



History of the Methodology of Organizing Drawing Courses in General Education Schools

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Annotation: From the first days after gaining independence, Uzbekistan began to realize the noble goal of establishing a free democratic state and ensuring a morally rich and dignified life of the people. The path of development that we have chosen is aimed at the renewal and development of the state and society, taking into account world experiences, as well as age-old national traditions, customs, and traditional lifestyle. During the 32 years of independence, there have been positive changes in almost all aspects of social, cultural and international life in the country. Active and effective steps have been taken regarding the integration of Uzbekistan into the world community, which is largely related to the level of creating opportunities for citizens of the country to freely access information.

Keywords: mausoleum, relevance, individual, measures, drawings, composition, engineering, computer, communication, monitoring.

In the age of rapid development of information and communication technologies, information policy is a part of cultural policy. Ensuring the population's full use of information resources, full cooperation of our country with the world information flow has been developing since the period when the issues of wide introduction of information and telecommunication technologies began to be solved at the republican level in the late 80s and early 90s of the last century. Not only scientific and technical information institutes, but also libraries and higher education institutions, which understood the relevance of the republic's entry into the global information system, joined this process. As a result of this, the following laws and regulations were adopted: "On Information" (1993), "On Legal Protection of Computer and Database Programs" (1994) laws and "Informatization Concept of the Republic of Uzbekistan" (1994). Later, the following laws and documents were developed and adopted in order to meet the growing requirements for the formation of the national information system and the use of information: "On Electronic Commerce" (2003), "On Electronic Document Circulation" (2003), laws "On electronic digital records" (2004), Decree of the President of the Republic of Uzbekistan "On further development of computerization and introduction of information communication technologies" and "On further development of computerization and information Decision of the Cabinet of Ministers of the Republic of Uzbekistan on measures to introduce communication technologies (2002).

With the honor of independence, the Republic of Uzbekistan has entered a new era of its development. Our nation has a rich historical, cultural and spiritual heritage. Ample opportunities



have been created not only to visit, but also to study and restore the thousand-year-old history of our architecture and urban planning, even architectural monuments that are forbidden to visit.

The time has come to objectively teach students the rare architectural monuments created in our country since ancient times, the history of the creation of urban planning, construction methods and rules.

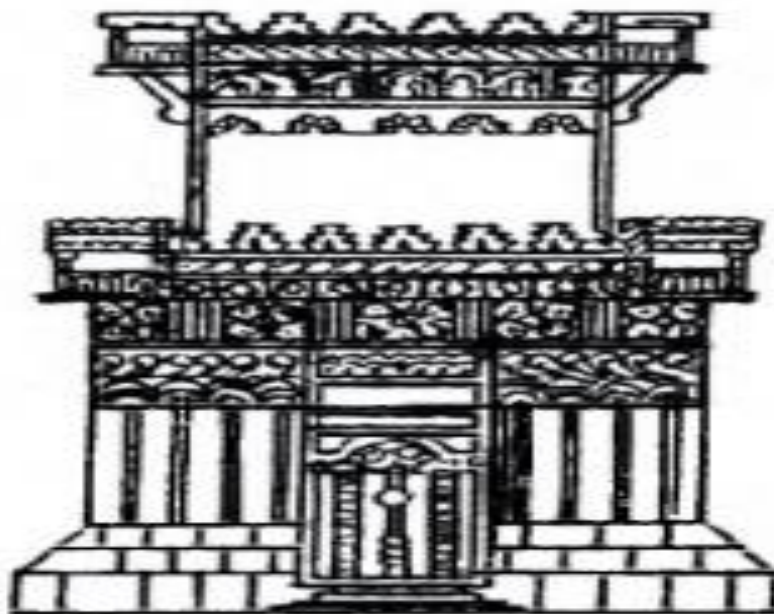
In all areas of human activity, it is necessary to have a sufficiently high level of spatial imagination and spatial thinking. No constructor (designer) can visualize a complex mechanism or machine completely (from thread to needle) in his mind. But in the process of designing, by drawing various drawings and calculations, you can begin to determine the general appearance of some elements and other aspects. As a result, the main idea in the construction may lead to major changes. Due to the dialectical relationship between drawing (technical drawing) and spatial thinking, they complement each other with interesting ideas. As a result, spatial thinking leaves the drawing behind and reinforces it by drawing an image on paper. By doing this, it helps to identify the image you have in mind and to check the interrelationship of some elements, and then to continue the construction and spatial thinking. A person who is not able to describe on paper fast enough, accurately and without mistakes, has many difficulties in quickly putting down the images that he imagines in his mind on paper. For this reason, it is necessary for each person to acquire the skill of writing down what he imagines in his mind, as well as spatial imagination and thinking. One of the parameters determining the above potential is the graphic literacy of the student. A student participating in the design process must have the ability to make a drawing and read it. Based on the given condition, it is necessary to know the rules of the science of drawing in order to think creatively, imagine, design and put it on paper.

