

(AKUZEM)» Университета Акдениз во время прохождения стажировки и составлен план обучения техническим дисциплинам в смешанном формате. Полученные в статье результаты показали, какая форма наиболее эффективна при разработке системы дистанционного обучения, касающаяся преподавания технических дисциплин, дана важная и полезная информация для повышения эффективности обучения и преподавания. Наша работа вносит свой вклад в образование в контексте дистанционного обучения, поддерживая расширенную модель принятия дистанционных технологий и учитывая различия в культуре, стиле обучения и социальной среде по сравнению с другими странами.

Ключевые слова: дистанционное обучение; образование смешанного формата; методика и методы дистанционного обучения; технические, профилирующие и специальные дисциплины.

Teaching of technical disciplines in a mixed format at the university

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Annotation

When the whole world switched to distance learning due to the pandemic, the education system also did not stand aside. Distance learning differs significantly from traditional, as practice shows, on-line students and teachers have faced serious problems hindering learning, and in some special disciplines, the level and quality of knowledge has significantly decreased than in traditional training. Among the students of VTU in the Republic of Kazakhstan, an analysis of the development of special disciplines was carried out, the data were summarized by analysis, study and observation. As a result, the academic performance of about 500 students in technical disciplines was analyzed. The results of the analysis were reviewed and discussed at the “Distance Education Application and Research Center (AKUZEM)” of Akdeniz University during the internship and a plan of training in technical disciplines in a mixed format was drawn up. The results obtained in the article showed which form is most effective in the development of a distance learning system related to the teaching of technical disciplines, important and useful information is given to improve the effectiveness of teaching and learning. Our work contributes to education in the context of distance learning by supporting an expanded model of adoption of distance technologies and taking into account differences in culture, learning style and social environment compared to other countries.

Keywords: distance learning; education of a mixed format; methodology, and methods of distance learning; technical, profiling and special disciplines.

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THE USE OF COMPUTER GAMES IN THE LEARNING PROCESS

Abstract

One of the most important requirements of society for future teachers, including art teachers, is their willingness to constantly search, and one of the problems that must be solved when training at specialized art schools remains the problem of “instilling artistic taste and creative thinking”. When a student starts at school, there may be some discomfort at first. Not all schools today still have well-equipped technology classes,

outdated curricula and techniques lead to a significant decrease in students' motivation to learn, as a result of which teachers are looking for more modern learning tools and methods. This article describes the use of computers in educational and extracurricular activities, where a computer game in combination with a specific learning task allows the learner to easily assimilate the material, and the corresponding motivational components direct it to creativity.

Keywords: graphics; creativity; drawing; method; model; computer games; computer programs; technology; scientific and technological progress.

Introduction. In pedagogical science, a number of principles have been substantiated, on the basis of which the educational process is successfully built: scientific, the connection of learning with life, systematicity and consistency, accessibility, visibility, consciousness and activity of students, the strength of knowledge, skills and abilities. The above-mentioned factors are also acceptable for teaching fine art to students of pedagogical universities, for example, the principle of scientific nature requires that the content of the training acquaint students with objective scientific facts, searches and laws, theories, so that it contributes to the disclosure of modern scientific achievements as much as possible and introduces students to the prospects for the development of this branch of knowledge.

Computer diversions within the visual expressions are pointed at creating the method of working with a controller, response, consideration and visual memory, combined considering, expository and inventive capacities, the improvement of perusing abilities, expansion of numbers. As a run the show, any computer diversion creates several skills at once, the most thing is that it ought to be wiped out a opportune and alluring way.

The educator includes a exceptionally imperative part to play in utilizing these programs. He chooses recreations for the lesson, didactic fabric and person assignments, makes a difference understudies within the handle of working at the computer, assesses their information and improvement. Coordination a customary lesson with a computer permits him to move portion of his work to a computer, whereas making the learning prepare more curiously and strongly. At the same time, the computer does not supplant the instructor, but

as it were complements him. The determination of computer diversions depends, to begin with of all, on the current instructive fabric and the level of preparing of learners.

The fast advancement of modern data advances and their presentation in Kazakhstan over the past decades have cleared out a certain engrave on the advancement of the identity of a cutting edge child. An effective stream of modern data, publicizing, the utilize of computer innovation in TV, the dispersion of computer gaming programs, electronic toys have an incredible affect on the childhood of a child and his discernment perception recognition discernment of the world around him. The nature of his favorite viable movement - diversions - is additionally changing altogether, and his favorite characters and leisure activities are changing.

These days, within the age of computerization of society, it has become complicated to find a proficient within the field of connected illustrations. Preparing of pros is given at the proficient and imaginative workforce of K.Zhubanov Aktobe Regional University. One of the numerous missions of the staff is to be a leading center for preparing exceedingly qualified master within the field of visual art, counting design and graphics, both conventional and modern. The issues of arrangement and advancement of multilevel preparing, future specialists - instructors specifically influence the category of data needs of future masters.

