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SOME ASPECTS OF PSYCHOLINGUISTIC ASSOCIATIONS OF PHARMACY STUDENTS

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ABSTRACT. *The article analyzes the results of free associative experiment which was held among first year students (specialty «Pharmacy») in 2015–2016 academic year. The authors define morphological and semantical groups of associations for the word-stimulus «Latin» which were received during the experiment, analyze syntagmatic and paradigmatic reactions of respondents, structure the given associative field. All associations can be divided semantically into general culture ones, ones connected with study process and ones which show emotional attitude towards the word-stimulus. The special attention is paid to emotionally coloured positive reactions as well as negative ones, because such type of connection is important while planning future work with students. Having noticed considerable quantity of reactions connected with hardships of study process and, besides, negative reactions of different expressiveness level, the authors doubt appropriateness of present distribution of study loading within Latin language learning for pharmacy students.*

Key words: *psycholinguistics, associative experiment, word-stimulus, reaction, «Latin», Latin language.*

Introduction

This article continues the work with definition of associative field of lexeme «Latin» in language consciousness of students of medical pharmaceutical specialties. According to the curriculum all students of medical pharmaceutical high schools study Latin language at the first year of study as a basis for formation of professional skills. The academic year 2015 / 16 is noted at National University of Pharmacy by serious changes in curricula. In this connection, the traditional

approach at which Latin language was studied throughout all first year (2 semesters) is replaced by more compressed and sated course for the one and only semester of studying. In the present state of affairs crucial would be not only to trace reactions of students to the offered word-stimulus «Latin», but also to give particular attention to an emotional component of such reactions.

Methods

In order to achieve the specified purposes, it seems reasonable to carry out free associative experiment and to create a corresponding associative field built on its results.

The study

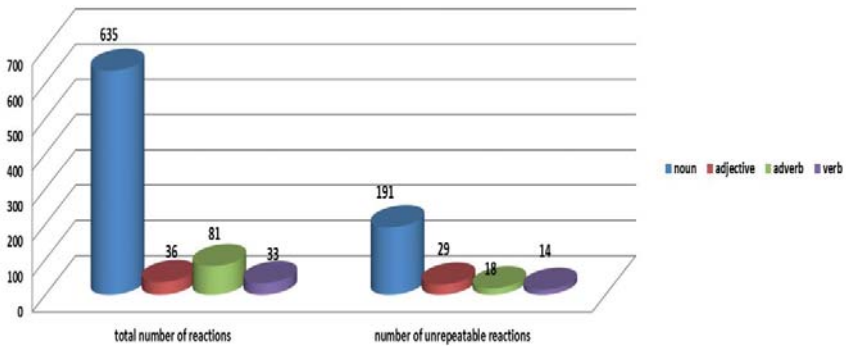
Such experiment was carried out in the group of respondents consisting of students (National University of Pharmacy) of the first year of study (specialty «Pharmacy») in the middle of the studied course when students already could understand estimation and study demands. 264 examinees (20 student groups) took part in the research. There were two refusals at the experiment (no associations are specified) that makes less than one percent from number of examinees. The character of sample: women – 224 (85%), men – 40 (15%), examinees' age – 17–18 years (100%) that is according to the purpose of experiment. The participants of psycholinguistic experiment were asked to keep to the following instruction: «Write the first associations which have come to your mind on the given concept». The time for reaction was limited to one minute (other restrictions were not supposed).

It is necessary to notice that in the first semester of 2015 / 16 very similar psycholinguistic experiment was already carried out with the students of National University of Pharmacy of the first year of study (specialty «Technology of perfumery-cosmetic means») and 30 examinees took part in it (Postolova, 178–182).

