

Research on the Development Ideas of Online Courses for Digital Media Art Majors Based on OBE (Outcome-Based Education) Teaching Concept

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ABSTRACT

Digital media art, as an interdisciplinary field that integrates digital technology, creative art, and visual design, is increasingly receiving widespread attention. This study aims to explore the characteristics of online course construction and course content development for digital media art majors. Research has found that the characteristics of digital media art online courses mainly include comprehensive interdisciplinary, practice oriented and project driven, rapid technological updates, multimedia teaching resources, personalized learning paths and assessment s, industry orientation and practical connections, international perspectives, community cooperation and collaborative learning, assessment and feedback mechanisms, and sustainable development and updates. These characteristics provide guidance for the design of online courses on digital media art, ensuring that students can fully understand the knowledge and skills in the field of digital media art, and apply them to practice to meet the needs of the rapidly developing digital media field. In the future, further research can be conducted on the implementation effectiveness and teaching innovation of digital media art online courses, continuously optimizing course design, and promoting the development of digital media art education.

Keywords: Digital media art, Online courses, Course construction.

1. INTRODUCTION

The research on the construction and content development of online courses for digital media art majors based on the OBE (Outcome-Based Education) teaching philosophy aims to emphasize the ultimate goal of course design and teaching: to cultivate students' specific abilities and skills. OBE values the learning objectives of the curriculum and the development of students' practical abilities to ensure that they possess the necessary knowledge, skills, understanding, and attitudes to meet the requirements of future career development. Firstly, course design should start with clearly defined learning objectives, to develop corresponding teaching activities and assessment methods for these learning objectives. The development of course content should be based on the needs and abilities of learners. Secondly, the course design should emphasize interdisciplinary characteristics, integrate multidisciplinary knowledge in the field of digital media art, and enable students to form a

comprehensive theoretical foundation and practical ability. In addition, it is necessary to collect students' learning outcomes and opinions through regular assessment and feedback mechanisms, continuously adjust and improve course content and teaching methods, to ensure the effectiveness and quality of the course. The construction and content development of online courses for digital media art majors based on OBE teaching philosophy should be closely combined with actual industry needs and student development goals, providing students with more practical, innovative, and adaptable learning experiences.

2. CHARACTERISTICS OF COURSE CONSTRUCTION FOR DIGITAL MEDIA ART MAJORS

Digital media art is an interdisciplinary art field that involves digital technology, creative art, and visual design. The construction of online courses and the development of course content are crucial

for digital media art majors, as they require a combination of theoretical knowledge and practical skills to ensure that students can fully understand and apply various aspects of digital media art. The following are the characteristics and research directions of online course construction and course content development for digital media art majors:

2.1 Comprehensive Interdisciplinarity

Digital media art involves interdisciplinary knowledge, including computer science, art, design, media studies, etc. When constructing a digital media art major, it is a must to break down traditional disciplinary barriers and integrate multidisciplinary knowledge to ensure that students can form a systematic and comprehensive disciplinary cognition and practical ability. Students need to learn computer science to understand the principles, operation methods, and development trends of digital media technology. At the same time, they also need to learn art and design, cultivate creative thinking, aesthetic awareness, and design concepts, in order to create attractive and artistic digital media works. The knowledge of media studies enables them to understand the social, cultural, and communication background of digital media works, and enhance their social influence.

Comprehensive interdisciplinary online courses require the design of a hierarchical and structured curriculum system, enabling students to gradually delve into different disciplinary fields. By organizing course content reasonably, teachers can guide students to integrate and apply their comprehensive subject knowledge organically in digital media art creation. This interdisciplinary comprehensive teaching model will help students establish rich and diverse interdisciplinary thinking, laying a solid theoretical and practical foundation for their future digital media art creation.

