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DEVELOPING WORD-CONSCIOUSNESS THROUGH LEARNING LATIN AND GREEK MORPHEMES

Сидорук Г. І. Розуміння слів на основі вивчення латинських і грецьких морфем.

У статті розглянуто, проаналізовано та класифіковано латинсько-грецькі афікси та корені, які є основними складовими морфемами англійських науково-технічних термінів, що потребують запам'ятовування для успішного виконання письмового та усного перекладу. Іноваційність даного дослідження полягає в тому, що студентам не потрібно «зазубрювати» не зрозумілі для них лексичні одиниці, а розуміти, «відчувати» внутрішню структуру й семантику і «конструювати» слово з осмислених ними морфоелементів.

Ключові слова: латинсько-грецькі афікси, складові морфем, морфоелементи.

Сидорук Г. И. Понимание слов на основе изучения латинских и греческих морфем.

В статье рассмотрены, проанализированы и классифицированы латинско-греческие аффиксы и корни, являющиеся основными составляющими морфемами английских научно-технических терминов, требующих запоминания для успешного выполнения письменного и устного перевода. Инновационность данного исследования заключается в том, что студентам не нужно «зазубривать» не понятные для них лексические единицы, а понимать, «чувствовать» внутреннюю структуру и семантику слова и «конструировать» его из осмысленных ними морфоэлементов.

Ключевые слова: латинско-греческие аффиксы, составляющие морфем, морфоэлементи.

Sydoruk G. I. Developing word-consciousness through learning Latin and Greek morphemes.

The article considers, analyzes and classifies Latin-Greek affixes and roots, which are the main components of morphemes of English scientific and technical terms that require memorization for successful translation and interpretation. Innovativeness of this study is in grounding the necessity for students to understand – "feel" the internal structure and semantics of terms and "construct" a word with meaningful morphological elements without need to "learn by heart" lexical units unclear for them.

Key words: Latin-Greek affixes, components of morphemes, morphological elements.

The more words you know, the more clearly and powerfully you will think and the more ideas you will invite into your mind. These words belong to Wilfred Funk and clearly reflect the task and purpose of our discussion in the article as problem number one in training would-be interpreters is to help trainees memorize as many words as possible in order to be effective communicators and interpreters. There isn't any universal recipe how to cultivate this ability. There are many ways of doing it. To my mind one of

those methods to impart, implant that word sensitivity and language intuition is to analyze the etymology of words, the meaning of their constituent parts, Latin and Greek words and morphemes in particular. We know very well that Latin is not taught in sufficient volume and Greek is neglected totally in our Schools and we are those who have to fill up that gap somehow.

Latin and Greek have contributed thousands of words into English Vocabulary, and their basic importance can hardly be exaggerated. Practically any term we use connected with knowledge or arts, with religion or education, is of Latin or Greek origin. The everyday words in English that refer to home, family, or domestic economy are mostly from the Anglo-Saxon, but even here there is an important Latin influence.

Some of the words in English can be traced to a remote past, some have histories that began yesterday or are even beginning today. The borrowing from the endless treasure of those languages has never stopped and it is not going to stop because new ideas, meanings, objects and situations are being born non-stop. It doesn't matter whether those are slow changes, swift new coinages of science or slang, ancient or recent borrowing-together they give flexibility, power and beauty to English, the richest and most widespread language of all time.

More than 50% of the words we use today are derived from these two classical languages. Learning some basic root words, prefixes and suffixes can repair this serious weakness in students' command of English. Knowing them will help to increase their "word power" in English, gain a keen awareness and understanding of thousands of English words, both common and not so common, derived from Latin and Greek. As usual those words, at first sight, seem too much sophisticated, abstract, uncoordinated, dissimilar and, as a result, hard to memorize. As soon as students find out common roots or affixes, similarities, familiar forms and meanings, they start feeling the words, they become word conscious and will never forget those words.

We are the ones who should stir up that curiosity about words, not only about their meanings but especially about their origins to help build a larger.

We distinguish two basic types of morphemes, which are minimal units of meaning: roots and affixes. We know pretty well the properties of the latter:

- Subordinate part of word
- Not necessarily present in words
- Multiple affixes can occur in a word (e.g.: in-divis-abil-ity)
- Dependent (bound) elements
- Can either precede or follow their roots (prefixes and affixes, respectively)

– Have more "schematic" (non-specific content).