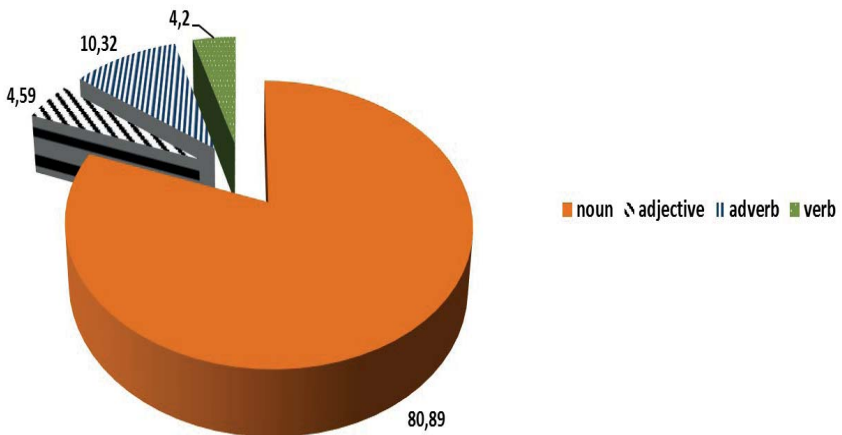
Discussion and results

Processing of associative experiment results (calculation of quantity of various reactions to the word-stimulus «Latin») has shown that for one stimulus examinees (264 persons) have given out 1025 reactions (803 words and 222 word-combinations). Thus, 1002 associations were in national languages (Russian, Ukrainian), and 23 ones were in Latin language. In order to analyze paradigmatic and syntagmatic

connections, were taken only individual words in national languages (785 units, i.e. 77% from total number of reactions). During the experiment, respondents received just one restriction – in time – 1 minute (for a wider associative representativeness), but were free in choice of words-reactions concerning various parts of speech. The respondents have chosen in overwhelming majority paradigmatic reactions (words-reactions of the same grammatical class, as well as a word-stimulus). Syntagmatic associations (words-reactions refer to other grammatical class, rather than a word-stimulus) are individual. This fact testifies to domination of language associations over speech ones. The experiment results are visually represented with the following diagrams (pic. 1–2):



Pic. 1. Grammar classes in numbers



Pic. 2. Grammar classes in percent

In total paradigmatic reactions make 80,89%, syntagmatic ones – 19,11% that testifies to the high level of actualization of a word-reaction in associative process.

According to the held experiment, the associative field possesses accurate structure (nucleus, body, and periphery). Further given are words-reactions of respondents to a word-stimulus «Latin» in decreasing order of usage rate, which are met more than once:

- **nucleus** – words (78), language (46), prescription/s (34),
- **body** – medicine (24), difficult adv. (24), dictation/s (21), dead language (20), plant/s (19), subject (18), interesting adv. (17), to learn (15), a lot of words (14), heavily (12), control test/s (11), difficulty / ies (11), to learn a lot (10), Rome (10), pharmacy (9), book (8), medicine/s (8), repeating an examination/s (8), preparation/s (8), drugstore (7), knowledge (7), a lot of (7), new words (7), study (7), Victoria Viktorovna (6), dead language (in Ukrainian «mertva mova») (6), ending/s (6), fear (6), horror (6), interest (5), science (5), not clearly (5), rules (5), profession (5), table/s (5), terms (5), copy book (5), work (5),
- **periphery** – Bazarova (4), pain (4), time (4), verbs (4), a lot of words to learn (4), language (in Ukrainian «mova») (4), memory (4), teacher (4), stress (4), terminal elements (4), hard adv. (4), lesson/s (4), pharmacist (4), botany (3), declensions (in Ukrainian «vidminy») (3), the Greek people (3), ancient language (3), lexical minimum (3), doctor/s (in Ukrainian «likar/i») (3), a lot of homework (3), university lesson («para») (3), to write (3), cognition (3), Friday (3), pen (3), individual work/s (3), difficult adj. (3), tablets (3), complication (3), language of a pharmacist (3), antiquity (2), aphorisms (2), points (2), huge volume (2), pressure (2), debts (2), homework (2), blackboard (2), endings (in Ukrainian «zakinchennya») (2), classroom activity (2) to cram (2), foreign language (2), interesting adj.(2), history (2), book («knizhka») (2), nightmare (2), favorite subject (2), doctors' language (in Ukrainian «mova likariv») (2), tension (2), Natalia Aleksandrovna (2), I do not understand (2), nerves (2), new adv. (2), modern language (2), basis (2), panic (2), grief (2), informative adv. (2), Monday (2), presentation (in Ukrainian «presentatsia») (2), work (2), development (2), gender (2), mind (in Ukrainian «rozum») (2), difficult subject (2), difficult language (2), test (2), complicated subject (2) dead part.II (2), university (in Ukrainian «universytet») (2), exercises (2),

good teacher (2), good lecturer (2), flowers (2), interesting adv. (in Ukrainian «tsikave») (2), to read (2), language of dead (2).