The problems of formation and development of multilevel training, future artists - teachers directly affect the category of information needs of future specialists.

The need to create an integral pedagogical system in the field of fine art is due to the fact that interest in this type of activity is increasing,

there are separate articles concerning training and the development of creative thinking [1]. However, without belittling their significance, it should still be emphasized that any particular problem cannot be considered and solved in isolation from the entire system of training and development of students' visual abilities. From a pedagogical point of view, such a system should be based on the basic provisions of pedagogy, the achievement of pedagogy and psychology, on the best practices of educational institutions. The system is also designed to streamline the process of training in the field of modern educational technologies and should have the ability to respond quickly to scientific and technological progress. Thus, the structure of the system includes relatively independent components, a system of classroom and extracurricular activities, a system of knowledge, skills and abilities, the content of educational material, teaching methods, individual moments of each lesson.

Methods. The essence of the system-structural approach is that the phenomenon or process under study does not break out of the complexes of others associated with it, but is considered as part of the whole, depending on its other constituent components and, in turn, affecting them. Often, when studying pedagogical processes, it was considered sufficient to find the cause of any phenomenon, process, method, and the issue was resolved. Without denying the role of cause-and-effect relationships, modern science indicates that every element, component, integral education is structural in nature, they can be comprehensively understood only when their content and structure are found.

Therefore, when implementing a system-structural approach to visual creativity, it is necessary, first of all, to find out the composition of the elements of the educational process, to establish which of them play a decisive role in the formation of creative learning, what are their connections with each other and in general.

The volume-structural approach assumes: a) consideration of the object of study and research

as a system; b) identification of many factors of system elements; c) establishment of links within this set; d) determination of the principles of interaction of the system with its individual elements; e) identification and classification of elements by significance; f) identification of the structure and planning of the system; g) analysis of the main principles of the system and the study of management processes that ensure the achievement of results.

It is possible to take into account all the variety of factors that include the functioning of the system, without violating its integrity, only on the basis of a level-based approach to complex phenomena of reality and cognition. System-structural analysis and a level approach allow us to study phenomena and processes without resorting to a continuous analysis of facts, but using only a selective method. One of the most successful ways of such a study is implemented using a multifactorial experiment or a mathematical modeling method [2].

Modeling is an indirect study of an object, in which not the object of interest to us is studied, but some auxiliary system or the most influential factors of the system, acting in a material or abstract form and reflecting the main functional connections of the object - both internal and external. The mathematical model, being a means of cognition of the simulated object, itself becomes the object of research (figure 1).

When they talk about the innovative procedure not as a whole, but only at certain stages, that is, they do not allow all creativity, but only its components, the expression creative activity is usually used. Thus, the concept of «creative activity» is used when studying the components of creativity. In addition, this phrase is used if they want to emphasize that there is not independent (or spontaneous) creativity, but planned activity to create a new one, especially if creativity is specially organized and carried out according to developed methods or under the guidance of a teacher.

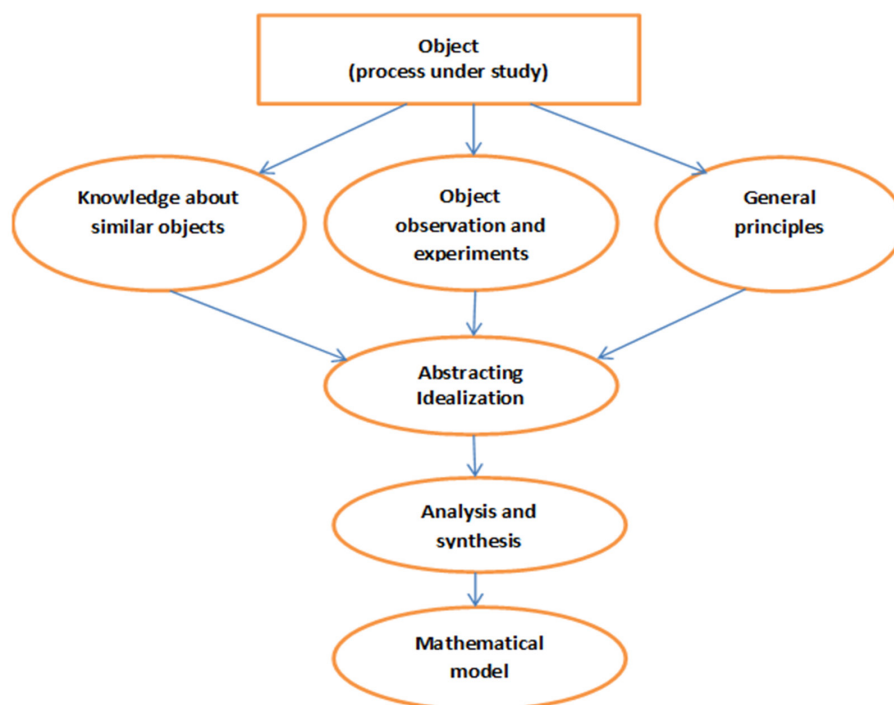


Figure 1. **The relationship of the mathematical model with the object under study**

