



Bukovinian State
Medical University

ВДНЗ України «Буковинський
державний медичний університет»



Ștefan cel Mare University
of Suceava

Сучавський університет імені
Штефана чел Марє

АКТУАЛЬНІ ПИТАННЯ СУСПІЛЬНИХ НАУК ТА ІСТОРІЇ МЕДИЦИНИ

AKTUALINI PYTANNIA SUSPILINIH
NAUK TA ISTORII MEDITSINI
(APSNIM)

CURRENT ISSUES OF SOCIAL
STUDIES AND HISTORY OF
MEDICINE

АКТУАЛЬНЫЕ ВОПРОСЫ
ОБЩЕСТВЕННЫХ НАУК
И ИСТОРИИ МЕДИЦИНЫ

ENJEUX ACTUELS DES SCIENCES
SOCIALES ET DE L'HISTOIRE DE
LA MEDECINE

Спільний українсько-румунський науковий журнал
Joint Ukrainian-Romanian scientific journal

2018, 2 (18)

<i>Журнал засновано в 2013 р. Перереєстровано 27.07.2015 р. у Міністерстві юстиції України (Свід. № 21495-11295ПП – Сер. КВ)</i>	<i>Journal started publishing in 2013 year. Re-registered in the Ministry of Justice of Ukraine 27.07.2015 p (Cert.of registr. № 21495-11295ПП – Ser. KB)</i>
<i>Журнал включено до Переліку наукових фахових видань України з історичних (Наказ МОН України № 515 від 16.05.2016р.) та філологічних наук (Наказ МОН України № 1222 від 07.10.2016 р.)</i>	<i>Journal is on the List of Scientific Professional publication of the Ministry of Education and Science of Ukraine, entitled to publish main results of dissertations in different fields of Historical sciences (order № 515 of 16.05.2016) and Philological sciences (order № 1222 of 07.10.2016)</i>

President: Dr. of Medicine, Prof. **Taras Boychuk** (Bukovinian State Medical University)

Editors-in-Chief: Dr. of History, Prof. **Stefan Purici** (Ștefan cel Mare University of Suceava)
Dr. of History, Prof. **Antoniuy Moysey** (Bukovinian State Medical University)

Executive Editors: Ph.D., Assoc. Prof. **Antonina Anistratenko**, responsible for the electronic version of the journal
Ph.D., Lecturer **Lilia Roman** (Bukovinian State Medical University)
Ph.D., Lecturer **Harieta Mareci Sabol** (Ștefan cel Mare University of Suceava)

Editors Assistants: Ph.D., Associate Prof. **Inha Tymofijchuk** (Bukovinian State Medical University)
Ph.D., Lecturer **Vasile M. Demciuc** (Ștefan cel Mare University of Suceava)

Executive secretaries: Lecturer **Iryna Kaizer**, Lecturer **Tetyana Nykyforuk**

Responsible for the electronic version on the OJS platform and DOI identifier: Liliya Petrichko
Responsible for the Bibliographic description of the references: Svitlana Tulevska

INDEXING: Index Copernicus – 73,78 (2016) | Infobase Index – 2,8 (2016) | MIAR – 2,8 (2016) | SRJIF – 3,98 (2017) | JICIndex – 0,110 (2017)

Journal was registered in the international scientometric and bibliographical database Index Copernicus, Directory of Open Access Journals (DOAJ), Ulrichs Web, Erih Plus, Scientific Indexing Services, eLibrary, Index of Turkish Education, Infobase Index, OAJI, World Cat, Directory of Research Journals Indexing (DRJI), Sherpa/Romeo, Scientific Journal Impact Factor (SJIF), Information Matrix for the Analysis of Journals (MIAR), Journals Factor (JF), International Institute of organized research (I2OR), Journals Impact Factor, International Innovative Journal Impact Factor (IIJIF), Rootindexing, Science Research Journal Impact Factor (SRJIF), JICIndex, was published in database: Google Scholar, SCIARY WorlWide Elibrary (SUA), Central and Eastern European Online Library (Germany).

