

Improving A Management System Of A Academic Lyceum Activities Based On Information And Communication Technologies

Gafurova Nodira Mirhosilovna

Abstract : This article was written with the aim of developing a system for managing the activities of academic lyceums based on information and communication technologies. The following tasks are solved in the article as: determination of the content and organizational structure of the electronic system aimed at the formation of an integrated educational information environment; determination of the composition and content of the electronic educational information environment; the organization of educational activities of academic lyceums and the development of control software; improvement of the modernized electronic didactic support for informatization of the educational process. Also, the article substantiates the relevance and necessity of the topic of the dissertation, sets out a foreign research review, defines goals, objectives, object, subject of research, shows the correspondence of the work to important areas of development of science and technology, and also provides information on scientific novelty, reliability of results, theoretical and practical significance, implementation of the results in practice, structure and publicity of the work, including those related to the development of methods for using the resources of a single information and education. There is no clear-cut space aimed at creating a unified information and educational environment of the academic lyceum, improving the quality of education based on the generalization and development of leading experiences in this field, despite certain results achieved in the implementation of information and communication technologies in the educational processes of educational institutions. Pilot work was carried out, the training method was developed on the basis of the problem, didactic foundations were determined and conclusions were drawn.

Keywords: information technology, ICT, academic lyceum, information and educational space, communication technology.

1. INTRODUCTION

World experience has shown that today, when science and technology are developing rapidly, the volume of scientific knowledge, concepts and ideas is growing. This, on the one hand, ensures its differentiation due to the progress of new spheres and branches of science and technology, on the other hand, contributes to the emergence of an integration process among sciences. System integration and management of the educational process using information and telecommunication technologies at the present stage are important areas for reforming the education system. The use of information and communication technologies, their practical application, as well as the introduction of effective and modern techniques with the help of these technologies are actual tasks of today. The adoption in the Republic of Uzbekistan of the Law on Education and the National Program for Personnel Training, as well as the Decree of the President of the Republic of Uzbekistan "On Measures for Further Improving the Activities of Secondary Specialized, Vocational Education Institutions," set the administration of academic lyceums the task of modern and effective educational and managerial processes, as well as the development of educational content and teaching methods that meet the requirements of the time. The adoption of these laws created the legal basis for the implementation of fundamental reforms in the field of education and identified a number of important tasks facing secondary specialized, vocational education. When choosing a profession, the use of new innovative technologies in academic lyceums in managerial, educational, vocational and vocational guidance processes and the informatization of these processes enables students,

along with the search for knowledge, self-education, analysis, and conclusion, to obtain information about higher educational institutions, the processes of entrance exams, and the processes of preparing for exams. The teacher in this process creates the conditions for the training and education of the individual in accordance with the tasks of its development and formation. And also performs the tasks of leadership and focus. This study will, to a certain extent, serve the implementation of the tasks established in the Decree of the President of the Republic of Uzbekistan "On the Strategy for the Further Development of the Republic of Uzbekistan" No. UP-4947 dated February 7, 2017, as well as in other regulatory legal acts on this activity.

2. MATERIALS AND METHODS

Objective: to develop a management system for the activities of academic lyceums based on information and communication technologies.

Research Objectives:

- determination of the content and organizational structure of the electronic system aimed at the formation of an integrated educational information environment;
- determination of the composition and content of the electronic educational information environment;
- the organization of educational activities of academic lyceums and the development of control software;
- improvement of the modernized electronic didactic support for informatization of the educational process.

The object of study is the management process based on the information and communication activities of academic lyceums.

- *Gafurova Nodira Mirhosilovna obtained her Bachelors's and Master's Degree in Pedagogical Science from The Tashkent State Pedagogical Institute. She has published more than 23 Journals and 52 papers in both national and international conferences.*
- *She is a Teacher of Chair of General Pedagogy, Tashkent State Pedagogical University named after Nizami, Tashkent city,*

Subject of study. General scientific methods (historical, biographical, content-analytical), the method of modeling (design), the sociometric method (tests, electronic survey, conversation), the method of pedagogical observation and the experimental method were used.