The number of prefixes is comparatively limited and countable. The meanings of their synonymous pairs are quite clear anyway:

<i>Latin</i>	<i>Greek</i>	<i>Interpretation</i>
Ambi	Amphi	On two or all sides – з обох (усіх) боків
Super, ultra	Hyper, epi	Over, above – понад
Contra	Anti	Against, in opposition to – проти
Extra	Exo	From inside – із середини
Trans	Dia	Through, beyond – крізь
Inter	Meta	Between – між
Quasi	Pseudo	As if – начебто, як би
Intro	Endo	To inside – в середину
Infra, sub	Cata, hypo	Under, below, beneath – по під
Ex, ab	Apo	Deviate, diverge, move away from – відходження
Re	Ana	Repeated rotation – переобертання
De, dis	A	Diverge, "away from" – розходження
Co	Sy	Convergence зходження

There are some other Latin prefixes:

ad, in (L.) =en (Gr.) – "towards", "in the direction of", con – "together", "with", e(x) – "out of", iuxta – "near", "close to", ob – "towards", prae – "before", pro – "onward", "forward", "in favour of", se – "away from".

Students should be acquainted with the main suffixes:

-ar, er, or – active doer, ant, -ent, ance, ence – the one influenced by the action (passive), -age – result of forced action, -tion, sion – action (process), -able, ability – ability, power, capacity to act actively.

The most interesting morphemes are roots which possess the following properties:

- Main part of word
- Must be at least one in a word
- In English limited to two in a word
- Can occur independently (free roots)
- Position is relatively free with respect to other roots (cf.: photograph vs. telephoto)
- Tend to have richer, more specific semantic content.

Root is the core of a word-stable and unchangeable in terms of meaning, and affixes add some shadow of meaning but do not influence the meaning of a root or change radically the meaning of the whole word, therefore the meaning of the whole word is highly predictable and can be deduced in a descriptive way, if the exact translation is unknown.

English words are coined of morphemes, combined in a variety of ways. Sometimes they are borrowed ready-made, sometimes created for specific purposes as in scientific-technical terminology. The most important task for any interpreter / translator is to be able to understand and explain the meanings of the most frequently used roots in combination with affixes. Understanding the meaning of a root as a main informative part of a word (lexical core of a word) is extremely helpful for understanding the whole word in general. Both in classical languages and English each root is normally assigned one interpretation, which is strictly reserved for it. Once the root has merged with morpheme and formed a word, its interpretation shifts due to the meaning of a morpheme. The words which seem absolutely unrelated, meaningless or heterogeneous appear related by common morphemes, meaningful and uniform. They do not require meaningless and useless cramming. Students start feeling the words and apprehend them as familiar to them. The language as a whole gets closer as its words make more sense.

As soon as the students learn main affixes and roots it proves expedient to give them certain tasks on constructing the words giving them definitions Ukrainian first then in English and they were giving ready-made words:

Акт, ект – діяти: дез-**акт**-ив-ація – дія з відхилення дієвості, транз-**акція** – опосередкована дія, контр-**акт** – протидія, де-ф-**ект** – відхилення від потрібної дії.

Вен – іти: **вен**-тил-яція – забезпечене проходження (повітря), а-**ван**-с – до проходження, ад-**вен**-тист – той, хто чекає прищестя, кон-**вен**-ція – спільна хода до чогось.

Students should be paid attention to the fact that roots may have different vowels. In old languages as a rule consonants were fixed versus vowels – it is currently found in Arabic and Hebrew – vowels are not indicated in a written form, thus they are unstable and changeable: Ukr. [молоко] – Rus. [малако] – Pol. [млеко] – Eng. [milk], but the combination of consonants *milk* in these languages is stable.

Var, ver – change: Ver-sion (change of type), var-iant (result of change), re-ver-se (rechanging the direction).

Vi – see: Vi-deo (which is seen), vis-à-vis (the two, looking at each other), a-vi-so (made vivid), di-vis-ion – seen separately (singled out), di-vid-end (result of separating), pro-vis-ion (foresen), re-vis-ion (repeated viewing), tele-vis-ion – device for distant seeing.

Scrip (L.), graph (Gr.) – write: De-scrip-tor (from written), manu-script (written by hand), trans-cript-ion (rewriting), graph (element of symbolic description), graph-ite (substance for writing), graphics (writing about functional dependence).