2.2 Being Practice-oriented and Being Project-driven

Being practice-oriented and being project-driven are important principles in the design of online courses for digital media art majors. As a field that emphasizes practice and creativity, the learning process of digital media art must be centered around practice, and project-driven to stimulate students' creativity and problem-solving abilities. Online courses should focus on designing practical projects that allow students to participate

in the entire process of digital media art creation firsthand. These projects can simulate real-life work scenarios, from conception, planning to implementation, and presentation, allowing students to unleash their creativity and skills at every stage. Through project driven approach, students are able to apply their theoretical knowledge to practice, experience the joy of digital media art creation, and cultivate practical problem-solving skills. Each project should have clear goals and requirements, and students need to independently think and design creative solutions, choose suitable digital tools and technologies to achieve them. In the progress of the project, teachers should play the role of mentors, provide timely guidance, suggestions, and feedback, guide students to discover and solve problems, and continuously improve their work. In short, practice-oriented and project-driven online course design can enable students to accumulate experience, cultivate skills, stimulate creativity, and lay a solid foundation for future digital media art practice.

2.3 Rapid Technological Updates

The digital media field, as a rapidly advancing field of technology, has an extremely fast pace of technological updates. New software, hardware, and technology are constantly emerging, bringing broader creative space and richer display forms to digital media art.

Faced with this rapidly developing situation, the design of online courses for digital media art majors must update course content in a timely manner to ensure that students understand the latest industry trends and technological trends. Firstly, the course content needs to be regularly evaluated and updated. Curriculum developers should regularly review the curriculum outline and textbooks, provide timely feedback on the latest technological progress, and adjust and update the course content. People can obtain the latest information by collaborating with industry professionals and enterprises, participating in industry seminars, exhibitions, and other means. Secondly, course design should focus on cultivating students' learning and adaptability abilities. In addition to imparting specific software and technologies, the attention in the courses should also be paid on cultivating students' learning abilities and independent learning habits, enabling them to have the ability to continuously learn and adapt to new technologies. Teachers should encourage students to actively explore new technologies, participate in

open source communities, projects, or practices, constantly broaden their horizons, and accumulate experience. In addition, specific course modules or elective courses can be set up to focus on the latest technologies and cutting-edge fields for in-depth research and exploration. These modules can be taught by professionals or researchers in the industry, providing students with the latest technological knowledge and development trends, and stimulating their innovation awareness.

2.4 Multimedia Teaching Resources

Online courses require rich multimedia teaching resources to present course content in diverse ways and enhance learning outcomes. Firstly, video tutorials are indispensable multimedia teaching resources. Video tutorials can visually and vividly showcase the creative process and technological applications of digital media art, providing students with multi-dimensional learning experiences such as visual and auditory experiences. Through video tutorials, students can have a more specific and in-depth understanding of the course content, improving learning efficiency. Secondly, sample projects are also very important multimedia teaching resources. By showcasing successful cases or the implementation process and results of specific projects, students can learn practical experience and industry standards, understand project design ideas and practical skills. Sample projects can stimulate students' creative thinking and inspire them to try their own project creations. In addition, interactive simulation is also an effective way to improve learning effectiveness. By simulating actual scenarios and situations, students can participate in decision-making and problem-solving, thereby better understanding the application of theoretical knowledge. Interactive simulation can stimulate students' participation and initiative, and promote the internalization and application of knowledge.

2.5 Personalized Learning Paths and Assessment

Personalized learning paths and assessment are key elements in the design of digital media art online courses. Given the diverse learning backgrounds, interests, and differences in learning abilities of students, it is crucial to provide customized and personalized learning paths and assessment methods for each student. Firstly, personalized learning paths are designed based on students' prior knowledge level, academic

background, and learning objectives. By setting up multiple learning starting points and branch choices, students can choose course content and learning directions that are suitable for themselves based on their academic level and interests. This personalized learning path can stimulate students' learning motivation, making the learning process more targeted and flexible. Secondly, personalized assessment methods should meet the learning needs and interests of students. Different students have different subject preferences and academic strengths, and online courses should provide diverse assessment methods, such as project evaluation, group discussions, individual assignments, online quizzes, etc., to meet the personalized learning needs of students. Students can choose an assessment method that suits their learning style and demonstrate their strengths. In addition, it is necessary to encourage students to participate in extracurricular activities and practical projects in course design, providing opportunities to independently expand their knowledge, which can help students discover their interests, hobbies, and potential talents, thereby adjusting their learning paths and choosing directions that are more suitable for personal development. Finally, regular personalized assessments and feedback are necessary. Teachers should regularly communicate with students, understand their learning situation, difficulties, and needs, adjust course design in a timely manner, and provide targeted guidance and support. Personalized feedback can help students better understand their academic level, improve learning methods, and achieve higher academic achievements.