The scientific novelty of the study consists of the following:

- created the content and organizational system of the electronic system aimed at creating an integrated information and educational environment for managing the detail of academic lyceums based on information and communication technologies;
- the content and components of the management system for the activities of academic lyceums based on information and communication technologies are determined;
- a methodological approach has been introduced that allows systematic monitoring of the dynamics of the management of academic lyceums on the basis of information and communication technologies;
- management of the activities of academic lyceums on the basis of improving the modernized electronic didactic support for informatization of the educational process is proposed as a holistic pedagogical system.

The practical results of the study consist of the following:

- an electronic information and educational environment has been formed that serves the management of academic lyceums;
- developed criteria for assessing the effectiveness of management of academic lyceums;
- The pedagogical possibilities of virtual education are determined;
- a software platform for managing the activities of academic lyceums was introduced into the educational process.

The reliability of the research results is established by the methodology of cognitive theory (the dialectical method of cognition, academic disciplines, a systematic approach to the analysis of social and natural phenomena), as well as the validity of the work of republican and foreign scientists, as well as practitioners in the field of managing the activities of academic lyceums based on information and communication technologies ; the applicability of research methods that are mutually complementary, consistent with the objectives of the study; quantitative and qualitative security of the analytical and research characteristics. Scientific and practical significance of the research results. The scientific significance of the research results is explained by the fact that the proposed model, system and programs are implemented in the management process of academic lyceums through the use of information and communication technologies. The practical significance of the research results is used to create electronic and methodological support for the management of academic lyceums on the basis of information and communication technologies, and the introduction of leading educational technologies Literature Review. Scientific research on the implementation of modern information technology in the education system has been carried out in many studies. V.A.Kastornova [7], M.P. Lapchik [8], E.V. Smirnova [17], and others in their studies highlighted the theory and methodological tasks of using computer technology in education. In the republic, studies on the implementation of information technologies, media technologies in education were carried out by A.A. Abdukadyrov [1, 2], N.A. Muslimov [11], U.S. Begimkulov [4], [5], N.R. Rustamova [12], [13] and

others. To date, the issue of applying various aspects of the use of information and communication technologies at different stages of education has been reflected in many studies. In particular, in numerous research papers by Adam Swinyard [18], Niall Marriott [9], J.D. Willms [20], E.N. Rychikhina [14], E.A. Semina [15], A.N. Mayorov [10], V.I. Vovna [19], N.F. Ilyina [6], T. Shaimardonov [16], L.I. Antsiferov [3]., V.S. Avanesov [3] information technologies are used as the development of pedagogical monitoring, creative potential, a form of distance education. However, the question of using information technology in the management, educational processes of academic lyceums, creating a unified information and educational network and the environment of the academic lyceum has not been investigated. Theory and Discussion. In the system of secondary specialized vocational education, the existing discrepancy between the current level of scientific, technical and technological development and the process of improving the quality of professional training of teachers is determined, while preventing it, the further urgency of the introduction of modern information technologies in a broad plan is noted. The theoretical and practical validity of the identified problem is proved, as well as the establishment of promising directions for the introduction of modern information and communication technologies in the educational process of the academic lyceums, the creation of a model information and educational website for academic lyceums of the republic, as well as through its holistic electronic educational information environment of the academic lyceum, the introduction of modern information technology as a sovereign improving the cognitive training of students, the creation of electronic multimedia educational and methodological complexes and the creation of pedagogical conditions for the informatization of its support. The main components of managing the activities of academic lyceums using information and communication technologies based on an analysis of the directions of development of computerization of education have been identified. The use of modern information and communication systems effectively affects the process of managing the lyceum in the management of the educational and educational processes of the academic lyceum. In that,

1. The efficiency of work with documentation at the academic lyceum will increase. A large amount of information on the management of the academic lyceum requires a high skill of the user in working with large information. The process of forming such a skill requires a lot of work and time. Systematic documents of management and information ensure the efficient flow of processes of their adoption, processing and transmission.