We bring to mind the Babylonian statue in Egypt, which belongs to the year 24 BC. A plan of the palace and its scale are depicted on the Babylonian lap. Historical monuments and archeological excavations show that people began to draw images of various objects around them and used images in communication even before the advent of writing. Rock images created by primitive people are similar to modern orthogonal images. Often, mammoth, bison and other animals are depicted individually. In this way, they began to draw images of structures and objects, which were simpler at first, and later more complex. At first, the role of painting increased, then the role of drawing increased dramatically. For example, as the human consciousness developed, science and culture began to form. Production and architecture began to develop. In their place, these began to acquire the essence of drawing, which is considered the main type of graphics. The first drawings appeared during the construction of houses, fortifications and other structures. In the first drawings, there was only one image, which was called a plan. Usually, these plans were executed directly on the surface of the building, that is, on the surface of the earth, with the actual size. To make such a drawing, the first drawing tools were created - a wooden compass and right-angled triangles made of rope.

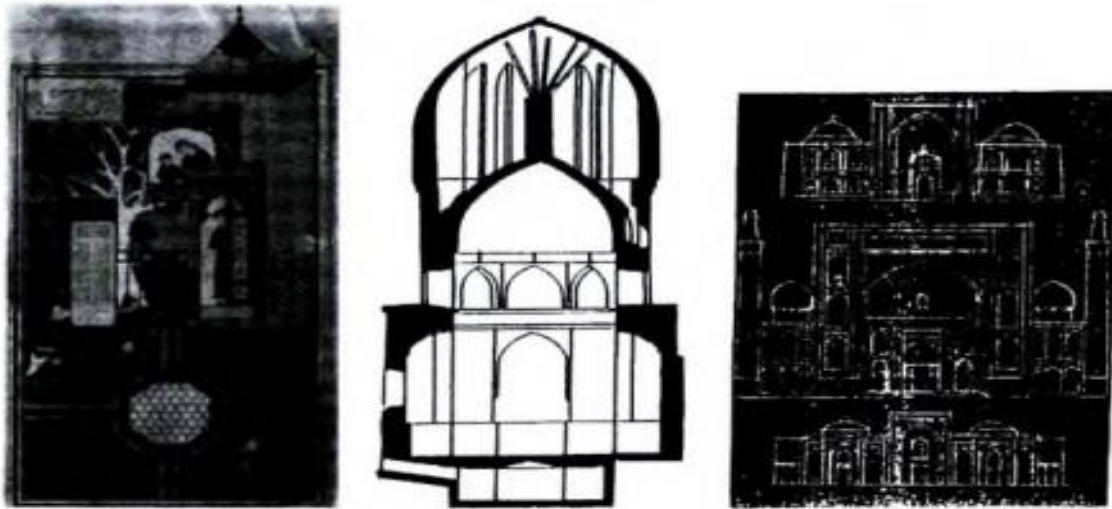




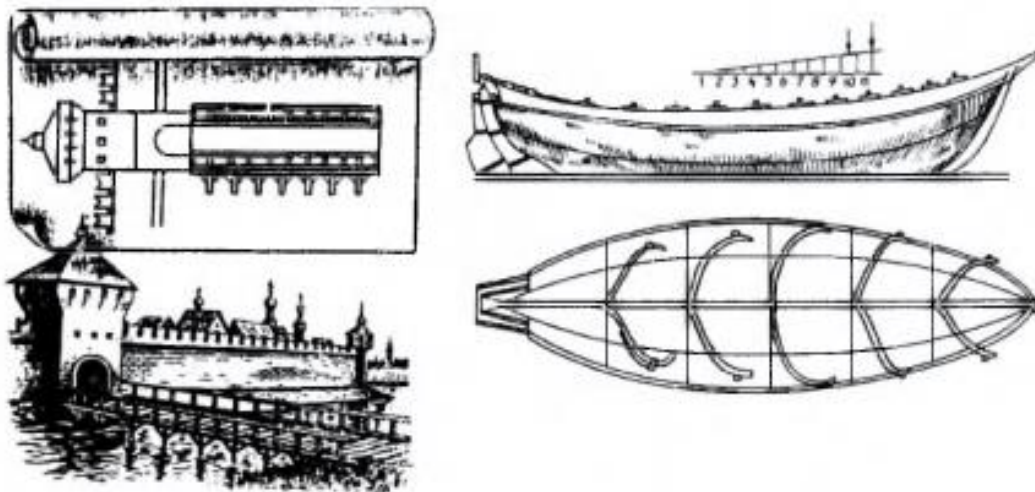
Later, such plans-drawings began to be made smaller on parchment paper, wooden boards and canvases¹. There was almost no difference between the original drawings and the painting. The images are drawn by hand. The drawing of the facade of the palace (V-VII century) carved on the Sogd plate kept in the Hermitage in St. Petersburg is depicted. In oriental miniatures, the image of distant objects is depicted above, and near objects are depicted in the same size below. In oriental miniatures, the image of distant objects is shown above, and near objects are shown in the same size below. Polygraphs correspond to the modern oblique-angle frontal isometry, trimetry, or oblique-angle frontal dimetry. The image of the Gori Amir mausoleum