



## Factors of Forming the Competences of Working With Information In Students

K.B.Umarov, A.R.Turgunov

Namangan Engineering-Construction institute

**Abstract:** Methodological aspects of developing students' competence in working with information are studied in the article. Methodological recommendations for organizing the process of developing the competence of working with information during independent life activities have been developed.

**Key words:** competence, scientific outlook, computerization, information competence, information and communication technologies, fundamental information.

### INTRODUCTION

Today, the main growth process in the country's economy requires organization based on scientific and technical knowledge. This requires a different approach to teaching in higher education institutions based on modern teaching methods. It will be necessary to develop a comprehensive system of formation of students' knowledge, skills and abilities on the basis of the improved State educational standard based on the competence approach. In this, it will be necessary to focus mainly on the training of qualified specialists who can quickly accept changes in the world, think creatively, make quick decisions, and understand robotics and digital technologies well. The qualification of specialists is determined not only by the amount of acquired knowledge, but also by the level of understanding of the general laws of science and technology development, scientific thinking skills, and worldview.

One of the main factors in the formation of a scientific worldview and development of scientific thinking is fundamental knowledge and training in the sciences. In recent years, it has been observed that graduates of general secondary schools have serious difficulties related to insufficient knowledge of subjects in most cases. For this, it is necessary to strengthen the subjects in terms of quantity and quality, paying attention to interdisciplinarity in the teaching process.

Special competences related to science (observation, understanding and explanation of physical processes and phenomena, conducting experiments, measuring physical quantities and making conclusions, being able to use physical knowledge and tools in practice), general scientific competences (competence to create new ideas, scientific, production and the ability and willingness to actively communicate in general cultural events), creative competencies (extracting useful information from experience, solving problems, opening the relationship between past and present events, finding new solutions) are important.

Students of higher educational institutions in technical directions should have fundamental knowledge of general physics in order to become mature personnel in their specialties. In addition to teaching methods of general physics (lecture materials, laboratory course, practical exercises related to analysis and solving problems, seminars, etc.), students should also have the skills to use modern computer technology.

In the process of teaching physics, it is appropriate to pay attention to the development of students' scientific outlook on the formation of competences for working with information. Formation of competences for working with information belongs to the type of generalized competences. This is the high efficiency of students' work in solving the problems of systematization and generalization of both educational material and their own knowledge. The widespread introduction of computerization began to have a significant impact on the development of physical science. The use of computers is very useful in solving more difficult tasks and helps in the development of physics, which is considered a very complex science. The use of computers equipped with programmed tasks increases the quality of practical and laboratory training in general physics. Live communication between the teacher and students is not only controlling, but also important for students' good learning and high achievement rates, so it should remain a decisive form of lecture, practical and laboratory training. It is necessary to train students to improve their ability to work with information in order to improve the effectiveness of the teaching process of general physics. In a sense, the process of teaching physics can be considered as a systematized flow of information. Therefore, in order to determine ways to improve education, it is necessary to determine the direction of improvement of educational work.

The process of developing the competence of students to work with information should be studied as a factor of creating a fund of fundamental information, providing them with information related to the fields of science, and they should regularly supplement their knowledge with news in the relevant fields. Students should have the following skills in the process of working with information:

- The content of object analysis consists of the following elements: 1) separation of the subject area; 2) identifying the object of study; 3) highlight the characteristics of the research; 4) highlight important information about the object; 5) setting information boundaries; 6) identification of the object recorded in the information.

- The ability to build an information model of the object. The content of the object's ability to build an information model includes the following components: 1) determining the relationships between the elements that make up the object's structure; 2) selection of analysis and synthesis criteria; 3) justification of the hierarchy of parameters and criteria in the preparation of the object's information model; 4) determination of the physical size of the information model, etc.

The process of obtaining information through the global network system can be divided into several steps:

- formalization of the user's need for information (for example, by creating a list of basic concepts related to the subject area, by defining semantic connections between them);

- selection of the information resource of the Internet to be searched, information search system (services: • WWW – electronic page service, • E-mail service, • Teleconferencing (Usenet), • File transfer (FTP), • Domain naming (DNS), • Telnet service ( Internet – telephone), • IRC – service or Chat conference, • ICQ – service, • Information search service, • Voice and video service and systems on the Internet: <https://www.google.co.uz>; <https://www.Rambler.ru>; <https://www.yandex.ru>; <http://www.yahoo.com>);

- form a query in the query language of the information search system; A group of keywords formed according to certain rules using a query language is called a query to a search server. The query languages of different search servers are similar. The request language of each system can be found in detail in the "Help" section.

