



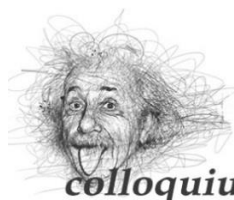
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CONTENTS

MEDICAL SCIENCES

Kaspruk N.M., Batranovska S.O.

CLINICAL FEATURES AND TREATMENT OUTCOMES OF ALLERGIC FUNGAL RHINOSINUSITIS IN PATIENTS WITH FUNGAL SENSITIZATION4

Dymitrash K.A., Yurieva L.M.

ADENOMYOSIS: MODERN STRATEGIES OF DIAGNOSIS AND TREATMENT8

Liashuk R.P.

IMMUNE STATUS OF A PATIENT WITH POLYGLANDULAR AUTOIMMUNE SYNDROME TYPE 212

TECHNICAL SCIENCES

Khvalin D.I.

THE MAIN METHODS FOR TREATMENT AND DECONTAMINATION OF HAZARDOUS RADIOACTIVE MATERIALS .15

PHILOLOGICAL SCIENCES

Behbudova E.Sh.

THE INFLUENCE OF BORROWINGS ON THE ENGLISH LANGUAGE: WORD STRUCTURE, WORD FORMATION, AND THE SOUND SYSTEM19

Huseynova A.N.

INTERNAL AND EXTERNAL RELATIONS IN M. A. RASULZADE'S JOURNALISTIC WRITINGS: BASED ON THE AZERBAIJAN NEWSPAPER (1918–1920)22

Suleymanova Kh.

THE CONCEPTUAL PARADIGM OF COMMUNICATION: ESSENCE, STRUCTURAL-FUNCTIONAL MODELS, AND TYPOLOGICAL FRAMEWORKS26

Маджидова И.А.

ПРОБЛЕМА АНТРОПОЦЕНА И НЕКРОПОЛИТИКИ В ЖЕНСКИХ ДИСТОПИЯХ30

Majidova I.A.

THE PROBLEM OF THE ANTHROPOSENE AND NECROPOLITICS IN WOMEN'S DYSTOPIAS30

Aliyeva S.

THE POETIC MODEL OF SUFI THOUGHT IN THE WORKS OF YUNUS EMRE AND QAZI BURHANEDDIN.....34

Кобринець О. С.

РАКІЯ ЯК ГАСТРОНОМІЧНИЙ СИМВОЛ ТУРЕЦЬКОЇ КУЛЬТУРИ У ПАРЕМІЯХ ТА АФОРИСТИЧНИХ ВИСЛОВАХ39

Kobrynets O. S.

RAKI AS A GASTRONOMIC SYMBOL OF TURKISH CULTURE IN PROVERBS, SAYINGS AND APHORISTIC EXPRESSIONS.....39

Leshchynska A. V.

INTERACTIVE TEACHING METHODS IN THE SYSTEM OF TEACHER EDUCATION FOR HIGHER EDUCATION STUDENTS43

ECONOMIC SCIENCES

Братченко О.О.

ОСОБЛИВОСТІ ФОРМУВАННЯ ТА ФУНКЦІОНУВАННЯ ТРАНСПОРТНО-ЛОГІСТИЧНИХ ПОТОКІВ АГРОПРОДОВОЛЬЧОЇ ПРОДУКЦІЇ.....48

Bratchenko O.

FEATURES OF THE FORMATION AND FUNCTIONING OF TRANSPORT AND LOGISTICS FLOWS OF AGRI-FOOD PRODUCTS.....48

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INTERACTIVE TEACHING METHODS IN THE SYSTEM OF TEACHER EDUCATION FOR HIGHER EDUCATION STUDENTS

Abstract.

This article explores possible ways to use interactive teaching methods—such as brainstorming, business games, press conferences, discussions, roundtables, problem-based lectures, the video method, and others—in the study of pedagogical subjects at institutions of higher education. Based on the research, the author demonstrates that instructors are proficient in interactive teaching methods and can successfully apply them in practice; however, it is important to take into account the lesson topic, objectives, characteristics of the instructional material, and the age and individual characteristics of the students. At the same time, interactive teaching methods make the study of pedagogical subjects more meaningful, interesting, and accessible, and stimulate students' cognitive activity. However, there are still many questions regarding the use of interactive methods that require deeper and more detailed analysis and study.

