International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

IMPROVEMENT OF PROFESSIONAL COMPETENCES OF THE TEACHER OF TECHNICAL UNIVERSITIES IN THE FIELD OF INNOVATIONS OF HIGHER EDUCATION

https://doi.org/10.5281/zenodo.7868740

Nam Anjela Lvovna
Senior lecturer,
Tashkent State Transport University, Tashkent, UZBEKISTAN
Email id: anzelanam73@gmail.com

Abstract.
The article reveals the relevance of the professional competencies of a university teacher, which are supported by the constant development and emergence of new computer and telecommunication tools, electronic educational resources, an intensive expansion of illustrative and interactive capabilities, the quality and effectiveness of computer training software, distance self-learning, automated knowledge control.

Keywords.
Professional competencies, electronic educational resources, distance platforms, network tools, motivation, teaching, learning, student-teacher interaction.

Introduction

The modern world is an era of innovation, in which it is unlikely that you will be able to build a career, find a job and achieve significant success without an appropriate education. And this is well understood by young people: today more than a billion students are educated in universities around the world. This number also includes students from Uzbekistan.

In his message to the Parliament for 2023, the President of Uzbekistan paid special attention to the problems of education. 2023 has been declared the year of "Care for the Human Being and Quality Education". These two areas will become a priority for our country. Of great importance in achieving the goals set will be played by scientific research, on which the progress of not only one single industry, but of the whole country depends. The main goal is to ensure the wide use of scientific and innovative potential with the full mobilization of scientific, intellectual and financial resources, the identification of priority areas for continuous reform of science in the future. Improving the quality of education has

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

become one of the important directions of the educational policy for the development of New Uzbekistan. [1]

The educational process is designed so that each student can systematize the acquired knowledge and skills, apply modern technologies. It is thanks to this formulation of the question that the young specialist manages to solve theoretical and practical problems in the field of his specialty.

In educational institutions of the Republic of Uzbekistan, much attention is paid to educational, ideological and educational work with students. One of the urgent problems of the education system in our region is the quality of education: the level of professional and general knowledge and skills of students. [2]

In my work, I want to define the issue of automation and optimization of the educational process, the use of new programs, more effective forms, methods, means and technologies of training, since the quality of training of specialists depends on this. In connection with the development of new technologies, the emergence of new scientific areas, the education system is constantly faced with the need to introduce new curricula or change the system for training highly qualified specialists.

The tasks of educational institutions should be formulated in such a way that the expected outcome of the learning process is clear, that is, what the university should strive for, and not how it is going to solve the tasks set. Another component in the selection of programs and priorities are external and internal indicators and needs. Of all the indicators, the most important is the level of quality of teachers. The level of pedagogical skills of teachers can be assessed by the number of published scientific papers, the amount of funding for scientific research, the number of patents and copyright certificates, awards, scientific titles, and the quality of pedagogical activity.

Information and communication technologies dictate new requirements for the professional and pedagogical qualities of a teacher, for methodological and organizational aspects of using information and communication technologies in teaching. Today, any teacher has many opportunities for using ICT tools in the learning process - these are information from the Internet, numerous electronic teaching aids, dictionaries and reference books, presentations, programs that automate knowledge control, new types of communication - chats, forums, e-mail, teleconferencing and more. Thanks to this, the content of training is updated, an intensive exchange between participants in the educational process is possible. [3]

Research Methodology And Analysis

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

The global changes affecting the modern educational system include the following: a change in the methods and ways of delivering information and educational content; changing the nature, methods of access to educational content; changing the nature of the interaction of subjects of the educational process; educational content. Over the past decades, educational technologies have undergone significant changes, moving from passive to active, from the simple use of computers to the introduction of modern information technologies and the digitalization of information content. [4]

In order to develop competitiveness, many educational institutions of the CIS countries are entering a new stage of their development and are solving the problem of increasing the use of electronic services. Cloud technologies and the e-learning system, in my opinion, just provide the user with the services that he needs: the student - educational materials, the teacher - management and control of students' activities, the curator - communication, discussion and exchange of information with the study group or their parents . The essence of electronic and cloud technologies is the use of remote computing resources through a web browser interface. These include cloud services such as email, office programs, virtual cloud desks, operating systems, and data storage.

Young men and women of modern times strive not only to graduate from high school, but also to develop their practical skills. That is why higher education must be constantly transformed and filled with new content. This year, significant emphasis in Uzbekistan will be placed on improving the quality of the educational process, introducing the most modern and advanced solutions into it.

