AN EFFECTIVE WAY TO PRESENT EDUCATIONAL MATERIALS

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ANNOTATION

The article discusses the principles of using elements of infographics as an effective way to present educational materials in the educational process. The idea of the possibilities and advantages of infographics in the provision of educational information is given.

Keywords: information, information flow, infographics, visualization, subtitles.

INTRODUCTION

The effective organization of the teaching process is characterized by the level of assimilation of educational information planned in the lesson into the minds of students.

How does information enter the human brain? Let's turn to the results of the study. 90% of the total amount of information enters the human brain by sight, 9% by hearing, and the remaining 1% by smell, taste and touch (Fig. 1) [1]. In the human brain, images dedicated to visual functions are processed faster than text.

The brain processes images at once, but processes text linearly, meaning that it takes a long time to get information from the text.

Figure 1. Brain perception of information flow through various senses

One of the ways to present information is infographics [2, 3].

Infographics is a graphic method of communicating information and knowledge, its task is to present complex information in a convenient and understandable way. This modern trend is a form of communication design.

Infographics are a way to talk about complex things easily. It makes the obscure comfortable, corrects confusion, and turns the murky into concrete. Infographics transform something that

can be read into something that can be seen, that is, by converting text symbols into graphic symbols or combining them into a whole.
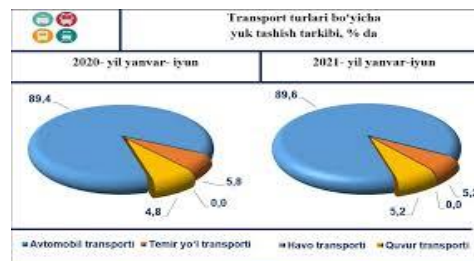
Here are some examples of infographics that we use in our daily life:

Road signs   Logotypes   Diagrams

In foreign literature, the term "infographics" is understood as a combination of graphic design, illustrations and texts for the purpose of creating a single plot, not just data visualization [4, 5].

MATERIALS AND METHODS

Statistics show that almost every social media user would rather share an image than text. You will have to read the text, spend effort and time on it, and the image will immediately identify the main message. It is known that almost 90-95% of users of social networks do not create any informational content at all, but only determine which one accurately reflects their opinion. And this is quite normal, because unique data require a lot of effort to find, organize and present them. If you belong to this 5-10% (or want to join their ranks), sooner or later you will have to resort to the use of graphical tools to present the available information in a more convenient way. In addition, visualization is necessary not only to freely express one's thoughts, but also for ease of work, if it is necessary to present the project simply and easily. Infographics change a person's perception of information materials: if the text contains graphics, then the reader first looks at the visual element, and then reads the text. Infographics help to grasp the main idea in the text. The highest level of understanding is achieved through a combination of text and graphics. Infographics are a convenient way to convey large amounts of information: with its help, you can present complex information simply and easily, and draw students' attention to printed or electronic materials. The relevance of effective use of infographics in modern education comes from the above points.

It is appropriate if infographics are used effectively in the educational process. Because the student will gain more knowledge if he sees and thinks than if he hears and reads the information. Using infographics, the teacher can quickly convey a large amount of information to the students. The use of graphics is of great importance, especially for the involvement of elementary school students in the learning process, because they enrich their imagination with the help of various pictures, objects, and graphic information. I believe that in order to improve the quality of education, it is necessary to establish the correct and effective use of infographics in schools. For this, every teacher should know how to use modern technologies and create useful infographics.

INFOGRAPHIC CREATION METHODOLOGY

Infographics include data visualization, where not only graphical indicators, but also factual data play an important role. When creating the concept, it is necessary to take into account that the infographic should have the following characteristics: the ability to convey a coherent content through the system of visual images, the unity of text and image, the availability of the interpretation of the infographic by the audience. informative content combined with attractiveness and boringness according to the author's intention.

Creating an infographic involves its development at two levels: conceptual (strategic) and implementation (tactical) [6].

At the conceptual stage, the idea of the infographic is developed in detail. The stage includes the following actions:

- Choosing a topic, formulating the purpose of creating an infographic and determining the target audience;
- Collect information and materials on the subject;
- Analysis and processing of collected data, selection of data and their translation into a convenient format for visualization;
- Development of a graphic idea and selection of visualization tools depending on the amount of data, the goals of the publication format.

The following operations are performed at the infographic implementation stage:

- Text into separate components: time, place, numerical data, comments, etc.;
- Evaluate the possibility of visualizing or saving these parts in text format;
- Choosing a concrete or abstract image; to assess its relation to stereotypes and audience prevalence;
- Stylization of images, creating harmony between form and content;
- Transform statistical data into graphs and charts, look for ways to combine visual forms in terms of composition;
- Correlation of events and images in time with the help of historical monuments (creating time tables, choosing a symbolic or numerical representation of time);
- Systematization of information in the space of future graphics (determining cause-and-effect relationships between different parts of the text, distributing events in order, setting the priorities of students, selecting or compiling text supplements, checking the accuracy of information);
- The final layout of the graphics (preferably creating a sketch);
- Creating titles and subtitles (nominative, non-metaphorical);
- Checking and editing infographics (text, images, as well as copyright).

Thus, the following features of infographics can be highlighted:

- Availability of graphic objects;
- Useful and relevant information ;
- Color presentation;
- Clear and meaningful coverage of the topic.

Teachers can make good use of infographics as a convenient and useful teaching method. Good graphics make information easy to retrieve and digest. For those who want to use infographics in the educational process, there are 5 main steps in creating an infographic (Figure 2) [6]:

INFOGRAPHICS FOR THE STUDY PROCESS
STAGES OF CREATION

Figure 2. Steps to create an infographic for the educational process

1. Choose the right infographic. Ask students to independently analyze graphs
The most important part of using infographics in the classroom is choosing the right infographic. To work effectively, you need to use graphics that allow students to think for themselves but don't leave them without context. This helps support student-led learning.
2. Create context.
Start with compelling background information, and use media content like videos or news articles to create a complete and relevant context.
3. Ask students to analyze the graphs independently.
Divide students into small groups of two to four people. Use a list of questions to help students evaluate the infographic and draw appropriate conclusions. You can use questions like:
-        What surprises you about the data you see?
-        What can you learn from this infographic?
-        What is the role of the creator of this infographic?
-        What are they trying to tell us?
Then allow students to brainstorm.
Give them the freedom to research the infographic and write their own conclusions .
4. Completion of group activities.
Each member of the group should share what is depicted in the infographic and the conclusions they have made by analyzing the infographic. Ask them to support their conclusions with evidence found in the graph and accompanying information. Then start a group discussion about the differences and similarities between each group's conclusions.

5. Evaluation.

We can see the level of thinking of students as we organize discussion, exchange of ideas and opinions in groups. Have students write a short essay describing the evidence and conclusions from the graph. Looking at the infographic, the student can write a personal story based on the information visualized.

SUMMARY

The use of infographics in the educational process helps to increase the effectiveness of information perception. The use of infographics in the presentation of educational material simplifies the perception of complex information, makes it visual and interesting for the student. The introduction of infographics into the educational process leads to:

- By the teacher - presenting the material in a new and interesting, informative form;

- Student - interest in the new form of presentation of educational material, the most understandable and easily digestible educational material, involvement in the educational process and development of the individual's creative activity.

Undoubtedly, infographics are a new stage in the presentation of educational material, because the main task of the educational process is to present information (knowledge) in the most understandable form for the student, and infographics are the best way to do this.

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