2.6 Industry Orientation and Practical Connection

Industry orientation and practical connection are important principles in the design of digital media art online courses. Digital media art is a highly practical and innovative field, close connections to the industry can ensure that course content meets industry needs, provide students with practical experience, and enhance their competitiveness in the workplace. Firstly, the course content should be based on industry practice. Course designers can incorporate information into their course content by gaining a deep understanding of the latest developments, technological applications, and creative trends in the field of digital media art. Introducing industry case studies can help students have a clearer understanding of the application of digital media art in practical projects and cultivate

their ability to solve practical problems. Secondly, it is necessary to strive to provide practical opportunities for students, such as internships, practical training, on-site inspections, etc. Schools can collaborate with the industry to establish a practical base, and provide students with a real work environment and project experience, allowing them to learn practical skills and industry experience through participating in practical projects. This practical connection not only deepens students' understanding of the industry, but also helps to establish interpersonal relationships within the industry, laying a foundation for future employment. In addition, the introduction of industry mentors is also very beneficial. Industry mentors are usually experienced industry professionals who can share practical experience, industry trends, career planning, and other knowledge, providing useful guidance for students' academic and career development. Through communication with industry mentors, students can better understand industry requirements, broaden their horizons, and form career development plans.

2.7 International Horizons

Considering the internationalization characteristics of digital media art, there should be international horizons in the course content, covering art forms and genres from different cultural backgrounds and countries, so as to ensure that students have cross-cultural and cross-border understanding and creative abilities. Firstly, the course content should cover artistic expressions from different cultural backgrounds and countries. Digital media art is not limited by national borders, and artistic expressions from different cultural backgrounds have unique characteristics and concepts. By learning and understanding the artistic creations of different cultures, students can broaden their horizons and enhance their respect and understanding of global multiculturalism. Secondly, it is necessary to introduce art genres, schools, and representative digital media artists from different countries and regions. This helps students to gain a deeper understanding of the development process, characteristics, and trends of digital media art worldwide. Students can enrich their creations by learning from the works of international artists and drawing inspiration from different cultures. In addition, encouraging international exchange and cooperation is also an important way to achieve an international perspective. Organizing students to participate in international digital media art exhibitions, competitions, seminars, and other

activities, and exchanging ideas and experiences with peers from around the world, will promote the internationalization process of digital media art education. Ultimately, there is a necessity to establish an international team and collaborative network, invite professionals from different countries and cultural backgrounds to participate in teaching or academic exchanges, strengthen international exchanges in the field of digital media art, and promote innovation and cross-cultural cooperation.

2.8 Community Cooperation and Collaborative Learning

Students should be encouraged to engage in collaborative learning in the course, and schools can simulate real work environments through team project collaboration, so as to cultivate students' teamwork and communication skills. The collaborative learning approach can not only promote cooperation and communication among students, but also simulate real work environments, cultivating students' teamwork skills, communication skills, and problem-solving abilities. Firstly, through team project collaboration, students can learn the importance of teamwork in the field of digital media art. Digital media art often requires the joint efforts of multiple individuals to complete a work. Therefore, through collaborative learning, students can understand the cooperation and coordination between different roles, and experience the creativity and efficiency improvement brought by team collaboration. Secondly, cooperative learning can simulate real work environments. The field of digital media art often requires collaboration with professionals from other creative fields, such as designers, programmers, film and television producers, etc. By simulating cross disciplinary collaborative learning, students can better adapt to diverse collaborative environments in their future careers. In addition, cooperative learning can enrich students' learning experience. By discussing, sharing experiences, and solving problems with classmates, students can receive inspiration and suggestions from different perspectives, deepen their understanding and mastery of course content, and improve their academic level. Thirdly, encouraging students to collaborate in learning within the community can establish a beneficial academic exchange platform. Through community cooperation, students can meet like-minded partners, establish long-term cooperative relationships, and jointly explore the development, technology, trends, etc. of the digital

media art field, forming a good academic atmosphere.

