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Comparative Assessment of the Effectiveness of Interactive Teaching Methods in the Formation of Clinical Knowledge Levels

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Annotation: The concept of "interactive" comes from the English "Interact" ("Inter" – "together", "act" – "to influence"). Thus, "interactive methods" refer to the mutual interaction of students. "Interactive teaching methods" represent a form of activity in which students and teachers work collaboratively. The essence of interactive methods consists of mutual interaction among all students and the teacher [6,7]. One of the urgent tasks faced by professors and instructors of higher and special education institutions is training qualified and competitive professionals who do not lag behind in scientific and technical progress.

Additionally, modern higher education requires the transformation of teaching methods to cultivate capable professionals [1].

The "brainstorming" method is one of the new techniques considered relevant to this field [8,9]. Its purpose is to generate new ideas, develop good ideas, achieve better results, and find new directions to solve problems. "Brainstorming" is considered a rapid and intensive process for solving problems. It encourages creative activity and prompts students to suggest multiple variants for solving a problem, including fantastic and imaginative ideas. The teacher then selects those ideas that are relevant for practice.

Before the class, the teacher explains the main discussion principles to the students: generate as many ideas as possible, without paying attention to their quality; briefly state solutions without criticism or analysis of the ideas expressed, even if they are incomplete; develop others' ideas, but no criticism is allowed. The teacher prepares a set of questions in advance to use during the laboratory session.

Applying new pedagogical technologies and interactive methods in the educational process leads

to the improvement of assessing students' clinical knowledge [1,2,3]. In medical universities, teaching practical skills and assessing their implementation requires a special approach [7]. It is impossible to comprehensively develop medical education without applying modern pedagogical technologies, new teaching methods, and improved techniques [4,5,6]. The proposed "brainstorming" and "three-step interview" methods are considered important for improving students' clinical knowledge [8,9].

Objective of the study. To study the effectiveness of the "brainstorming" and "three-step interview" interactive methods during practical classes for students.

Materials and methods. At the "Propaedeutics of Internal Diseases" Department of the Bukhara State Medical Institute and in collaboration with the "Medical and Biological Sciences" Department of the Tashkent State Pharmaceutical Institute, the effectiveness of interactive methods was analyzed during practical classes for third-year students. Two representative groups with nearly equal average ratings and covering the same topics were assessed for the effectiveness of the interactive and traditional methods. Four practical classes on respiratory system diseases were compared. All students were divided into two groups: in the first group (21 students), the "brainstorming" method was used for four topics; in the second group (22 students), the "three-step interview" method was used.

In the "brainstorming" method, problems are presented to the students, and they quickly analyze them and respond within 1–1.5 minutes. In the "three-step interview" method, a group of three students acts as "doctor," "patient," and "expert-UAS," respectively, and 10–15 minutes are given. The "expert" evaluates the doctor's actions by answering "what was done correctly," "what errors occurred," and "how it should be done," followed by a group discussion led by the teacher.

The "brainstorming" method was used for general topics of the subject, while the "three-step interview" method was applied for specialized topics. The students' knowledge level and retention were assessed through questions and answers, written work, test results, and ongoing and final assessments. In the "brainstorming" method, questions of variant (α1, α2, α3) complexity were given. The results showed that the two interactive methods had different impacts on the formation of students' knowledge. The control work results in academic groups confirmed this. The evidence showed that the "brainstorming" method developed students' oral and rapid thinking skills, which was reflected in the analysis of acquired knowledge. In 14 cases (66.7%) of "brainstorming" sessions, students' oral skills developed for clinical knowledge acquisition, and in 6 cases (28.6%), clinical observation skills developed. This suggests that the method is primarily useful for the theoretical part of practical classes and is not sufficiently effective for acquiring practical skills.

During the learning process, the second group showed significantly positive changes compared to the first group. Students playing the "patient" role showed a deep understanding of disease symptoms, mastering subjective information by 75%, which was significantly 48% higher ($p<0.005$) than those who did not play the "patient" role. Students playing the "doctor" role mastered both subjective and objective information—palpation, percussion, auscultation skills—achieving a practical skill acquisition rate of 78%, with a significant difference of 50% ($p<0.005$) compared to others. Active interaction was clearly seen among students performing the "doctor" role. In addition, students' assimilation of laboratory and instrumental examination results increased by 27%, helping them learn how to behave with patients. "Experts" learned to detect errors promptly and find ways to prevent or correct them effectively. The method's drawback is that not all students could actively participate during the class. It follows that the "three-step interview" method allows students to express independent thoughts freely, developing their clinical thinking and practical skills.

In the first group, students' speed in analyzing clinical situations improved by 21% ($p<0.05$), and they felt relatively freer during classes, learning to analyze achievements and shortcomings

independently. However, practical knowledge acquisition was significantly lower than that of the second group ($p<0.005$).

The analysis of the above results shows that the “brainstorming” method consolidates theoretical knowledge and develops quick thinking, while the “three-step interview” method promotes clinical observation and practical skill acquisition.

It follows that the “brainstorming” method is suitable for the theoretical part of practical classes, while the “three-step interview” method is ideal for practical parts.

Conclusion:

1. The “brainstorming” and “three-step interview” methods differently influence the formation of students’ knowledge.
2. In practical classes, interactive methods should be selected and applied according to the topic of each class.
3. The “brainstorming” method is more suitable for the theoretical part, developing quick thinking. The “three-step interview” method is more suitable for the specialized part, helping students master practical skills.

References:

1. Bakhramov S.M., Boltaev K.Zh., Zharylkasynova G.Zh. and others. Advanced age and hemopathies . Ibn Sino . Tashkent. 2002; 1-2: 73.
2. Beloshevsky V.A. Iron deficiency in adults, children and pregnant women. M.: 2000. 145s.
3. Vorobiev P.A. Anemic syndrome in clinical practice. M .: 2001.188s.
4. Zharilkasynova GJ, Boltaev KJ, Atoev AA et al. Iron metabolism in the elderly . Medicine and quality of life. 2008; 1: 45-47.
5. Zimmerman Y.S., Babushkina G.D. Diagnostics and differential diagnosis of iron deficiency anemia. Wedge . m unit. 1997; 11: 72-76.
6. Orziev *Z.M.*, Sulaimonova *G.T.* Analysis of modern supplies for the formation of critical periods in the occurrence of iron deficient anemies and their regional features . Therapeutic Bulletin of Uzbekistan. No. 3,2019, pp . 121-125 .
7. Narziev SH.S.,Hazratov O’.H.Factori risca jelezodefisitnoy anemii sredi jenscogo pola//Terapevtichesciy vestnik Uzbecistana.-2019.-№2.-C.137-138
8. Aslonova.I./Zh.AshurovaN.G.TukhtaevaKh.Kh..Factoririsca jelezodefisitnoy anemii sredi jenscogo pola//Terapevtichesciy vestnik Uzbecistana.-2019.-№2.-C.-81-83
9. Gadaev A.G.,Turakulob R. I., Qurbonov A.K. Surunkali yurak ytishmovchilgida kamqonlikni uchrashi va uni kasallik kechishiga salbiy tasiri // O’zbekiston tibbiyot jurnali.-2019-2.-C.74-77.
10. Khazratov O’.X., Shodmonov X.Z., Xamitova F.A., Niyazova G. Vliyanie fototerapiy u bol’nix pojilogo vozrasta stradayushix xronichskoy obstruktivnoy bolezn’yu legkix. Klinichiskay gerontologiya. Moskba, 2006.№9.C.28-29.