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MODERN METHODS OF STUDYING OF TOXICOLOGICAL CHEMISTRY AT THE MEDICAL UNIVERSITIES.

Teachers in the pedagogical and didactic theory encounter general guidelines for the innovation of teaching, such as instruction should not be conceived as memorizing facts and concepts, definitions and phenomena, individual differences among students should be respected, student should be brought into a situation to develop their knowledge, etc. But such demons do not trigger response it not observed and re-shaped into precise and specific methodological guidelines aimed at current programmed contact. The introduction of innovation will be facilitated by providing complete didactic materials which will help teachers to apply these innovations in practice more easily. The use of modern instructional technology does not mean only modernization of the medical university with new and modern teaching aids but providing clear guidelines for implementation of the active forms and methods in the context of current educational contents. The teacher must know how to combine modern methods, forms and methods of teaching, or what the advantages and disadvantages of such models and frameworks are, and in what frames they can be successfully applied in our teaching practice.

In an attempt to avoid generalized didactics and out of the desire to leave using teaching methods, which can easily be transformed into routine practice and bare practicing, the basic idea of the work was to show how to shape innovative models of educational organization in teaching toxicological chemistry, i.e. kind of effect they have on the success of students, or what dimensions the teacher has to take into account in order to meet the frames of contemporary teaching of toxicological chemistry.

The aim of the work is to show the application of teaching methods used in the teaching process in teaching the content area of toxicological chemistry as well as their empirical confirmation by measuring the achievements of the student. Intentional causes for this paper to be written can be found in the fact that in our teaching are extremely rare, which is especially case n teaching the area natural and synthesis poisons or, more precisely, toxin. Institutions of higher education and training within the European union offer their own proposals for the modernization of the educational process in our universities, but only as example and ideas that need to be upgraded to suit the conditions of our teaching practice. Models of learning and instruction for teaching toxicology that will be proposed in this paper rely on the achievement of teaching practice and campatille teaching subject in the countries of the European Union under the title « Pharmaceutical Science»

The acceptance of innovation and improvement of competencies must be the foundation of the professional development of teachers, particularly in the areas of effective instruction and management in the classroom, for the development of the desired pupils competencies for a life the contemporary environment, as well as in the goal of getting to an effective teaching and contemporary forms of learning in practice.

Analyzing certain theoretical positions we just wanted to find a foundation for shaping the innovative models that will be subject to empirical verification, i.e. to detect which teaching methods applied in teaching toxicological chemistry will increase the success of student studying teaching toxicological chemistry, or which will increase the ability to apply the knowledge students acquired?

Today there are many modern theories of learning, as well as modern theories of teaching. The generally include cognitive styles and strategies, multi-intelligence, critical and creative thinking, role of motivation in learning, cooperative learning interactive learning and ambient learning. New circumstances create new learning that as more student-active self-conscious, creative,and autonomous.

We basically start from the systematic-theoretical didactics that applies the methods and procedures of system theory especially systematic thinking in order to solve problems in a scientific, technical and ideological field. Due to the fact that the purpose of the system theory is to analyze complex systems and prepare technical measures for their effective action, teaching toxicological chemistry here as regarded as a complex system consisting of a series of complex teaching situations one of the objectives of this research is to discover the elements of teaching situations, then to detect the relations between them, to investigate the criteria under which they act and to lead them to raising the level of students success. For

system theoretical didactic it doesn't matter which method will be applied, but the situation for learning is important and it as important which operations a student must perform (observe, learn, to remember).

Contemporary educational and teaching practice in the application of teaching methods for learning finds its asylum in those theories of learning which are putting the focus on the activities of the students the importance of the discovery, experience and events happening during the process of learning.

In the course of the research three methods are used in teaching toxicological chemistry-teaching inorganic poison-organic poisons-natural poisons: Their pharmacological activity and primary structure: lecture method, slide demonstrations and laboratory method.

Lecturing remains one of the more popular methods to transmit information and ideas by teachers, trainers and speakers. As students and audience participants we are quite familiar with the approach. Lectures can be informative boring and overwhelming depending on the compelling nature of the message and the presenter's style and clarity of message. The lecture method usually is one-way communication and allows for little or none audience participation. The result is audience misunderstanding, lass of information and poor retention.

The traditional didactic lecture method as «an oral presentation given to a class by the teachers» while Ericson [1] stated that the lecture or didactic is the method of teaching outside of manipulative work. Teachers are comfortable with the traditional method because they remain in control of content and time [3].

Evidences from a number of disciplines suggest that oral presentation to a large group of passive students contributes very little to real learning. In physics, standard oral-lecture does help most students develop conceptual understanding of fundamental processes in electronic and in informatics. Similarly, students grades in a large toxicological chemistry oral lecture course do not correlate with the lecturing skills and experience of the instructor.

Despite the limitations of traditional oral-lectures, introductory courses in toxicology are forced offer high-enrolment introductory science courses. Many professors who teach these courses feel that lecturing is their only option , and can only dream of what they could accomplish in smaller classes.

However , there is a small but growing group of science faculty members who have developed ways to engage students in the process of thinking, questioning, and problem solving despite the large class size.

It is important to remember but the single overriding goal of a presentation is to provide meaningful content in an entertaining way so that participants focus their attention, understand material and are receptive to implementing new ideas back home. The whole preparation, presentation and content of a lecture must therefore be directed not to the speaker but to the audience needs and wants. We encourage you to try some of the techniques provided so that your lectures may be perceived as more interactive , understood, and remembered.

A side demonstration is an act that a teacher shows and explains something to a class by a prepared ppt teaching tool in Microsoft office software or classically overhead. This can be used as any educational materials.