Modern technologies have a huge impact on the course of reforms in education and science. A fundamentally new generation of high-tech online learning is being formed, which is fundamentally different from the classical one. These technologies are truly revolutionary: they allow students to combine training with internships. The combination of such distance education with full-time education provides students with a diverse set of knowledge and skills. In addition, high technology provides students with closer communication, as well as their active interaction with teachers, which opens up new opportunities. [5]

Lectures and seminars, as well as exercises performed in the presence of a teacher, allow you to quickly learn new material than self-study. But at the same time, a significant part of the time is spent on routine tasks that do not require the presence of a teacher, and reduce the time allotted for consultations. We are talking about the issuance of assignments, lists of references, presentation by the lecturer of

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

information related to GOSTs and standards. The second reason for the automation of the educational process is the spread of computer technology. Preparing abstracts and diplomas in graphic editors, using e-mail and searching for information on the Internet has become commonplace. Most students have a computer at home, the rest can get the opportunity to work on a computer at the department.

To implement the project of automation of the educational process, it is advisable to use Internet technologies. This choice is due to several factors. Firstly, the automation of the elements of the educational process involves working with information presented in electronic form. Naturally, if the need arises, it can be transferred to paper media or, conversely, extracted from them. The only restriction on the form of presentation of electronic information is its compliance with standards. That is, the user should not have problems with extracting information (meaning) from the received data. Secondly, software and hardware that ensure the exchange of information between teachers and students with the fulfillment of the requirements for efficiency and general accessibility must be universal and inexpensive. Or, the application software must be independent of system packages and hardware.

Results

An automated system that helps to conduct the educational process is part of the automated information system of the cathedral. The activity of the department, as an independent administrative unit, needs to be automated. The tasks performed by the department can be divided into several types:

- administrative and organizational,
- educational and methodical,
- research.

It is the educational and methodological tasks performed by teachers and students that constitute the subject area of the developed system.

The preparation of the educational process involves the preparation and approval of the curriculum and programs of disciplines corresponding to the specialty and direction of the department, the recruitment of staff of teachers who read the disciplines, and the scheduling of classes. Since the listed actions are performed by teachers of the department and the university, the functions of the system under consideration include only the results of their implementation as information for review.

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

Conducting the educational process is the main part of education. It involves the presentation of educational material at lectures, seminars, exercises and consultations. Part of the material is mastered by students on their own due to the limited volume of lectures. To facilitate independent work, teachers provide students with lists of literature on the subject of the course being read.

The automated system implements only secondary functions related to organizational regulations, or functions for the distribution of educational and methodological materials. Of the various types of classes conducted within the framework of the training course, the automation of consultations, receiving and issuing tasks will contribute to increasing the effectiveness of training. Students have the right to extract information and send information requests to the teacher, who can then put the data submitted by students for public access. [6]

Teaching materials are an electronic version of teaching aids, methodological materials, assignments and requirements for performing exercises and term papers. They can be either electronic documents in the form of archive files or hypertext pages, or drawings obtained by scanning literary sources, or programs designed, for example, for performing exercises or laboratory work.

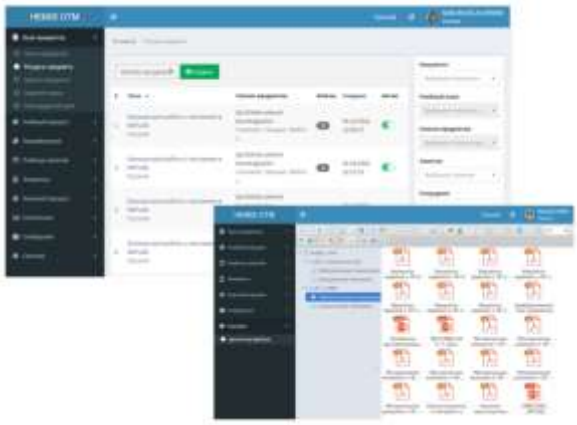

Figure 1. Placement of resources by subject on the HEMIS platform

Conducting intermediate controls during the semester is directly related to the learning process. Intermediate controls carried out during the semester include the acceptance of exercises performed by students, laboratory work, abstracts, examinations and ratings. At the end of the academic semester, independent work, term papers and exams are accepted. To prepare for their implementation, to issue and receive assignments, the following tasks are performed:

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

1) Issue of tasks can be done in several ways. If we are talking about permanent tasks that are relevant for a long time, for example, about the requirements for performing laboratory and independent work, then such information materials should be placed in the section of educational and methodological materials, indicating the discipline to which they relate.

