

The Essence of Program and Methodological Complexes in Improving the Methodology of Teaching Sciences

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Annotation: The method of teaching subjects should be chosen based on the nature of the subject. Also, the teaching methodology is based on the study of the history and development of the relevant field of knowledge, the purpose of the curriculum, the intellectual capabilities of students, age characteristics and how these characteristics manifest themselves in specific conditions. This article talks about it.

Key words: information technologies, information resources, software package, higher education, future computer science teachers.

The method of teaching subjects should be chosen based on the nature of the subject. Also, the teaching methodology is based on the study of the history and development of the relevant field of knowledge, the purpose of the curriculum, the intellectual capabilities of students, age characteristics and how these characteristics manifest themselves in specific conditions. The chosen methodology should provide high-quality educational services and take into account the needs of society and the labor market [1, 2, 3, 4, 5]. The essence of the presented methodology is to visualize educational materials in the educational process and ensure a conscious perception of the course content. An analysis of the content of the subject and the requirements for the areas of education and specialties outlined in the paragraphs makes it possible to determine the purpose of "Informatics", the principles of the formation of content, forms, methods and means of teaching, as well as an analysis of the results of the achieved level of skill. It is known that educational goals should be set based on the requirements of the state educational standard. With the improved development of the content of the science "Theory of Algorithms", the following general didactic principles were used: [6, 7, 8, 9, 10]

- the principle of consistency in the education system - a strict logical sequence is observed in the learning process, acquired knowledge and formed ideas are derived from previously acquired knowledge, strengthen and deepen them and prepare the ground for the next educational process;
- the principle of linking education and practice - is associated with the application of the content of education in practice, in which the process of implementing education in harmony with life is considered; the principle of unity of education and upbringing - ensures the harmonious development of students both intellectually and spiritually;
- the principle of holistic formation of educational activities in training - the process of evaluating the results of educational activities provides control over the attention of students, explaining to them the tasks, the necessary needs - activation of motivational states, assistance to activities, the formation of correction;
- the principle of visualization of learning - provides for the assimilation of knowledge on the basis of a living perception of the studied phenomena and phenomena.

Methods aimed at improving the process of teaching subjects with the help of IT create additional opportunities for the full operation of these classical principles. An example of this is the teaching methodology aimed at teaching the subject "Informatics" using the PMC. The expediency of using PMC in the educational process, which combines educational and methodological materials in different formats in a specific subject in the educational process, is due to the fact that it serves to solve certain pedagogical problems and is a software product intended for both the teaching teacher and the student [11, 12, 13, 14, 15, 16].

The presentation that supports lecture sessions in the PMC contains the most basic, basic concepts and information on the topic [17, 18, 19]. Displaying it on the screen and presenting the necessary information to students for recording helps both save time and draw students' attention to the main points of the educational material. The combination of graphic and textual information embedded in the PMC with the mental and emotional state presented to students through a live lecture by the teacher creates a qualitatively new information and educational space during the lesson, and the expanding flow of information in this space allows all participants in the educational process to move from passive accumulation knowledge to self-study, motivates to move to the system of acquiring qualifications. On the page for each topic there is a theoretical material, a practical part and tasks for self-fulfillment. Displaying these pages of guidelines during practice saves the teacher time, and options for tasks and tasks of different levels of complexity help to tailor the lesson to the individual characteristics of students.