Editorial Board:**Social sciences:**

Associate Prof. **Gennadii Kazakevych**, Dr. of History, Taras Shevchenko Kyiv National University (Ukraine);
 Prof. **Michel Kerautret**, Dr. of History, Ecole des Hautes études en sciences sociales (Paris, France);
 Prof. **Zenon Kohut**, Dr. of History, Alberta University (Edmonton, Canada);
 Prof. **Oleksandr Kurochkin**, Dr. of History, M. Rylskiy Institute of Art, Folklore and Ethnology, Academy of Sciences (Kyiv, Ukraine);
 Chief Research Worker **Elisaveta Kvilincova**, Dr. of History, Institute of Cultural Heritage, Academy of Sciences (Chisinau, R. Moldova);
 Prof. **Yuri Makar**, Dr. of History, Academician of the Ukrainian Academy of History, Yuriy Fedkovych Chernivtsi National University (Ukraine);
 Senior Research Associate **Paul Meerts**, Dr. of History, Institute of International Relations Clingendael (The Hague, Netherlands);
 Prof. **Olimpia Mitric**, Dr. of History, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Prof. **Georghe Onișor**, Dr. of History, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Associate Prof. **Florin Pintescu**, Dr. of History, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Academician **Stepan Pavliuk**, Dr. of History, Director of the Institute of Ethnology, Academy of Sciences (Ukraine);
 Academician **Anna Skrypyk**, Dr. of History, Director of the Institute of Art Studies, Folklore and Ethnology, Academy of Sciences (Kyiv, Ukraine);
 Prof. **Andrzej Wawryniuk**, Dr. of History, Państwowa Wyższa Szkoła Zawodowa w Cholmie (Poland);
 Prof. **Vitaliy Dokash**, Dr. of Philosophy, Yuriy Fedkovych Chernivtsi National University (Ukraine);
 Prof. **Mychailo Marchuk**, Dr. of Philosophy, Yuriy Fedkovych Chernivtsi National University (Ukraine);
 Prof. **Sorin Tudor Maxim**, Dr. of Philosophy, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Prof. **Diego Sanches Mecka**, Dr. of Philosophy, National University of Distance Education (Madrid, Spain);
 Assoc. Prof. **George Neamtu**, Dr. of Philosophy, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Prof. **Ivan Ostaschuk**, Dr. of Philosophy, Bukovinian State Medical University, M.P. Dragomanov National pedagogical University (Ukraine);
 Assoc. Prof. **Bogdan Popoveniuc**, Dr. of Philosophy, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Assoc. Prof. **Nina Zoriy**, Ph. D. of Philosophy, Bukovinian State Medical University (Ukraine);
 Prof. **Bertrand Badiou**, Dr. Of Philosophy, Ecole normale supérieure (Paris, France);
 Prof. **Piotr Borek**, Dr. of Philology, Head of the Polish Philology Institute Krakiv Pedagogical University (Poland);
 Prof. **Mircea A. Diaconu**, Dr. of Philology, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Assoc. Prof. **Evelina-Mezalina Graur**, Dr. of Philology, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Prof. **Adam Falowski**, Dr. of Philology, Head of the East Slavic Philology Institute Jagiellonian University (Poland);
 Prof. **Roma Franko**, Dr. Of Philology, University of Saskatchewan (Canada);
 Assoc. Prof. **Simona-Aida Manolache**, Dr. of Philology, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Prof. **Hanna Martynova**, Dr. of Philology, Bohdan Chmelnytskyi Cherkasy National University (Ukraine);
 Prof. **Nagy Rodica-Măriora**, Dr. of Filology, Head of the Scientific library in Ștefan cel Mare University of Suceava;
 Prof. **Antoaneta Olteanu**, Dr. of Philology, Bucharest University (Romania);
 Assoc. Prof. **Oleksandr Rak**, Ph. D. of Philology, Bukovinian State Medical University (Ukraine);
 Prof. **Nataliya Rusnak**, Dr. of Philology, Yuriy Fedkovych Chernivtsi National University (Ukraine);
 Chief Research Worker **Anna-Maria Sorescu-Marinkovich**, Dr. of Philology, Balkan Institute at Serbian Academy of Sciences and Art (Belgrad);
 Assoc. Prof. **Nadia Laura Serdenciuc**, Dr. of Educational Sciences, Ștefan cel Mare University of Suceava (Suceava, Romania).