Auto-graph – self writing: bio graphy (writing about life), mono-graph (writing about one topic), ortho-graphy (correct, right writing), oscillo-graph (the device to write in the deviations), para-graph (written alongside, nearby), para-llelo-gram (outlined by parallel lines), poly-graphy (polywriting (press), photo-graphy (lightwriting), epi-graph (above the written).

Grad – to walk step by step, pace, крокувати: grad-ation (action of step-by-step placing), a-ggres-sion (attack, onset), des-inte-gra-tion (step-by-step dissection), in-gred-ient (integral element), inte-gral (between steps, filling up intervals), con-gress (common striding), pro-gress (walking to aim), re-gress (reverse stepping).

Gno, on – to know, denote, designate (знати, означувати): a-gno-sticism (denying possibility of learning), dia-gno-sis (through knowledge), i-gno-re (as if not to know), pro-gno-sis (foreseeing through knowledge), si-gna-l – (co-symbol), agro-no-mist (field expert), a-no-maly (deviation from known), hyp-no-sis (subconsciousness (cognition), eco-nom-ics – (household knowledge), ergo-nom-ics (knowing how to do), an-on-ym (without name, non-designated, indefinite), ant-on-ym (contrary in meaning), pseudo-nym (designated instead of).

Here we are just submitting examples with specific Latin roots:

gen – beget, give life, give birth: gen-esis, gen-eral, gen-ius, gen-itals, hetero-gen-ic, de-gen-erate, gen-tleman, en-gin-eer, conver-gen-ce, exo(endo)-gen-ous.

Duc, duct – вести: aque-duct, via-duct, de-duc-tion, in-duc-tion, con-duc-tor, pro-duc-tion, pro-duc-er, re-pro-duc-er.

Jec – кидати: pro-jec-tor, in-jec-tion, ob-jec-tive, sub-ject.

Clam – гукати (compare Ukr. – лемент): de-cla-ration, pro-clam-ation, re-clam-ation.

СТРУКТУРА І СЕМАНТИКА МОВНИХ ОДИНИЦЬ

Cred – вірити: cred-it, cred-o, a-cred-itation, dis-cred-it, cred-itor.

In such a way all Latin and Greek borrowings in English can be described.

Students might enjoy using their knowledge of morphemes by playing lots of word games. In one of them players may combine roots and affixes and try to come up with the correct word.

	fero	mitto	Pono	premo	scribo	volvo
a(b)-	–	–	–	–	ascribe	–
ad-	–	admit admission	–	–	–	–
con-	confer conference	commit commis- sion	compose composition	compress compres- sion	conscribe conscription	convolu- ted
de-	defer deference	–	depose deposition	depress depression	describe description	devolve devolu- tion
e(x)-	–	emit emission	expose exposition	express expression	–	evolve evolution
in-	infer inference	–	Impose	impress impression	inscribe inscription	involve involve- ment
inter-	interfere interference	intermitte nt	–	–	–	–
iuxta-	–	–	juxtapose juxtaposition	–	–	–
ob-	offer	omit omission	oppose opposition	oppress oppression	–	–
prae-	prefer preference	–	–	–	prescribe prescription	–
pro-	–	–	propose proposal	–	proscription	–
re-	refer relate	remit remission	Repose	repress repression	–	revolve revolver, revolu- tion
se-	–	–	–	–	–	–
sub-	suffer	submit submis- sion	suppose supposition	suppress suppression	subscribe subscription	–
trans-	transfer translate	transmit transmis- sion	transpose transposition	–	transcribe transcription	–

In this connection it is expedient to give specific tests to check the skill of becoming word-conscious about terminological words consisting fully or partially of Greek and Latin affixes and roots. This ability to decode the words is extrapolated onto other words of more or less complicated form and etymology.

