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USING SCRIBING TECHNOLOGY IN COMPUTER SCIENCE LESSONS

S.V. Mamadzhanova
Assistant Teacher of the Department of Informatics
Kokand State Pedagogical Institute

ABSTRACT

The article deals with the essence of students' visual thinking as a psychological and pedagogical phenomenon. Attention is directed to the methodological features of using scribing in computer science lessons in order to activate logical thinking, structure educational information and quickly memorize it by students. The main function of the method of presenting information using scribing is the ability to quickly, efficiently and visually convey information to students.

Keywords: innovative technologies, graphic technique, scribing, visual thinking, level of assimilation, quality of assimilation, professional competencies.

INTRODUCTION

The 21st century is called the century of high computer technologies. Information and information processes, having become the most important component of human life, made it possible to form the information society as a stage in the development of human society.

For the successful development of knowledge, a modern student needs a minimum of costs and a maximum result. There are many ideas, tools and suggestions for optimizing the educational process. One of these tools is scribing technology - as a visualization tool using modern ICT tools. It is he who allows you to assimilate information more efficiently than many other types of presentations and successfully replaces boring and wordy explanations.

Visualization of the educational process gives great prospects for development, helps students acquire qualities that will become their support in the future - this is logical, imaginative, creative thinking, the ability to work effectively in a team, make quick, practical decisions.

Scribing is a new concept in the field of education, which is gaining more and more popularity in the era of informatization, but the ideas of this direction are quite ancient. An analysis of the literature showed that so far there are no pedagogical studies using this technology, there are single works [1, 2, 3], which reveal the concept of scribing (scribe - mark up or sketch out sketches). Scribing is the latest presentation technique invented by the British artist Andrew Park, which means the process of visualizing complex meaning with simple images using drawings, in which images are drawn in the process of conveying information.

FORMULATION OF THE PROBLEM

At present, the leisure preferences of schoolchildren, their reading interests, and the principles of information perception have changed. Psychologists talk about the so-called "clip thinking" of teenagers. It can be characterized by the following parameters: high speed of processing educational information; lack of sustained attention decreased ability to analyze; formation of emotional passivity and impoverishment of thinking. An important pedagogical problem arises - the low level of development of mental skills and operations among students; they cannot

concentrate for a long time on the information presented by the teacher, and this leads to a decrease in analytical abilities; the level of academic performance falls and the ability to build long logical chains decreases, thinking becomes impoverished and becomes less capable of creativity. Schoolchildren increasingly prefer listening to audiobooks to traditional reading and watching a video lesson than a teacher's explanation. To some extent, this facilitates the perception of educational material and leads to an exceptional increase in the degree of its assimilation compared to traditional methods. The purpose of the article is to show the possibilities of scribing as a methodical technique in computer science lessons in a modern school when explaining theoretical material, to identify the possibilities of scribing technology to achieve a high level of development of their information competence.

METHODOLOGY AND RESEARCH METHODS

In accordance with the stated goal, such empirical methods as experiment, observation, comparison were used. In addition, to identify the results, an analysis of creative written work and oral responses of students was used. A survey (questionnaire, conversation) was chosen as the leading research method, which provides an opportunity to identify the productivity of scribing in computer science lessons. In order to increase students' interest in the problem under study and broaden their horizons, a video scribe on the topic "Interesting facts about IT" was prepared on the PowToon online service. To achieve the goal of the study, modeling of visualization maps using the scribing technique in the discipline "**Computer Science** " was used.

RESEARCH RESULTS AND DISCUSSION

Scribing is the creation of small clear drawings that make the meaning of educational activities understandable. It turned out that the method of presenting information using drawn diagrams and illustrations is much more effective than a boring verbose lecture. The peculiarity of scribing, in comparison with other ways of conveying complex information, is that it simultaneously involves the hearing, vision and imagination of a person: when simple images are drawn in the process of conveying information, a person not only understands it better, but also remembers it [4].