Action may be a “deliberate change of characteristic and social reality by an individual” [3, P.38]. In the event that inventiveness, that’s, the center on imagination, is inalienable in a certain sort of movement and this prepare is an indispensably portion of person or collective imagination, at that point able to conversation approximately the imaginative nature of such action when the members in this handle increment their individual imaginative potential

Imaginative character is a marker of the improvement of inventiveness within the prepare of any action. In case a person has imaginative potential, that’s, he has created certain properties essential for imagination, and there are moreover fitting motivational components that arrange him to imagination, at that point such a individual can be considered a imaginative individual. But it is possible to judge whether a given individual may be a inventive individual or not as it were by the particular comes about of his inventive movement.

Imaginative action has certain considering abilities, counting the capacity to perform complex mental operations, which is a necessarily portion of imaginative thinking. One

of these apparatuses, which have interesting capabilities and are broadly utilized and tried in schools of mechanically created nations, could be a computer and different computer programs.

Combining the capabilities of a TV, a book, a calculator, being a widespread toy able of mirroring other toys and a assortment of diversions, a present day computer or tablet at the same time is an break even with accomplice for a child, able of reacting exceptionally quietly to his activities and demands, which he some of the time needs. An understanding companion and astute tutor, the maker of the storyteller of universes and identities, the apex of the mental accomplishments of mankind, the computer plays an progressively critical part within the relaxation exercises of modern children and within the arrangement of their psychophysical qualities and identity advancement.

The utilize of computers in instructive and extracurricular exercises of the school looks exceptionally normal from the point of see of the child and is one of the viable ways to extend inspiration and individualization of his instructing, the advancement of visual imaginative capacities and the creation of a

affluent passionate background. The quick improvement of modern data technologies and their presentation within the nation have cleared out a certain engrave on the improvement of the identity of a advanced child.

Computer games is a game habitat on a computer screen that resembles a cartoon. In this environment, in accordance with the tasks appointed to him, the child can do certain practical actions using his abilities, skills and knowledge. The gaming computer environment, connecting with a specific educational task, allows the child to assimilate the material as if unnoticed by himself, and at the same time, which is very important, to use it in his favorite practical activity - the use of a manipulator allows the student to quickly master computer work. Games can be held with the participation of one student, or with the participation of two. Control over the progress of the game is accompanied by sound signals. Musical fragments and animation elements are used as encouragement.

Theoretically, the possibilities for the formation of the experience of visual creative activity using computers are limitless. However, numerous psychological barriers that stand in the way of revealing the creative process hinder the free flight of thought.

A characteristic feature of computer games is the possibility of flexible use of most of its materials for studying various educational topics by replacing their didactic material and tuning to a specific topic or student, as well as limiting the duration of the game by time or by the number of tasks. This is done with the help of a special computer program «Constructor», designed for a teacher or a computer class technician and requiring the most minimal knowledge and computer skills [4]. Most games involve saving their statistical data on the results of completing tasks. The methodical manual on working with a computer allows you to use it throughout the academic year in the learning process in addition to the standard curriculum.

The teacher has a very important role to play in using these programs. He selects games for the lesson, didactic material and individual tasks, helps students in the process of working

at the computer, evaluates their knowledge and development. Integrating a regular lesson with a computer allows him to shift part of his work to a computer, while making the learning process more interesting and intense. At the same time, the computer does not replace the teacher, but only complements him. The selection of computer games depends, first of all, on the current educational material and the level of training of trainees. Here, the complex provides complete freedom to a creatively working teacher and allows him to use it with various educational programs and methodological manuals.

Under the conditions of the current schedule of the computer class, the class was divided into 2-3 groups so that students could work on computers individually or at least two at a time. With this method, students perform a kind of laboratory work, acquiring knowledge in the classroom, developing their skills and abilities, then they use them in practice, in gaming activities in the computer classroom. In one lesson, they can use 5-7 computer games. The themes of the games, their modes and didactic material can be chosen both for the purpose of studying new material, fixing or repeating, and for knowledge control. Due to the change of games and their short duration (10-15 minutes), students retain a fairly stable interest and efficiency in the classroom.

In the future, in high school, to continue learning using of computers, taking into account the age and intellectual abilities of students, you can use such well-known developments as a software and methodological complex, the «Logo-Writer» system.

