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Integrated approach in language ESP teaching technology of future pharmacists

The setting of the problem. The innovative entry of Ukraine into the educational scientific space of Europe envisages new flexible models of the pedagogical process organization and ensuring the high quality of specialists training, their competitiveness in the international market, the younger generation education with new thinking, armed not only with professional knowledge and skills of a high level, but fluent in a foreign language (FL). Today, in the context of the changed didactic paradigm, one should more constructively consider the teaching problem and supporting the study of a foreign language in higher non-linguistic profile schools, which for the last two decades has been regarded as a significant educational, vocational-oriented academic discipline. The very concept of “foreign language” is characterized by integrative interrelated aspects: linguistic (language and speech material), psychological (procedural components) and social (implementation of interaction with the environment - communicative function), which act as a whole.

In this connection, the need for training the pharmaceutical profile specialists with the corresponding level of English competence formation in
reading professional literature, skills of effective business communication in a foreign language, which provides the necessary communicative capacity in situations of occupational work in oral and written forms, is actualized; studying, improving and recognizing the technology of integrative interrelated teaching of speech activity (SA), as one of the best, based on the theoretical and practical format of the “integrated-skills approach” pedagogical conception, that is, the development of skills from the interrelated main types of speech activity: writing, speaking, listening and reading.

Long-term observation indicates that any resulting type of learning depends on four components: the teacher-student interaction; pedagogical technologies; the effectiveness of the developed methodological materials and methods of their use; the feedback implementation. The foreign language and professional discipline integration is a process of integrity formation, during the synthesis of elements there is their interpenetration, the expansion of knowledge and the constant change of the source elements [6; p. 108]. According to the goals of professionally-oriented training in the non-linguistic higher school, the using systemic phenomenon integrology creates new guidelines for students in the professional communicative competence (PCC) formation, which modern educators define as an integrative quality of the specialist’s personality, serves to implement the establishment of communication between the disciplines of the student’s professional preparing and facilitates in the process of knowledge integrating to solve the problem of their professional importance. A foreign language as an additional information tool gives students the opportunity to complete, improve their vocational knowledge on the one hand, and, on the other hand, to increase the level of professional communication.

Analysis of the research and publications on the problem. Conception of the scientific research discourse of domestic linguodidactics (I. M. Berman, N. F. Borysko, I. P. Zadorozhna, O. M. Leontiev, S. Y. Nikolaeva, Y. V. Petrovska) and foreign scientists (B. Bloom, G. Gumperz, B. Laufer, W. Littlewood, J. O’Malley, L. Murphy, R. Pregent, S. Reinhart, W. Rivers et al.) in the format of the problem under consideration, the integrative interrelated formation of the PCC, the analysis of its theoretical platform, focuses on detailed investigation of various aspects of this competence mastering (N. V. Nikolaenko, O. E. Syzemina, Y. I. Passov); the psychological basis definition of ESP instruction for pharmacy learners as a formation of the student’s personality, the modeling of his/her professionalism (I. O. Zymnya, O. M. Leontiev, O. R. Luria); the leading thesis description
characterizing the specifics of foreign languages interrelated study (M. D. Kryryan, V. G. Kostomarov, O. D. Mytrofanova, Y. N. Sorokina, T. S. Shpanko); the realization of the contextual education technology in the various spheres of the future pharmacists’ professional communicative activity (T. I. Gorpynych, O. M. Solovova, S. K. Folomkina, L. I. Chernyak); a modular program of training that involves students mastering the linguistic component of the language, which provides the content side of communicative competence in an inextricable link with the socio-cultural constituent and pragmatic efficiency (N. F. Borysco, N. D. Galskova, M. Byram, R. Lado); optimization means of the vocabulary remembering and its updating by teaching reading and speaking as an important part of the students’ educational cognitive base (N. V. Bilyaev, V. G. Vemian, N. V. Romashchenko, V. L. Pugachova, S. G. Shatilov, F. Dubin, M. A. Snow).

The scientific conclusion of Canale and Swain linguists is drawn to the presence of four interacting components that are part of the “communicative competence” notion, the area of its knowledge and skills: grammatical, which includes a reference point on vocabulary, rules of word-formation, phonetics, sentence structure; sociolinguistic, which defines the limits of the oral speech using; discursive, which involves the degree of grammatical and semantic structures possession for understanding the content of textual material (scientific, informational, discussion, business); strategic, which refers to the ability and potential of communication, perfect and less ideal [3; 12].

