

УДК 616.31:378.1:001.8

N.V. Hasyuk<sup>1</sup>, O.V. Klitynska<sup>2</sup>, I.V. Antonyshin<sup>1</sup>, Y.O. Mochalov<sup>2</sup>

## Ways of formation and extending of clinical and analytical thought of students-dentists under the activities of student scientific society

<sup>1</sup>I. Horbachevsky Ternopil State medical university, Ternopil, Ukraine

<sup>2</sup>State higher educational establishment "Uzhhorod national university", Uzhhorod, Ukraine

*In our opinion, the combined use and testing of different methods of holding scheduled meetings of the student scientific community in the form of a discussion, and in particular its kind of round table, enables the formation, deepening of clinical and analytical thinking, and also creates the preconditions for improvement through communication and discussion of the rendered on consideration of material. The above facts contribute to the modernization of the culture of individual cognitive activity, develop creativity, reveal opportunities and encourage active independent work with further extrapolation of the acquired practical skills in future dental practice.*

*It should be noted that at the stage of summarizing the results of the whole discussion, the responsible student of the scientific society has the opportunity to use the methods of organization of evaluation activities, receiving feedback (questionnaire, questionnaire, tables on the criteria for evaluating the discussion and mandatory statements are made on the part of each circle) At the stage of expressing gratitude for participating in the discussion, the leader verbally and nonverbally expresses his gratitude to the participants for their participation in discussing the issues and consider it necessary to focus on the personal qualities of each participant and his role in the team, with the method of raising motivation.*

**Key words:** *discussion, analytical thinking, formation, consciousness, student scientific society.*

### Introduction

The continuous process of updating and reorganization in the medical education system requires new approaches to improving not only the content of the curriculum in educational institutions of the medical profile, methodical basis, but also the forms and methods of work of teachers with students [1–3].

Focusing on the humanization of the field of training and education of medical students, the formation of the student's personality, the recognition of its value and the need for modern society, first of all, it should be remembered that the personality of students is formed by the personality of the teacher himself [11, 27–29].

An integral part of each teacher's work is work with group students, which is closely linked with the educational process, which allows them to consolidate their theoretical knowledge on a daily basis, improve practical skills of different character and develop scientific clinical thinking [4, 23–26].

The signing by Ukraine of the Bologna Agreement expands the opportunities of educational institutions in designing the pedagogical process in accordance with international standards and requirements while preserving, of course, their own national achievements in education. All this makes a new look at the problems of quality management education in higher education institutions in Ukraine [9, 19–22].

Influence of the educational environment of the department on the development of such qualities of the student as analytical thinking and unconventional approach in practice, rejection of stereotypes, ability to innovate, interest in everything new, critical comprehension of the proposed, the

ability to choose the most effective behavior for the solution of the clinical situation, allows to form a specialist in your case .

**The aim of our approach** in preparing the future dentist is activation and development the clinical, analytical thinking of a specialist in the conditions of modern medical education, gaining the ability to work in a team with the ability to express their own opinion.

### Research results

It is well known that discussion is a way of organizing joint activities in order to intensify the decision-making process in a group; a method of training that increases the intensity and effectiveness of the educational process by actively involving students in the collective search for new scientific directions [10, 13–15].

Using our own experience during the meetings of student scientific society, we can distinguish the following signs of discussion: consideration, exchange of views and ideas between the participants; study of a question, problems from different perspectives; active interaction of participants, based on multilateral communication; construction and appropriation of new knowledge. There are several types of discussion in scientific literature and pedagogical practice [8, 16–18].

First, the debate – this kind of discussion, involving "fighting words", desire to win. Their purpose is to find the best arguments in defense of their position, exacerbation and clarify their own point of view, demonstrated by the weak validity of the opposite opinion. Debates can take place both verbally and in writing [19–21].

Negotiations, as a kind of discussion, are used to discuss the situation and find a solution, find a compromise, reach

consensus, and establish cooperation among the group students. Using our own experience, the most productive among the contingent of medical students is the kind of discussion in the form of a "Round Table" – a conversation that allows organizing an exchange of thoughts and ideas.

During the preparation for the discussion, we consider it necessary to adhere to the following steps below.

An integral part is the preparatory work, the purpose of which is to solve the following tasks: the formulation of the topic and aim of the discussion. From our experience, we can argue that the effectiveness of the discussion depends on the relevance of the topic and the clearly defined goal.

Widely formulated theme involves the definition of the main areas of research work of students, collecting and organizing information on this topic, finding alternatives, interpreting the arguments and examples. A narrowly formulated theme usually ends with a group decision on the issues discussed with the direct involvement of a teacher in the context of a teacher-student.