2. It will be possible to provide sufficient information for making management decisions. As a related continuation of the above opinions, it should be noted that systematized and orderly information contains sufficient information, having significance in making managerial decisions. Making the right decision by the leader will be facilitated.

3. Management information support will be developed. The manager will create information support for the management process on the basis of the formation of a database that includes all the information about the information, categories, interests, abilities of its employees, departments of disciplines, methodical associations in disciplines, groups, students, classrooms, buildings, and in general about the academic lyceum . And this, in turn, facilitates and improves the process of his work, showing peculiar features of managerial activity.

Information is a communication technique between a manager and managed systems in an academic lyceum. Information is a separate link in the management system at the academic lyceum. It has a number of features, they depend on all links of information management, the coverage of all tasks. Information is both the starting point, and the result of managerial detail, as well as the condition of existence, the method of consolidating the actions taken. As the volume of information increases, so does the requirement for management information quality indicators. For example, to analyze information from higher organizations and submit to the educational process of the academic lyceum, you need to process this information, adapt it to the conditions of the lyceum, that is, determine the appropriate state for your levels and conclude, as well as make the necessary decisions based on the conditions of the lyceum. In order to make managerial decisions, the process of modern management in the academic lyceum consists of collecting, processing and transmitting information, informing and bringing it to the performers in the form of managerial orders. The following types of information are distinguished in this: statistical, operational, economic, settlement, financial, procurement, personnel, marketing, social and others. In the academic lyceum, information by its origin is divided into external and internal information. External information consists of information obtained from the external environment. For example, information obtained from the ministry, government, center and similar departments. These include information about directions, planning tasks of higher organizations. Internal information in the academic lyceum or in its managerial link is formed, for example, by deputy directors for educational work or spiritual and educational work. In the framework of the academic lyceum, they may include information on the fulfillment of the curriculum or educational plan by teachers, material and technical support, personnel, and academic performance. All work carried out in this direction should provide a unified system for collecting and processing information. The totality of information in the academic lyceum is a management information system. The Lyceum's information system is a complex informational system covering internal documentation that is included in the Lyceum from external institutions and is created as a result of their processing, technical, as well as methodological tools of information flows, information channels and the control object. In an academic lyceum, an informational set for a certain part of the control object constitutes a small system. For example, the department of disciplines. The organization of an effective information system is considered an important condition for the design of one or another organizational management system of the academic lyceum (educational or spiritual and educational work) and its effective activities. In the academic lyceum, the process of designing an information system should be based on the following tasks: analysis of the existing information system in the academic lyceum; study of the main directions of information; determination of the necessary volume and content of information; determination of technical means for collecting and processing information; creation of information processing technology; establishing the frequency of occurrence and use of information; designing standard information for the convenience of automating the transmission and processing of information; streamlining and design of all materials obtained in the design process. The modern stage of educational reforms puts forward urgent tasks

related to the efficiency of updates that are taking place in society, the quick adaptability of new ones, and subsequently high requirements for educational institutions. In such conditions, the potential of measures aimed at the development of educational institutions and the provision of activities at the level of modern requirements will increase. Almost all the tasks presented impose new requirements in relation to the principle and when they are solved, collective actions that are carried out only on the basis of existing experience become insufficient. An analysis of research in the theory and practice of management of educational institutions has shown that the management of an educational institution in modern conditions is becoming directly related to the management of information exchange in it. This in turn shows that this can be achieved through the effective use of information technology in improving the activities of educational institutions and makes it necessary to conduct targeted research in this direction. The creation of an electronic information educational environment should not only be a purely technical issue, but for this it is necessary to direct the scientific, organizational, organizational and pedagogical capabilities of the institution on the basis of a systematic approach. In our opinion, the concept of "electronic information and educational environment" can be explained as a complex of software, information technology, educational and methodical systems of a focused educational process. As a result of analytical studies, the electronic information and educational environment can be characterized by the following typological characteristics:

1) the electronic information and educational environment of any level is considered a complex structural object that has the property of systematicity.