History of medicine:

Assoc. Prof. **Carmen Cornelia Bălan**, Dr. of Psychology, Ștefan cel Mare University of Suceava (Suceava, Romania);
 Prof. **Vasyl Cheban**, Dr. of Medicine, Bukovinian State Medical University (Ukraine);
 Dr. med. Dipl.-Psych, MBA, **Gerhardt Dammann**, Chief of Psychiatrische Klinik Münsterlingen and the psychiatric services Thurgau (Switzerland);
 Prof. **Alexander Fediv**, Dr. of Medicine, Bukovinian State Medical University (Ukraine);
 Prof. **Oleksandr Ivashiuk**, Dr. of Medicine, Bukovinian State Medical University (Ukraine);
 Prof. **Yuzef Podguretski**, Dr. of Psychology, Opole University (Poland);
 Prof. **Alfred Prits**, Dr. of Psychology, Pres. of World Psychology Union, Head of Psychotherapy and Psychoanalysis Institute in Vienna (Austria);
 Prof. **Viktor Tashchuk**, Dr. of Medicine, Bukovinian State Medical University (Ukraine);
 Prof. **Dmytro Tyntyuk**, Dr. of Medicine, Chisinau State University of Medicine and Pharmacy N.Testemitsu (R. Moldova);
 Prof. **Bohdan Vasylevskiy**, Dr. of Medicine, Chief of Psychosomatik Institute (Warsaw, Poland);
 Prof. **Konstantin Yetso**, Dr. of Medicine, Chisinau State University of Medicine and Pharmacy N.Testemitsu (R. Moldova).

Актуальні питання суспільних наук та історії медицини. Спільний українсько-румунський науковий журнал. Серія "Історичні науки" || Current issues of Social studies and History of Medicine. Joint Ukrainian-Romanian scientific journal. Series "Historical science"/ Редколегія: Т. Бойчук, Ш. Пуріч, А. Мойсей. Чернівці–Сучава: БДМУ. 2018. № 2 (18). 149 с.

ISSN: 2311-9896; EISSN 2411-6181

The actual problems of world history, history of Ukraine, history of religion, ethnogenesis and traditional culture of peoples, archeology, philosophy, linguistics, literature and history of medicine are investigated in the journal. The journal is the international edition according to the sphere of extension and geography of the authors.

The publication is aimed at the higher educational institutions, academic institutes, and cultural institutions staff.

ББК 60я53+5г.я43

The journal is published in paper and electronic version with the resolution of the academic council of Higher State Educational Establishment of Ukraine "Bukovinian State Medical University" (Decision № 6. Date 22.02.2018).

The authors are responsible for the selection, accuracy of given information, citations, proper names, geographical names and other data.

Publishing: 2-4 issues a year. Languages: Ukrainian, Russian, English, French.

Address: Ukraine, 58000, Chernivtsi, Heroiv Maidanu str., 3, Department of Social Sciences and Ukrainian Studies.
 Tel.: (0372) 520871. **E-mail:** snim@bsmu.edu.ua; society@bsmu.edu.ua

The electronic version of the journal is available on the Web sites: <http://apsnim.bsmu.edu.ua>; <http://doaj.org> (Directory of Open Access Journals); <http://www.irbis-nbuv.gov.ua> (Scientific periodicals of National V. Vernadskij library web-site); <http://scholar.google.com.ua> (Google Scholar); <http://e-apsnim.bsmu.edu.ua> (OJS).

**КОМБІНОВАНІ ТА ІНТЕРАКТИВНІ ТЕХНІКИ
ВИКЛАДАННЯ АНАТОМІЇ ЛЮДИНИ ІНОЗЕМНИМ
СТУДЕНТАМ****Олександра-Марія ПОПЕЛЮК,**ВДНЗ України «Буковинський державний медичний університет»,
м. Чернівці (Україна); alexandra.popelyuk@bsmu.edu.ua**AN INTERACTIVE AND COMBINED TECHNIQUES'
APPROACH TO TEACHING HUMAN ANATOMY TO
FOREIGN STUDENTS****Oleksandra-Maria POPELYUK**Higher State Educational Establishment of Ukraine
„Bukovinian State Medical University”, Chernivtsi (Ukraine)
ORCID ID:0000-0003-3961-7529; RESEARCHER ID E-5465-2017