Keywords: *interactive teaching methods, instructor, higher education student, active learning, institution of higher education, pedagogical subjects.*

Statement of the Problem.

Pedagogy, as both a science and an art, involves constant interaction between teachers and students. Therefore, it is clear that interactive teaching and learning methods will contribute to more effective mastery of the course content. Interactive methods involve mutual interaction among participants in the educational process, as well as dialogue. This dialogue can take place both between people and between a person and additional learning resources (computers, nature, and various objects). When interactive teaching methods are used, all students are engaged in the process of discovering new information. This discovery process follows the pattern: discover, understand, and apply. The advantage of interactive teaching methods is that they increase the opportunity to organize individual, pair, and group work during class. There is a growing trend toward involving students in research processes, business games, working with primary sources, and creative tasks.

In an interactive learning environment, the student takes on the role of an active participant. They set learning goals for themselves, develop their learning initiative; independently identify problems during the learning process, and master techniques and methods for reflecting on their learning activities. Therefore, there is a growing need for a more in-depth study of the possibilities for using interactive methods in the study of pedagogical disciplines and pedagogy, in particular.

Analysis of Recent Research and Publications.

The issue of using interactive teaching methods is one of the pressing areas of contemporary pedagogical science. Its complexity necessitates considering interactive learning in the context of a teacher's professional development, improving teaching methodologies for pedagogical disciplines in higher education institutions, and implementing competency-based and student-centered approaches in the educational process. The theoretical and methodological foundations of the professional training of future teachers are discussed in the

works of I. Bekh, V. Zagvyazinsky, I. Ziazun, N. Kuzmina, N. Nychkalo, S. Sysoeva, and M. Fitsula. T. Dobrynina, L. Pyrozhenko, O. Pometun, G. Selevko, M. Skrypnyk, G. Kobernyk, V. Melnyk, O. Pekhota, and L. Piven have made significant contributions to research on the content, principles, and technologies of interactive learning. The works of V. Bepalka, V. Yevdokimov, M. Klarin, L. Novikova, A. Panchenkov, T. Remekh, O. Sagan, and I. Yakimanskaya are also of great importance for understanding the possibilities of interactive learning. A separate area of scientific research is devoted to stimulating the cognitive activity of students, as reflected in the works of O. Pekhota, O. Savchenko, V. Semchenko, and other scholars.

At the same time, the results of contemporary research indicate an expansion of the possibilities for interactive learning thanks to the implementation of digital educational technologies, blended learning, and a student-centered organization of the educational process. Interactive methods are viewed not only as a means of stimulating cognitive activity but also as an effective tool for developing professional competencies, critical thinking, communication skills, the ability to collaborate, and professional reflection among higher education students.

Identification of previously unaddressed aspects of the overall problem.

While the scientific literature describes interactive teaching methods in higher education, there is a need to outline possible ways to apply them when higher education students study pedagogical subjects. This will help raise the professional level of young teachers and revitalize the educational process in higher education.

The purpose of this article is to identify the characteristics of using interactive teaching methods in the professional training of future bachelor's degree candidates in pedagogy at higher education institutions in Ukraine.

Presentation of the Main Material. Recently, active learning methods have been the focus of many pedagogical conferences. Theorists and practitioners strive to improve the effectiveness of learning in higher education and to foster positive motivation among students to pursue their education. Active learning involves improving the methods and organizational forms of students' educational and cognitive work, which ensures active and independent theoretical and practical engagement by students at all stages of the educational process. In this regard, M. Makhmutov believes that the active engagement of students is possible only if the volitional and intellectual aspects of the individual are stimulated within the educational process. In I. Kharlamov's research, activity is analyzed as an individual's desire to learn and the mental effort involved in the process of acquiring knowledge. In other words, the driving force in active learning is the individual's cognitive activity, which often depends on the culture of intellectual work of the higher education student.