2.9 Assessment and Feedback Mechanism

It is necessary to design effective evaluation and feedback mechanisms, including regular quizzes, project evaluations, peer reviews, etc., to help students continuously improve and adjust course design. Through appropriately designed evaluation methods and timely and effective feedback, students can better understand course content, identify shortcomings and make improvements, achieving continuous academic progress. Firstly, regular tests are an important means of evaluating students' mastery level. By assessing students' understanding and mastery of course knowledge, teachers can adjust teaching strategies, promptly identify difficulties that students face, and take measures to solve them. Secondly, project evaluation is an effective way to enhance students' practical abilities. By evaluating students' practical projects, not only can their ability to apply knowledge and skills be evaluated, but can their comprehensive abilities in creativity, design, team collaboration, and other aspects also be evaluated, providing comprehensive growth feedback for students. Meanwhile, introducing peer review is also an important component of the evaluation mechanism. Mutual evaluation among classmates can stimulate their competitive awareness and innovative thinking. Peer review can also facilitate in-depth discussions and exchanges among students, broaden their horizons, and share experiences. In addition, regular evaluations and feedback from teachers are crucial for student learning. Teachers should promptly review homework, answer student questions, and provide specific suggestions and guidance to help students improve. Regular academic discussions and Q&A sessions can also bring teachers and students closer together and promote effective communication.

2.10 Sustainable Development and Updates

It is a must to establish a mechanism for sustainable development, regularly evaluate and update courses, and continuously optimize course content and teaching methods based on student and industry feedback. The field of digital media art is in a rapid development stage, with technology, creativity, and market demand constantly changing. In order to maintain the timeliness and attractiveness of the curriculum, it is necessary to establish sustainable mechanisms to regularly

evaluate, update, and optimize course content and teaching methods. Firstly, regular assessment is the foundation for sustainable development. Through regular assessments, teachers can understand the effectiveness of the course, student feedback, and academic progress. The assessment can be conducted in various ways, including student surveys, teacher evaluations, industry feedback, etc., to comprehensively understand the strengths and weaknesses of the curriculum. Secondly, continuous optimization and updates should be carried out based on the evaluation results. The assessment results provide a strong basis for course improvement. Based on feedback from students and industry, teachers can timely adjust course content, update teaching materials, improve teaching methods in a timely manner, and maintain the novelty and timeliness of the course. In addition, actively utilizing new technologies and teaching methods is also an important way to update the curriculum. The field of digital media art is closely related to new technologies, and the use of new technologies, media, and teaching tools can enrich course formats and improve teaching effectiveness. Ultimately, collaboration and communication with the industry are also important ways to maintain the timeliness of the curriculum. Maintaining close cooperation with professionals and enterprises in the digital media industry and art field can help people understand the latest trends, technological innovation, and employment needs in the industry, adjust course directions in a timely manner, and ensure that course content meets industry standards.

The above characteristics and research directions can provide guidance for the development and improvement of online courses for digital media art majors, with a focus on project practice driven approaches, multimedia technology means, and reasonable evaluation and feedback mechanisms based on disciplinary characteristics (see "Table 1").

Table 1. Development ideas for digital media art courses based on OBE teaching theory

OBE theory guidance	Characteristics of the major	Course development ideas
Goals	Comprehensive interdisciplinarity	Course overview and introduction; Basic theoretical knowledge; Creativity and design principles
Process and practice	Being practice-oriented and being project-driven	Practice of digital media art projects; Comprehensive practical projects; Industry case analysis and discussion
	Multimedia teaching resources	Digital media production technology; Multimedia content development and editing; Interaction design and user experience; Animation production and special effects technology
Feedback	Assessment and feedback mechanism	Course assessment and feedback; Ethical and legal issues;

3. DEVELOPMENT IDEAS FOR THE CONSTRUCTION OF ONLINE COURSES FOR DIGITAL MEDIA ART MAJORS

The design of online courses for digital media art majors requires comprehensive consideration of the characteristics, subject knowledge, practical skills, and learning needs of students in the field. The followings are some ideas for developing course content to ensure the comprehensiveness, practicality, and adaptability:

3.1 Design of Course Overview and Introduction

The design of course overview and introduction should introduce the definition, history, development trends, and importance of digital media art in modern society. Digital media art is a comprehensive discipline that integrates computer science, artistic creativity, and media technology, aiming to create, express, and showcase art through digital technology and multimedia means. The goal of the course is to provide students with a comprehensive understanding of digital media art, including its concepts, history, development trends, and industry applications. Through course learning, students will master the basic theories, technological applications, and creative methods of digital media art, cultivate innovative thinking and team collaboration awareness, and lay a foundation for future development in the field of digital media art.