Попелюк О.-М. Комбинированные и интерактивные техники преподавания анатомии человека иностранным студентам. Современный мир - глобальная экономическая, технологическая, историческая и социальная многокультурная система. Образование непосредственно определяет судьбу общества, его жизнеспособность и будущее развитие. Анатомия является основой для всех медицинских и смежных медицинских специальностей и обеспечивает формирование клинического мышления. **Цель исследования.** Целью исследования было изучить применение интерактивных методов обучения в сочетании с классическими методами, такими как препарирование, в курсе анатомии человека для студентов первого курса БГМУ. **Материал и методы.** Исследование было проведено в конце второго модуля «Центральная нервная система и органы чувств» на кафедре анатомии человека им. М. Г. Туркевича для студентов первого курса 3 медицинского факультета Высшего государственного медицинского учреждения Украины «Буковинский государственный медицинский университет» Черновцы, Украина. В исследовании участвовали 75 студентов. Шесть 2-х часовых занятий проводились с группами около 20 студентов по методикам мозгового штурма, "боди-арта" и викторины в сочетании с препарированием. **Результаты и обсуждение.** После сравнения результатов сдачи модуля студентами, участвующими в исследовании и тех, которые не принимали участия, обнаружена существенная разница в показателях успеваемости, с достоверным повышением среднего балла для участников исследования. **Выводы.** Полученные результаты указывают на то, что сочетание нескольких методов интерактивного обучения является эффективным способом преподавания анатомии студентам и способствует лучшему усвоению материала и длительному его сохранению в памяти учащихся.

Ключевые слова: анатомия человека, интерактивные методы, комбинированный подход к обучению

Introduction. The modern world is a global economic, technological, historical and social multicultural system. The education directly determines the fate of a society, its viability, and future development¹. The level of knowledge and the qualification level of a specialist influences on the reputation of a particular institution, which provides a unique educational service used by future doctors. Strengthening of the foundations of the state, the pursuit of democratization and humanization of all areas of public life, the desire to integrate into the European and global society require new conceptual approaches in education in general and fundamental subjects in particular².

Knowledge of anatomy is an important part of medical practice, with an absence leading to errors in identification of anatomical structures. Anatomy underpins all medical and allied health professional education informing clinical reasoning. Indeed, the consequence of less-than-optimal

anatomy education is the graduation of incompetent health-care professionals³. Learning by lecture is a passive experience in which little processing occurs between the ear that hears and the finger that writes⁴. In order to achieve optimum anatomy education, cadaveric dissection (dissection of a dead human body) is mandatory in the majority of medical schools and perceived as a fundamental part of medical training. Because of current arguments on balancing learning outcomes, problems related to the use of human cadaver, teaching methods and resources, education in anatomy has introduced a shift toward greater use of alternative modes of teaching involving books, videos, cadaveric plastination, non-cadaveric models and computer-based imaging⁵. Although efforts have been made over recent years to promote the introduction of new techniques to stimulate students to assume a more active attitude toward learning⁶, such techniques seem not to have had a significant impact⁷ especially

¹ Bulakh I. Ye., Volosovets' O. P., Mruha M. R. Problemy otsinyuvannya znan' studentiv u kontekstivymoh Bolons'koyi deklaratsiyi [The problems of knowledge estimation in the contest of Bologna declaration], Medychnaosvita, 2011, N. 2, P. 20–22 [in Ukrainian].

² Svintitska N. L. Shlyahi pidvischennya effektivnosti navchalnogo protsesu z anatomiyyi lyudyny [Ways of increase of efficiency of educational process on human anatomy], Visnyk problem biolohii i medytsyny, 2014, V. 3, N. 2, P. 101-105 [in Ukrainian].

³ Sugand K., Abrahams P., Khurana A. The anatomy of anatomy: A review for its modernization, Anat. Sci. Educ., 2010, V. 3(2), P. 83–93 [in English].

⁴ Patel K. M., Moxham B. J. Attitudes of professional anatomists to curricular change, Clin. Anat., 2006, V. 19, P. 132–141 [in English].

⁵ Drake R. L. Anatomy education in a changing medical curriculum, Anat. Rec., 1998, V. 253, P. 28–31 [in English].