and madrasahs built in the 15th century is given. Later, the drawings tried to show the shape of the object as well as its size, and the drawings gradually improved. A drawing of the bridge from above and in front of the guard tower (XVII century) is given. As a result of the development of shipbuilding in Russia, more accurate and to-scale drawings appeared. It began to use three projections, which described the length, width and height. A rowing boat drawn by Peter I in 1719 using projection rays is shown. In the 18th century, the drawings were made with great care and color. In these drawings, conditional cuts are performed and the cut part of the item is colored according to the material. A number of ancient scientists and scholars, engineers and architects, and folk craftsmen took a leading place in the field of development of the theory of the methods of depicting the spatial body on the plane, as well as its practical application. M. Kant and his predecessors considered Euclidean geometry to be the only, even divine geometry. The images correspond to the modern oblique-angle frontal isometry, trimetry, or oblique-angle frontal dimetry. The image of the Gori Amir mausoleum and madrasahs built in the 15th century is given. Later, drawings tried to show the shape of the object as well as its size, and the drawings gradually improved. A drawing of the bridge from above and in front of the guard tower (XVII century) is given.



As a result of the development of shipbuilding in Russia, more accurate and to-scale drawings appeared. The French engineer, mathematician, and statesman Gospar Monge (1748-1818) paid special attention to the fact that when the plan and the facade are used together, it is possible to dramatically develop a person's thinking about geometric invention. The method of right-angled (orthogonal)



projections was used in graphic work even before G. Monge. Monj, on the other hand, summarized some of the rules acquired in this field in a number of countries of the world and the achievements of foreign scientists in solving spatial metric problems with a graphical method, developed it in every way and put it into a scientific system.