The introduction of interactive learning into the higher education process promotes active learning. It places higher demands on the instructor as the organizer of the learning process. To achieve success in interactive learning, the instructor must create a learning environment in the classroom that encourages students to actively master the content of pedagogy. That is, as they master the content of the "Pedagogy" course, they independently ask their classmates questions about the material being studied, master techniques for independent learning, and reflect on their own activities. Students independently apply existing effective teaching methods, independently identify problems that require analysis, act simultaneously as both learners and teachers, constantly expand their knowledge, and seek ways to apply it.

While studying topics from the "Didactics" section, students should be aware of the common goal shared by all and visualize the outcome, which in turn activates their life experiences and their school learning experiences. It is important to note that the effectiveness of learning the material also depends on the relationships among students within the group and between students and the instructor. Dialogue—often involving the use of computer technology—a creative approach to learning, and a combination of individual, pair, group, and collective work during discussions of topics such as "The Lesson in a Modern General Education School" have proven to be effective:

"all Control in the educational process," "Teaching Methods." Undoubtedly, information-based methods—which involve interaction among participants in the educational process aimed at acquiring new knowledge and developing skills and competencies—will remain highly relevant; Motivational methods have proven equally effective, as they foster positive motivation among higher education students toward group activities, individual participants, and themselves; regulatory methods help establish rules for dialogic interaction among learners. Interactive methods based on the classifications by V. Melnyk, O. Golubkova, and O. Sichkaruk have proven effective in classes for the "Pedagogy" course. Specifically: preventive, simulation-

based, and non-simulation-based interactive methods [5; 9; 11]. They have enlivened discussions of complex topics from the section

"Upbringing"—discussions of upbringing issues, the use of upbringing methods in a group, role-playing, counseling, psychodrama, the business game "Parent-Teacher Conference," and debates on the responsibility of participants in the educational process for the outcomes of learning and upbringing, as well as the interaction between the educational institution and the student's family. An analysis of our own experience and that of our colleagues suggests that the "Brainstorming" method—also known as the "Brainstorming Technique"—is most frequently used in working with students. When studying the topic "The Essence of the Upbringing Process," higher education students are asked to list as many associations as possible with the term "upbringing," provide examples of how they were raised, and describe how they have raised others. When studying the topic

In the section "Characteristics of Teaching Methods" based on Y. Babansky's classification, students provide examples they are familiar with of how educators apply these methods and predict their effectiveness. While studying the topic "Methodological Work in Schools," higher education students propose ways to enhance the effectiveness of methodological work in schools. In particular, these include deepening philosophical and pedagogical knowledge; and developing the national school system. "Brainstorming" sessions yielded positive results when studying the general principles of pedagogy, as did thematic discussions on specific topics with invited experts, such as teachers and parents. Interest in learning is stimulated by problem-based lectures, workshops, roundtables, the participation of gifted students in academic conferences, and the solving of pedagogical problems. Traditional discussions were revitalized by the interactive "PRESS" methods proposed by O. Pometun and L. Pyrozhenko, "Change your position," and "take a position" [7].

Trust and goodwill toward the instructor are fostered by the use of interactive methods during the initial phase of the instructor's interaction with students. Energizers helped relieve tension during lectures. They allow students to take a break from active engagement and prepare themselves to absorb new information.

Interactive methods such as discussion, situational analysis, and the analysis of specific scenarios helped increase interest in the "Pedagogy" course. Facilitating discussions in class helped mobilize the pedagogical knowledge and perspectives of higher education students on educational issues. Discussion proved particularly relevant when addressing controversial issues such as: the introduction of modular learning in high school, the effectiveness of the current 12-point grading system, and the balance between collegiality and personal responsibility in the educational process. We practiced the three types of discussion proposed by V. Okon: "casual" discussion, which arose spontaneously during the consideration and discussion of complex issues of interest to most students; discussion aimed at forming convictions; and genuine educational discussion, which was specifically organized to address an

important didactic problem. Observational discussion stimulated students' cognitive interest. During this process, some students served as observers of their peers' work. Repeated discussions—which facilitated the discussion of issues first in small groups and then in larger ones—proved beneficial, as did the conference discussion that took place during the student conference itself. We employed the “ ” discussion method, as proposed by M. Klarin [8]. These methods helped foster dialogue during the learning process and diversify the educational experience. Changing seats during class, recording responses on video for later review and discussion, conversations, and individual presentations helped students form their own positions on the material being studied. We have found that the use of video clips during lectures and seminars increases material retention by 5% when their viewing is combined with the analysis of situations: illustrations, evaluations, and exercises.

