№	Статья и ссылка	Аннотация
1.	Zhilmagambetova, R., Mubarakov, A., Alimagambetova A. (2022). ANALYSIS OF THE EFFECTIVENESS OF THE USE OF ADAPTIVE TRAINING PLATFORMS IN SECONDARY VOCATIONAL EDUCATION. *Scientific Journal of Astana IT University*, (9), 4-13. https://doi.org/10.37943/aitu.2022.33.90.001	The article considers the tasks and features of mathematics training for students of secondary vocational education. Special attention is paid to the need to solve the problem of adaptation of students to the conditions of study in college and the organization of independent work. In this regard, the authors propose to make wider use of the practice of adaptive learning as innovative pedagogical tools. The article considers the concept of the effectiveness of adaptive personalized learning and suggests the directions by which it can be evaluated. As an example, the experience of implementing an adaptive educational course "Mathematics", designed in the Articulate Storyline platform, is analyzed. The module is designed to organize and support adaptive learning of students of the Department of Information Systems by means of adaptive educational technologies. The results of the training are analyzed, and the possibilities of the Articulate Storyline platform in ensuring the independent work of students are presented. The main part of the article is devoted to evaluating the effectiveness of e-learning using an adaptive educational platform. With the help of questionnaires and tools of the Articulate Storyline platform, an assessment of the educational result achieved was made, the degree of motivation of students to master the discipline of mathematics was analyzed, and the attitude of students to the process of e-learning using an adaptive educational platform was investigated.
2.	Shevtsov, V., Ismailova, A., Aitimova, U., Khapilina O. (2022). APPLICATION OF INFORMATION SYSTEMS AND TOOLS IN BIOINFORMATICS. *Scientific Journal of Astana IT University*, (9), 14-21. https://doi.org/10.37943/aitu.2022.59.49.002	Abstract: The pace at which scientific data is produced and disseminated has never been as high as it is currently. Modern sequencing technologies make it possible to obtain the genome of a specific organism in a few days, and the genome of a bacterial organism in less than a day, and therefore researchers from the field of life science are faced with a huge amount of data that needs to be analyzed. In this connection, various fields of science are converging with each other, giving rise to new disciplines. So, bioinformatics is one of these fields, it is a scientific discipline that has been actively developing over the past decades and uses IT tools and methods to solve problems related to the study of biological processes. In particular, a crucial role in the field of bioinformatics is played by the development of new algorithms, tools and the creation of new databases, as well as the integration of extremely large amounts of data. The rapid development of bioinformatics has made it possible to conduct modern biological research. Bioinformatics can help a biologist to extract valuable information from biological data by using tools to process them. Despite the fact that bioinformatics is a relatively new discipline, various web and computer tools already exist, most of which are freely available. This is a review article that provides an exhaustive overview of some of the tools for biological analysis available to a biologist, as well as describes the key role of information systems in this interdisciplinary field.
3.	Toxanov, S., Abzhanova, D., Faizullin, A. (2022). DEVELOPMENT OF AN INFORMATION AND EDUCATIONAL PORTAL OF DISTANCE LEARNING BASED ON EDUCATIONAL DATA MINING. *Scientific Journal of Astana IT University*, (9), 22-35. https://doi.org/10.37943/aitu.2022.48.68.003	Abstract: Currently, there is an increase in demand for distance education programs, which actualizes the problems of organizing the educational process at universities using these technologies. The article highlights and describes the characteristic features and prospects of using the analysis of educational data in the information and educational portal of distance learning, in order to implement adaptive learning and learning in accordance with dynamically formed individual trajectories. The task is to create a fundamentally new information system of the university using the results of the analysis of educational data. One of the functions of such a system is to extract knowledge from the data accumulated during operation. Creating own system of this type is an iterative and time-consuming process that requires preliminary research and step-by-step prototyping of modules. The novelty lies in the fact that there is currently no methodology for developing such systems in Kazakhstan, so a number of experiments were conducted in order to collect data, select suitable methods for studying the collected data, and then interpret them. As a result of the experiment, the authors identified the sources of educational data available for analysis in the information environment of the university. The data of semester academic performance obtained from the Toraighyrov University information system, data obtained as a result of independent work of students and data obtained using specially developed Google-forms were taken as a basis. An information and educational portal was created for the automated collection, processing and analysis of educational data. Based on the study of students' behavior, it becomes possible to form recommendations for teachers to improve the content and structure, as well as recommendations for the training of students. The data contained in the activity logs are examined to obtain information, search for dependencies by filtering relevant logs, structuring information from them and providing data in a form convenient for analysis and drawing conclusions. The data of the main types of events generated as a result of recording user actions

		in the learning management system and scenarios for using the results of the analysis of these data are considered. The elements of the software implementation of this system are described in detail, conclusions are made about the availability of the data sources used, and conclusions are drawn about the prospects for further development.