However, despite the substantial research base, the generalization of existing trends in the foreign language teaching suggests that the interrelated integrative formation potential of the English PCC in students of non-language specialities have not been sufficiently studied; the development problem of a methodology for the interrelated forming the English professional linguistic competence in reading and speaking, especially in the context of student’s autonomy modern theories and the productive educational integrated strategy evolution, as one of its important components have remained unexplored; the lingua-didactic model of further comprehension of the content developing special training tasks of combined teaching reading-speaking mastery has not been realized under the experimental study.

The aim and research problems. The objective is to describe and motivate the didactic paradigm of integrative learning interrelated forms of pharmaceutical specialities students targeted on the skills getting and skills using, which materialize the real professional communicative needs
of the individual.

Achievement of the set goal involves solving the following tasks:
• studying modern theoretically-methodological conceptions, technologies of teaching English as the second language (ESL) in terms of the integrology educational fundamentals;
• outlining the content, structural components and ways of implementing a training trajectory for students-pharmacists mastering with the interacting basic aspects of didactic professional integration.

The presentation of the core material. Scientific elaboration of the didactic integrology problem, its essence, methodology and methodical principles formulated the basis for determining the main directions of integration processes practical substantiation in the foreign language acquisition of future pharmacists. In the context of this teaching technology, the category of principles is considered by scientists S. K. Folomkina, O. G. Kaverina, S. Y. Nikolaeva, O. M. Solovova, G. A. Taratuta from a system approach position in an integrated learning process.

Interdisciplinary integration teaching of the course “English for Pharmaceutical Specialties” is based on aspect-integrative learning target program that covers the following constituents: linguistic component of the language; content-language teaching technology; interrelated mastering the types of speech activity in the business communication format; interdisciplinary integration as one of the ways to develop professional competence; integrated approaches and drawing parallels with medical subjects when pharmaceutical students are able to get a solid foundation not only for memorizing instructional material but also for understanding the new in the next forthcoming job and professional situations; socio-cultural contrastive components that ensure students with intercultural differences realizing and understanding the native and non-native cultures, in particular professional ones, and their relationships [2; 27].

In light of the practical purpose of learning, all aspects must be mastered, and each of them can be considered as a stage in the gradual acquiring of a subject [10; 15].

The origin of the integrative interrelated formation theory of lexical and terminological competence in the process of studying English professional communication in the non-lingual higher school as a scientific trend and approach, foreign researchers refer to the ‘60s, 20th century (M. A. Snow, M. Met, F. Genesee). V. A. Buchbinder, I. V. Rahmanov reckoned the approach as a technology of parallel development of speech skills and
abilities technology, in the unity of speaking, writing, listening and reading; believed that a comprehensive study of the SA types, if it was necessary, passes into aspect one. It was then that the expediency of the integration problem lexical thesaurus and oral discourse was investigated and proved (J. Neu, J. Richards); vocabulary and writing (J. Ever, L. Selinker, L. Trimble, J. Swales); intensive and extensive reading as a means of instructional potential vocabulary mastering in the context and speaking (D. Brown, F. Dubin); considering the words as structural (building) blocks, which form the knowledge of ESL (B. Seal) [12; 235]; content-based instruction, when the focus is on the subject-matter and not on the form, as S. D. Krashen says, on “what is being said, rather than how” [9; 62]. Many attempts were made to create efficient programs of communication professional training for the students (functional nature of communication), as well as to describe the content of a learning-centered approach directed at the needs of a student (D. Bycina, T. Hutchinson, A. Waters).

Significant lingua-didactic potential contains a multilevel structure of interrelated learning of speaking-reading, speaking-writing, the subject aspect of which includes the following elements: both types SA equal learning; chain in working with the above mentioned SA types; controlling a purposeful plan of statements formation; managing independent intellectual-speech activity (N. Dobrovolska, T. M. Dridze, G. O. Myhaylovska, O. V. Puzanova).

E. G. Azimov, M. Y. Demyanenko, E. V. Markaryan, R. Oxford studied the principle of differentiated and interrelated teaching of SA forms with the distinction of its priority role in the communicative potential development of students of non-language higher educational institutions. As to their points of view, the most rational educational stages: analysis-planning-certain line of action-evaluation will allow implementing an extraordinary approach to modeling the necessary system for the formation of deep knowledge, skills, the evolution of future pharmacists’ integrative thinking [11; 343].