In this context, an “illustration” scenario—under conditions of reproductive learning—presents a solution to an educational problem proposed by the specialists involved in it. An “evaluation” scenario allows the student to assess a ready-made solution to a specific educational situation, while an “exercise” scenario presents options that require students to perform specific actions that contribute to their professional growth. The latter type of situation is useful for preparing future professionals for teaching practice. These may include tasks such as filling out attendance sheets or class registers, and in the context of distance education, they may involve checking students' homework, creating presentations, or preparing lesson segments. Various types of pedagogical analysis have proven effective, such as the “incident” method and the “basket method.”

Solving pedagogical problems is particularly popular in seminars. The analysis of specific educational situations contributes to: the development of analytical thinking among higher education students; the formation of practical skills in working with information; the development of managerial decision-making; the mastery of modern managerial and socio-psychological technologies; the expansion of communicative competence; the development of the ability to choose optimal options for effective interaction with others; the stimulation of innovation; and increased motivation to study the theory of the problem.

The “portfolio” method has proven effective in the process of preparing for modular assessments. As students independently mastered the course material, they took notes in their notebooks and prepared summary reports. This made it possible to assess the students' ability to work independently, their sense of responsibility, and their capacity for reflection.

We should not overlook international experience with the use of interactive teaching methods in higher education. The international experience described by L. Yakimova, in the form of interdisciplinary seminars, has proven effective. It was particularly valuable in integrating “Pedagogy” with subject-specific teaching methodologies and psychology [1].

The “Author's Chair” method proved effective in boosting students' self-esteem. It allowed future professionals to assess their pedagogical abilities and helped shape their career orientation.

“The ‘Roundtable’ method proved effective during the final sessions.” During discussions led by “roundtable” experts, fellow students share their successful and unsuccessful experiences in applying the knowledge they have gained in practice. In this way, they reinforce their theoretical knowledge and reflect on any gaps in their understanding.

Role-playing exercises yielded positive results in the final modules. Examples include “Promoting the Major,” “Class Meeting,” “Evaluate the Answer,” and others.

During their teaching practicum, students had the opportunity to practice using modern methods of teaching and guiding students. This method involves the following stages: familiarization with behavioral rules in practice, observing a teacher's lessons, conducting lesson segments, conducting trial lessons and final lessons, and consolidating experience during subsequent stages of the practicum. Video demonstrations of exemplary lessons can serve as a supplementary tool. Teaching in pairs is practiced. The conducted lessons are collectively discussed and evaluated by the teacher and the instructional specialist.

The drawing method helps foster interdisciplinary connections. Students create drawings based on their understanding of teaching methods, principles, or the course of interaction. We summarize the results by analyzing the images and identifying the main idea of the drawings.

The advantage of interactive learning is that it incorporates a whole range of principles. Key among these is the principle of active participation. To achieve their goals, college students must actively participate in class discussions and actively interact with their classmates. The principle of open feedback. The expression by a participant or all group members of opinions, ideas, or objections regarding the assigned tasks. It is precisely through the active use of feedback that group members learn how others perceive their manner of communication, thinking style, and behavioral traits. The principle of experimentation. The active search by students for new ideas and ways to solve the assigned tasks. This principle is very important both as a model for real-life behavior and as a catalyst for the development of creativity and personal initiative. The principle of trust in communication. This is precisely the aim of the special arrangement of the group space during classes: a technique commonly used in the classroom involves seating students and the instructor in a circle, facing each other, in order to challenge students' stereotypical attitudes and preconceptions about how classes should be conducted and organized, and what role the instructor should play in them. The principle of equality of positions. This means that the instructor does not seek to impose their opinion on students but works together with them as equals. In turn, each participant in the interaction has the opportunity to take on the role of organizer or leader.

In our opinion, the following are important aspects that support the use of interactive game-based methods in the study of this discipline

“Pedagogy” involves guiding higher education students toward achieving results; developing personal qualities that are important for their future teaching careers; deepening interdisciplinary connections; and helping to shape a well-rounded professional model for a bachelor’s degree in pedagogy.