Here is a fragment of the organization of the educational and creative process.

Organizational moment. Greeting students, checking for absentees. Motivation (self-determination) for learning activities: What does a person do when he wants to remember important information? (Memorizes, writes down); Where can the information be stored? (not for long - in human memory, longer - on paper, in phone memory, computer); How is the storage of information in computer memory organized? (in the form of files); When we play

a computer game, where are the intermediate results saved? (in files); Where does the progress of the saved game or the information for the game come from? (from the file); Do we know how to write code that will save the results of the game? (no); Then what is the main question we will be addressing in class today? (How do I write the code that saves information to a file?) The topic of the lesson? (Files).

We activate creative abilities through the educational and creative task “Associations”: “Passing a geometric body (any object) to each other, you need to name any noun. The one who takes the prism calls any word that came to his mind about what was said - an association.” Let’s start with the word “File”. You can go through each student two or three times (depending on the number of people in the group). Let’s draw the students’ attention to the fact that very often thematic associative chains arise during the task. The teacher, participating in the educational and creative task, tries to lead the students’ associations to one of the words: “game”, “expert”, “smart guy”, etc.

Updating knowledge; What is the purpose of our lesson? (Find out which programming language constructs allow you to work with files).

Let’s make a lesson plan (1. Find out the algorithmic constructions associated with the file; 2. Check their use in practice; 3. Summarize).

What can I do with files on my computer? (open and close, read and write, create and delete); What files can be stored on the computer? (audio, video, graphic, text, etc.) Today in class we will get acquainted with text files that are used in the programming process. The solution to the problem. The discovery of new knowledge. Let’s compare the entries of programming language operators with English words (open, file, write, read, etc.). The basic algorithmic constructions for working with files in the programming language are recorded.

Research result. The computer naturally fits into the life of the school for many decades and is another effective technical tool with which you can significantly diversify the learning process. Each lesson causes emotional uplift in children, even lagging students are willing to work with

a computer, and the unsuccessful course of the game due to gaps in knowledge encourages some of them to seek help from a teacher or independently seek knowledge in the game. On the other hand, this method of teaching is also very attractive for teachers: it helps them better assess the abilities and knowledge of the child, understand him, encourages them to look for new, non-traditional forms and methods of teaching.

Society is undergoing rapid and fundamental changes in its structure and fields of activity. The roots of many changes lie in new ways of creating, storing, transmitting and using information. We are in a state of transition from the industrial age to the information age. This means, in particular, that an increasing number of people are increasingly faced with the need to process an ever-increasing amount of information.

Computer and communication advances are very self-evident appearances of the data insurgency. Subsequently, it gets to be clear that the near intrigued appeared in computer education by instructors locked in within the rummage around for ways to adjust the school to the present day world [5]. An expanding number of guardians, instructors and understudies are coming to accept that as a result of the procured information approximately computers and the procured abilities to work on them, children will be way better arranged for life and fabric well-being in a changing world. Some individuals are persuaded that the computer gives new opportunities for the inventive improvement of children and their instructors, permits them to urge freed of the repetitive conventional course of consider and create unused thoughts and implies of expression, makes it conceivable to illuminate more curiously and complex issues.

In this respect, the fear is communicated that children who are acclimated to communicating with computers will have the next inclination for such shapes of communication that are characterized by exactness and clarity, instead of instinct or uncertainty, which are fundamental for craftsmanship and compassionate exercises.

A number of teachers doubt the reality of achieving the goals of computer literacy, they believe that computers are nothing more than

another means of distracting the attention of children in the classroom. Others insist that it is impossible to prepare teachers for the use of computers in lessons and competent teaching of computer literacy to children without serious professional training. An even more serious objection is the fact that children will communicate much less with each other, since they will spend a significant part of their time at the computer. In this regard, the fear is expressed that children who are accustomed to communicating with computers will have a higher preference for such forms of communication that are characterized by accuracy and clarity, rather than intuition or ambiguity, which are necessary for art and humanitarian activities.

The philosophy is that the school has no alternative but to adapt it to the rapidly changing information age. The main purpose of adaptation is that children need to be taught to process information, solve problems, communicate with people and understand the essence of the changes needed in society.

If computers have the powerful intellectual qualities that are attributed to them, then they can be fully used to achieve this goal. The goals of computerization of education and the content of educational activities at school should be integrated in the lessons of mathematics, social disciplines, natural sciences and native language. Such integration cannot be completed within one year or be the result of the implementation of a project or a one-time revision of the curriculum. On the opposite, it may be a prepare that has no conclusion. It contains a set of common objectives of computerization of the instructive prepare, the execution of which is conceivable as a result of the joint work of the organization, instructors and instructors specializing within the improvement of preparing programs. The execution of these objectives will shift from school to school, from one school subject to another, from educator to educator, from one year of consider to another. But it is critical to note that all these varieties will happen within the framework of common objectives, considered in a certain grouping, which is able permit each understudy to renew their information from year to year and shape modern commonsense

computer aptitudes based on already procured involvement [6].