The example of etymology test

1. In all events, only bona fide students are allowed to play.
true, genuine, faithful, healthy, upper class
 2. Each captain will make an ex tempore speech at 9:00 A.M.
long, spontaneous, motivational, spirited
 3. The manager is ex officio (згідно своєї посади) gatekeeper.
by virtue of his office, formerly, well-suited, never allowed to be
 4. Jean Valjean's sentence for stealing a loaf of bread seems an unusually stringent punishment.
confining, severe, distorted, tricky
 5. Some people believe that warm milk has a somniferous (снодійний) effect.
restful, sleep inducing, nauseous, painful
 6. The governor regretted that he never fulfilled his aspiration to be president.
ambition, stimulus, annoyance, insulting remark
 7. The principal felt that my excuse was implausible.
pleading, unlikely, unforgivable, believable
 8. The Trojan Horse was the most successful subterfuge used by the Greeks.
irony, mockery, suggestion, trickery
 9. Black clouds often portend that a storm is impending.
make believe, prevent, act as an omen, explain
 10. At the town meeting, John Bespoke was the principal interlocutor. Others had little to say.
Policeman, dominant speaker, researcher, translator
- One more task may be as follows. Let students think about the idea that the meanings of all the examples share in common and write the word with the same meaning in the spaces under "Meaning" and check it.

<i>Examples</i>	<i>Meaning</i>
scribe , inscribe , scribble (<i>каракулі, нерозбірливий почерк</i>), scripture (<i>Holy Scripture – Священне писання</i>)	write
temporal , temporary , contemporary	time
solar , solarium , solstice (<i>сонцестояння</i>)	

cardinal, cardiac, cordial, accord	heart
vision, visa, invisible, television	see
dental, dentist, dentifrice (зубний порошок чи паста), dentate (зубчастий – у ботаніці)	tooth
octopus, octagon (восьмикутник), octette, October	eight
population, popular, populous	people

It is also expedient for students to have classified list of frequently used Latin and Greek roots in English words with synonyms or explanations:

<i>ad to, toward admit</i>	<i>mil 1,000 million, mile</i>
<i>amo love amiable</i>	<i>mono one monogamy</i>
<i>anthro man anthropology</i>	<i>mort death immortal</i>
<i>anti against antimatter</i>	<i>nano dwarf, very small</i>
<i>aqua water aquarium</i>	<i>nat birth natural</i>
<i>aud hear audience</i>	<i>naut, nav sail navy</i>
<i>astro star astronaut</i>	<i>neo new neolithic</i>
<i>bi two bisexual</i>	<i>nul nothing annulment</i>
<i>biblio book bibliophile</i>	<i>oct eight octave</i>
<i>bio life antibiotics</i>	<i>omnia all omnipotent</i>
<i>card heart cardiac</i>	<i>pan (latin) bread companion</i>
<i>carn meat, flesh carnival</i>	<i>pan (greek) all pancreas</i>
<i>chron time chronic</i>	<i>pax, pac peace pacify</i>
<i>cide, ciss cut, kill genocide</i>	<i>ped, pod feet pedestrian</i>
<i>circu around circumference</i>	<i>ped, paed child pediatrics</i>
<i>cogn know recognize</i>	<i>pent five pentagon</i>
<i>cyber direct, guide cyberspace</i>	<i>phobia fear claustrophobia</i>
<i>dent, dont teeth dentist</i>	<i>phon sound phonograph</i>
<i>derm skin epidermis</i>	<i>phyte little plant neophyte</i>
<i>dict speak dictionary</i>	<i>poli city, state politics</i>
<i>dyn power dynamic</i>	<i>poly many polygon</i>
<i>ecos, oikos house ecology</i>	<i>port carry portfolio</i>
<i>eg I egomaniac</i>	<i>poss, pon put, place impose</i>
<i>epi on top epitaph</i>	<i>pro for, forward promote</i>
<i>eu happy, good euthanasia</i>	<i>pyr fire pyromaniac</i>
<i>ex, exo out exorcist</i>	<i>rupt break rupture</i>
<i>fid faith confident</i>	<i>seme seed inseminate</i>
<i>fin end infinite</i>	<i>semi half semester</i>
<i>gamy wife polygamy</i>	<i>sinestra left sinister</i>

<i>gig giant gigabyte</i>	<i>somn sleep insomnia</i>
<i>gyny woman gynecology</i>	<i>soph wisdom philosophy</i>
<i>hep liver hepatitis</i>	<i>spect look at inspection</i>
<i>hetero different heterosexual</i>	<i>sta, sti, stu stand standard</i>
<i>intra within intravenous</i>	<i>stella star constellation</i>
<i>kil thousand kilowatt</i>	<i>theo God theology</i>
<i>lux, luc light lucid</i>	<i>thana death euthanasia</i>
<i>mal bad malpractice</i>	<i>trans across transfusion</i>
<i>mania crazy pyromaniac</i>	<i>tort twist, turn torture</i>
<i>man hand manufacture</i>	<i>tox poison toxic</i>
<i>mar sea marine</i>	<i>vita, viva life vital</i>
<i>mega great, large megabyte</i>	<i>volu wish volunteer</i>
<i>meter measure thermometer</i>	<i>xeno strange xenophobic</i>
<i>metro city state metropolitan</i>	<i>zoa animal protozoa</i>

