



The Use of Information Technology: Projecting data base in History

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Abstract— In the article are given the use of information technologies in the teaching of history significantly increases the amount of information involved in historical education, allows you to freely implement modern interactive technologies, including design and modular. Today it is already quite obvious that programs to improve the quality of education, involving the use of ICT, bring positive results for both students and teachers. Even more promising is the expansion of the use of the latest and emerging technologies. Teachers get great opportunities to help students learn complex concepts and involve them in active participation in the educational process; provide students with access to information and resources; better meet the individual needs of children. If we can take advantage of all the advantages offered by the use of ICT, we will be able to improve both the quality of the educational process and the level of knowledge of each student.

[Beknazarova S.S., Ishankhodjayeva Z.R., Xamroyev The Use of Information Technology in History. *Academ Arena* 2021;13(12):6-9]. ISSN 1553-992X (print); ISSN 2158-771X (online).
<http://www.sciencepub.net/academia>. 2.doi:[10.7537/marsaaj131221.02](https://doi.org/10.7537/marsaaj131221.02).

Keywords— history institutions, produce and accumulate huge amounts of data, creating an information system, practical application, data base.

1. Introduction

The most important task of modern education is to get students a certain set of knowledge, the formation of skills and abilities to independently obtain and process the necessary information. The use of information technology helps to navigate the endless flow of information, allows students to develop the skills to highlight the main thing, analyze, argue, generalize and draw appropriate conclusions. The issue of the use of information technology in teaching history is particularly relevant, because historical science operates with precise concepts, figures, dates, specific historical images.

Currently, the practical use of the computer is manifested in history classes, in preparation for them, in educational events of a historical nature and much more. The computer gives a wide opportunity to systematize the available methodological developments by translating them into an electronic format. With the help of these processes, various methodological tools and manuals for all history courses are easily updated and replicated with changes in curricula and textbooks – thematic planning, training tasks, visual diagrams and maps, testing options, etc. [1, 4].

Modernization of education focuses the teacher on mastering new information technologies. The use of information technologies in the educational process allows you to:

make training sessions modern: visual, colorful, informative, interactive and time-saving;

use differentiated and personality-oriented approaches to learning;

establish a relationship of mutual understanding, mutual assistance between the teacher and the student;

to activate the cognitive activity of students.

Currently, not only schoolchildren, but also students have weak motivation to study, interest in learning. There are many reasons for this: the

overload of training programs;

the isolation of the studied material from life, from the abilities and needs of students, and much more.

Therefore, the teacher sets a goal – to maintain interest in learning. In this regard, the computer gives the history teacher new opportunities, allowing together with students to enjoy the fascinating process of cognition, not only pushing the walls of the classroom with the power of imagination, but with the help of the latest technologies allows you to immerse yourself in a bright colorful world. Provide positive motivation for learning through interactive interactive hypertext. Modeling programs help to understand complex processes more deeply. Currently, there are a large number of encyclopedic multimedia programs of a demonstration nature.

Special attention should be paid to the expansion of opportunities in the study of topics related to culture. It is only with the help of media and computer technologies that we have the opportunity to fully join the treasures of not only Russian, but

also world culture, to show the masterpieces of world architecture, sculpture, architecture, which many will not be able to see in real life [2, 40-46].

Using a computer makes it possible to see the world through the eyes of many painters, to hear an actor's reading of poems against the background of classical music. Such classes foster a sense of beauty, broaden horizons, allow for a limited time to give extensive material, conduct training sessions at a high aesthetic and emotional level. Slides displayed on a large screen are a wonderful visual material. This material can be different: the

- usual illustration;
- using animation in slides;
- using multimedia.

2. Methodology

Information technologies can be effectively applied at all types of training sessions and at all its stages. At the same time, the change of different types of activities attracts attention to the subject of study and retains a steady interest, creates an atmosphere of success.

At the stage of studying new material, information technologies help to emotionally and figuratively present the material accumulated from various sources, simplify the perception of complex topics containing a large amount of material, and use the influence on all types of memory.

When preparing for training sessions with the use of information technology, Internet resources are of great help. For more efficient use of a computer in training sessions, it is necessary to constantly improve theoretical and practical skills, participate in network projects, contests, and work on creating your own website. Information technologies, together with properly selected teaching technologies, increase the level of quality, differentiation and individualization of education and upbringing [3, 57-61].

Internet resources can be considered as part of the information and communication subject environment, which contains the richest information potential. A history teacher can use the educational resources of the Internet to search for various historical sources, texts of monographs, articles, lecture courses, various methodological materials, newspaper and magazine articles, abstracts. On the Internet, you can find the websites of various educational institutions and educational authorities. The telecommunication capabilities of the Internet can be used to organize distance learning and to organize communication through forums, chats and video conferences. Educational resources of the Internet can be successfully used by a teacher in history lessons in on-line modes [4, 169].

Electronic libraries play a great role in the use of information on the Internet. Electronic libraries are complex information systems. Increasingly, scanned book texts are placed on the websites of these libraries

Professionals and amateurs create websites on the Internet dedicated to individual historical periods and sections of historical science. On these sites you can find not only educational texts, but also various multimedia objects: video and sound files, photos, maps, diagrams. They open up huge opportunities for the use of information technologies in the pedagogical process.

These sites contain a large number of scenarios for lessons, Olympiads, historical evenings, development of tests and control works, etc.

The use of information technologies in the teaching of history significantly increases the amount of information involved in historical education, allows you to freely implement modern interactive technologies, including design and modular. Today it is already quite obvious that programs to improve the quality of education, involving the use of ICT, bring positive results for both students and teachers. Even more promising is the expansion of the use of the latest and emerging technologies. Teachers get great opportunities to help students learn complex concepts and involve them in active participation in the educational process; provide students with access to information and resources; better meet the individual needs of children. If we can take advantage of all the advantages offered by the use of ICT, we will be able to improve both the quality of the educational process and the level of knowledge of each student.