To study the issue of the development of creative abilities of students, a pedagogical experiment was used, including several stages

- state-standing (search);
- forming (training);
- control (comparative).

Statistical processing of experimental data. The preparation and conduct of an experimental study of the development of creative abilities of adolescent students was conducted from 2019 to 2021 on the basis of the gymnasium school # 51, Aktobe. 24 students of the 10th “A” class were included in the experimental work. Let’s imagine the step-by-step actions of experimental work.

This questionnaire allows us to obtain quantitative characteristics of the need to achieve a goal and the need for self-improvement, which, in our opinion, corresponds to the ability to self-organize.

The motivation of communication and collective activity reflects the communicative abilities of students.

Criteria for evaluating the results obtained: Number of points: from 1 to 4 - low intensity of motivation, from 4 to 7- average, from 7 to 9 - high, from 9 to 10 – very high intensity of motivation. Since this method of measuring the level of motivation indicators allows us to judge the degree of development of these indicators only relatively, since it does not contain normative data for different age ranges, we combined high and very high levels of motivation into one and called it “high”, this was done for the convenience of monitoring the development of indicators of creative abilities (figure 2).

Levels of development of creative abilities of students in the experimental group (formative experiment). Data analysis showed that 40% of the experimental group’s students increased their level of motivational and creative activity. The final results of the pedagogical experiment confirmed that creative activity organized in the process of programming didactic computer games is an effective means for the development of creative abilities of students (figure 3).

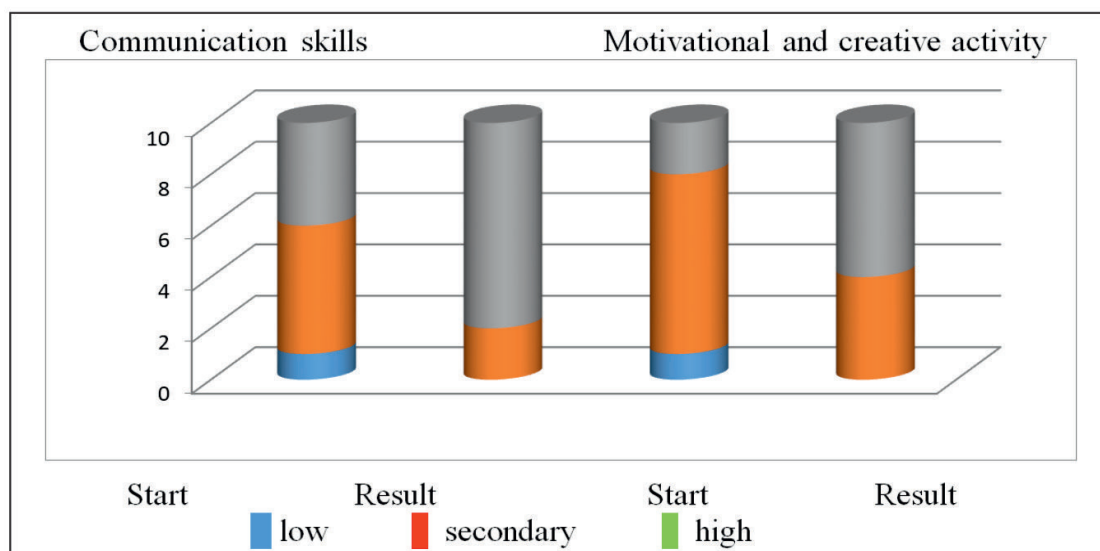


Figure 2. Levels of development of creative abilities of students in the experimental group (formative experiment)