Integration as a self-sufficient scientific concept is documented in pedagogy only in the first half of the ’80s, the last century. The rational core of interdisciplinary connections (IDC), as one of the leading forms of sequencing in the learning process, was investigated by V. P. Bespalko, N. F. Borysco, L. I. Morska, L. Petrovska, G. Rogova, O. B. Tarnopolskiy. Actual investigations are exactly the works of scientists, where the IDC concept definition, the content understanding and procedural implementation of their organization are given. In line with N. D. Galskova interpretation
of IDC definition essence is cited: *if successive bonds within one subject help to build a knowledge system in depth, then the IDC is broad; in this case, knowledge leads to a system that is not in one place, but in two - in depth and in breadth*, which allows the learning process not to be transformed into the study of individual subjects, but to be the single one of mastering a speciality [1:57]. Interdisciplinary professional associations of different types, flexible distribution and close interaction of educational subjects, as one of the innovative approaches N. F. Borysko refers to the professional orientation of the content teaching [2; 217].

Methodologists examine interdisciplinary integration as a factor of specialists’ training in the sphere of professional education, their professional competence (PC) growth and the necessary condition for the organization of the instructional process in a non-language higher school (A. Y. Bagrova, G. V. Barabanova, L. M. Bosova, T. V. Kolomyets).

The interconnection of the discipline “Foreign languages” with other subjects, researchers O. Y. Kolesnikova, A. A. Puzik, O. I. Agafonova closely associate with the issue of the medical students’ motivation increasing provided that knowledge gained under the foreign language study, are used by them on special discipline classes to take over the recommended foreign sources [7; 140].

**The Content and Language Integrated Learning (CLIL)** method, proposed in 1993 by Michael Lewis and upgraded in 2014 by Hujh Dellar and Andrew Walkley, is able and intended for providing immediate feedback and progress. CLIL is guided by four educational components: grammar, vocabulary, functionality and content - in equal proportions with an accent on the lexical approach.

Analyzing the role of the linguistic component in the teaching methodology, researcher I. P. Zadorozhna asserts that among all the main aspects of the foreign language the most important and significant from a psychological point of view should be reckoned vocabulary, because without the stock of words, at least insignificant, it is impossible to speak the language [15; 74]. O. M. Leontev singles out that it is expedient to construct a learning process for memorizing linguistic material (in our case, lexical and terminological vocabulary), which serves as a starting point for the formation of speech skills and abilities to achieve a practical purpose [10; 24].

It is referred to the content of the mentioned professional aspect of teaching, as a subject-linguistic component of mastering the written and oral communicative competence *professional text* as a source for obtaining by students-pharmacists academic reference information, the
work at which is a means of reading skills developing and the special terminology study, understanding special literature and regulatory documents (annotations for medicines, package inserts, abbreviations and pharmaceutical topic literature).

The conclusions of scientists (N. I. Gez, K. Y. Kusko, S. K. Folomkina, T. Hutchinson, M. Lewis, A. Waters et al) confirm the opinion that the professional texts satisfy informative and cognitive needs of students, work as a support to stimulate the students’ learning linguistic interaction of professional topics, supplement their knowledge of the speciality by reproducing and semantically processing the received information, expanding their capacity for real communication. Such a collaboration of various thematic subject groups within a single discipline reflects the essence of the synthesis process of several scientific branches in an organic unity of a separate medical discipline, in this case, pharmacy.

The professional orientation of foreign speech activities involves for occupational purposes the use of texts that should correspond to the students' subject knowledge, so that a foreign language could be a way of deepening professional knowledge, as well as activating independent mental activity. As noted by Y. A. Semenchuk, L. S. Solovey, O. B. Tarnopolsky, the professional content-language technology of training increases the possibilities of effective target acquisition of the normative body of special information and situational-predicted specific business communication, contributing to the enrichment of the general and speciality-oriented terminological vocabulary as a fundamental paradigm of students’ fruitful interactive speech process.

CLIL is very effective in learning English in the field of medicine. The main task of the teachers in this situation is to create possible favorable conditions for students not to get lost in the flow of information, but to focus on obtaining results.

Mastering professional linguistic competence by students provides for the acquisition of a certain amount of formal knowledge and corresponding skills related to various aspects of language: vocabulary, phonetics, grammar. This technology includes knowledge of theoretical information about the system, structure and language material, mainly - lexical units, the rules of their combination, which is a prerequisite for successful and high-quality communication. Under the integration of linguistic material, due to Kaverina, should be understood the didactic process of the qualitative interpenetration of knowledge, the formation knowing how to realize the relationship between
FL and professional disciplines, development of creative abilities of future pharmacists [6; 108].