3.2 Basic Theoretical Knowledge Construction

The basic concepts, principles, technologies, and tools of digital media, include graphic design, animation production, audio processing, video editing, and other basic knowledge. In online courses for digital media art majors, basic theoretical knowledge is crucial for students to gain a deeper understanding of digital media. Firstly, the course will introduce the basic concepts of digital media, which includes the definition, characteristics, and development history of digital media, helping students establish a holistic understanding of digital media. Secondly, the course will delve into the principles and technologies of digital media, which includes the basic principles of digital image processing, technical means of animation production, principles of audio processing, etc. By gaining a deeper understanding of these principles and technologies, students will be able to better utilize digital media tools for creative purposes. In addition, the course will also introduce tools and software closely related to digital media creation. Students will learn how to use these tools for digital media creation. Overall, the course of basic theoretical knowledge aims to lay the theoretical and technical foundation for students to create digital media art. This will lay the foundation for students to delve deeper into various fields, master advanced technologies, and engage in innovative practices in the future. At the same time, these basic theoretical knowledge will also provide solid support for students' future career development, enabling them to possess core competitiveness in the field of digital media.

3.3 Creativity and Design Principles

It is necessary to explore the inspiration and conception of digital media artistic creativity, principles of visual art design, color theory, layout design, etc., with the aim of cultivating students' unique creative thinking and aesthetic views, enabling them to possess the creative conception and design ability of digital media works. Firstly, the course will delve into the inspiration and conception of digital media artistic creativity. Students will learn how to gain inspiration, cultivate creative thinking, and engage in conceptualization and planning in digital media art creation. This includes methods and techniques for obtaining creativity from various aspects such as daily life, nature, and culture. Secondly, the course will introduce the principles of visual art design, which includes basic design principles such as composition principles, proportion, balance, repetition, contrast, rhythm, etc. By studying these principles, students can understand how to create visual beauty and harmony in digital media works. In addition, the course will also delve into color theory. Color is an extremely important element in digital media art, which not only affects visual effects but also conveys emotions and information. Students will learn how to apply colors, as well as the meaning and effects of different color combinations. Finally, the course will explore layout design. In digital media art works, layout design can directly affect the overall beauty and visual appeal of the work. Students will learn how to arrange visual elements reasonably to achieve optimal visual effects.

Through this section of the course, students will acquire the basic theories and skills of creative conception and visual design, laying the foundation for their subsequent digital media creation. Meanwhile, creativity and design principles will also provide valuable theoretical and practical support for students' future career development, enabling them to create stunning works in the field of digital media.

3.4 Digital Media Art Project Practice

Emphasizing practical projects aims to emphasize practical teaching, allowing students to apply the theories and skills learned in the course through specific projects, thereby improving their practical abilities, creative thinking, and problem-solving abilities. Firstly, this module will design diverse project cases covering different directions

in the field of digital media art, such as graphic design, animation production, interactive design, multimedia art display, etc. Each project case will be combined with specific learning objectives and skill requirements, allowing students to gradually master the relevant knowledge and skills in practice. Secondly, the course will adopt a project-based teaching method, guiding students to fully participate in project initiation, needs analysis, creative conception, production and implementation, and result display. Through practical learning activities, students will improve their creative and teamwork abilities. In addition, the course will also focus on interdisciplinary collaboration, designing projects that require interdisciplinary knowledge and skills to work together to simulate real-life work scenarios and cultivate students' ability to comprehensively apply various disciplinary knowledge to solve practical problems.