According to the constructed associative field (having analysed a nucleus and a body) it is possible to assume that the most of tenmet words-reactions are obviously connected with features of educational process and do not bear emotional colouring. So, the nucleus includes the following associations: *words (78), language (46), prescription/s (34)*, and the body opens with such reactions as: *medicine (24), difficult adv. (24), dictation/s (21), dead language (20), plant/s (19), subject (18)*, from which only *difficult adv. (24)* is emotionally coloured.

However, at more detailed analysis of all associations, considering individual ones, the group of the reactions, which express the emotional attitude of respondents, is the most significant. As a whole, all received associations can be divided into three basic semantic groups:

- ***Perception of Latin as a study subject.*** (Here it is possible to allocate ***intrasubject*** reactions):

aphorisms (2), botany (3), letters, declensions (in Ukrainian «vidminy») (3), Errarehumanumest, extractum, endings (in Ukrainian «zakinchennya») (2), noun (in Ukrainian «imennyk»), Lingua Latina, tincture, niger; ending/s (6), spelling, stem (2), Per aspera ad astra, adjective (in Ukrainian «prykmetyk»), rules (5), preparation/s (8), Plantago, pluralis, plant/s (19), prescription/s (30), gender (2), words (78), word-combinations, Cum Deo (2), sternocleidomastoideus, terminal elements, terms (4);

The reactions connected with educational process:

points (2), Bazarova (4), a white coat, Valentina Ivanovna, Victoria Viktorovna (6), Tuesday, the second floor, Gagarina, dictation/s (21), debts (2), homework (2), blackboard (2), a filled in sheet, copy-book (in Ukrainian «zoshyt»), book (8), control test/s (11), conference, corridor; lexicon, lexical minimum (3), chalk, module, Natalia Aleksandrovna (2), groupmates, window, Olena Leonidovna, pencil (in Ukrainian «olivets»), mistakes, paragraphs, school desk, break, a repeating an examination/s (8), Monday (2), subject (18), presentation (20), teacher (4), example, Friday (3), pen (3), individual works (3), a lexical dictation, to copy off, Wednesday, table/s (5), the table of declension endings (in Ukrainian «tablystya vidminkovyh zanikchen'»), test (2), a copy-book (5), the third floor; study (7),

Ukrainian language, university (in Ukrainian: universytet) (2), exercises (2), lesson/s (4), a text-book, to learn (15) to learn words, failed tests «tails», Thursday, cribs, language (46);

• ***Generalculture associations:***

anciency (2), archeologists, architecture, dying out language, Harry Potter, Homer, the Greek people (3), something of Greek origin, old, ancient Gods, ancient Rome, ancient language (3), antiquity, ancient Greece, Europe, mysterious, a foreign language (2), intelligence, history (2), pictures in Greek style (in Ukrainian «kartynku v grestkomu styli»), linguistics, dead language (in Ukrainian «mertvamova») (6), dead language (20), language (in Ukrainian «mova») (4), speculators, science (5), there is no such language, excavation, Rome (10), intelligence (in Ukrainian «rozum») (2), dead part. II (2), a clever person, universal language, philosophy, Finita la comedia, French, black magic, exorcism, language which connects the past with the present, medical language, the language of dead (2);

(including a subgroup of professional associations:

a drugstore (7), drugstore business (in Ukrainian «aptechna sprava»), doctor, medicinal herbs, medicine/s (8), doctor/s (in Ukrainian «likar/I») (3), medicine (in Ukrainian «liky»), composition of medicines (preparations) (in Ukrainian «sklad likiv (preparativ)»), medicine (24), pharmacist, work in drugstore (in Ukrainian «robova v aptesti»), tablets (3), pharmacist (4), pharmacy branch (in Ukrainian «farmaceutychna galuz'»), pharmacy (9);