We consider the most general purposes of the discussion:

- analysis of the existing teacher's experience from various scientific directions, comprehension and consideration of the discussed issues from different sides, analytical attitude to the worked out literary sources on the given subjects;
- formation of a new view on the solution of a scientific problem within the framework of compromise decisions to the problem at the expense of clearly formulated research purposes;
- verification of formulated hypotheses in practice, taking into account the information received earlier.

The next stage of the meeting of the scientific society in the framework of the discussion is the presentation of the program of joint activities, the distribution of roles by the head of the department.

Responsible for the work of the student's scientific society of the department acquaints the participants with the algorithm of the discussion, distributes roles, such as observers and participants of the debate, supporters and opponents, and necessarily emphasizes the need to express their opinions on the issues discussed by each participant. At this stage, it is also necessary to arrange the harmonization of concepts and terms. This is the most important condition for mutual understanding in the process of discussion, and will contribute to a deep and meaningful consideration of tasks.

Otherwise, the debate can turn into an unnecessary dispute, in which much of the time will be spent to clarify the understanding of the statements of each participant. Determination of the norms of the group's work is very important in the process of discussion.

Responsible for the work of the scientific society reminds the rules of organization of the group work. Participants can add, if necessary, new view, at the same time everyone's opinion must be interesting, which makes it possible to feel the significance of the personality of young scientists.

The next step is to arrange questions or statements for a group discussion. Statements for discussion should be formulated in such way that participants can understand them, find arguments to confirm or refute the proposed problem

issues, analyze their knowledge and experience and use them in the debate process to reach the final result and discuss it.

Conducting the discussion involves the following activities: organization of dispute of specific privileged issues, demonstration of a motion picture film, illustrative materials, a description of a specific clinical case from the teacher's experience, the use of literary sources on this topic, the invitation of experts will allow smooth transition to controversy the theme, increase the attention of participants, adjust for productive debate problems.

Observation of the development of group dynamics, performance of work standards and atmosphere in the group; regulation of these processes is a function responsible for the work of student scientific society. Compliance with the rules of the stages of the discussion and the rules of performance of each participant promotes its more active, dynamic work, speeches of a large number of participants, and also avoids unnecessary pauses and delaying the discussion process.

The observance of the purpose of the discussion is particularly important, the curator must be careful that the participants of the debate do not deviate from the topic, so that the conversation is based on the controversy of the theme (issues, problems), and not on the dispute of the personalities of the students themselves. From our experience, we consider it necessary to tactfully stop participants deviating from the topic, and by means of questions, fixations or interim analysis of thoughts, ideas direct students to discuss issues, problems.

An intermediate analysis of participants' statements at certain intervals will facilitate a smooth transition to the next round of discussion, feedback received by students.

An integral part is the question as a means of organizing and conducting a discussion. The presence of problematic scientific issues is the main tool for organizing meaningful work. Their use gives the leader the opportunity to organize not an automatic immersion in the subject of discussion, but to concentrate the attention of its participants on the content of the expressed arguments, theses, and statements. The final stage involves solving the following tasks:

- summing up the discussion;
- expressing gratitude to the members for participating in the discussion.

Responsible for the student scientific society can use methods of the organization of evaluation activities, receive feedback (questionnaire, tables on the criteria for evaluating the discussion, and binding is to express proposals from each side member) at the stage of summarizing the results of the whole discussion.

At the stage of expressing gratitude for participating in the discussion, the leader verbally and nonverbally expresses his gratitude to the participants for their participation in the discussion of the issues and considers it necessary to focus on the personal qualities of each member and his role in the team in order to enhance the motivation.

## Conclusions

Thus, the complex use of various methods of conducting meetings of a student's scientific society in the form of a discussion, and in particular its kind of «Round

Table» provides for the formation and deepening of clinical and analytical thinking, improves at the expense of communication and discussion of the proposed material of the perception of fundamental knowledge, modernizes the culture of individual cognitive activity, develops creative potential, reveals opportunities and encourages independent work with further extrapolation of the acquired practical skills in future dental practice.