4.	Azieva, G., Alimagambetova, A., Turusbekova, U. (2022). FORMATION AND APPLICATION OF AN AGENT – ORIENTED MODEL IN THE MANAGEMENT OF THE OIL INDUSTRY OF THE REPUBLIC OF KAZAKHSTAN. *Scientific Journal of Astana IT University*, (9), 36-49. https://doi.org/10.37943/aitu.2022.41.73.004	Abstract: Kazakhstan is one of the few countries in the world rich in oil, deservedly called "black gold" because it is the most important source of energy. The relevance of the study of this paper is determined by the fact that the management of the oil industry affects not only the management process itself, but also the social aspects of the implementation of the development strategy of the state as a whole. It is necessary to identify aspects of management activity and define criteria by which it is possible to calculate the effectiveness of managerial decision-making in the analyzed industry. Agent models allow us to identify the main criteria for the effectiveness of managerial decision-making and optimize social and economic costs for their implementation within the framework of interdepartmental planning. The novelty of the research is determined by the fact that agent models are based not only on the associated parameters of the management process, but also affect the possibility of planning current activities for a long period. The article shows that the formation of agent models should affect both the aspect of the formation of matrices of complex managerial actions and calculations on the accounting of competencies in making managerial decisions. The practical significance of the study is determined by the fact that the development of complex models based on agent forms allows expanding the use of forms of control over the industry by the state and other stakeholders. The implementation of a matrix form of management is proposed, taking into account balanced industry indicators of management quality.
5.	Kenzhin, Zh., Kuangaliyeva, T., Kassenov, Kh. (2022). FUNCTIONAL MODEL OF ORGANIZATION DEVELOPMENT BASED ON QUALITY MANAGEMENT IN AN EDUCATIONAL ORGANIZATION-AS A QUALITY ASSURANCE TOOL. *Scientific Journal of Astana IT University*, (9), 50-60. https://doi.org/10.37943/aitu.2022.15.24.005	In the context of the formation of an innovative economy, great attention in management in recent years has been paid to the problems of mastering and implementing the management of an organization based on quality. Quality management is one of the key functions of both corporate and project management, the main means of achieving and maintaining the competitiveness of any organization. The historical experience of the USA, Japan, Germany, and a number of other countries shows that ensuring the steady and harmonious development of any enterprise through the use of effective management systems based on quality is one of the main levers with which they managed to overcome the economic crisis and take a strong position in the world market. The research topic is relevant due to the great importance and significance of the integration mechanisms for the development of enterprises and organizations based on quality management. Thus, the construction of a functional model allows you to develop new solutions for bringing enterprises to a new level of development. In recent years, the role of quality in ensuring the competitiveness of products and enterprises has significantly increased, which requires the management of organizations to develop and implement modern management models that meet the requirements of international and national standards. This article discusses an algorithm for the formation and implementation of a functional model for the development of an organization based on quality management in an educational organization. The feature of quality management policy in an educational organization is analyzed. A process of forming a functional model based on standardization, which is based on the implementation of interrelated processes that increase the efficiency of an organization in obtaining the intended goals, is proposed. This article describes the algorithm of formation and realization of the functional model of development of the organization on the basis of quality management in education. Analyzed features of the policy of quality management in educational organizations. The proposed formation process of the functional model on the basis of standardization is based on the implementation of interrelated processes that increase the organization's effectiveness in obtaining goals.