• ***Emotional attitude to the subject:***

positive/ neutral coloured reactions:

(Big willing, fun, basically it is interesting, but too much of it, time here quickly passes by, for development, the good, kindness, obtainment of new (in Ukrainian «zdobuttya novogo»), interest (5), interesting adj. (17), interesting aphorisms, interesting adv. (2), interesting subject, it sounds beautifully, beautiful language, easier than English, better, than the English, a favourite subject (2), hope, necessary for profession, unbelievable, unfamiliar, unusually, the unexpectedness, the novelty, new adv. (2), the new knowledge (2), new words (7), new language (2), pleasant, necessary for the future profession, it is necessary in life for work, the general development, it is necessary to know, it is necessary to learn, the necessary language for a pharmacist, it's ok, informative adv. (2), informative, cognition (3), necessary for the profession (in Ukrainian «potribno

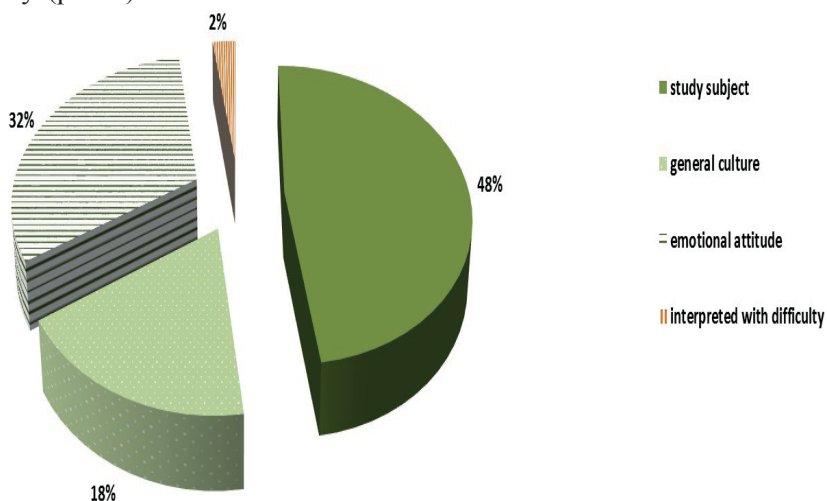
dlya profesii»), instructive adv., prestige, useful in work, cool, pleasure, development (2), laughter, diligence, aspiration, hard, but pleasant, a good subject, not so heavy, a good teacher (2), a good lecturer (2), interesting adv. (in Ukrainian «zikave») (2), interesting adv. (in Ukrainian «zikavo»), interesting things (in Ukrainian «zikavynky»), something new, something unknown (in Ukrainian «schos' nevidome»);

negatively coloured reactions:

(sleepless nights, a pain (4), the majority of studied is not necessary, huge volume (2), difficult language (in Ukrainian «vazhka mova»), give me back a year of studying, basically it is interesting, but it is a lot of it, everything is bad, everything to learn, the grief, pressure (2), long lessons, long, a life is a pain, a blockage, many words are given, it occupies a lot of time, tangled, to cram (2), how to copy off, the nightmare, a heap of words, laziness to study, dead language which it is necessary to learn for a long time, is a lot of (7), is a lot of time, is a lot of time for studying, is a lot of time to learn, is a lot of homework (3), is a lot of words (14), is a lot of words to learn (4) much to learn (10), much that is not clear, torture for students, it has bothered, it has bothered medamn! to learn three hundred words a time, pressure (2), I do not prepare, not quite understanding, I do not know, I do not love, I do not understand (2), I do not understand the endings, is not clear (5), unusually, nerves (2), I don't have a mood for it, I have not time to learn, affliction, despair, very difficult, a panic (2), sadness (2), little sadness, bad marks, bad attitude towards a student, subject, that is difficult for me to study, but if it is necessary then it is obligatory (in Ukrainian «predmet yakyj meni duzhe vazhko vchyty, ale yak treba, to treba»), torture, disappointments, boredom, utter boredom, tears, difficult adv. (24), complexity / ies (11), difficult adj. (3), a difficult subject (2), a difficult language (2), death, a dream, strange words, fear (6), scary, stress (4), labour (5), hard adv. (4), hard in little time given, difficulty (3), a stupid audience, hard adj. (12), the hard subject (2), the heavy subject, horror (6), awful evening, weariness, to learn and learn).