## References

1. *Гуревич Р.С.* Інформаційно-комунікаційні технології в навчальному процесі і наукових дослідженнях // Р.С. Гуревич, М.Ю. Кадемія. – К. : Освіта України, 2007. – 396 с.
2. *Дичковська І.М.* Інноваційні педагогічні технології / Дичковська І.М. – К., 2004. – 172 с.
3. *Морзе Н.В.* Моделі ефективного використання інформаційно-комунікаційних та дистанційних технологій навчання у вищому навчальному закладі [Електронний ресурс] / Н.В. Морзе, О.Г. Глазунова // Інформаційні технології і засоби навчання. – 2008. – № 2 (6). – Режим доступу : <http://www.ime.edu-ua.net/em6/emg.html>.
4. *Національна стратегія розвитку освіти в Україні на 2012-2021 роки* [Електронний ресурс] – Київ: 2012. – Режим доступу : <http://www.nmu.edu.ua/legis2.php>.
5. *Alfred M.* Strangers in the mirror: immigrant students in the higher education classroom / M. Alfred, R. Swaminathan // Adult Learning. – 2001. – Vol. 12, № 4. – P. 1-13.
6. *Althach P.* The internalization of higher education: motivations and realities / P. Althach, J. Knight // Journal of Studies in International Education. – 2007. – Vol. 11, № 3/4. – P. 290-305.
7. *Benevento M.* Role of mass spectrometry-based proteomics in the study of cellular reprogramming and induced pluripotent stem cells / M. Benevento, J. Munoz // Expert Rev. Proteomics. – 2012. – Vol. 9, № 4. – P. 379-399.
8. *Bezrukova V.S.* Mobility of the education system / V.S. Bezrukova. – Yekaterinburg, 1997. – 194 p.
9. *Bligh J. G.* Trends in medical education / J.G. Bligh // Eur. J. Dent. – 1998. – Vol.2, N1. – P.2-7.
10. *Discussion* in scientific and technical propaganda and active learning. – М.: Medicine. – 1990. – P. 4 – 6.
11. *Gasyuk N.V.* The role of a student's scientific society in forming the scientific component of the personality of future specialists / N.V. Gasyuk // Collection of materials of the regional scientific-practical conference «Ukrainian professional language: history and modern times». – Ternopil, 2014. – P. 1.
12. *Harden R.M.* A practical guide for medical teachers / R.M. Harden. – Edinburgh; New York: Elsevier Health Sciences, 2009. – 435 p.
13. *Higher education in the twenty-first century: vision and action* / UNESCO World Conference on Higher Education, Oct. 5-9, 1998, Paris : Declaration. – Mode of access : [http://www.unesco.org/education/educprog/wche/declaration\\_eng.htm](http://www.unesco.org/education/educprog/wche/declaration_eng.htm).
14. *Khominets V.V.* Scientific and Methodical aspects of increasing the professional skills of teachers / V.V. Khominets // Education of Zakarpattia. – 2006. – No. 4. – P. 78–88.
15. *Knight J.* Internalization remodeled definition, approaches, and rationales / J. Knight // Journal of Studies in International Education. – 2004. – Vol. 8, № 1. – P. 5-31.
16. *Kritz M.M.* Globalisation and internationalisation of tertiary education: Final Report submitted to the United Nations Population Division / M.M. Kritz // International Symposium on International Migration and Development, June 28-30, 2006, Turin: Final Report // UN/POP/MIG/SYMP/2006/02/Rev – Mode of access : [http://www.un.org/esa/population/migration/turin/Symposium\\_Turin\\_files/P02\\_KRITZ\\_Rev3\\_Augst21.pdf](http://www.un.org/esa/population/migration/turin/Symposium_Turin_files/P02_KRITZ_Rev3_Augst21.pdf).
17. *Krizko V.V.* Anthology of axiological education paradigm / V.V. Krizko. – K. : Education of Ukraine, 2005. – 440 p.
18. *Lee H.B.* Ha H. Mechanisms of epithelial-mesenchymal transition of peritoneal mesothelial cells during peritoneal dialysis / H.B. Lee // J. Korean Med. Sci. – 2007. – Vol. 22, № 6. – P. 943-945.
19. *Merzlyakova N.S.* Professional mobility of university student in the context of multicultural education / N.S. Merzlyakova // Bulletin of the Bashkir University. – 2009. – No. 3 – P. 1007–1010.
20. *Michael H.* Ross. Histology: a text and atlas: with correlated cell and molecular biology / Michael H. Ross, Wojciech Pawlina // 6th ed., 2011. – P. 105-157.
21. *Morita N.* Negotiating Participation and Identity in Second Language Academic Communities / N. Morita // TESOL Quarterly. – 2004. – Vol. 38, № 4. – P. 573-603.
22. *Report on trends and development in higher education in Europe 1998-2003* / Meeting of Higher Education Partners, 23-25 June, 2003 : UNESCO – CEPES Report [Electronic resource]. – Mode of access : <http://unesdoc.unesco.org/images/0013/001303/130336e.pdf>.
23. *Solomenko L.O.* Active teaching methods in the system of personality development / L.O. Solomenko // Chemistry. Biology. – 2001. – No. 25. – P. 112–114.
24. *Stepko M.P.* Ukrainian education in the Bologna process: experience, perspectives / M.P. Stepko // The director of school, myce, gymnasium. – 2006. – No. 6. – P. 107–111.
25. *Swanwick T.* Understanding medical education: evidence, theory and practice / T. Swanwick. – Oxford : Wiley-Blackwele and ASME, 2010. – 464 p.