Conventionally, all scribing techniques can be divided into manual and computer. Manual scribing, in turn, can be hand-drawn, applique or magnetic. When creating computer scribing, special programs and online services are used. Computer scribing is much easier than manual scribing. Such scribing can be created using the PowToon service and the VideoScribe program. PowToon is an online service with a set of ready-made templates and the ability to create a presentation from scratch, with additional paid features. The program provides several options for animating text on slides: writing text by hand, the sequential appearance of letters, as well as simple options for animating text. The library of animated images is incredibly large: models of different people in vector graphics and many infographic elements. In the library of ready-made templates, you can choose the most suitable design for your video presentation. Finished works can be directly uploaded to YouTube.

VideoScribe is a program that allows you to create great video scribing for those who can't draw. Unlike PowToon, the entire presentation in VideoScribe is placed on one large field, and not on several slides. VideoScribe lets you choose the color and texture of the background, the font,

and the variant of the image of the hand holding the pencil or brush. The illustration library contains hundreds of pictures on a variety of topics (business, emotions, food and drink, health, tools, transportation, weather, sports, media, construction, people). You can upload your images. Settings apply to each element: the time during which the image will be drawn, color scheme, size, position on the board. You can record your own voice for video scribing or add a suitable soundtrack from the existing library.

There are also many other video scribing software such as Moovly, GoAnimate and Plotagon.

The use of scribing in computer science lessons helps students visualize abstract concepts, capture, and then reproduce what they see.

Visualization allows you to link the information received into a complete picture of a particular object or phenomenon.

In addition, when creating scribing, students develop critical and imaginative thinking.

The most promising is the use of scribe presentations in project activities.

Also, scribe can be used:

- when learning new material;
- when checking homework;
- as "brainstorming";
- reflection in the lesson;
- be a support when writing a presentation;
- in self-study in the trend "Inverted class";
- in extracurricular activities, for example, when participating in competitions.

When creating a video scribing, there are four main stages to consider - a work plan, analysis, visualization and timing (from 1 to 10 minutes).

A competent combination of words and illustrations that can clearly display the main ideas of the presentation is scribing.

Observations have shown that the pace of work should be maintained, otherwise the productivity of scribing will decrease.

Having studied the types of scribe presentations, we can highlight the positive and negative aspects of this technique.

Minuses:

1. Difficulty in writing a script.
2. Training in drawing diagrams, graphs, figures.
3. A selection of illustrations for creating applique scribing.
4. Large time costs for voice acting, filming and editing of the film.
5. Technical difficulties.

Pros:

1. Efficiency - in a short period of time, it is possible to explain the material in an accessible and high-quality way.
2. Versatility of visualization. The language of the drawing is understandable to everyone. Scribing to some extent acts as a universal language of communication.
3. High-quality assimilation of information and memorization of the key points of the presentation. The interrelation of verbal and visual information helps to easily restore listened

reports in memory, since, as a rule, complex dry information is converted by a scriber into simple symbols and objects that we encounter in everyday life.

4. The possibility of continuous communication with the audience throughout the performance.
5. Possibility to use the scribe (general picture, which is obtained by the end of the event) in further work as an overview of all the information received.
6. The effect of parallel following - the sound series is illustrated by images almost simultaneously, which contributes to the qualitative assimilation of the material.
7. The video can be shown an unlimited number of times.

It turns out that scribing has more pluses than minuses. Video scribing is one of the most effective, interesting and persuasive ways to present information.

The approbation of scribing in computer science lessons has proven the effectiveness of teaching for the development and enhancement of students' visual thinking. Thus, the study showed that the visual presentation of theoretical material can be used in preparation for both oral and written responses.

CONCLUSION

In conclusion, it can be concluded that the use of elements of scribing technology in computer science classes contributes to the resolution of such pedagogical problems as enhancing the effectiveness of learning, the formation of critical thinking, the development of visual thinking, increasing cognitive interest and independence, and the education of visual culture. Scribing technology is a creative process that can be used in the study of new material, consolidation and generalization, in project activities. The student should not so much be able to draw as quickly find accurate and simple visual symbols for concepts or phenomena.

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