2) the integrity of the electronic information and educational environment, meaning the same meaning as the concept of achieving integrity, their conformity, encompasses educational and educational goals in the implementation of the personal and professional model of the graduate of the educational process.

3) the electronic information and educational environment is at the same time a factor in the effectiveness of educational and educational work, as well as its means.

It was revealed that the tasks associated with the development of methods for using the resources of a single information and educational space aimed at creating a single information and educational environment of the academic lyceum, improving the quality of education on the basis of generalization and development of leading experiences in this field have not found their full solution despite the achievements certain results in the implementation of information and communication technologies in the educational processes of educational institutions.

1. In the educational process, the site of the single information and educational space www.uzmu2al.uz was created as a model for academic lyceums of the Republic of Uzbekistan in order to increase the potential of self-education in the educational process, the use of modern innovative technologies in the educational process, taking into account the formation of new information and educational resources introducing them into practice as a factor of optimization and intensification, ensuring the interconnection of participants in the educational process, development and improvement of information and modern educational technologies.

2. The requirements for the composition and structure of

the websites of academic lyceums as a network communication link connecting various information and educational resources to provide the user with information in the form of a simple search and convenient large-scale system are justified.

3. The composition and structure of the program platform of the model site of republican academic lyceums aimed at improving the quality of secondary specialized vocational education and the creation of information and educational resources of the educational system of secondary specialized vocational education in the Internet have been developed in the republic. The structure of this platform includes:

- unified electronic educational and scientific resources;
- a single base of graduates and a system for presenting information about HEU;
- distance educational resources;
- distance learning courses;
- electronic resources for education;
- electronic educational-methodical complexes;
- An electronic system for the methodological application of young teachers;
- electronic conference-forum;
- The electronic propaganda system for the education of academic lyceums, as well as substantial substantiation, have made it possible to quickly apply the results of research in educational practice.

4. The main tasks of the software platform are established, consisting of the following:

- creation of a unified electronic educational information environment of republican academic lyceums;
- formation of the environment of a unified telecommunication network of academic lyceums on the basis of combined electronic educational and scientific resources;
- creation of pedagogical foundations for the use of information and communication technologies in a single information and educational environment;
- the massive use of educational information resources of educational significance, providing the public with open information on the educational content of academic lyceums, as well as the introduction of electronic propaganda education

system of academic lyceums;

- the formation of educational and methodological support for distance education;
- introducing a unified base of graduates, ordering teaching staff, introducing an electronic system for the methodological application of young teachers.

5. The interconnection of the implementation of the content of activities, organizational, as well as methodological support of the stages of the information and educational environment is shown. The unified electronic information and educational environment of secondary specialized vocational education has formed an open system of information and educational resources as a factor that provides effective mutually beneficial communication between participants in the educational process, which represents the possibility of using integrated information and educational resources together with the disciplines, developing modern information and communication technologies.

3. EXPERIMENTAL RESULTS

The purpose of the experimental work is established by the fact that it consists of determining and substantiating the effectiveness of education based on the introduction of program and methodological support for the created information and educational resources, training disciplines for the informatization of educational processes of academic lyceums. The established goal of experimental work carried out by the following tasks:

- organization of the use of the portal in the Internet system, information and educational resources of academic lyceums;
- providing teachers and students with developments for the implementation of information technologies in educational processes;
- introduction of modern information technologies into the content;
- the introduction of an electronic monitoring system in determining the level of student performance.