Overall, the digital media art project practice module aims to enable students to truly understand and apply the knowledge they have learned through practical projects, providing them with a platform for creative practice. This practice will enable students to gain rich experience in solving real problems, showcasing creative works, and teamwork, laying a solid foundation for their future career development.

3.5 Comprehensive Practice Project

By combining the knowledge of each module, a comprehensive practical project should be carried out, aiming to combine the knowledge of each module and require student teams to collaborate to complete the entire process of digital media art works, including design, production, presentation, etc. Firstly, this module will design challenging and comprehensive practical projects that integrate theoretical knowledge and practical skills learned in the course, aiming to enable students to fully apply and deepen their knowledge. Secondly, the course will encourage students to complete projects in a collaborative manner and simulate real-life work scenarios. Through collaboration, students can fully leverage their respective strengths and improve their teamwork and communication skills. In addition, the course will focus on the innovation and practicality of the project, encouraging students to try new creative and technological applications, while considering the actual value and experience of the work for users or audiences. The goal of the comprehensive practice project module is to cultivate students' practical ability, creativity,

teamwork ability, and problem-solving ability. By participating in comprehensive practical projects, students will gain valuable practical experience and better understand the creative process and practical application scenarios of digital media art.

This comprehensive practical project design will help transform students' theoretical knowledge into practical skills, while also providing a platform for students to demonstrate and prove their abilities. This practical experience will play a positive role in the future career of students, enabling them to better adapt to the requirements of the digital media art industry.

3.6 Industry Case Analysis and Discussion

Analyzing successful cases in the field of digital media art aims to guide students to understand the characteristics, innovative directions, and development trends of industry practice through in-depth analysis of successful cases in the field of digital media art, including commercial applications, art exhibitions, etc. Firstly, this module will select some representative digital media art cases, covering different fields and types, such as digital advertising marketing, virtual reality applications, digital art exhibitions, etc. Through in-depth analysis of these cases, students can understand the widespread application and innovative forms of digital media art in the real world. Secondly, the course will focus on successful cases in the business field, such as digital marketing advertising, brand promotion, etc. Students will analyze the success factors, marketing strategies, creative expression methods, etc. of these cases to deeply understand the role and value of digital media in the business field. In addition, the course will also explore the application of digital media art in art exhibitions, cultural creativity, and other fields. By analyzing cases of art works, exhibition design, cultural and creative projects, students will understand the relationship between digital media art, artistic innovation, and cultural dissemination, and expand their understanding of the diverse application of digital media art.

Overall, the industry case analysis and discussion module aims to showcase the rich application scenarios and diverse innovative forms of digital media art to students through specific cases, guiding them to think about the role, challenges, and future development directions of digital media art in different fields. This learning approach can enrich students' subject knowledge,

enhance their understanding of the digital media art industry, and prepare them adequately for future career development.

3.7 Digital Media Production Technology

Digital media production technology is an indispensable part of digital media art online courses, aimed at providing students with practical technical knowledge required for digital media production, introducing commonly used digital media production tools and software, and exploring their application methods in depth. Firstly, the course will introduce commonly used digital media production tools and software. These tools and software are important tools in the process of digital media production, which can help students achieve various digital media creations, including image design, video production, animation production, 3D modeling, etc. Secondly, the course will delve into the specific application methods of these tools and software. Students will learn how to use these tools for image editing, video editing, animation production, 3D modeling, and more. The focus will be on practical operations, and through demonstration and practice, students will become familiar with the tool's operating interface, functions, and application skills. In addition, the course will also introduce common techniques and methods in digital media production, such as image processing techniques, video editing principles, animation production processes, 3D modeling principles, etc. These technologies and methods are the foundation of digital media production, and are crucial for students to understand the process of digital media production and improve production efficiency.

Through this section of the course, students will master practical techniques and methods of digital media production, providing technical support and guidance for their subsequent digital media creation. Meanwhile, mastering these digital media production tools and technologies proficiently will also become an important competitive advantage for students in the digital media industry.

