CURRENT RESEARCH JOURNAL OF PEDAGOGICS
(ISSN –2767-3278)
VOLUME 05 ISSUE 05 Pages: 59-63
SJIF IMPACT FACTOR (2022: 6. 013) (2023: 7. 266) (2024: 8.125)
OCLC – 1242041055
Publisher: Master Journals

Journal Website: https://masterjournals.com/index.php/crjp

Research Article

IMPROVEMENT OF TEACHING METHODOLOGY OF SPECIALIZED SUBJECTS USING 3D MAX TECHNOLOGIES IN THE DIRECTION OF VOCATIONAL EDUCATION "DESIGN"

Submission Date: May 18, 2024, **Accepted Date:** May 23, 2024,
Published Date: May 28, 2024
Crossref doi: https://doi.org/10.37547/pedagogics-crjp-05-05-12

Gofurova Aziza Xidirnazar Qizi
Jizzakh State Pedagogy University, Assistant Uzbekistan

ABSTRACT

This article presents ideas about using teaching techniques and computer technologies, along with interactive methods, to improve teaching dress design processes. Information is given on the fact that the correct choice of educational methods in the teaching of specialized subjects of clothing design develops students' knowledge and skills, creates interest in learning, motivation, and develops the ability of students to work independently and creatively. The article also lists the guaranteed results of the correct choice of methods.

KEYWORDS

Method, 3D max, student, design, designer, clothing, specialty, teaching, design, digital technology, innovation.

INTRODUCTION

Currently, the problem of the computerization of modern schools and universities is being actively discussed by teachers and psychologists. The conclusions of many studies on this topic are described in detail in scientific and scientific-methodical literature. Features of the use of digital technologies by students in the process of mastering various subjects were considered in the research works conducted by scientists from the countries of the Commonwealth of Independent States (CIS) and scientists from foreign countries.

Including E.E. Aleksandrovna, the use of automatic systems of design (CAD) in the teaching of specialized subjects to students of the engineering-pedagogical course, T. Chemodonovna on the use of CAD in general engineering drawings, and professor V.A. Obukhovets

CURRENT RESEARCH JOURNAL OF PEDAGOGICS
(ISSN –2767-3278)
VOLUME 05 ISSUE 05 Pages: 59-63
SJIF IMPACT FACTOR (2022: 6. 013) (2023: 7. 266) (2024: 8.125)
OCLC – 1242041055
Publisher: Master Journals

on the use of 2D software in order to organize and methodically provide the process of teaching students of a technical university to work with computer-aided design systems [].

In the dissertation work of N.A. Sablina, the pedagogical conditions of an individually oriented approach to the development of artistic and creative activity of students were determined, and in the scientific research work of M.N. Marchenko, from the point of view of developing the abilities of designers for creative activity, T.N. Suvorova's individual characteristics of the student personality, cognitive interests , will serve as methodological guidelines for our dissertation research, with the theoretical justification and experimental investigation of the conflicts between the possibilities of 3D technologies to improve the quality of education, taking into account the educational model used in educational institutions of professional aspirations.

Today, the professional training of a designer cannot be imagined without the use of modern digital technologies. The professional activity of the future specialist-designer requires universal knowledge of modern methods of modeling and visualization of multidimensional space in digital technologies, which helps to set new requirements for the training of specialists in the field of design.

The use of digital technologies together with interactive methods for the purpose of improving the teaching processes creates a demand for technical means of teaching and computer technologies. Based on this, today digital technologies are actively used in all fields, as well as in the higher education system. The correct choice of educational methods in the teaching of specialized subjects creates interest and motivation in students to acquire knowledge and skills, increases their learning activity, and ensures that students have the ability to work independently and creatively. The studies did not provide ideas on what programs to use in the development of artistic and creative activities by students studying dress design with the help of three-dimensional computer modeling. The review of dissertation works shows that the development and formation of artistic and creative activity among students were considered mainly within the framework of arts and artistic crafts.

As a result of our research, we have developed a model of the process of teaching design to students using CLO3D, Marvelous Designer, Style3D design and modeling, Assyst CAD, and Autodesk 3Ds programs of 3DMAX technology in higher educational institutions, training specialists in the field of "design.". We paid special attention to the selection of training methods in the development of the constructive design competence of future specialists, in the improvement of training sessions, and in the organization of practical sessions. The use of 3D MAX technologies in the teaching of specialized subjects guarantees the following results:

- creating interest and motivation in students to thoroughly master the basics of specialized subjects on the basis of 3D MAX technology;
- increase their learning activity;
- to ensure that students have the ability to think independently and creatively;
- improving the quality of teaching the basics of specialized subjects by students;
- the direction of design serves to increase the efficiency of teaching specialized subjects.

In the course of the research, attention was paid to the effective use of interactive methods in exposure and practical training, taking into account their characteristic features. In this case, first of all, interactive methods were chosen, which are able to

CURRENT RESEARCH JOURNAL OF PEDAGOGICS
(ISSN –2767-3278)
VOLUME 05 ISSUE 05 Pages: 59-63
SJIF IMPACT FACTOR (2022: 6. 013) (2023: 7. 266) (2024: 8.125)
OCLC – 1242041055
Publisher: Master Journals

provide theoretical knowledge and strengthen this knowledge to ensure the expected result for exposure and practical training.