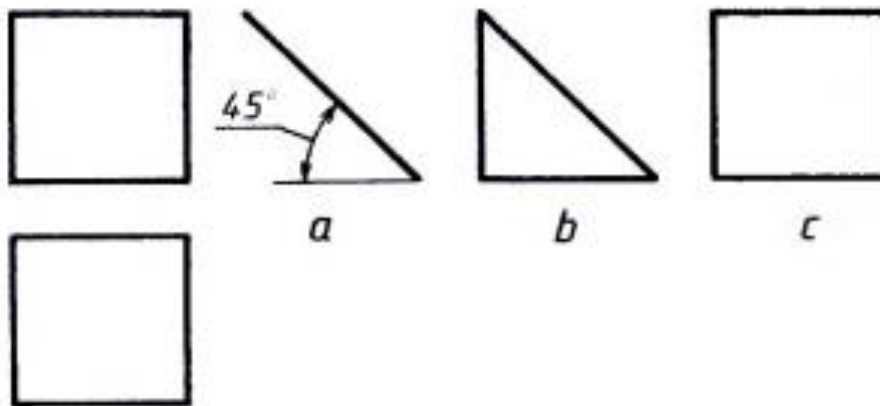
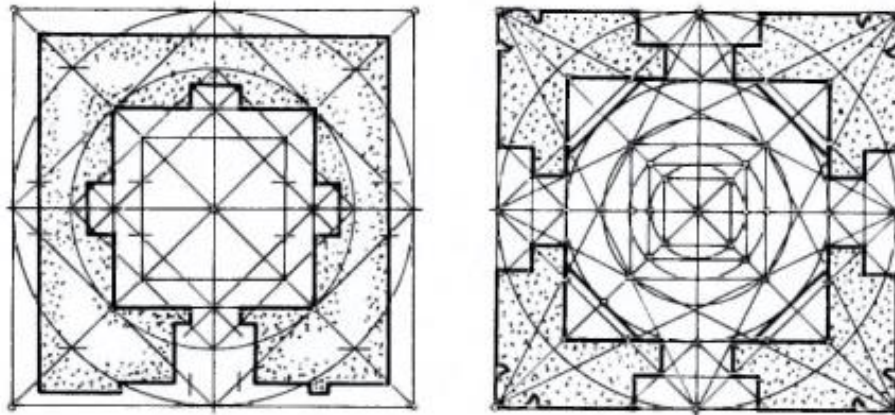


We can clearly see examples of the ancient architectural law even in the Central Asian architecture of the 15th century BC. The plan of the tombs of the Somanites in Bukhara and Takash in Khorezm is given. Geometric patterns also appeared as a result of the use of a dynamic square. Because of this, ancient buildings and patterns were beautiful, majestic and strong. Among the Timurid rulers, the great Uzbek scientist, astronomer and mathematician, statesman Ulugbek Muhammad Taragai (1394-1449), the grandson of Temu, made a great contribution to the science and culture of the peoples of Central Asia. Because of his interest in science, he built madrasas in Bukhara (1471), Samarkand (1420), G'ijduvan (1432-1433). When it comes to a geometric body, for example, a cube, questions such as what it looks like, what elements it is made of, and how it is depicted in a drawing are encountered. Thinking begins to find answers to such questions. Thinking helps in the process of thinking. Then it becomes clear that the sides of the cube are made of the same squares and these squares are six, and an attempt is made to draw a clear image of this cube. Then it will be depicted in projections. Thus, in order to acquire information about the cube, one first uses spatial thinking and acquires spatial imagination. Now let's solve a few examples related to the cube.