References:

1. Исмоилова, З. Қ., & Раупова, Ш. А. (2018). Муаммоли таълим технологияларининг таълим жараёнидаги ўрни. *Irrigatsiya va Melioratsiya*, (3), 93-97.
2. Бабаходжаева Н.М., Тухтаева Н.Р., Зиякулова Ш.А. Преподавание предмета Теория алгоритмов посредством программно-методического комплекса // *Modern education systems in the USA, the EU and the Post-Soviet countries: conference proceedings*. – Seattle: KindleDP, 2020. –Р.194-196.
3. Колдунова И.Д. Методика обучения студентов курсу «Теория алгоритмов» на основе аналитико-синтетической деятельности: дис. ... канд. пед. наук. Красноярск, 2015. –160 с.
4. Раупова, Ш. А. (2022). ЁШЛАР ПСИХИК САЛОМАТЛИГИНИНГ АЙРИМ МАСАЛАЛАРИ: Раупова Шохида Ахроровна, Тошкент давлат стоматология институти катта ўқитувчиси, Тошкент шаҳри, Ўзбекистон. *Образование и инновационные исследования международный научно-методический журнал*, (7), 334-337.
5. Раупова, Ш. А. (2022). ЎҚУВ-ТАРБИЯ ЖАРАЁНИДА ИННОВАЦОН ФАОЛИЯТ ЁНДАШУВИ. *Архив научных исследований*, 2(1).
6. Rustamova, N. R. (2019). Media culture as a developing factor of rational thinking of secondary school students. *European Journal of Research and Reflection in Educational Sciences Vol*, 7(3).
7. Rustamova, N. R. (2020). Development of technology based on vitagenic experience using media resources in higher educational institutions students teaching. *International Journal of Scientific and Technology Research*, 9(4), 2258-2262.
8. Rustamova, N. R. (2020). Training of students of cognitive processes based on vitagen educational situations. *International Journal of Advanced Science and Technology*, 29(8), 869-872.
9. Ruzieva, D. I., Rustamova, N. R., Sunnatovich, D., & Tursunov, A. J. K. (2020). The Technology of Developing Media Culture in Higher Educational Students. *International Journal of Psychosocial Rehabilitation*, 24(09).

10. Рустамова, Н. (2022). Медиатаъсир контекстида талабаларда медиаменталитетнинг шаклланиш босқичлари, Образование и инновационные исследования международный научно-методический журнал, (1), 130-136.
11. Муслимов Н.А. Электрон дарслик яратиш методик тамойиллари ва технологиялари. / Infocom.uz, 2004. – 62-66 б.
12. Ruzieva, D. I., & Rustamova, N. R. (2021). Analysis of theoretical studies of the concepts of vitagen and vitagenic education. *Таълим ва инновацион тадқиқотлар*, (4), 43-47.
13. Rustamova, N. R. (2022). Development of Media Education and Media Mentality in the System of Continuous Education. *Spanish Journal of Innovation and Integrity* | ISSN, 2792(8268).
14. Rustamov, K. J. (2021). Innovative Approaches and Methods in Teaching Technical Subjects. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(5), 1861-1866.
15. Rustamov, K. J., & Tojiev, L. O. (2022). Types of Steering and Their Design Aspects. *Indonesian Journal of Innovation Studies*, 20, 10-21070.
16. Rustamov, K. (2022). The Mathematical model of a positioning hydraulic drive: Mathematical model of a positioning hydraulic drive. *Acta of Turin Polytechnic University in Tashkent*, 12(2), 76-81.
17. Rustamov, K. J., & Husenova, G. Y. (2021). Mathematical modeling of hydraulic equipment of a multi-purpose machine and the sequence of transfer of the dynamic model to the generalized coordinate system. *Asian Journal of Multidimensional Research*, 10(12), 736-745.
18. Askarhodjaev, T., Rustamov, K., Aymatova, F., & Husenova, G. (2020). Justification of the hydraulic system parameters of the excavation body of a multi-purpose road construction vehicle based on the TTZ tractor. *Journal of Critical Reviews. Innovare Academics Sciences Pvt. Ltd.* <https://doi.org/10.31838/jcr>, 7, 40.
19. Rustamov, K., Komilov, S., Kudaybergenov, M., Shermatov, S., & Xudoyqulov, S. (2021). Experimental study of hydraulic equipment operation process. In *E3S Web of Conferences* (Vol. 264, p. 02026). EDP Sciences.