With the help of 3D MAX technology, it is possible to improve the teaching process of specialization subjects in the direction of "design" in the following order:

1. Integrating 3D MAX Technology into Curriculum: Integrating 3D MAX Technology into Design Major Qualifications, Curriculum, and Science Programs. Using this program will help students acquire basic and advanced skills in the subject. Assignments and projects given to students during training should be designed to use 3D MAX technology for students to create and visualize their own design projects.

2. Practice-based teaching: It is very important to give students the opportunity to apply the knowledge they have acquired by giving them practical exercises in class. Organizing practical training and master classes where students can directly work with design in 3D MAX technology will help to develop their practical skills and improve their results. It is recommended to use practice-based methods in teaching design student's 3D Max technology.

3. Projects and Exercises: Preparing projects and exercises to teach students how to design with 3D MAX technology will be very useful. For this, it is necessary to organize project work that requires the use of 3D MAX technology to create real design projects. These organized projects and exercises allow students to consolidate their acquired knowledge in practice. For example, in 3D MAX, exercises such as working with an avatar, creating a model, animating, applying materials and textures, and creating illustrations and lighting effects will help students improve their skills and abilities.

4. Individual approach: It is very important to provide students with an individual, work-oriented approach to teaching design in 3D MAX technology to assess their acquired knowledge levels with grades. Assessing and providing feedback to students is a factor in improving their knowledge, skills, and performance.

This helps them identify their mistakes and correct them. Individual approaches to 3D MAX technology allow us to provide additional support to students in strengthening their acquired knowledge. Additional help can be obtained from online resources and study materials. There are many online resources, video tutorials, and study materials to help students learn 3D MAX. Students are encouraged to use these resources for independent study and practical lessons.

5. Corporate training: It is recommended to use corporate training methods when training design students in 3D Max technology. Teaching students to work in groups allows them to help each other and share their knowledge with others. This method helps to improve students' work efficiency and develop their ability to work in a team.

6. Use of real-life examples: It is very important to use real-life examples when teaching design students 3D Max technology. Giving students real-life design tasks, projects, and exercises that involve them in solving real-life design tasks, for example, allowing them to design famous people from their clothes using elements of traditional clothes, is very useful.

7. Use of the latest news: It is very important to use the latest news in the field when teaching design students using the tools of 3D Max technology. Informing students about new design methods, tools, and opportunities in this technology and implementing these methods and approaches will help design students develop their skills in 3D MAX technology and prepare them for a successful design career.

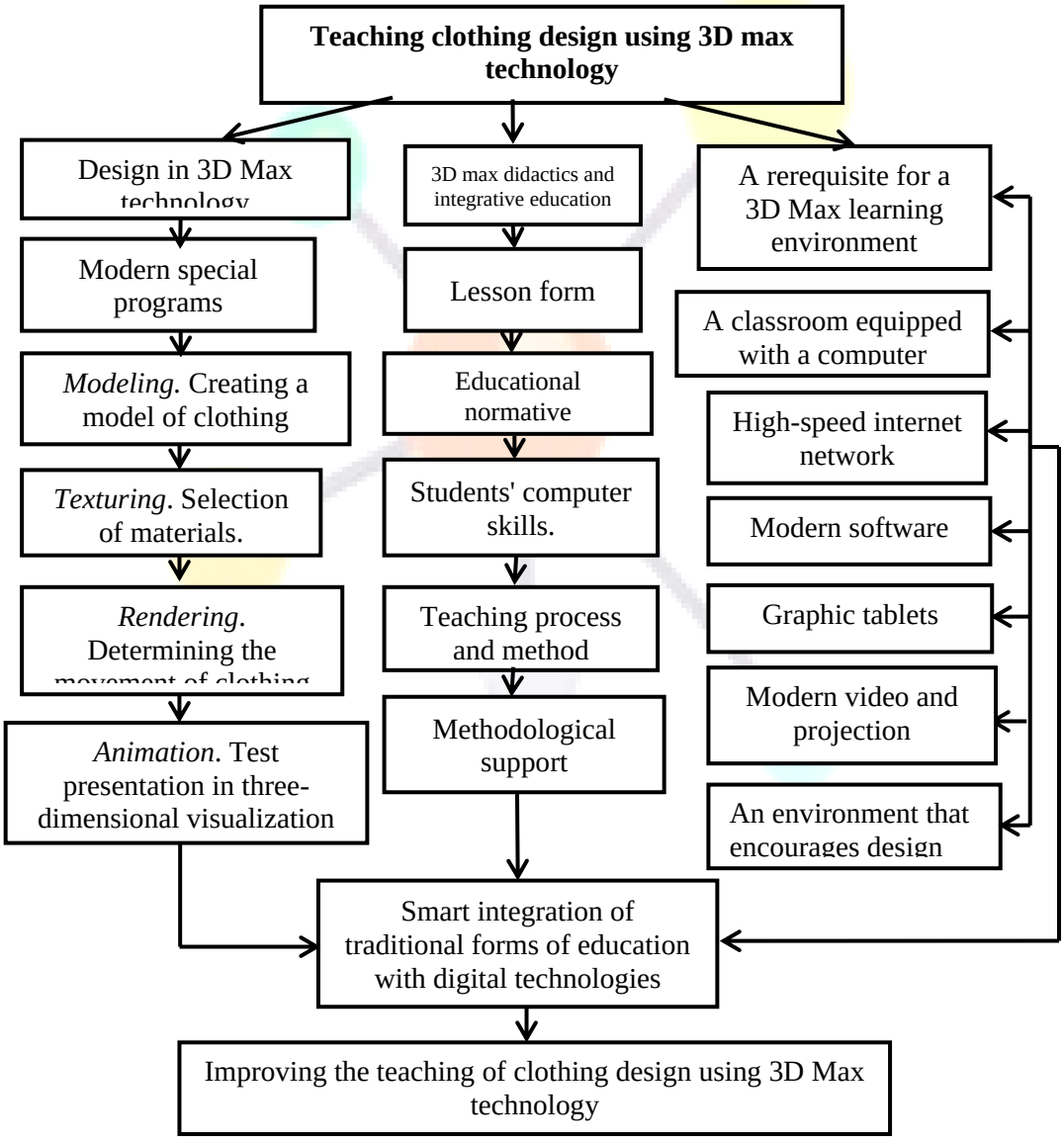
From our side, in the teaching of "Computer Modeling of a Design Object," we paid great attention to the