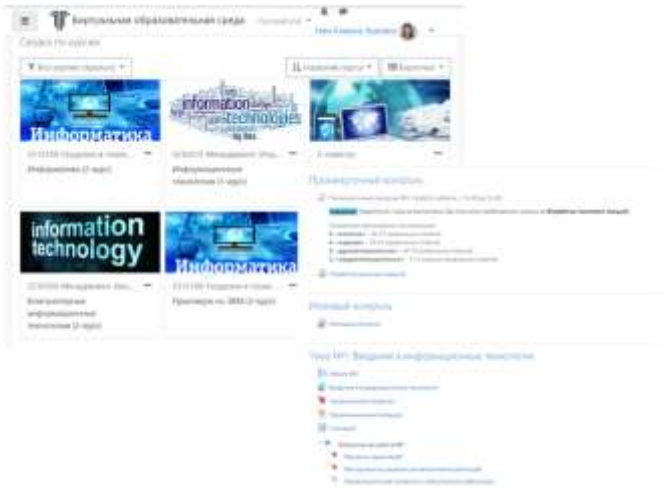

Figure 2. Creation of training courses on the MOODLE platform

2) Acceptance of tasks. An important task of the system is to provide the teacher with the opportunity to receive assignments completed by students in advance and get acquainted with them before conducting control activities, which will save time during their implementation and allow them to become more familiar with them. In this case, completed tasks are understood as electronic documents: abstracts, reports, printouts of programs. One of the options for accepting assignments from students is a mail server on which the teacher has a mailbox, the address of which is indicated in the states description section.

3) Announcement of the results of acceptance of assignments is carried out in three ways: through messages on the bulletin board, through information on teacher pages or by sending a response if the system uses a mail server to receive assignments.

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

Figure 3. Development of an information platform for a training course in the TELEGRAM messenger

Reports on the educational process and research combine several activities of teachers and students that are not directly related to the educational process, but are of interest as the results of the department's work. In addition to educational and methodological work, teachers of the department participate in research developments, lead scientific directions at the department. To provide information about the scientific activities of the department, the functions of the automated system listed above are supplemented by the following functions:

1) Presentation of reports on seminars and conferences. A special section of the system is devoted to the review of scientific events held at the department. The section is presented in the form of an information tree, the root of which is a list of ongoing events, and the branches are hyperlinks to more detailed information.

2) Presentation of publications. Many universities publish collections in which the works of teachers and students are published.

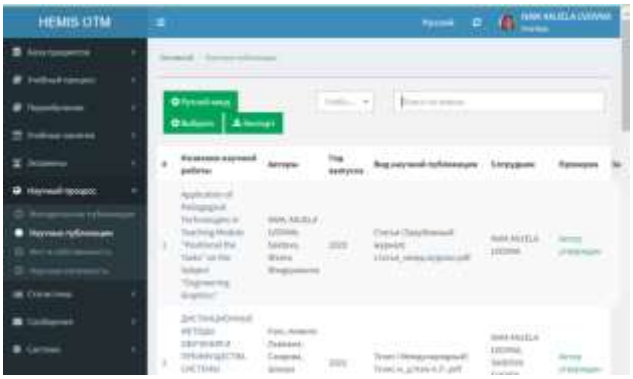

Figure 4. Scientific and methodological base of the teacher on the HEMIS platform

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

In accordance with the concept proposed in the article for building automation systems for educational activities of the department of the university, a similar system has been developed and is already functioning. It is used by teachers and students in the performance of their educational and methodological work. The user interface is designed as hypertext pages loaded into browser windows. The developed system implements all the functions that ensure the preparation of the educational process.

Of the tasks of conducting the educational process, the following were implemented: the placement by the teacher and the reading by students of educational materials and announcements, the ability for teachers to supplement the pages of the system with their own developments. At the moment, the development of the system continues. It is supposed to supplement its functionality by implementing all the tasks of the educational process indicated in this article.

Conclusions.

Thus, my work has shown that the possibilities of educational electronic systems MOODLE, HEMIS, instant messengers and cloud services are very useful in the process of full-time education. The main advantages of electronic technologies include the concentration of various information related to the educational process (educational materials, test papers, files with programs, correspondence with teachers, etc.) in one place and the ease of repeated access to it.

It should also be noted that students interested in gaining knowledge were able to get more of it, since more information (program examples, correct solutions with detailed explanations, etc.) was made available by placing it in the system. The students who missed the classes got the opportunity not to break away from the educational process and quickly catch up with the group, as they had access to all the materials that were given in the lesson, they could, if necessary, ask questions to the teachers.

