mastering – of the student. But at equal volume of tasks from this type, the foreign students need much more time, not small part of which they have to devote for mastering of great number of new and recalling of old one, studied for example in a preparatory course and not fresh in their memory general linguistic and general scientific lexis. The enormous quantity of new words and the lack of habit, especially in first course, to be separated the major as per meaning from them – these are problems, which the students overcome difficult without somebody else's help. The training dictionaries have an important role in this process.

The presented here dictionary is the first from a series of dictionaries, which we prepare, with the following characteristics: 1. training dictionaries; 2. based on topical for the students training texts; 3. intended concretely for the audience of the foreign students in the medical university.

This series stipulates the preparation and publishing of 5 types of training dictionaries [Минков, Костова 2013]: 1/ a dictionary of the general linguistic and general scientific lexis – represented here, already published; 2/ a training terminological dictionary – an explanatory dictionary with the specific terms in the before-clinical disciplines; 3/ a mixed type of dictionary (including all layers of lexis – general linguistic, general scientific, terminological, but comprised in training texts only of one training discipline: for example biology, biochemistry and so on.) [Костова, Станчева, Минков 2010]; 4/ a dictionary of the foreign words in the scientific text; 5/ a medical training dictionary–phrase-book for work as per the clinical subjects and with patients.

These are training handbooks for students, which in some cases – as in the presented here, they unite a training dictionary and a notebook, carrying out concrete training purposes.

It is, however, important the teachers in the special subjects to be acquainted with the contents and the peculiarities of this type of dictionaries. They are not philologists and naturally - concentrating in the teaching of the subject, it is unwonted for them to give explanations regarding the structure, the grammatical peculiarities of

the words and so on. And this is not necessary. But they may have in mind the peculiarities of the scientific text, concrete linguistic difficulties of the students and at leading of the practical classes and lectures to watch for their speech - for example, to avoid foreign words, to substitute them with adequate Bulgarian synonyms, there are such and so on. In the groups for joint training of Bulgarian and foreign students there may not and does not have to be allowed lowering of the level of teaching or to be lost time, because of insufficient linguistic competence and linguistic uncertainty of the foreign students. The teachers, organizing their speech – written and oral speech, may have in mind the contents of this type of training dictionaries, which give clear notion about the linguistic competence of the foreign students, especially the initial stages of their training in the subject.

This way the training dictionary can be not only a handbook for the student, but also a mediator in the communication teacher - student, cooperating in this way for increasing of the efficiency of the process teaching-training, in which are interested in equal degree both of the participating parties. [Минков 2012].

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