- perform a search; To search for information, it is necessary to perform the following actions: launch an Internet browser program (by double-clicking the left mouse button on the Browser tab); Enter the address of the search engine in the address bar of the Internet browser program, for example, [google.co.uz](https://www.google.co.uz); after entering the address, press the Enter key on the keyboard; as a result, the search engine Web page is loaded on the browser screen.

- analysis of received materials. In addition to the ability to find information related to the subject area, the user is also required to analyze the source of information. It is also necessary to know the authors about the purpose and tasks of the site where the selected material is published. For this purpose, it is important to determine the following information about each document selected for use: a brief description (description) of the site, the scope of general topics, information about its developers; availability of other materials related to the topic you are looking for on the site and information about the author of the material.

Integration of scientific knowledge from different fields is achieved by working with information. The student's need for information depends on the level of his development, his readiness to use the received information in the process of his activity, the completeness and value of the information provided to him. Application of information will be an opportunity to acquire it only if it is measured and processed.

### Literature:

1. Ефремова Н.А, Рудковская, В.Ф. Фундаментальное естественнонаучное образование, личность и общество. //Образование XXI веке: проблемы и перспективы. Материалы IX Международной научнопрактической конференции. – Пенза, 2013. С.18-22.
2. Умаров, Қ. Б., А. Р. Турғунов, and С. Қ. Мадумарова. "ФИЗИКА ФАНИНИ ЎҚИТИШДА ТАЛАБАЛАР ИЖОДҚОРЛИГИНИ ОШИРИШДА ФАНЛАРАРО ИНТЕГРАЦИЯНИНГ ЎРНИ." *JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH* 6.5 (2023): 5-10.
3. Amrullayevich K. A., Obid o'g'li S. J. ELEKTRON TALIM MUHITIDA TALABALARDA AXBOROT BILAN ISHLASH KOMPETENTLIKNI SHAKLLANTIRISH //International Journal of Contemporary Scientific and Technical Research. – 2022. – С. 641-645.
4. Umarov, Qudiratilla Bekboevich, and SHavkat Inamdjonovich Nabiev. "GENIUS-GOALS AND OBJECTIVES OF EDUCATION." *Scientific and Technical Journal of Namangan Institute of Engineering and Technology* 2.7 (2020): 368-374.
5. Umarov, Qudratilla Bekboyevich, and Nargiza Qudiratullayevna Usmanova. "STUDENTS FOR IMPROVEMENT OF CREATIVE ACTIVITIES OF STUDENTS." *Scientific and Technical Journal of Namangan Institute of Engineering and Technology* 1.11 (2019): 245-248.
6. Каршиев А.А. Ўқувчиларда ахборот билан ишлаш компетенциясини шакллантиришнинг даражавий тузилмаси //инновации в педагогике и психологии. – 2021. – Т. 4. – №. 4.
7. Бекваевич, Умаров Кудиратилла, Олимжон Усупович Отамирзаев, and Дилноза Неъматиллаевна Зокирова. "The use of Interactive Methods in the Formation of Independent Thinking of Students and Their Analysis." *Telematique* (2022): 7026-7032.
8. Набиев, Шавкат Инамджанович, Кудиратулла Бекбаевич Умаров, and Собиржон Рахимжанович Бойдедаев. "ЭТИМОЛОГИЯ И ТОПОНИМИКА НАСЕЛЕННЫХ ПУНКТОВ, ЭТНОСА ФЕРГАНСКОЙ ДОЛИНЫ И СВЯЗЬ ИХ С ЕВРОПОЙ." *European Journal of Interdisciplinary Research and Development* 16 (2023): 373-378.
9. Набиев, Шавкат Инамджанович, and Кудиратулла Бекбаевич Умаров. "КАК ПОЯВИЛСЯ ЯЗЫК, ПЕРВОЯЗЫК, РОДСТВО НАРОДОВ АЗИИ И ЕВРОПЫ С ТОЧКИ ЗРЕНИЯ ФИЗИКОВ." *European Journal of Interdisciplinary Research and Development* 17 (2023): 167-172.
10. Умаров, Қ. Б., А. Р. Турғунов, and С. Қ. Мадумарова. "ФИЗИКА ФАНИНИ ЎҚИТИШДА ТАЛАБАЛАР ИЖОДҚОРЛИГИНИ ОШИРИШДА ФАНЛАРАРО ИНТЕГРАЦИЯНИНГ