The progressive future of our state depends primarily on the constant reproduction of highly educated and disciplined personnel capable of mastering rapidly changing technologies and forming an appropriate economic structure. Only people with modern knowledge, intellectual potential and advanced competencies can achieve the strategic goals that Uzbekistan faces.

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-4| 2023 Published: |22-04-2023|

REFERENCES:

1. Address by the President of the Republic of Uzbekistan H.E. Mr. Shavkat Mirziyoyev to the Oliy Majlis and the People of Uzbekistan. 20.12.2022. https://president.uz/en/lists/view/5774

2. Lvovna, Nam Anjela. "Management of the educational process of universities with the help of electronic services." ACADEMICIA: An International Multidisciplinary Research Journal 12.4 (2022): 493-497. http://dx.doi.org/10.5958/2249-7137.2022.00314.7

3. Нам, А. Л. Актуальность внедрения электронного обучения в системе высшего образования Республики Узбекистан / А. Л. Нам. — Текст : непосредственный // Молодой ученый. — 2018. — № 22 (208). — С. 341-343. — URL: https://moluch.ru/archive/208/51061/ (дата обращения: 24.04.2023).

4. Медведев П.Н. СОВРЕМЕННЫЕ ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В СФЕРЕ ОБРАЗОВАНИЯ: ВОЗМОЖНОСТИ И ПЕРСПЕКТИВЫ / П.Н. Медведев, Д.В. Малий, Е.С. Папочкина // Международный научно-исследовательский журнал.- 2021. - №6 (108). - URL: https://research-journal.org/archive/6-108-2021-june/sovremennye-informacionnye-texnologii-v-sfere-obrazovaniya-vozmozhnosti-i-perspektivy (дата обращения: 24.04.2023). - doi: 10.23670/IRJ.2021.108.6.119

5. Тевс, В.Н., Подковырова, В.Н., Апольских, М.В., Афонина, М.В./ Использование современных информационных и коммуникационных технологий в учебном процессе: учебно - методическое пособие / Д.П. Тевс, В. Н. Подковырова, Е. И. Апольских, М. В, Афонина. – Барнаул: БГПУ, 2016. - 245 с.

6. Нам, А. и Саидова, Ш. 2022. Плюсы и минусы компьютеризации при обучении инженерной графики в техническом вузе. Общество и инновации. 3, 4/S (май 2022), 338–343. DOI:https://doi.org/10.47689/2181-1415-vol3-iss4/S-pp338-343.

7. Львовна, Н. А., & Сардор, Р. (2021). НЕОБХОДИМОСТЬ ИСПОЛЬЗОВАНИЯ СИСТЕМЫ MATLAB В ПРЕПОДАВАНИИ УЧЕБНЫХ ДИСЦИПЛИН ПРИ ПОДГОТОВКЕ СПЕЦИАЛИСТОВ ТЕХНИЧЕСКИХ НАПРАВЛЕНИЙ. Central Asian Journal of Theoretical and Applied Science, 2(5), 160-164. Retrieved from https://cajotas.centralasianstudies.org/index.php/CAJOTAS/article/view/171

8. Raximov S. D. MA'LUMOTLAR TUZILISHI VA PYTHON DASTURLASH TILIDA ALGORITMIK FIKRLASH JARAYONLARI //SO'NGI ILMIY TADQIQOTLAR NAZARIYASI.–2023.–T.6.–№3.–C.27-33. https://bestpublication.org/index.php/sit/article/view/4192

9. Raximov S. D., Sodiqov S. S. TEXNIK SOHA MUTAXASSISLARI O 'QUV FANLARINI O 'QITISH TAYYORGARLIK JARAYONIDA C++ DASTURIDAN FOYDALANISH ZARURATI //INTERNATIONAL CONFERENCE: PROBLEMS AND SCIENTIFIC SOLUTIONS. – 2022. – T. 1. – №. 7. – C. 115-118.

10. Lvovna, N. A. ., & Shagiyazovna, S. S. . (2023). Application of Pedagogical Technologies in Teaching Module "Positional the Tasks" on the Subject "Engineering Graphics". Vital Annex : International Journal of Novel Research in Advanced Sciences, 2(3), 191–195. Retrieved from https://www.innosci.org/IJNRAS/article/view/971

11. Нам, А. Л. Перспективы использования социальных сетей в учебном процессе в технических вузах / А. Л. Нам, Ш. Супиева // Теория и практика современной науки. – 2021. – № 5(71). – С. 178-181. – EDN DMOOQB.