The accent in the context of the discipline “The English language” integration and the special cycle subjects are, first of all, on the contact with the course “Latin for Pharmaceutical Specialties” as one of the general disciplines. The use of Latin-English integrative teaching based on the problem-search training, when the student is aware of the motivation for study, the essence of the action operational mechanism, the logic of its implementation, reveals the ways of self-education and self-knowledge, and on the comparative method of the terminology base learning, provides strong and profound awareness of these languages. Thus, the comprehensive linguistic education of students should be directed primarily to improving and deepening the FL acquisition, professional erudition and general culture.

The described cognitive trajectory aims to raise the level of professionally meaningful linguistic and speech skills of pharmaceutical students. Its content is the systematic introduction of pharmaceutical and medical vocabulary, the terminology of related disciplines, which function in the English Sublanguage Pharmacy, namely: pharmacology, pharmacognosy, pharmacodynamics, pharmaceutical biology, pharmaceutical chemistry, phytopharmacy, economics, management, pharmacy marketing, pharmaceutical commodity research, on the ground of which the students’ potential lexical and terminology vocabulary is enlarged. Such a linguistic pedagogical principle of the target program creates a linguistic paradigm of professional-oriented language learning, considering it for professional communication in the context of a speciality.

While structuring the subject area of vocational education for students of pharmacists, the peculiarities of the English language itself as a study object and medical speciality of the study subject were taken into account as well as the orientation on the content of a specific field of activity, as exemplified by pharmaceutical chemists, pharmacists, pharmacologists, project-manager, clinical research associate, laboratory technician, packaging technician. The general tendency of this training is the evolution of professional-oriented learning in terms of relevant communication skills and information needs.

The above-mentioned target functional program is being practiced for a 2-years course by the foreign languages department teachers’ stuff of the Bukovinian State Medical University (BSMU). This model is grounded on the definition of self-study, presented in didactics as a form, method,
tool design training and its informative educational activities, aimed at achieving a top professionally-oriented integrative pragmatic approach to learning by mastering real situations of pharmaceutical practices, increase motivation for learning the English language.

It is a duomodular instructional system of the individual work (guided and unguided) arrangement within the English language curriculum (100 training hours) for the first and second-year students of the Pharmaceutical Faculty of the BSMU. The first block “Basic Introduction to Pharmaceutical Terminology” (the audience self-work) is geared toward the student who has little or no previous exposure to the medical field and includes covering professional thesaurus, being explained by a teacher the peculiarities of creating the medical terms. Much of the tasks are focused at the ability to recognize and classify medicines grounded on the derivative elements that carry information about the chemical composition or synthesis route of the medicines, the source of extraction, the anatomical, physiological and therapeutic effects, the pharmacological group, which facilitates orientation in the arsenal of modern drugs, the number of which grows every year. A student is concentrated on the parts of a medical term, including the prefix, the stem or root word, the suffix as word-forming elements. Having developed the techniques of the medical terms building learners fulfill complex of exercises with different tasks: break down the given terms and define them; create a new medical term by adding definite prefixes and suffixes to a stem; guess the meaning of the words by their components: leukocytic, erythrocytosis, chemotherapy, antiseptic, intravenous, sublingual; construct the following medical notions: against infection, the study of drugs, the study of poisons; the stem -pyr- refers to -fever- what would the condition antipyretic describe; what group pharmacological dependence indicates the following derivative elements: -aeth-, -azid-, -azin-, -azol-, -hydr-; in the given medicines single out the word-forming elements, that inform about the plant component presence: camphonium, coffetaminum, corvalmenthum, phytolysin; underline the word-forming elements, that carry physiological information: biligninum, cholangulum, haematogenum, diuretinum.

The second block “How Well Can You Read and Communicate” includes acquiring professional reading-speaking competence by students via their mastering series simple skills and willing to learn; setting up realistic work scenarios in which newly attained knowledge can be communicated. The leading module principles incorporate the students’ professional mobility development, strengthening the pragmatic component in the curriculum; the study of lexical and contextual aspects of the business language topics:
Company Structure, Making Appointments, Applying for a Job, Career Profiles, Job Interviews, Cross-cultural based Conversation, Cultural Differences in Marketing Drugs and Medicine, Drugs Safety and Regulatory Documentation, Hospital Pharmacy, etc. These situational thematic complexes are designed in the professionally-oriented communicative tasks that represent the specificity and logic of the subject, which is the essence of this profession. The program proposes an active empirical approach to teaching through approximating it to the real situation in Pharmaceutical practice.

Thus, the conducted investigation promoted the considerable progression of both theoretical and pedagogical-experimental material, which proved the introducing prospect of the SA types integration in the students-pharmacists’ training professional EL.