26. *Sutnick A.I.* The global value of standards in medical knowledge and competence / A.I. Sutnik. – Changing medical education, 1993. – 27 p.
27. *Teaching differently. Active learning strategy* / E.K. Grigalchik, D.I. Gubarevich, I.I. Gubarevich, S.V. Petrusev. – Mn. : «BIP-S», 2003. – 182 p.
28. *Ukrainian Pedagogical Encyclopedia*. – K. : 1993. – P. 273–275.
29. *Yeroshenko G.A.* Personally-oriented ways of optimizing the education of future specialists / G.A. Yeroshenko, N.V. Gasyuk, O.D. Lisachenko // Materials of the XI International Scientific and Practical Conference devoted to the 200th anniversary of the foundation of the South Ukrainian National Pedagogical University named after K.D. Ushynsky's» Adaptation Opportunities for Children and Youth». – Odessa, 2016. – P. 38–40.

*Дата надходження рукопису до редакції: 05.10.2018 р.*

**Резюме.** На нашу думку, поєднане використання та апробація різних методик проведення планових засідань студентського наукового товариства у вигляді дискусії, а саме її різновиду круглого стола, дає можливість формування, поглиблення клінічного та аналітичного мислення, а також створює передумови для покращення за рахунок спілкування та обговорення винесеного на розгляд матеріалу.

Вищенаведені факти сприяють модернізації культури індивідуальної пізнавальної діяльності, розвивають творчий потенціал, розкривають можливості і спонукають до активної самостійної праці з подальшим екстраполюванням отриманих практичних навичок у майбутню стоматологічну практику.

Слід відзначити, що на етапі підведення підсумків всієї дискусії відповідальний за роботу студентського наукового товариства має можливість використовувати методи організації оціночної діяльності, отримання зворотного зв'язку (опитувальник, анкета, таблиці з критеріями оцінювання дискусії і обов'язковим є висловлення пропозицій зі сторони кожного гуртківця).

На етапі висловлення подяки за участь у дискусії ведучий вербально і невербально висловлює свою подяку учасникам за участь в обговоренні питань і вважаємо за необхідне з мето підвищення мотивації акцентувати увагу на особистих якостях кожного із учасників та його ролі в команді.

**Ключові слова:** дискусія, аналітичне мислення, формування, свідомість, студентське наукове товариство.

**Резюме.** По нашему мнению, сочетанное использование и апробация различных методик проведения плановых заседаний студенческого научного общества в виде дискуссии, а именно ее разновидности круглого стола, дает возможность формирования и углубления клинического и аналитического мышления, а также создает предпосылки для улучшения, за счет общения и обсуждения, вынесенного на рассмотрение материала.

Вышеприведенные факты способствуют модернизации культуры индивидуальной познавательной деятельности, развивают творческий потенциал, раскрывают возможности и побуждают к активной самостоятельной работы с последующим экстраполированием полученных практических навыков в будущей стоматологическую практику.

Следует отметить, что на этапе подведения итогов всей дискуссии ответственный за работу студенческого научного общества имеет возможность использовать методы организации оценочной деятельности, получения обратной связи (опросник, анкета, таблицы с критериями оценивания дискуссии и обязательно высказывания предложений по стороны каждого кружковца).

На этапе выражения благодарности за участие в дискуссии ведучий вербально и невербально выражает свою благодарность участникам за участие в обсуждении вопросов и считаем необходимым с целью повышения мотивации акцентировать внимание на личных качествах каждого из участников и его роли в команде.

**Ключевые слова:** дискуссия, аналитическое мышление, формирование, сознание, студенческое научное общество.

### Відомості про авторів

**Гасюк Наталія Володимирівна** – доктор медичних наук, доцент, доцент кафедри терапевтичної стоматології Тернопільський державний медичний університет імені І.Я. Горбачевського МОЗ України.

**Клітинська Оксана Василівна** – доктор медичних наук, професор, завідувач кафедрою стоматології дитячого віку Державного вищого навчального закладу «Ужгородський національний університет».

**Антонішин Ірина Володимирівна** – кандидат медичних наук, доцент кафедри терапевтичної стоматології Тернопільський державний медичний університет імені І.Я. Горбачевського МОЗ України.

**Мочалов Юрій Олександрович** – кандидат медичних наук, доцент кафедри хірургічної стоматології щелепно-лицевої хірургії та онкостоматології Державного вищого навчального закладу «Ужгородський національний університет».