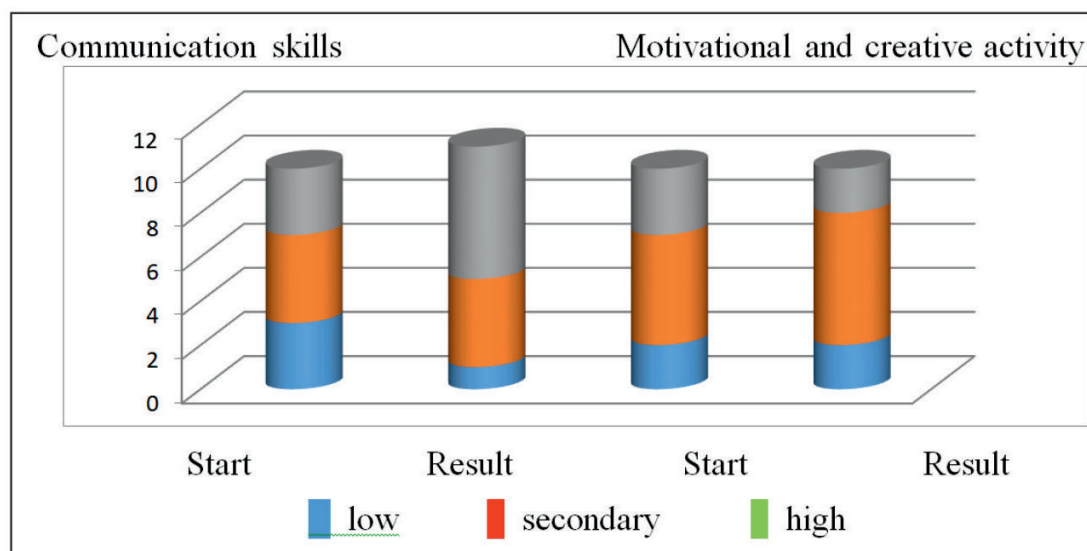


Figure 3. Levels of development of creative abilities of students in the control group (formative experiment)

The following changes occurred among the students of the experimental group: The number of students with a high level of abilities increased by 40%; The number of students with an average level of abilities decreased by 20%; the number of students with a low level of abilities decreased by 20%. In the control group, the changes that have occurred are insignificant.

Discussion. The taking after changes happened among the understudies of the test gather: The number of understudies with a

tall level of capacities expanded by 40%; The number of understudies with an normal level of capacities diminished by 20%; the number of understudies with a moo level of capacities diminished by 20%. Within the control gather, the changes that have happened are insignificant. Discussion. Talking about creative considering, we don't differentiate it with a few other sort of considering, but as it were emphasize its introduction and association with inventive activity. According to A.N. Shishkina, "the

advancement of imaginative considering is prove by the efficiency of imaginative movement, which is an suitable marker for us” [7, P.343-346].

A creative personality is also distinguished by a special combination of personal and business qualities. The textbook for students of higher educational institutions names seven signs of creative potential: originality, heuristics, imagination, activity, concentration, clarity and sensitivity [6].

“The creative teacher is also characterized by such qualities as initiative, independence, the ability to overcome the inertia of thinking, a sense of the truly new and the desire to learn it, a high need for achievement, purposefulness, breadth of associations, observation, developed professional memory” [8]. We agree with the authors and especially note the following qualities in this list - observation, purposefulness and breadth of associations, since these properties of a creative personality are listed in the works of other authors [9-12].

In relation to visual creativity, this issue is considered in more detail by B.A.Gerber, who emphasizes the need for the formation of the supporting properties of a creative personality (spatial thinking, spatial imagination, observation) in the formation of the experience of visual creative activity [13].

Magen-Nagar, and N., Wu, M.L. identifies various types of activities, for example, play, learning, communication and work, indicating the direction of specific activities - cognitive, social, artistic, technical and others [14; 17]. The activity we are considering has an artistic orientation and combines several elementary activities such as teaching, communication and work, and when using computers, you can add a game to this list.

Imaginative movement has its possess specifics, its victory depends on appropriate arranging and compliance with the correct laws - particularly on cautious ponder of person stages in understanding with a well-known calculation that decides the arrange and substance of each stage. For visual inventive movement, the explanation gets to be particularly critical: “the movement carried out by its subject incorporates the objective, the

implies, the change handle itself and its result” [12, P.83-84]. Creative action continuously infers getting a result – the creation of a visual protest of a certain level of complexity and oddity. The result is utilized to judge the victory of this sort of movement and the level of inventiveness improvement.

For the advancement of imaginative potential and planning of understudies for imagination, inventiveness and involvement of visual imaginative action are shaped. At the same time, visual imaginative movement is carried out in a moderately little volume (adequate for passing and working through all stages of visual and decorative-applied imagination) beneath the direction of a teacher. The current framework of shaping the involvement of visual inventive action permits the consideration of computers (realistic tablet) in this movement as it were as an extra apparatus, gear when performing certain stages. An isolated academic issue remains the utilize of computer innovation to create the inventive potential of understudies.

Numerous creators emphasize the significance of creating suitable instructional conditions, the nonattendance of which does not permit software engineers to make educationally viable program devices. One of the fundamental reasons for the nonattendance of such pedantic conditions is the deficiently information of mental marvels related with the use of cutting edge computer innovation within the arrangement of the encounter of visual imaginative action. The confinements of the “mechanical” approach to the creation of robotized preparing frameworks are showed, when it is accepted that the adequacy of data discernment straightforwardly depends on the response of the machine to the activities and requests of the learner. It is obvious that man could be a much more complex and eccentric creature.