- ЎРНИ." *JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH* 6.5 (2023): 5-10.
11. Umarov, Qudratilla Bekboyevich, and Nargiza Qudiratullayevna Usmanova. "STUDENTS FOR IMPROVEMENT OF CREATIVE ACTIVITIES OF STUDENTS." *Scientific and Technical Journal of Namangan Institute of Engineering and Technology* 1.11 (2019): 245-248.
  12. Umarov, Q. B., and N. Makhmudov. "BASIS OF THE STRENGTH OF THE MUG SEED ON THE EARTH OF THE WORKING BODY." *МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ* 4 (2021): 52.
  13. Бекваевич, Умаров Кудиратилла, Олимжон Усупович Отамирзаев, and Дилноза Неъматиллаевна Зокирова. "The use of Interactive Methods in the Formation of Independent Thinking of Students and Their Analysis." *Telematique* (2022): 7026-7032.
  14. Umarov, Qudiratilla Bekboevich, and SHavkat Inamdjonovich Nabiev. "GENIUS-GOALS AND OBJECTIVES OF EDUCATION." *Scientific and Technical Journal of Namangan Institute of Engineering and Technology* 2.7 (2020): 368-374.
  15. ҚБ Умаров, СҚ Мадумарова, АЗ Солиев ТАЪЛИМ СИФАТИНИ ОШИРИШДА ПЕДАГОГ КОМПЕТЕНЦИЯСИНИНГ ЎРНИ *JOURNAL OF INNOVATIONS IN SCIENTIFIC AND ...*, 2023
  16. Boydedayev, S. R., M. M. Umaraliyev, and A. R. Turgunov. "APPLICATION OF THE VENN DIAGRAM METHOD IN THE LABORATORY LESSON." *DETERMINATION OF YOUNG'S MODULUS OF DIFFERENT METALS BY BENDING METHOD*." *Web of Scientist: International Scientific Research Journal* 3 (2022): 377-381.
  17. Rahimjonovich, Boydedayev Sobirjon, Umaraliyev Maksud Mahmudovich, and Turgunov Adham Rakhmatillayevich. "TO STUDY THE DEPENDENCE OF THE INTENSITY OF" ABSOLUTE BLACK MATTER" RADIATION ON TEMPERATURE AND DISTANCE." *Galaxy International Interdisciplinary Research Journal* 9.12 (2021): 671-675.
  18. Umaraliyev, Maksud, and Adham Turgunov. "MEASURING OF THERMAL CONDUCTIVITY COEFFICIENT IN SOIL SAMPLES." *Scientific and Technical Journal of Namangan Institute of Engineering and Technology* 3.5 (2022): 34-39.
  19. Тургунов А. «СОВЕРШЕНСТВОВАНИЕ МЕТОДИКИ ОБЕСПЕЧЕНИЯ ПРЕЕМСТВЕННОСТИ НАУЧНЫХ ПОДХОДОВ В ПРЕПОДАВАНИИ АТОМНОЙ ЯДЕРНОЙ ФИЗИКИ». *Наука и инновации* 2.А5 (2023): 275-278.
  20. Рахимжонович, Бойдедаев Собиржон, Умаралиев Максуд Махмудович и Тургунов Адхам Рахматиллаевич. «К МАГНИТООПТИЧЕСКОЙ АНИЗОТРОПИИ КРИСТАЛЛА Mg ЭФФЕКТ ИЗМЕНЕНИЯ МАГНИТНОЙ СТРУКТУРЫ FeVO<sub>3</sub>». *Web of Scientist: Международный научно-исследовательский журнал* 3 (2022): 175–180.
  21. Рахимжонович, Бойдедаев Собиржон, Умаралиев Максуд Махмудович и Тургунов Адхам Рахматиллаевич. «Экспериментальное определение силы в магнитном поле воздушной катушки». *Пирианский журнал* 12 (2022): 27-30.
  22. Rahimjonovich, Boydedayev Sobirjon, and Umaraliyev Maksud Mahmudovich. "STUDY OF FERROMAGNETIC HYSTERIZES CURVES IN CASSY LAB." *Web of Scientist: International Scientific Research Journal* 3 (2022): 520-525.