The principle of openness. In addition, to digitalize historical sources, you can create various databases and use them in the educational process.

A database is a set of all data defined by <schemas> in the environment. The concept of an environment is implementation-defined. Databases are a collection of information (about real objects, processes, events or phenomena) related to a specific topic or task, organized in such a way as to provide a convenient representation of this collection, both as a whole and any part of it. A relational database is a set of interconnected tables, each of which contains information about objects of a certain type. Each row of the table includes data about one object, and the columns of the table contain various characteristics of these objects — attributes. The rows of the table are called records; all records have the same structure — they consist of fields in which the attributes of the object are stored. Each field of the record contains one characteristic of the object and has a strictly defined data type (for example, a text string, a number, a date). All records have the same fields, only they contain different attribute values.

Database management systems (DBMS) are used to work with data. The main functions of a DBMS are data definition (description of the database structure), data processing and data management.

A relational database is a collection of relationships containing all the information that should be stored in the database. However, users can perceive such a database as a collection of tables.

The relational model consists of three parts describing different aspects of the relational approach: the structural part, the manipulative part and the integral part.

In the structural part of the model, it is fixed that the only generic data structure¹ used in relational databases is a normalized n-ary relation. The concepts of domains, attributes, tuples, header, body, and relationship variable are defined. In fact, in the two previous sections of this lecture, we considered precisely the concepts and properties of the structural component of the relational model.

In the manipulation part of the model, two fundamental mechanisms for manipulating relational databases are defined – relational algebra and relational calculus. The first mechanism is based mainly on classical set theory (with some refinements and additions), and the second is based on the classical logical apparatus of first-order predicate calculus. We will consider these mechanisms in more detail in the following lectures, but for now we will only note that the main function of the manipulation part of the relational model is to provide a measure of the relativity of any particular relational database language: a language is called relational if it has no less expressiveness and power than relational algebra or relational calculus.

Finally, in the integral part of the relational data model, two basic integrity requirements are fixed, which must be maintained in any relational DBMS. The first requirement is called the entity integrity requirement. Tuples of relationships correspond to an object or entity of the real world in relational databases. Specifically, the requirement is that any tuple of any relation value of any relation variable must be distinguishable from any other tuple of this relation value by the composite values of a predefined set of attributes of the relation variable, i.e. E., in other words, any relationship variable must have a primary key. As we saw in the previous section, this requirement is automatically satisfied if the basic properties of the relationship are not violated in the system.

In fact, the entity integrity requirement is completely as follows: any relation variable must have a primary key, and no primary key value in the relation variable value-relation tuples must contain undefined values. In order for this formulation to be fully understood, we must at least briefly discuss the concept of an indefinite value (NULL).

The key field of the table is marked with a special key icon in the selection field on the left side of the window. To select a field, just click on the line that describes this field. At the same time, the parameters for this particular field will be shown in the lower part of the window.

A key field is one or more fields whose combination of values uniquely identifies each record in the table. Key fields are used to quickly search and

link data from different tables using queries, forms and reports.

The relationship between tables establishes relationships between matching values in key fields, usually between fields of different tables having the same names. In most cases, the foreign key of another table is associated with the key field of one table, which is the unique identifier of each record. For example, to compare information about employees and orders accepted by them, you should determine the relationship by the "cOdeFIO" fields in two tables.

One-to-many relationship

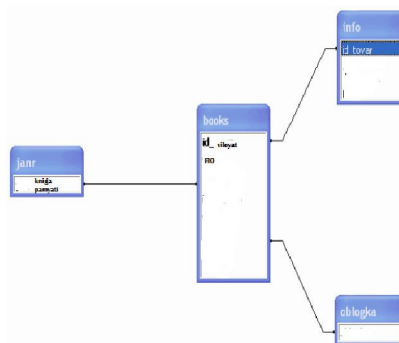
Our database used the one-to-many relationship type

A one-to-many relationship is the most commonly used type of relationship between tables. In such a relationship, each record in table A can correspond to several records in table B, and a record in table B cannot have more than one corresponding record in table A..

Discussion of results

In order to determine the relationship between tables, add tables to the Data Schema window and move the key field of one table to another table with the mouse.

The internal connection of two tables by one field in a relational database is based on a one-to-many relationship. An example is the demo database "viloyat", in which all connections are internal connections by one field based on the specified relationship. Each table must have a primary key with unique value.



DBMS working with file servers allow multiple users of different computers (sometimes located far enough from each other) to access the same databases. At the same time, the development of various automated management systems of organizations, educational complexes, information and other systems is simplified, where many employees (students) must use common data and exchange those created in the course of work (training).

The relational database engine of SQL Server is a relational DBMS that stores and manages data in relational tables. Each table represents a separate

object, such as customers, employees, or products that the company sells. The columns of the tables represent attributes, and the rows represent instances of the corresponding objects. At the request of the application, the relational database engine links tables to each other. The relational database engine stores detailed records of transactions generated by operational transaction processing systems (OLTP) at the request of specialized data stores. The relational database engine provides reliability and protection of stored data, fault tolerance, dynamically optimizes performance, and also imposes locks to implement parallelism.

The use of databases and information systems is an integral part of the functioning of various successful organizations and the activities of modern man. In this regard, the development of the principle of construction and effective application of appropriate technologies and software products is becoming more relevant.

Currently, databases are used in almost all spheres of human activity. Since electronic databases can be used to create electronic resources of various historical sources.

The design of the database "Memory books of Katagon kyrbonlari" was carried out by creating a DBMS and SQL query language. This database contains basic information on historical data.

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12/14/2021