We have found that the University of London’s experience with the use of technical teaching aids in the classroom is also valuable for the context of Ukrainian schools. The combination of technical teaching aids with verbal teaching methods has fostered student engagement and, consequently, a better understanding of the course material [15].

We agree with I. Bogdanova’s view that, among the key conceptual foundations for the effective implementation of interactive pedagogical innovations in the educational process at institutions of higher education, the following are particularly relevant: a systematic analysis of technological processes, methods, and tools of interactive technologies as an optimal educational environment for training specialists; a systematic study of information regarding the application of interactive technologies in the training of future specialists, which is of theoretical and practical significance for their professional growth; the development of methodologies for applying interactive technologies in the training of future teachers; the identification of optimal pedagogical conditions for the effective implementation of interactive methods in the professional training of future teachers, which involves not only the professional training of students but also guiding them toward the fullest possible self-realization, the development of individuality, independence, and openness to self-improvement [3].

To determine the extent to which Ukrainian instructors of pedagogical disciplines are familiar with interactive teaching methods, we conducted a survey of participants in professional development courses at Chernivtsi National University (June 2020). Thirty people took part in the survey. All respondents stated that they use interactive teaching methods alongside traditional ones. Two percent of those surveyed prefer more traditional teaching methods, which is due to the specific nature of their subject. All instructors listed more than ten interactive teaching methods. This indicates that they take a creative approach to each class session and strive to combat student boredom, stimulate their engagement, and make the learning process more interesting and meaningful. Virtually all instructors use technological tools as a means of stimulating students’ cognitive activity during class sessions.

Conclusions and Prospects for Further Research.

In any type of class, instructors must use several teaching methods in various combinations. The use of interactive teaching methods depends on the objectives and conditions of each type of class, as well as the student audience. However, these methods undoubtedly make learning more engaging for higher education students, stimulating their cognitive activity and interest in

pedagogical knowledge. The specifics of using interactive teaching methods when teaching pedagogical subjects can be broadly divided into two categories: theoretical and practical. The theoretical component involves the need to provide professional development for instructors of pedagogical subjects to equip them with the content of new interactive teaching methods; the introduction into domestic practice of international experience in using more interactive methods for teaching pedagogical subjects; and the continuous updating of the theoretical and methodological foundation of interactive methods to avoid monotony in teaching and to foster greater interest in pedagogical subjects. The practical component is designed to help instructors take into account the specific nature of the subject and the audience’s readiness to work with interactive methods; and to document the results obtained using interactive methods in order to determine the most effective conditions for applying each specific method.

The research aims to examine international experience in implementing interactive teaching methods.

Bibliography:

1. Activating the Learning Process in Modern Higher Education: A Methodological Review / Compiled by L.A. Yakimova. Kyiv, 2010. 32 pp.
2. Bogdanova, I.M. Pedagogical Innovation: A Textbook. Odessa, 2000. 148 pp.
3. Bogdanova, I.M. The Use of Interactive Technologies in the Training of Future Social Workers. *Bulletin of the National Academy of the State Border Guard Service of Ukraine. “Pedagogical Sciences.”* 2011. Issue 4. URL: http://www.irbisnbuv.gov.ua/irbis_nbuv/cgiirbis (accessed June 29, 2020).
4. Bugriy, O. Activating the Learning Process in Foreign Higher Education Institutions. *Higher Education*. 2008. No. 5. pp. 70–78.
5. Golubkova, O. A., & Kefeli, I. F. The Use of Active Teaching Methods in the Educational Process: A Teaching and Methodological Guide. St. Petersburg, 1998. 42 pp.
6. Zadoya, E. S. “Utilizing the Potential of Non-Traditional Technologies in the Training of Future Teachers.” *Technologies of Continuing Education: Problems, Experience, and Prospects for Development*. Mykolaiv, 2002. pp. 92–95.
7. Interactive Learning Technologies: Theory, Practice, Experience: Methodological Guide / Edited by O. Pometun, L. Pyrozhenko. Kyiv, 2002. 135 pp.
8. Klarin, M.V. Interactive Learning—A Tool for Acquiring New Experience: From the Experience of In-House Training and Business Consulting. *Pedagogy*. 2000. No. 7. pp. 12–18.
9. Melnik, N. Interactive Technologies for Developing Professional Competence among Master’s Students in Early Childhood Education in Germany. *Psychological and Pedagogical Problems of Rural Schools*. 2012. No. 42. pp. 20–24.
10. Pekhota, O. Project-Based Learning. *Educational Technologies*. Kyiv, 2004. 234 pp.
11. Sichkaruk, O. Interactive Teaching Methods in Higher Education: A Teaching and Methodological Publication. Kyiv, 2006. 86 pp.