⁶ Fasel J. H. D. Teaching of anatomy to medical undergraduates: General practice as a guideline? A synopsis, J. Anat., 1998, V. 192, P. 305–306 [in English].

⁷ Fasel J. H. D., Gailloud P., Vu N. V. A core anatomy program for the undergraduate medical curriculum, Acad. Med., 1998, V. 73, P. 585–586 [in English].

on foreign students. In particular, the introduction of interactive techniques into basic science education has been especially controversial, an area where a stronger disposition toward classic teaching techniques often exists among teachers⁸.

Aim of the study. In this study, the application of an interactive learning technique, namely body painting, brainstorming and quizzes combined with classical methods such as dissection to the teaching of anatomy to first-year medical students is outlined, and the results of an evaluation study aimed at exploring the students' views on this teaching approach are reported.

Material and methods. The study was carried out at the end of the second module "Central nervous system and sensory organs" in anatomy of the first-year medical curriculum of the Higher State Educational establishment of Ukraine "Bukovinian State medical university" Chernivtsi, Ukraine. A total of 75 students participated in the survey. Six 1.5-hour sessions were conducted with groups of approximately 20 students and were dedicated to brainstorming, body painting and quizzes combined with dissection on three topics: central nervous system, cranial nerves and sensory organs.

A pilot anatomy workshop in combination of interactive methods, with 27 undergraduate anatomy students, representative of 3rd medical faculty was conducted in 1st Term 2017. Elements of the pilot workshop were based on curricular content while the learning activities incorporated visual and tactile learning techniques not currently utilized in the anatomy units of study⁹. We used a range of open and closed questions in a survey to capture students' feedback on the elements and the practicalities of the workshop and their learning style preferences. The feedback was utilized to refine and optimize the final proposed strategy. All participants provided written consent to participate and the use of their examination results for the study.

One activity was dedicated to body painting with water-based face and body paints. Participants painted bones of the viscerocranium, muscles of mastication and facial expressions, cutaneous nerve distributions on each other guided by anatomy atlases and textbooks¹⁰. Expertise in body painting was not the focus, but students were encouraged to be detailed in morphologic features rather than being artistically creative.

In each session we provide students with a 40-min lecture accompanied by anatomical demonstration of the gross anatomy of a prosected adult human brain, or a specimen of a certain part of the head with clearly visible superficial and deep structures (nerves, arteries and veins, muscles of facial expression). A bony cranium with the calvaria removed is also used to more clearly demonstrate the osseous morphology, particularly the cranial nerve foramina. This enables students to observe the particular structures and also breaks up the lecture presentations by providing a welcome counterpoint. Also each student dissects one or more fresh porcine eyes exploring and identifying the attached anatomical adnexa and surface structures of the globe while also focusing on gaining eventual access to the internal anatomy of the

eyeball. Afterwards students brainstormed the functional applications of the relevant anatomy. Finally, the fourth activity required participants either individually or in groups to undertake quizzes and to complete tables and schematic figures related to functional and clinical applications. Students were free to move between the four activities during the session.

The main steps of brainstorming that we used in our application to anatomy teaching were the following. The group of participants was divided into subgroups of four to six people to increase participation of each student. Each subgroup nominated a representative speaker to feedback to the larger group. The teacher then stated the questions on which the subgroups had to answer.

Results and their discussion. At the conclusion of the workshop, students immediately completed a paper-based post-workshop survey. This survey evaluated: a) the usefulness of the workshop in consolidating the material learned during the semester b) whether their attendance at the workshop achieved their goals stated in the baseline survey, c) their post-workshop self-perceived confidence with the topics of neuroanatomy and d) overall satisfaction with the anatomy workshop.

And another survey was administered four weeks after the workshop, following their final examinations but prior to receiving any results. This survey assessed the participants' self-report of the workshop's usefulness in examination preparations as well as performance.