Table 1: Statistical analysis sample rates

Total number of students 180 (out of 3 academic lyceums)	Not included in iOS, educational sites, educational portals. "2"	Entered IOS AL "3"	Entered IOS AL "4"	Entered IOS AL "5"
Before the introduction of IOS in AL	64	31	32	53
With the introduction of IOS in AL		26	64	90

As the experimental base of the study, 2-academic lyceum at the Uzbek National University named after Mirzo Ulugbek, academic lyceum of Termez State University, academic lyceums of Karshi State University were selected, 180 students participated in them. In the research works on this study, the identified solutions to the problem of informatization and management of the educational processes of the academic lyceum showed the presence of new research areas in the future.

4. CONCLUSION

Based on the content and conclusions of the study, we can come to the following conclusions:

Studies have shown that the insufficient development of pedagogical conditions for improving the quality of educational processes with tasks based on the "National Program for the Training of Personnel" in the system of secondary specialized

vocational education, the current level of development of science, engineering and technology, the implementation of information technologies in these processes is gaining high relevance. Theoretical and practical substantiation of the identified problem, in particular, the establishment of promising directions for the implementation of information and communication technologies in the educational process of the academic lyceum, the creation of a unified educational site for the academic lyceum, as well as through its unified electronic information and educational environment, the introduction of modern information technologies as improving the quality of knowledge of students of the lyceum, the creation of electronic multimedia teaching resources and ensuring their implementation in the educational process create the necessary pedagogical conditions for the intensity of the informatization process. As a result of the analysis of the work on the implementation of modern information and

communication technologies in the activities of academic lyceums, the creation of a holistic pedagogical system of informatization of educational processes is justified as a necessary condition for improving the quality of education. With an increase in the efficiency of the educational processes of the academic lyceum, as well as in the development of the content of modern information and communication technologies, the pedagogical and psychological, technical conditions of the lyceum were studied, the following important didactic features of information and communication technologies aimed at improving the efficiency of the educational process were identified:

-organization of the introduction of information technology based on an integrative approach, taking into account the complex feature of the educational process;

-the fruitful use of the multimedia capabilities of information technology in order to ensure scientific and visual training;

-individualization, intensification and optimization of training in the design of educational processes in the environment of modern information technologies;

-systemic, logically consistent application of information and communication technologies in order to ensure the effectiveness and efficiency of training.

As a result of the study, the objective necessity of creating the information-educational environment of the academic lyceum is substantiated, methodological foundations are created and development components are formed. This establishes the main goal of informatization of education, which consists of improving the educational quality of educational institutions through the use of modern information and communication technologies. Evaluation of an informatized educational process along with the creation of an opportunity to determine the level of student achievement is also an important pedagogical means of stimulating the educational process, the awakening of a positive motive in the student has been revealed. According to this, modern information systems have been created for assessing the student's knowledge, skills and abilities, and methods and means for controlling knowledge have been proposed in accordance with them. It is shown that Monitoring in the information and educational environment through the "training-control" system provides the ability to monitor and diagnose student achievement, a set of measures aimed at determining the level of student knowledge. Monitoring based on computer technology is based on continuous monitoring in the "learning-control" system, monitoring the dynamics of the assimilation of student knowledge, skills and abilities, and, if necessary, a process that provides and notes the possibility of correction and introduction

