

ANALYSIS OF DIDACTIC REQUIREMENTS APPLIED TO MODERN CHEMISTRY LESSONS

¹Nishonov Mirkozimjon, ²Usmanova Khurikhan Ikhtiyarjon's daughter

¹Professor of chemistry department of Fergana State University, candidate of technical sciences

²Ggraduate student of Fergana State University, majoring in chemistry

<https://doi.org/10.5281/zenodo.10347907>

Abstract. *This article analyzes the didactic requirements for modern chemistry classes, and the theoretical and practical issues of their systematization based on the structure, content and modern approaches of the modern chemistry teaching process are highlighted.*

Keywords: *teaching process, structure, content, teaching chemistry, improving chemistry lessons.*

General education is based on the preparation of students for life and work in school classes. For this, it is necessary to improve the content of the educational process and its teaching methods, the organization of classes based on the fundamental requirements of the time, to activate the cognitive activities of students, and to pay special attention to the practical creative use of the acquired knowledge. In connection with the rapid development of science and scientific-technical development, the knowledge of employees employed in the national economy is rapidly becoming outdated. Therefore, it is necessary to teach students to use various sources of chemical knowledge and develop their knowledge independently.

It is preferable to teach ways to search and acquire new knowledge, rather than trying to explain as much material as possible in each lesson, emphasizing the work with different sources of knowledge in the teaching process and educational methods.

All this puts new demands on chemistry classes, requires further improvement of the lesson.

The lesson is the main form of the educational process. Currently, the role of the lesson in the educational process is increasing. Improving school education aims to raise the level of lessons to a new level of quality, to a level that meets the demands of society for teachers.

Taking into account the requirements for improving education and the needs of chemistry teachers, in this article, we aimed to do a didactic analysis of the requirements for modern chemistry classes, systematize them, and develop scientific and methodical recommendations in this field.

Today, the rapid development of science and technology complicates the requirements for modern classes day by day. This, in turn, requires certain clarifications to be made to the requirements for the lesson.

In the following years, the expressions "traditional lesson" and "modern lesson" began to be used more often in scientific methodical sources. What is the "modern lesson" itself?

Some scientists, Methodists, and chemists think about the modern lesson:

D. P. Erygin says: "Modern lesson is to activate the educational process."

Yu. K. Babansky says: "The modern lesson is to optimize the educational process."

K.K. Platonov says: "Modern lesson - development of theoretical thinking."

Elnor I.A.: "Modern lesson - gradual development of mental activity".

Yu. K. Babansky admits: "The modern lesson is problematic education."

All these points indicate the need to shift the main attention in the lesson from the teacher's activities to the students' activities (their educational process) [1-10].

It is known that in traditional lessons, the teacher talks by himself, and it is necessary to strengthen the participation of students in acquiring new knowledge. An important condition for the effectiveness of the lesson is the active work of all students during the entire lesson. The main tool that activates the activity of students is the independent work they do. When we think about the requirements for a modern lesson, first of all, it is important to clarify them according to the type of activity. Because the concept of requirements for the lesson is general, they are the content of education, teacher and student activities, used teaching methods, tools, types of control, education. should be further clarified according to the result.

That's why the requirements for the current chemistry lesson are getting a special description based on the demand of the time. In the past, lessons were evaluated mainly based on the activity of the teacher, but now, the effectiveness of the lesson is based on the extent to which the educational and educational goals of the lesson (on the basis of the requirements for the content of the lesson) have been implemented, the quality of the knowledge and skills acquired by the students, and the level of formation of the students' beliefs (educational result). requires quality assessment.

V.A. Onishchuk conditionally divides requirements for modern classes into educational, didactic, psychological and hygienic groups. These conditional groups are interconnected with each other and have a collective description. We will touch on them briefly. The educational requirements for the lesson include issues such as raising exemplary moral qualities in students, forming a scientific worldview, connecting education with life, cultivating aesthetic taste, respecting and protecting nature.

Didactic requirements for the lesson: clearly defining the plan and structure of the lesson, the educational and educational purpose of the lesson, educational tools and teaching methods, the ways to activate the students' cognitive activity in the lesson, the types of laboratory, independent and practical work performed by the students, specific tasks, the scientific high quality of the new material It includes issues such as being at the level, efficient use of modern pedagogical and information technologies of education, monitoring and evaluating the knowledge and skills acquired by students.