Carefully material selected slide demonstrations are one of the ways of helping students overcome misconceptions, and there are a variety of resources available [6]. Slide demonstrations can be very effective for illustrating concepts in the class, but can result n passive learning without careful attention to engaging students. They can provoke student to think by themselves and are especially helpful is the slide demonstration has a surprise, challenges an assumption or illustrates an otherwise abstract concept or mechanism. Slide demonstrations can be very effective for illustrating concepts in the class, but can result in passive learning without careful attention to engaging students. They can provoke students to think by themselves and are especially helpful it the slide demonstration has a surprise, challenges an assumption, or illustrates an otherwise abstract concept or mechanism. Slide demonstrations that use everyday objects are especially effective and require little preparation on the part of faculty. Students interest is a peaked if they are asked to make predictions and volk on the most probable outcome. There are numerous resources available to pelp faculty design and conduct slide demonstrations.

Laboratory work is the hallmark of education in science and technology based fields. Student laboratories are a costly resource yet their educational potential is often not fully

realized in practice. It is timely that their design and delivery and the forms of student assessment used be examined critically for their contribution to high quality learning [8].

The first area of study is the effectiveness of laboratory activities for promoting learning, Practical work is a control theme of lessons in the medical and pharmaceutical sciences [2.5].

Laboratory work is seen as an integral part of most science courses and offers students a learning environment that differs in many ways from the « traditional» classroom setting [4].

It is important to consider whether learning is more effective if the student do the student experiments themselves or they watch the teacher demonstrating. Furthermore, are either of these approaches more effective than the teacher simply describing the student experiments to the students and telling them the results? [7].

It is hard to imagine learning about science, without doing laboratory and fieldwork . Student experimentation underlies all scientific knowledge and understanding. They provide students with opportunities to think about , discuss, and solve real problems. No science can be properly taught without. Student experiments. The students experiments should be the central part of science teaching. It serves many purposes . Student experiments are performed to find relations among concept or to verity hypothesis its in other lessons, in science lessons the effectiveness is related to the use of teaching methods. Some methods may use together for offering a topic. But, which method must take precedence to increace student academic achievment and retention level?

The aim of this study was to determine the effects of the usage sequential lecture method such as didactic lecture, slide demonstration and laboratory student experiment on the academic achievement and retention (remembrance) level in teaching of poisons (synthetical and natural).

The results of this study showed that academic achievement in lessons began with experiment or slide demonstration was higher that lesson beginning with lecture method. In science teaching, using laboratory student experiment or slide demonstration at the beginning of the lesson attracts attention and motivation of students. But, using oral-only lecture bores students and loses theirattention to it.

A laboratory setting is a more conducive learning environment that lecture halls (especially for large classes)as at provides students with real I life situations and a chance to exercise their problem-solving skills. At the same and opportunities for hands on experience, active thinking and knowledge reflection. In addition, a teamwork environment encourages students to practice their interpersonal skills as well as to nurture team spirit and leadership. Finally, oral presentations provide an opportunity for students to sharpen their mental response and presentation skills.

According to this study's results, retention (remembrance) level in lesson beginning with experiment and slide demonstration was higher that of beginning with lecture. Because, people remembrance 10% of that they read, 20% of what they heard, 30% of what they saw and 90% of what they had a hands on experience. Laboratory work is a hands on experience [1].

References:

1. Beydogan H.O. Ogretimi Plantana ve Degerlendirme / H.O. Beydogan // Science Teaching Reconsidered : A. Handbook National Academy Press, Washington-2001, USA (This report is Vailable on-line at http://www.nap.edu/readingroom/books).

2. Galton M. Same characteristics of effective Science teaching /M. Galton, I. Eggleston// European Journal of Science Education.-1979.-val.1.-pp 75-86

3. Havice w. Collrgr Students Attitudes To ward oral Lectures and Integrated Media Presentations. http:// scholar. lib.vt.edu/ejourals / Jots/Winter-Spring-1999/PDF/havice.pdf.

4. I.Haynie W.I. Effects of inticipation of Tests on Delaged Retention Learning/ W.I. Haynie//Journal of Technology Educations.-1997-val9,N1.-pp20-30

5. Holstein A. The role of the laboratory in science teaching: neglected aspects of research/ A.Holstein, V.M. Lunetta//Review of Educational Research.-1982.val.52,-pp 201-217.

6. Katz D.A Science slide demonstrations, student experiments, and resources: a reference list for elementary through college teachers toxicological chemistry with some physics and life science/ D.A Katz//Journal of Chemical Education.-1991.-val.68,N3.-pp235-244

7. Killermann W. Research into toxicological chemistry teaching methods W. Killermann//Journal of chemistry Education.-1998.-val.33,N1.-pp 4-9

8. Winter D. Novice Inctructors and Student-Centered Instuction: Identifying and Addressing Obstacles to Learning in the College Science Laboratory/D.Winter, P. Lemons, J. Bookman and W. Moose//.The Journal of Scholarship of Teaching and Learning.-2001-val.2,N1.-pp.14-42.

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ПРОТИВОГРИБКОВАЯ И ПРОТИВОМИКРОБНАЯ АКТИВНОСТЬ ПРОИЗВОДНЫХ 4-МЕТОКСИ-9-ГИДРАЗОНО АКРИДИНОВ

Поиск противомикробных и противогрибковых препаратов в настоящее время приобретает особую актуальность, так как многие современные препараты утратили свою эффективность в связи с тем, что антисептики акридинового ряда не вызывают привыкания микроорганизмов, а кроме того уменьшают их резистентность к наиболее широко применяемым антибиотикам и сульфаниламидным препаратам [1]. Обновление и пополнение арсенала химиотерапевтических средств за счет соединений этого является важной проблемой.