5. REFERENCES

- [1] Abdukadyrov A.A., Teoriya i praktika intensivatsii podgotovki uchiteley fiziko-matematicheskix dissiplin: Aspekt ispolzovaniya kompyuternix sredstv v uchebno-vospitatelnom protsesse : dissertatsiya ... doktora pedagogicheskix nauk : 13.00.01, Tashkent. gos. ped. in-t im. Nizami, Tashkent, 1990, pp. 312-334.
- [2] Abdukadyrov A.A. Masofali ukitish modellari va ularning sinflari. // Zh. Fizika, matematika va informatika. – Tashkent, 2004. – No 5. –pp. 50-56.
- [3] Antsiferov L.I. Avanesov V.S. Problema psixologicheskix testov // Vopr. psixologii. 1978. No 5. pp. 97-107.
- [4] Begimkulov U. Povyshenie kvalifikatsii pedagogicheskix i upravlencheskix kadrov vysshix obrazovatel'nyh uchrezhdenij // Uzbekiston oliy ta'lim tizimida kadrlar resurslarini boshqarish va rivojlantirish. Tashkent - 2014. pp.9-12
- [5] Begimkulov U.S. Pedagogik talim zharajonlarini ahborotlashtirishni tashkil etish va boshqarish nazariyasi va amaliyoti: Ped.fanl.dokt. ... diss. – Tashkent: 2007. – p. 305.
- [6] Ilyina N.F. Monitoring processa professional'nogo stanovleniya pedagoga, zanimajushhegosja innovacionnoj dejatel'nost'ju // Standarty i monitoring v obrazovanii. 2009. No 2.
- [7] Kastornova V. A. Obrazovatel'nye portaly kak jelement realizacii jelektronnogo obrazovanija // NiKa. 2013. pp. 280-282.
- [8] Lapchik M.P, Lihasherstnaja, Ju. Jeffektivnost' obrazovatel'noj dejatel'nosti INPO. Nauka i shkola, 2009 No 2, pp. 12-18.
- [9] Marriott N., Goyder H. Manual for Monitoring and Evaluating Education Partnerships International Institute for Educational Planning. Paris. 2009. – pp. 114.
- [10] Mayorov A.N. Monitoring v obrazovanii. – M.: Intellect-Centr, 2005 – pp. 396-424.
- [11] Muslimov N.A. Kasb talimi ukituvchilarini kasbij shakllantirishning nazarij – metodik asoslari. Diss. p.f.d. – T.: 2007. – pp. 200-275.
- [12] Rustamova N.R. Media culture as a developing factor of rational thinking of secondary school students//European Journal of Science and Research Reflection in Educational Sciences (EJRRES), Special Issue – Great Britain, 2019, Volume No.3, Speccial Issue, pp. 58-64.
- [13] Rustamova N.R. The Technology of Developing Media Culture in Secondary School Students. International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-IX, Issue-II, December 2019. Aviable to: <https://www.ijitee.org/wp-content/uploads/papers/v9i2/B6181129219.pdf>
- [14] Rychihina E.N. Monitoring kak obshhaja funkciya upravlenija. Monografija //Uhta: UGTU, 2008. – 140 s.
- [15] Semina E.A. Monitoring professional'no-profil'nyh kompetencij studentov – budushhix uchitelej matematiki kak sredstvo povyshenija urovnja ih matematicheskoy podgotovki. Diss. kon. ped. nauk. – Krasnojarsk, 2014. – pp.122-229.
- [16] Shaimardonov T. "Elektron pedagogika va pedagogning shahsij, kasbij ahborot majdonini lojihalash" moduli bujicha UUM. – Tashkent: UzMU huzuridagi pedagog kadrlarni kajta tajjorlash va ularning malakasini oshirish Mintaqavij markazi, 2015. – p. 136.
- [17] Smirnova E.V. Metodicheskie rekomendacii k testirovaniyu po inostrannomu jazyku pri distancionnoj tehnologii obuchenija // Vektor nauki Tol'jattinskogo gosudarstvennogo universiteta. Serija: Pedagogika, psixologija. 2017. No 1 (28). pp.49-53
- [18] Swinyard A. Organizational monitoring systems and student academic achievement. Dissertation, Doctor of Education. – Seattle Pacific University, 2015. –pp. 136.
- [19] Vovna V.I. Korochencev V.V. Monitoring kachestva obuchenija kak vazhnejshij instrument upravlenija obrazovaniem // Innovacii v obrazovanii. 2005. No 5.
- [20] Willms J.D. Monitoring school performance: A guide for educators. Washington, DC: Falmer Press. 1992.