Conclusions and perspectives of further research. In the target program of teaching a foreign language as the second language (ESL) in higher school, the definition of an effective teaching method is an essential procedural component. Thereby, the trend of the comprehensive search for realizing the methodological basis of the integrated education problem, which is the content of the students-pharmacists’ general and professional training, has already been described in the scientific literature, but it is possible to conclude the obligatoriness for the English teachers and pharmacists-specialists cooperation, to further comprehending and determining the effective trajectory of the linguistic- vocational education active forms in the context of the perspective of a national integrative textbook “English for Pharmaceutical Specialties” creation, founded on the specificity of practical aspects of didactic correlation with leading professional disciplines compiling special texts and lexical units complexes of exercises, a vocabulary of a pharmaceutical terminology with Latin and Ukrainian equivalents focused on improving student’s language instruction, depth and breadth of the foreign vocational skills formation at the highest possible level. Knowledge of the own speciality and foreign languages - this is exactly what should be the professional of the new millennium.

References:


5. Горпініч Т.І. Особливості іншомовних фацовых джерел як засобу навчання читання іноземною мовою (на прикладі професійної літератури з фармації). Молодий вчені. 2015. № 2. С. 222–225.


Transliteration of References:


5. Horpinich T.I. (2015). Osoblyvosti inshomovnykh fakhovykh dzherel yak zasobu navchannia chytannia inozemnou movoiu (na prykladi profesiiinoi literatury z farmatsii) [The peculiarities of professional literature as a means of teaching reading in a foreign language (on the basis of professional literature in pharmacy)]. "Young Scientist". 2. 222–225. [in Ukrainian]


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Abstracts

TOMASZEWSKA AGNESE. Integracyjne podejście w technologii ESP nauczania studentów-przyszłych farmaceutów. Artykuł dotyczy problemu wdrożenia zasady „zintegrowanego podejścia do umiejętności” jako podstawy obcego języka pisaneego i mówionego w systemie innowacyjnego paradymatu technologii edukacyjnej integracji studentów specjalności farmaceutycznych; jest on uzasadniony, na podstawie wyników praktycznych badań dyskusji naukowego współczesnych naukowców zagranicznych i krajowych, racjonalności rozwoju i wprowadzenia do praktyki nauczania celowego programu funkcjonalnego, obejmującego treść i komponenty proceduralne organizacji procesu integracyjnego uczenia się.  
Słowa kluczowe: podejście integracyjne, specjalizacje farmaceutyczne, szkolenie zawodowe, program funkcjonalny.

ТОМАШЕВСЬКА АГНЕСА. Інтегративний підхід у технології мовного ESP навчання студентів-майбутніх фармацевтів.
У статті розглядається проблема реалізації принципу «Integrated-skills approach» як базис іншомовного письменного та усного мовлення у системі інноваційної парадигми освітньої технології інтегрології студентів фармацевтичних спеціальностей; обґрунтовується, спираючись на результати практичного вивчення наукового дослідницького дискурсу сучасних зарубіжних та вітчизняних вчених, раціональність розробки і впровадження в практику викладання цільової функціональної програми, що охоплює змістовні та процесуальні компоненти організації інтеграційного процесу навчання.

Ключові слова: інтегративний підхід, фармацевтичні спеціальності, професійне навчання, функціональна програма.

ТОМАШЕВСКАЯ АГНЕССА. Интегративный подход в технологии языкового ESP обучения будущих студентов-фармацевтов. В статье рассматривается проблема реализации принципа «Integrated-skills approach» как базис иноязычного письменного и усного обучения в системе инновационной парадигмы образовательной технологии интегрологии студентов фармацевтических специальностей; обосновывается, исходя из практического изучения научного исследовательского дискурса современных зарубежных и отечественных ученых, раціональність розробки і впровадження в практику преподавания целевой функціональної програми, включающую содержательные и процесуальные компоненты організації інтегрированного процесса обучения.

Ключевые слова: интегративный подход, фармацевтические специальности, профессиональное обучение, функціональна программа.

TOMASHEVSKA AGNESSA. Integrated approach in language ESP teaching technology of future pharmacists. English «Integrated-skills approach» learning realization of students-pharmacists as the basis for foreign written and oral communication forms in the innovative paradigm system of educational integration technology is considered; taking into account the scientific research discourse practical study of the obtained generalized results of contemporary domestic and foreign investigators, the development and implementation rationality of target functional program incorporated the lexical contextual and procedural components in terms of integrated teaching process organization is substantiated.

Keywords: an integrative approach, pharmaceutical specialities, professional learning, functional program.