Psychological requirements for the lesson: It involves the teacher carefully studying the psychological characteristics of the students (thinking, memory, thinking, will and feelings) in the lesson and referring to it. The teacher's psychological state (mood, arrangement, attention) has a direct effect on the students, and consequently on the learning of the students. Therefore, he should be organized, self-demanding, and give knowledge in a high spirit and with confidence. The teacher should evaluate the knowledge and skills of the students with demandingness, thoroughness and justice. Because every mistake of the teacher in this field can cause the student's interest in chemistry to decline.

Hygienic requirements for the lesson: air temperature in the classroom; includes issues such as the amount of light, the safety of the laboratory work performed by the students, appropriateness for their age, non-boringness, appropriateness of the lecture-style explanation. Doctors of Pedagogical Sciences D.P.Erygin and N.E.Kuznetsova set the following requirements for the modern chemistry lesson on the methodology of chemistry education:

- 1) providing a clear educational goal;

- 2) to pay attention to scientific content;
- 3) connecting the studied material with life;
- 4) pay attention to the polytechnical direction in order to prepare students for life;
- 5) determine educational tools suitable for the content of the subject;
- 6) choosing educational methods suitable for the content of the subject;
- 7) teaching students to work independently with sources of knowledge;
- 8) intersubject communication;
- 9) adherence to the principle of using local information in education;
- 10) paying attention to ecological education and ecological upbringing.

So, it can be seen from the didactic analysis that the requirements for the modern chemistry class are very diverse.

Conclusion

In the article, we thought only about the main requirements for the chemistry class. In order to increase the effectiveness of the chemistry lesson, the teacher needs to take into account the unique individual capabilities of the classes, to achieve the full formation of knowledge, skills and qualifications specified in the model program, to ensure full and healthy communication between himself and the students, as well as to work skillfully and efficiently.

REFERENCES

1. Карпенко М. П. Перспективы развития системы высшего образования на основе «Концепции вуза– 2030» / М. П. Карпенко // Вестник РЕАН. 2005. Т. 5. №3. С. 27–34
2. M. Nishonov, N. Holiqova. The importance of using educational resources in independent learning of chemistry. Scientific newsletter of Namangan State University. Namangan 2022. No. 3, pp. 80-83.
3. M. M. Yunusov, M. Nishonov. Studying the Efficiency of Teaching the Chemical Technology Course Using Information Technologies. Eurasian Journal of Learning and Academic Teaching, (2022). 13,33–38.
4. M. Nishonov, Sh. Mamajonov, V. Xujaev – Kimyo o'qitish metodikasi. Toshkent: O'qituvchi, 2002.
5. М.Ф. Нишанов, А.А. Хайдаров, Д.М. Мирзаев - Значение изучения среды раствора при профессиональной подготовке студентов направления «Пищевая технология». Журнал Universum: технические науки, 2020 Номер 10-2 (79) Страницы 92-94
6. M. Nishonov, S. Mamajonov, D. Tojimatov -Methodological significance of studying the migration of microelements in water and soils. American Journal of Applied Science and Technology, 2022 Том2 Номер07 Страницы10-14
7. М. Нишонов, С. Тешабоев. Мактабда кимёдан амалий ишлар. - Т.: Ўқитувчи, 1992, 134 бет
8. M. Nishonov, Sh. A. Mamajonov, D. Tojimatov -Methodological Significance of Studying Chemical Pollution of the Environment by Microelements. Eurasian Research Bulletin, 2022 Том10. Страницы 55-58.
9. M. Nishonov, Sh. A. Mamajonov. Improving the Structure and Content of the Course "Methods of Teaching Chemistry" in Higher Education. Pedagogical Education, 2004.

10. M.Nishonov, T.Amirova. Integrative description of the science of chemistry teaching methodology with didactic analysis.- Science and innovation, 2023 том 2 номер 66 страницы 245-248
11. M.Nishonov. Methodological significance of studying the transfer of dissolved microelements through soil solution.- Science and innovation, 2023 том 2 номер special issue 6. страницы 64-68