The remained individual reactions which have entered none of the groups, may be defined as «interpreted with difficulty»: *spring, air, city, Darina, action, tree, yellow, the Latvian person, spoon, horse, melody (in Ukrainian «melodiya»), walrus, five-pointed star, force, dark blue, spices, statute, flowers (2), black.*

Semantic distribution of reactions is presented in the following way (pic. 3):



Pic. 3. Semantic distribution of reactions

Conclusions

Thus, from available semantic groups the group «study subject» is in the lead that is logical and predictable. The second by quantity is totally unexpected group «emotional attitude» where negatively coloured reactions dominate absolutely. The reactions connected with the volume of learned material (*a lot of, long, great volume* and so forth) overall make 51. Quantity of reactions to educational process complexity (*difficult adv., difficult adj., hard adv.* and so forth) is 71. As the result is has considerable number of reactions of extreme expression (*pain, nightmare, despair, panic, fear, stress, horror* and so forth) – 42.

The received results force to speculate over expediency to state a course of such a volume for just one educational semester. Probably, it would be reasonable to reconsider the volume of lexical material for studying or to divide given academic hours in several practices in a week.

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ДЕЯКІ АСПЕКТИ ПСИХОЛІНГВІСТИЧНИХ АСОЦІАЦІЙ У СТУДЕНТІВ-ФАРМАЦЕВТІВ

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АНОТАЦІЯ. У статті проаналізовано результати вільного асоціативного експерименту, який було проведено серед студентів першого курсу спеціальності «Фармація» у 2015–2016 навчальному році. Автори виділяють морфологічні та семантичні групи асоціацій на слово-стимул «латина», отриманих під час експерименту, аналізують синтагматичні та парадигматичні реакції респондентів, вибудовують

структуру отриманого асоціативного поля. Семантично асоціації поділяються на загальнокультурні, пов'язані з навчальним процесом, а також ті, що виражають емоційне ставлення до слова-стимулу. Емоційно забарвленим реакціям, як позитивним, так і негативним, у статті приділено особливу увагу, адже подібний зворотній зв'язок є важливим при плануванні майбутньої роботи зі студентами. Автори відстежують значну кількість реакцій, пов'язаних зі складністю навчального процесу, а також негативних реакцій різного ступеню експресії. Це дає підстави ставити під сумнів доцільність існуючого розподілу навчального навантаження при вивченні латинської мови студентами-фармацевтами.

Ключові слова: психолінгвістика, асоціативний експеримент, слово-стимул, реакція, «латина», латинська мова.

НЕКОТОРЫЕ АСПЕКТЫ ПСИХОЛИНГВИСТИЧЕСКИХ АССОЦИАЦИЙ У СТУДЕНТОВ-ФАРМАЦЕВТОВ

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АННОТАЦИЯ. В статье проанализированы результаты свободного ассоциативного эксперимента, проведенного среди студентов первого курса специальности «Фармация» в 2015–2016 учебном году. Авторы выделяют морфологические и семантические группы ассоциаций на слово-стимул «латынь», полученных в ходе эксперимента, анализируют синтагматические и парадигматические реакции респондентов, структурируют полученное ассоциативное поле. Семантически ассоциации делятся на общекультурные, связанные с учебным процессом и выражающие эмоциональное отношение к слову-стимулу. Эмоционально окрашенным реакциям, как позитивным, так и негативным, в статье уделено особое внимание, ведь подобного рода обратная связь важна при планировании будущей работы со студентами. Отметив значительное количество реакций,

связанных с трудностями учебного процесса, а также негативных реакций разной степени экспрессии, авторы ставят под сомнение целесообразность существующего распределения учебной нагрузки при изучении латинского языка студентами-фармацевтами.

Ключевые слова: психолингвистика, ассоциативный эксперимент, слово-стимул, реакция, «латынь», латинский язык.

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