Two subsystems (human and computer) they are qualitatively heterogeneous, and the effectiveness of the dialogue with the computer depends on the consistency of their characteristics. A. Tyhon warns against the danger of negative consequences if the process of computerization is spontaneous and purely technocratic [15].

Psychologists often use the concept of “subconscious”. The presence of unconscious components of human mental activity is proved. The work of the subconscious mind in the process of communicating with a computer is still poorly understood, as are many other psychological issues related to the use of computers. There is a contradiction between the need to use computers and the lack of methods for their use. The following aspects of the problem of computerization were considered in the works of various authors:

- improving the creative nature of learning (Galatskova I.A. Oblasov V.V.);
- psychological influence of computers (Tikhon A. S. Kochioban A. B.).

A separate problem is the need for a clear classification of the ways of using computer technology in the formation of the experience of visual creative activity due to the variety of possibilities of using modern computer technology.

The far incomplete initial classification of the use of computers has three directions:

- computer as a learning tool,
- computer as an object of study,
- computer as a technical assistant to the teacher in the organization of the educational process.

The use of computers in training is not yet effective enough and does not give the result that we would like to expect. This is due to the fact that the theoretical foundations of computerization of learning are insufficiently developed.

In this case, it is necessary to solve not so much technical as psychological and pedagogical problems of computerization. According to L.A.Nainysh, three groups of such problems can be distinguished [16]:

- theoretical and methodological nature;
- related to the development of training technology;
- related to the design of training programs.

In conclusion, I would like to note that our research and creative activity, organized in the process of programming various computer games, is an effective means for the development of creative abilities of students.

Conclusion. One of the essential difficulty today remains the extreme complexity of creating software. This factor prevents the creation of the necessary programs directly by the teachers themselves and requires the mandatory participation of professional programmers.

And this, in turn, creates the need for careful elaboration of specific methods for compiling various training programs created for specialized educational fields such as the formation of experience in visual creative activity. Evaluating the experimental work carried out by us, we note that it was aimed at using a specially created system that includes organized methodological and psychological support to systematically manage the development of the creative abilities of high school students of their educational and creative activities in programming didactic computer games.

The methodological system for the development of creative abilities of high school students in the process of programming didactic computer games is based on the integration of the following components: 1) social order for the development of creative abilities of the individual. 2) components of the process of organizing the development of creative abilities of high school students in the process of programming didactic computer games: a) purpose; b) stages c) content; c) methods and techniques; d) forms; e) programming teaching tools that influence the development of creative abilities are used in unity with methods and methodological techniques; f) criteria are determined based on the structure of students’ creative abilities under consideration.

In order to identify the dynamics of the development of creative abilities of high school students in the process of programming didactic computer games during the year and to confirm the hypothesis of the study, a control experiment was conducted. The results obtained give grounds to conclude that the hypothesis is correct and allow us to state the fulfillment of the tasks set.