6.	Yavorskiy, V., Yesmagambetova, M., Ussenov, S. (2022). INTELLECTUAL INFORMATION TECHNOLOGIES IN THE ACTIVITIES OF THE EMERGENCY RESCUE SERVICE. *Scientific Journal of Astana IT University*, (9), 61-74. https://doi.org/10.37943/aitu.2022.20.82.006	Abstract: The paper considers the features of the use of intelligent information technologies in the process of the emergency rescue service of the enterprise. To improve the efficiency of the rescue services, it is necessary to carry out strategic planning and management, which would be designed to prevent the occurrence of an emergency (emergency). Effective subsystems of emergency proactive planning should not only predict the occurrence of possible emergencies, but also provide for appropriate preventive measures, and emphasis should be placed on eliminating the underlying causes, not the emerging consequences. The change of modes in the event of an emergency can be effectively implemented through the deployment of a technologically secured situational center. Decisions in emergency situations are made in various operational situations, including crisis, and in extremely limited time. Nevertheless, they must be taken in a

		timely manner, be as reasonable as possible, and ensure the fullest and most effective use of available opportunities. Decision-making processes can be based on the personal experience of participants in the management process. As you carry out your professional activity, experience is formed, which subsequently allows you to perform some tasks much faster and more efficiently. To gain experience, it is proposed to use a knowledge management system based on ontology. In order to ensure maximum awareness of the management of the situation, it is proposed to use the expert system of the situation center. (ES SC) The ES of the situational center of the authorities can significantly improve the efficiency of management processes and provides information support for strategic and tactical management decision-making. The ES should implement tools for a comprehensive and operational assessment of the state of the management object and situational analysis of the identified problems.
7.	Toxanov, S., Abzhanova, D., Faizullin, A. (2021). ONTOLOGICAL MODEL OF A DATABASE OF INFORMATIONEDUCATIONAL PORTAL OF THE UNIVERSITY. *Scientific Journal of Astana IT University,* (9), 75-84. https://doi.org/10.37943/aitu.2022.90.22.007	Abstract: According to the state program "Informational Society 2030", it is planned to develop education on the basis of new progressive concepts of introducing the latest information technologies and scientific and methodological achievements into the educational process. In order to achieve goals, it is necessary to implement mobilization and effective use of staff and property and technical resources of the university. It is possible if there is purposeful modeling of the information and educational portal of the university. The choice and design of teaching technology are primarily determined by the type of students' competencies and the characteristics of the planned learning outcomes for each level of competence (knowledge, skills, and experience). Constant improvement of EP content and educational technologies as a key factor of education services quality is a vital demand. The article considers the issues of the concept of ontology, IDEF-technologies and, based on the ontological model proposed in the article, the architecture of the database of the information and educational portal of the university is developed and classes and properties for the implementation of this model are defined, and a functional model of the university in IDEF0 is developed, which covers all types of university activities, integrates all information flows and forms a single information space.
8.	Mukasheva, A., Yedilkhan, D., Aldiyar, M. (2022). MULTIDIMENSIONAL DATABASES IN INFORMATION SYSTEMS OF UNIVERSITIES. *Scientific Journal of Astana IT University,* (9), 85-94. https://doi.org/10.37943/aitu.2022.53.85.008	The article is devoted to the description of the method of multidimensional database, which is an effective method of data storage, which allows analyzing data qualitatively, and most importantly in a short time. The article discusses the capabilities of multidimensional databases, in particular, multidimensional OLAP (On-Line Analytical Processing) cubes when analyzing large amounts of data. Provides an overview and features of a multidimensional database and discusses the steps you need to take with a multidimensional database to understand the structure and capabilities of an OLAP cube. To create a knowledge base, it describes the steps you can take to create and execute a multidimensional database that you can collect from various sources, save to a database, and then prepare a report using OLAP analysis. Various information system data processing technologies such as OLTP and OLAP were considered. The algorithm of the data storage process for analysis purposes was studied. A model of a multidimensional database in the form of a three-dimensional cube was presented. Examples of analysis and ways of obtaining information from the data cube were also given. The use of a multidimensional database in higher education institutions as a simple and effective method of data storage is considered. There are also illustrations of the structure of a higher educational institution to see the bulkiness of information, and what kind of information database operates in the educational institution.