Latin and Greek morphemes as well as words are broadly presented today in agricultural terminology. The prestige of Rome was such that Latin borrowings are to be found in virtually all European languages and mainly agricultural terms. Even the word agriculture is derived from Latin words *Ager* and *Cultura*. *Ager* means land or field and *Cultura* means cultivation. Therefore the term means *cultivation of land*, i.e. the science and art of producing crops and livestock for economic purposes. Many other words contain the same root: *aguaculture*, *apiculture*, *horticulture*, etc. In veterinary medicine there many Latin animal words like: *bovine* (cow), *lupine* (wolf), *canine* (dog), *feline* (cat), *piscine* (fish), *vulpine* (fox), *asinine* (donkey), etc. In general Latin is used originally as the international language of scholars, and is persistent in many areas like pharmacy. Its universal usage in botanical, bacteriological and parasitological nomenclature ensures its continuation. The example of fauna nomenclature is given below:

<i>Latin name</i>	<i>English name</i>
<i>Alces alces</i>	<i>Moose</i>
<i>Antilocapra Americana</i>	<i>Pronghorn</i>
<i>Canis latrans</i>	<i>Coyote</i>
<i>Canis lupus</i>	<i>Wolf, Gray</i>
<i>Castor Canadensis</i>	<i>Beaver</i>
<i>Cervus elaphus</i>	<i>Elk/Wapiti</i>
<i>Eptesicus fuscus</i>	<i>Bat, Big Brown</i>
<i>Erethizon dorsatum</i>	<i>Porcupine</i>
<i>Felis rufus</i>	<i>Bobcat</i>

Glaucomys sabrinus
Mephitis mephitis
Mustela erminea

Squirrel, Northern Flying
Skunk, Striped
Weasel, Short-tailed (Ermine)

English makes considerable use of morphemes of Latin and Greek origin to form *neo-classical compounds*. Very many classical elements, such as *micro-*, *-scope*, *tele-*, *-graph*, occur frequently in new words: although they may look ‘foreign’, and appear only in combination with other like elements, they are nonetheless productive. They are particularly prevalent in science and technology, typical examples being:

- *tele-*: *television*, *telephone*, *telescope*, *telecommunications*;
- *bio-*, *hydro-*, *micro-*, *photo-* as prefixes: *biology*, *photography*;
- *-logy*, *-scope* as suffixes: *biology*, *microscope*;
- *-graph*, *-graphy*, *-gram* as suffixes: *telegraph*, *photography*, *hologram*.

Certain Latin and Greek elements are particularly used on systematic basis of in chemical nomenclature:

- *mono-*, *bi-*, *tri-* etc. to indicate the number of atoms in molecular compounds of two elements: *dinitrogen monoxide*;
- *-ide* to indicate the non-metal in a binary compound: *sodium chloride*;
- *-ate* for the second part of a compound of three or more elements: *sodium carbonate*;
- endings like *-ane*, *-ene* to indicate members of classes of organic compounds: *methane* is an alkane.

Students may be asked to make up a few compounds with morphoelements like: *photo-*, *-logy*, *-graph*, *micro-*, *-crat/-cracy*, *bio-*, etc. Or provide examples of the following prefixes and suffixes and determine the functions of the affixes as well as the overall meaning of the derived word having learned the tables and examples given above: *-ness*, *semi-*, *-hood*, *in-*, *-ment*, *dis-*, *-ish*, *sub-*, *-ful*, *re-*, *-ation*, *en-*, *-able*, *dis-*, *-ize*, *-ee*, *non-*, *-y*, *-ify*, *a*, etc.

Conclusions. The more Latin and Greek elements students learn the greater will be their proficiency with English words.

Any analytical and synthetic analysis of morphemes and coinages add to better remembering the words and their correct use and interpretation. Thereupon special theoretical and practical sources should be available.

Special tasks are considered expedient for every area of science and engineering.

Word-consciousness is the most effective and productive way to excel and enrich vocabulary.

Latin and Greek are persistent languages in subject matters of life resources and sciences in terms of word formation and nominalization.

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