12. Suvorova, N. Interactive Learning: New Approaches. *Innovations in Education*. 2001. No. 5. pp. 106–107.

13. Yagodnikova, V.V. Interactive Forms and Methods of Teaching in Higher Education: A Teaching and Methodological Guide. Kyiv, 2009. 80 pp.

14. Yakovchuk, O.L. Game-Based Learning Technologies as a Component of Stimulating Students' Cognitive Activity in Biochemistry Lectures. *Young Scientist*. 2016. No. 8. pp. 381–385.

15. Cameron, B.J. *Active Learning*. 7th ed. London, ON: Society for Teaching and Learning in Higher Education. *Green Guide*. 2010. No. 2.

References:

1. Yakymova, L.A. (2010). Activation of the Educational Process in Modern Higher Education: A Methodological Review. Kyiv: DP "Vyd. dim 'Personal'."

2. Bohdanova, I.M. (2000). *Pedagogical Innovation*: Textbook. Odessa: TES.

3. Bohdanova, I. (2011). The Use of Interactive Technologies in the of Future Social Workers. *Bulletin of the National Academy of the State Border Guard Service of Ukraine. Pedagogical Sciences* [Bulletin of the National Academy of the State Border Guard Service of Ukraine. "Pedagogical Sciences"], no. 4. Available at: http://www.irbisnbuv.gov.ua/irbis_nbuv/cgiirbis (accessed June 29, 2020).

4. Buhrij, O. (2008). The use of active teaching methods in the educational process. *Vyshha shkola*, vol. 5, pp. 70–78.

5. Holubkova, O.A., & Kefely, I.F. (1998). *The Use of Active Teaching Methods in the Educational Process: A Teaching and Methodological Guide*. Saint Petersburg.

6. Zadoya, Ye.S. (2002). Using the possibilities of non-traditional technologies in the training of future

teachers. *Technologies of Continuing Education: Problems, Experience, and Prospects for Development*. Mykolaiv: MF NaUKMA.

7. Pometun, O., & Pyrozhenko, L. (2002). *Interactive Learning Technologies: Theory, Practice, Experience Methodological Guide*. Kyiv: A.S.K.

8. Klarin, M. (2000). Interactive Learning—A Tool for Acquiring New Experiences. *Pedahohika*, vol. 7, pp. 12–18.

9. Melnk, N. (2012). Interactive Technologies for the Development of Professional Competence among Master's Students in Preschool Education in Germany. *Psychological and Pedagogical Problems of Rural Schools*, vol. 42, pp. 20–24.

10. Pexota, O. (2004). *Project Technology. Educational Technologies*. Kyiv: A.S.K.

11. Sichkaruk, O. (2006). *Interactive Teaching Methods in High School: A Pedagogical Publication*. Kyiv: "Takson."

12. Suvorova, N. (2001). Interactive Learning: New Approaches. *Innovations in Education*, vol. 5, pp. 106–107.

13. Yagodnikova, V.V. (2009). Interactive Forms and Methods of Teaching in High School: A Teaching and Methodological Guide. Kyiv: DP "Vydavnychi dim 'Personal'."

14. Yakovchuk, O.L. (2016). Game-Based Learning Technologies as a Component of Stimulating Students' Cognitive Activity in Biochemistry Lectures [Game learning technologies as a component of activating the cognitive activity of students in lectures on biochemistry]. *Molodyj vchenyj*, vol. 8, pp. 381–385.

15. Cameron, B.J. (2010). *Active Learning*. 7th ed. London, ON: Society for Teaching and Learning in Higher Education. *Green Guide*, vol. 2.