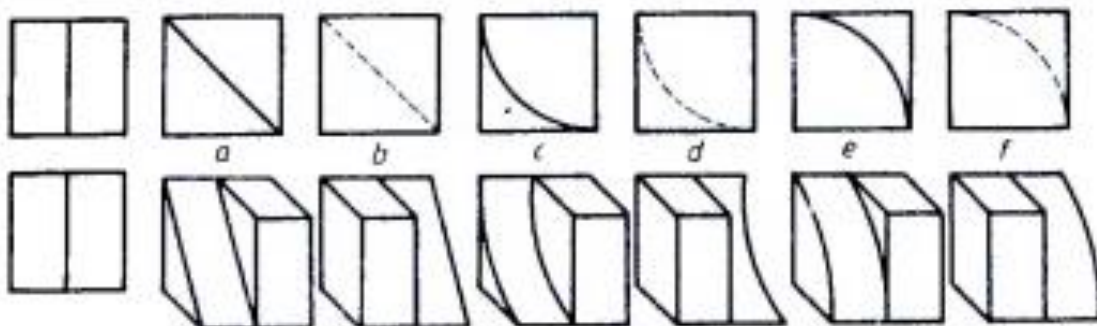


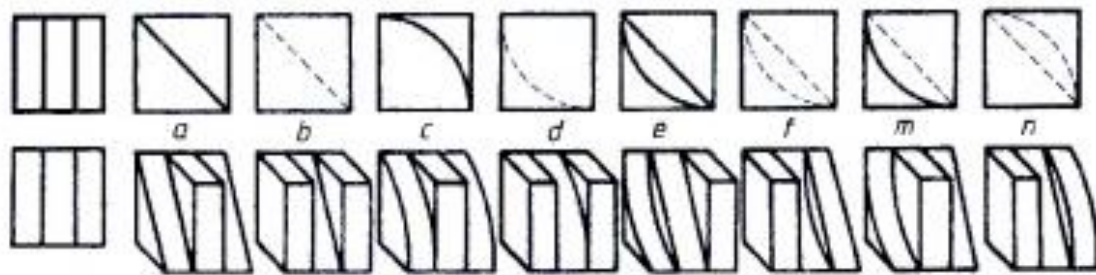
1. Projections of equal squares are drawn on N and F. Determine what it is by its projection on W

- A section of a straight line lying at an angle of 45° to H and V is described
- a triangle whose sides are equal to each other is depicted
- A square equal to those in N ua V is depicted



If it is considered, if a-form is taken, it is a rectangular plane; If the b-form is taken, half a cube is taken, and if the c-form is taken, a full cube is depicted. 2. In V and H, a square with the same projection and a line dividing it into two equal parts is drawn. Find out what it is. A, b, c, d, e and / are the solutions to the problem indicated in the options. 3. The projections on V and H are square and two lines are drawn between them. Find out what it is. A, b, c, d, e, f, m and n show the solution to the problem. 4. A clear image of three holes and a cube is given





Design the cube in such a way that the detail will fit through these three holes. Above the first hole, a groove is cut, and a corresponding groove is carved in the clear image of the cube. The second hole is described as a square. At the bottom of the third hole, a right angle is cut, the sides of which are equal to each other. A groove is cut on the side parallel to W of the cube equal to the same angle. 5. Projections of a model made of one piece of wire in H and V are given. Do its uchincli projection and clear image. Before determining the third projection of the model according to the given two projections, a wireframe representation of the cube is drawn. Then the image in V is drawn on the fat parallel to F of the cube. The projections of the wire are considered as edges of the cube. Since the model is made of one whole piece of wire, the wire should not be repeated twice on one edge of the cube.

Conclusion

The history of graphics is related to the history of class society, science and culture, history of architecture. That's why we study together. The ideas of depicting and using a three-dimensional geometric body graphically on a plane with the help of conventional symbols have a centuries-old history in the development of man and society. Images carved and drawn by primitive people on rocks, cave walls and other places, tools, household items, manuscripts written on ancient materials and other information found with the help of archeological excavations, which have reached our time, mark the long history of graphics. is an invaluable resource for learning. Such images were found in Egypt, on the banks of the Yenisei River, Kazakhstan, Uzbekistan, Altai and other places.

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