References

- [1] Special'naya pedagogika. – V 3 t. – T.1 / pod red. N.M.Nazarovoj. – M.: Academia, 2017. – 304 s.
- [2] Averchenko V.I., Malahov Yu.A. Metody inzhenernogo tvorchestva: Uchebnoe posobie. – M.: Flinta, 2021. – 78 s.
- [3] Tihomirov E.I. Social'naya pedagogika. Samorealizaciya shkol'nikov v kollektive. – M.: Academia, 2018. – 206 s.
- [4] Polyakov K.Yu. Programmirovaniye. Python. C++ Chast' 4: uchebnoe posobie. – M.: Binom. Laboratoriya znaniy, 2019. – 181 s.
- [5] Haritonov S.V., Stepanenko N.V. Primeneniye vozmozhnostej Microsoft Excel v modelirovani. – T 12. – № 1(67). – 2017. – S.137-139.
- [6] Bordovskaya N.V. Psihologiya i pedagogika: Uchebnik dlya VUZov. Standart tret'ego pokoleniya. – SPb.: Piter, 2017. – 624 s.
- [7] Shishkina A.N. Programmirovaniye didakticheskikh komp'yuternyh igr kak sredstvo razvitiya tvorcheskikh sposobnostej uchashchihsya starshih klassov v usloviyah integracii obshchego i dopolnitel'nogo obrazovaniya //Strategicheskie orientiry sovremennogo obrazovaniya: sbornik nauchnyh statej / Ural'skij gosudarstvennyj pedagogicheskij universitet. – Ekaterinburg, 2020. – Chast' 3. – S.343-346.
- [8] Uvarov A. Tekhnologii virtual'noj real'nosti v obrazovanii //Nauka i shkola. – 2018. – № 4. – S.108-117.
- [9] Erogoва I.S. Komp'yuternye igrы v obuchenii //Vestnik nauki i tvorchestva. Sibirskij federal'nyj universitet. – Krasnoyarsk, 2016. – S.78-79.
- [10] Galackova I.A., Oblasov V.V. Modelirovaniye v processe obucheniya kak sredstvo povysheniya tvorcheskoj aktivnosti uchashchihsya //Sovremennye problemy nauki i obrazovaniya. – 2018. – № 2. – S.124-130.
- [11] Solomon Majmon. Kriticheskie issledovaniya o chelovecheskom ume, ili vysshej sposobnosti poznaniya i voli /Per. s nem. K. Loshchevskogo. — SPb.: Gumanitarnaya Akademiya, 2017. – 306 s.
- [12] Kanke V.A. Filosofiya: Uchebnoe posobie. M.: Infra – M, 2018. – 286 s.
- [13] Gerver V.A., Ryblina A.A., Tenyakshev A.M. Osnovy inzhenernoj grafiki: Uchebnoe posobie. – M.: Knorus, 2019. – 426 s.
- [14] Magen-Nagar, N., Shachar, H., & Argaman, O. (2019). Changing the learning environment: Teachers and students' collaboration in creating digital games. Journal of Information Technology Education: Innovations in Prac-tice, 18: 61-85. <https://doi.org/10.28945/4405>.
- [15] Tihon A.S. Kochioban A.B. Negativnoe vliyaniye komp'yutera i interneta na psihiku i fizicheskoe zdorov'e detej //International Academy Journal Web of Scholar 1(43), January 2020.-S36-39.
- [16] Najnish L.A. Inzhenernaya pedagogika: Nauchno-metodicheskoe posobie /L.A.Najnish, V.N. Lyusev. – M.: Infra-M, 2017. – 256 s.
- [17] Wu, M. L. (2018). Making sense of digital game-based learning: A learning theory-based typology useful for teachers. Journal of Studies in Education, 8(4): 1-14. <https://doi.org/10.5296/jse.v8i4.13022>.

Оқыту үдерісі барысында компьютерлік ойындарды қолдану

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Аңдатпа

Қоғамның болашақ мұғалімдерге, оның ішінде суретші-ұстаздардың алдына қоятын маңызды талаптардың бірі–олардың үнемі ізденуге дайындығы және мамандандырылған өнер оқу орындарында оқыту үдерісі барысында шешілуі қажет мәселелердің бірі “көркемдік талғам мен шығармашылық ойлауды” қалыптастыру болып отыр. Алғашқы мектеп табалдырығын аттағаннан бастап, оқушы кейбір қолайсыздықтарға тап болуы мүмкін. Өйткені, бүгінгі таңда барлық мектептерде жоғары жабдықталған технологиялық сыныптар жоқтың қасы, ескірген оқу бағдарламалары мен әдістемелік құралдар

оқушылардың оқу мотивациясына кедергі жасап, оның едәуір төмендеуіне әкеліп соғатыны белгілі, және осы жәйт әрдайым мұғалімдерді оқытудың заманауи құралдары мен әдістерін жаңаша іздеуге мәжбүр ететіні рас. Мақалада компьютердің оқу және оқудан тыс іс-әрекеттерде қолданылуы және оқу үдерісінде компьютерлік ойындарды белгілі бір оқу тапсырмасымен біріктірілуі, оқушыға оқу материалын оңай игеруге мүмкіндік беріп, оны тиісті мотивациялық компоненттер арқылы шығармашылыққа бағыттау мәселелері қарастырылады.

Түйін сөздер: графика; шығармашылық; сурет; әдіс; модель; компьютерлік ойындар; компьютерлік бағдарламалар; технология; ғылыми-техникалық прогресс.

Применение компьютерных игр в процессе обучения

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Аннотация

Одним из важнейших требований, предъявляемых обществом, будущим педагогам, в том числе педагогам-художникам является их готовность к постоянному поиску и одна из проблем, которую необходимо решать в процессе обучения в специализированных художественных учебных заведениях, остается проблема привития «художественного вкуса и творческого мышления». Начиная, учиться в школе в первое время ученик может почувствовать определенный дискомфорт. Не во всех школах сегодня еще есть высоко оснащенные технологические классы, устаревшие учебные программы и методические приемы приводят к существенному снижению мотивации учения школьников, заставляя педагогов искать более современные средства и методы обучения. В данной статье рассматривается использование компьютеров в учебной и внеурочной деятельности, где игровая компьютерная среда, соединяясь с конкретной учебной задачей, позволяет ученику легко усвоить материал, а соответствующие мотивационные компоненты, ориентируют его на творчество.

Ключевые слова: графика; творчество; рисунок; метод; модель; компьютерные игры; компьютерные программы; технология; научно-технический прогресс.