We compared the results of the module 2 examination (it consisted of multiple-choice questions, dissection-based examination testing identification of anatomical structures and their functional applications and theory examination covering the entire module content) in attendees and non-attendees. With the significantly different baseline module results indicate a significantly different indices between groups, with an increase in mean scores for the attendee cohort and a decrease in the non-attending cohort. All participants (100 %) reported that their goals for attending the anatomy workshop were attained. The main stated goals were the following: 1. Understanding content (62/75) - the majority of participants acknowledged that anatomy was more than just memorization and wanted to engage with the structural anatomy to understand concepts, functional applications and possible clinical relevance; 2. Getting some alternative approaches to the anatomy subject (31/75); 3. Examination preparation (27/75) - some participants attended the workshop to improve their examination performance. The workshop was perceived as an opportunity to up-skill in examination technique and undertake structured revision; 4. Increase self-confidence (11/75) - a small amount of students perceived that their performance would be enhanced by improving their confidence with the content.

Undertaking this innovative, interactive workshop significantly improved the examination performance of attendees compared to non-attendees.

Body painting and clay modelling were reported to be the most useful components of the anatomy workshop, closely followed by the quizzes and white-boarding. Previous research has suggested the usefulness of body painting

⁸ Nagaswami S. Vasan, David O. DeFouw, Bart K. Holland. Modified use of team-based learning for effective delivery of medical gross anatomy and embryology, *Anatomical Sciences Education*, 2007, V. 1, N.1, P. 3-9 [in English].

⁹ Diaz C. M., Woolley T. Engaging multidisciplinary first year students to learn anatomy via stimulating teaching and active, experiential learning approaches, *Med. Sci. Educ.*, 2015, V. 25, P. 367-376 [in English].

¹⁰ Lujan H., Dicarolo S. E. First year medical students prefer multiple learning styles, *Adv. Physiol. Educ.*, 2005, V. 30, P. 13-16, doi: 10.1152/advan.00045.2005 [in English].

and clay modelling in increasing student engagement as well as consolidation of anatomy¹¹. Not only would the findings from this study support these claims, but that it must be highlighted that these learning tools would be valuable for healthcare students whose preferred learning style involves visualization and kinesthesia. Some students reported that the quizzes helped them to identify areas of knowledge deficit and to consolidate existing knowledge.

As anatomy underpins all healthcare, the purpose of anatomy as core learning for healthcare professionals is to provide the student with tools to assist clinical reasoning. Spatial ability or appreciating the spatial orientation of the various anatomical structures is an essential skill for health professionals. This spatial ability, practiced by the body painting and modelling components in the workshop, compliments and value-adds to existing teaching on three-dimensional cadavers, potted specimens, living and plastic models as well as two-dimensional imaging and texts/atlas, which can be transferred to the diagnosis and management of the patient. The clinically case-oriented quizzes and table/figure completion tasks facilitated the blending of academic learning with real-world applications, assisting the student to situate new knowledge with cognitive schemas to be recalled in later academic and clinical scenarios¹².

Conclusions. The study of anatomy is the basis of medical education. There has been ongoing discussion and debate over the best ways in which to teach anatomy to both first-year medical students as well as more senior medical students and residents during the earlier stages of their residency training. Naturally, a final conclusion on the effectiveness of any teaching technique can only be drawn on the results of a randomized controlled trial that compares its outcome with that of similar trials; thus, this study has to be considered just the first step. Nonetheless, our data are very encouraging, because they demonstrate that most students view our teaching approach as both interesting and useful. Many successful innovative teaching techniques have been applied to improve anatomy courses by means of interactive learning (Fitzgerald, 1992; Scott, 1993, 1994; Cliff and Wright, 1996; Teichgraber et al., 1996; Drake, 1998; Fasel, 1998; Fasel et al., 1998, 1999; Giffin and Drake, 2000; Tutarelet al., 2000; Carlson, 2002; Drake et al., 2002; Haines et al., 2002; Heidgeret al., 2002; Reidenberg and Laitman 2002; Miller et al., 2002)¹³. Our experience also indicates that the combination of several techniques could represent an effective way to induce interactive learning to anatomy students. Assisting in development of generic professional attributes, the workshop may be a valuable addition to traditional anatomy learning and teaching in the health sciences.

Future recommendations. Future studies should include a larger experimental cohort, case-matched for course, age, gender and importantly for baseline examination performance. Further research is needed to determine whether such a workshop would be beneficial to the academic performance of all students. Scheduling a second workshop in the later years of medical and healthcare study may enhance longer-term knowledge retention. This may be useful revision for clinical practice but will require further investiga-

tion¹⁴.