CURRENT RESEARCH JOURNAL OF PEDAGOGICS
(ISSN –2767-3278)
VOLUME 05 ISSUE 05 Pages: 59-63
SJIF IMPACT FACTOR (2022: 6. 013) (2023: 7. 266) (2024: 8.125)
OCLC – 1242041055
Publisher: Master Journals

teaching methods of independent work and individual approach in teaching based on three-dimensional technology, while developing and improving the improved methodology of teaching design to students with the help of 3D MAX technology(figure -1).

When starting to study design in 3D MAX technology, students should have technical knowledge and theoretical knowledge of specialized subjects, along with creativity. Analyzing the possibilities of integrating clothing design into the main subjects of the curriculum, we should turn to the subjects of visual arts, painting, composition, and clothing design.

Due to the availability and breadth of a unique set of didactic features, the computer technology of these 3D MAX technologies is a very modern and promising tool for use in the field of education.



CURRENT RESEARCH JOURNAL OF PEDAGOGICS
(ISSN –2767-3278)
VOLUME 05 ISSUE 05 Pages: 59-63
SJIF IMPACT FACTOR (2022: 6. 013) (2023: 7. 266) (2024: 8.125)
OCLC – 1242041055
Publisher: Master Journals

Figure -1. Methodology of Teaching Clothing Design Using 3D Max Technology

Taking into account the specific and didactic possibilities of 3D MAX technology, it is of particular importance to use it in the educational process. Because it improves students' perceptions of space, vision, abstract-logical and figurative thinking, sense of color, creative imagination, visual images, and integrity of perception, it is a unique means of developing personal qualities as well as structural features of organizing design activities.

Digital technologies are a product of the development of world civilization; therefore, the employees of education and other fields in the country need to adapt to the trend of their continuous development and expand their use in more fields, thereby bringing the level of development of science and technology to a higher level.

The use of digital technologies in the educational process in higher education helps to develop the individual working abilities of students, to form a desire for self-improvement, and to develop the skills of working with information technologies for future designers and teachers, ensuring the interdependence between natural-scientific, technical, and social sciences and art.

REFERENCES

1. N.A Sablina Development of imagination as the main component of professional training of design students / N.A. Sablina // Higher education today. - 2012.- No. 7. - P.52-54. 169
2. N.A Sablina. Development of the imagination of design students as a condition for the formation of professional qualities/N.A. Sablina // Teacher of the XXI century. -2012.- No. 4. – P.132-136
3. M. N. Marchenko Computer graphics / programs of specialization disciplines (for specialties 030800 "Fine Arts" and 052400 "Design"). -Krasnodar: KubSU, 2002. - 22 p.
4. M. N. Marchenko Basics of three-dimensional modeling of objects in COREL DREAM 3D: textbook. allowance / M. N. Marchenko. - Krasnodar: KubSU, 1998. - 51
5. M. N. Marchenko Development of abilities for design activities: on the material of teaching students of the art and graphic faculty of technical and computer graphics: dis. Dr. ped. Sciences: 13.00.02 / Marchenko Marina Nikolaevna. – Krasnodar: 2002. - 442c.
6. A. X. Gofurova "CREATION AND STRENGTHENING OF FOLDS ON CLOTHING PARTS." BBK 1 P76 (2021): 25.
7. A. V. Gofurova and S. S. Gofurova. "METHODOLOGY FOR TEACHING SPECIAL SUBJECTS IN THE FIELD OF PROFESSIONAL DESIGN USING 3D TECHNOLOGIES." Economics and Society 2 (105) (2023): 1367-1373