Попелюк О.-М. Комбіновані та інтерактивні техніки викладання анатомії людини іноземним студентам. Сучасний світ - це глобальна економічна, технологічна, історична та соціальна багатокультурна система. Освіта безпосередньо визначає долю суспільства, її життєздатність та майбутній розвиток. Рівень знань та рівень кваліфікації фахівця впливає на репутацію певної установи, яка виконує унікальну освітню роботу, що використовується майбутніми лікарями. Знання анатомії є важливою частиною медичної практики, відсутність якого призводить до помилок у ідентифікації анатомічних структур. Анатомія є основою для всіх медичних та суміжних медичних професійних спеціальностей і забезпечує формування клінічного мислення. Наслідком недостатньо адекватної анатомічної освіти є випуск некомпетентних медичних працівників.

Мета дослідження. Метою дослідження було вивчити застосування інтерактивних методів навчання, а саме "боді-арту", мозкового штурму та "вікторини" у поєднанні з класичними методами, такими як розтин, під час викладання анатомії студентам першого курсу БДМУ та дослідити думку студентів щодо використання даного підходу до навчання.

Матеріал і методи. Дослідження було проведено в кінці другого модуля «Центральна нервова система та органи чуття» на кафедрі анатомії людини ім. М. Г. Туркевича для студентів першого курсу 3 медичного факультету Вищого державного медичного закладу України «Буковинський державний медичний університет» Чернівці, Україна. У дослідженні взяли участь 75 студентів. Шість 2-годинних занять проводилися з групами близько 20 студентів за методиками мозкового штурму, «боді-арту» і вікторини в поєднанні з розтином та препаруванням за трьома темами: центральна нервова система, черепно-мозкові нерви і органи чуття.

Результати і обговорення. Після порівняння результатів складання модуля студентами, що приймали участь в дослідженні та тих, що не брали участі виявлено суттєву різницю в показниках успішності, з достовірним підвищенням середнього балу для учасників дослідження.

Висновки. Отримані результати вказують на те, що поєднання кількох методів інтерактивного навчання є ефективним способом викладання анатомії студентам та сприяє кращому засвоєнню матеріалу і тривалішому його збереженню в пам'яті. Ми вважаємо, що сучасні інтерактивні методи є цінним доповненням до традиційного викладання в галузі наук про здоров'я.

Ключові слова: анатомія людини, інтерактивні методи, комбінований підхід до навчання

Попелюк Олександра-Марія – кандидат медичних наук, доцент кафедри анатомії людини ім. М. Г. Туркевича ВДНЗ України "Буковинський державний медичний університет". Автор 86 друкованих наукових і методичних праць, у тому числі 2-х навчальних посібників. Коло наукових інтересів: морфологія, нормальна анатомія, ембріологія, хірургія, громадське здоров'я.

Popelyuk Oleksandra-Mariia – PhD, associate professor at Mykola Turkevych Department of Human anatomy of the Higher State Educational Establishment of Ukraine "Bukovinian State Medical University". The author of 86 published scientific and methodical works, including 2 textbooks. Research Interests: morphology, normal anatomy, embryology, surgery, public health.

Received: 20.05.2018

Advance Access Published: June, 2018

© O.-M. Popelyuk, 2018

¹¹ Finn G. M., White P. M., Abdelbagi I. The impact of color and role on retention of knowledge: A body-painting study within undergraduate medicine, *Anat. Sci. Educ.*, 2011, V. 4(6), P. 311–317. doi: 10.1002/ase.253 [in English].

¹² DiLullo C., McGee P., Kriebel R. M. Demystifying the Millennial student: A reassessment in measures of character and engagement in professional education, *Anat. Sci. Educ.*, 2001, V. 4, P. 214–26. doi: 10.1002/ase.240.

¹³ Nicholson L. L., Reed D., Chan C. An interactive, multi-modal Anatomy workshop improves academic performance in the health sciences: a cohort study, *BMC Medical Education*, 2016, V. 16, P. 7. doi:10.1186/s12909-016-0541-4.

¹⁴ Hattam A. T., Diaz C. M. Medical student-initiated anatomy education: an extracurricular experience at a regional medical school, *Med. J. Aust.*, 2012, V. 197, P. 218, doi: 10.5694/mja12.10735 [in English].