3.8 Multimedia Content Development and Editing

Multimedia content development and editing are key modules in digital media art online courses, aimed at teaching students the necessary skills to create, edit, and process multimedia content such as digital images, audio, and videos. Firstly, the course

will focus on introducing digital image processing skills, which includes basic editing, restoration, and synthesis of images, as well as the application of special effects. Students will learn to use various image processing software for image editing, improving the quality, aesthetics, and attractiveness of images. Secondly, the course will cover video production and editing skills. Students will learn the basic principles and techniques of video editing, including cutting, merging, adding audio, applying special effects, etc., to create artistic and professional video works. In addition, the course will teach sound processing skills. This includes audio recording, editing, mixing, special effects processing, etc. Students will learn to use professional audio processing software to improve the quality and appeal of audio.

Overall, the multimedia content development and editing module will provide students with the skills and tools needed to create high-quality digital media works. These skills not only enable students to create digital media works with professional standards, but also provide strong support for their future careers. This module will focus on practice. Through a large number of exercises and projects, students will master the development and editing skills of multimedia content, laying a solid foundation for their future digital media art creation.

3.9 Interaction Design and User Experience

Interaction design and user experience are important components of digital media art online courses, aimed at introducing students to the principles, methods, and technologies of interaction design, as well as how to ensure that digital media works have a good user experience. Firstly, the course will focus on introducing the basic principles of interaction design. Students will learn how to understand user needs, design user-friendly and intuitive interfaces, and how to improve user satisfaction and efficiency through interaction design. Secondly, the course will cover user interface design. Students will learn how to design attractive interfaces, including layout, colors, fonts, icons, etc., as well as how to improve user comprehensibility and comfort through design. In addition, the course will also delve into user experience design. Students will learn how to optimize the overall user experience, including user emotions, emotional design, user research, etc., to ensure that users have a good feeling and experience of digital media works. Finally, the

course will also introduce the importance and design methods of information architecture. Students will learn how to design clear and organized information structures so that users can easily find the information they need and improve user satisfaction.

The interaction design and user experience module will help students master the key concepts and skills of interaction design and user experience in digital media works through a combination of theoretical explanation, case analysis, and practical operation. These skills will enable students to create user-friendly, attractive, and highly usable works in the field of digital media, thereby enhancing the impact and audience satisfaction of the works.

3.10 Animation Production and Special Effects Technology

Animation production and special effects technology is a crucial part of the digital media art online course. This module aims to delve into the technology and methods of digital media animation production, covering 2D animation, 3D animation, special effects production, etc., in order to cultivate students' skills and creative abilities in the field of animation. Firstly, the course will focus on introducing 2D animation production. Students will learn the basic principles, production process, animation frame design, character modeling, and other key technologies of 2D animation. This will lay the foundation for students to create traditional and digital 2D animations, and cultivate their creativity and expressive abilities. Secondly, the course will cover 3D animation production. Students will learn key technologies such as 3D modeling, scene design, character animation, and lighting effects. Through practical projects, students will learn how to create high-quality and realistic 3D animation works. In addition, the course will also cover special effects production. Students will learn the basic concepts, techniques, and applications of special effects production. This includes particle systems, simulation effects, rendering techniques, etc., allowing students to add visual impact and realism to animated works.

Overall, the animation production and special effects technology module aims to cultivate students' technical abilities and creative skills in the field of animation through theoretical teaching, case analysis, and practical projects. These skills will equip students with the ability to create exciting animated works, laying a solid foundation for

future digital media art creation and career development.

3.11 Course Assessment and Feedback

The online courses for digital media art majors should be designed with effective evaluation and feedback mechanisms to ensure that students can achieve the predetermined learning goals and cultivate the required abilities. Here are some suggestions for assessment and feedback mechanisms:

- Clear learning objective assessment: Setting clear and measurable learning objectives can help assess students' academic achievement. Each goal should have clear standards so that students understand the level they are expected to achieve.
- Course assignments and project evaluation: Teachers design diverse assignments and projects that cover different aspects of course objectives, such as graphic design, animation production, interaction design, etc. They check whether students have made progress in skills and concepts through regular homework evaluations.
- Self assessment and peer assessment: Teachers should encourage students to evaluate their academic performance to enhance their self-awareness and critical thinking. Meanwhile, peer assessment can stimulate discussions and communication among students.
- Regular tests and exams: Design regular tests and exams that cover different aspects of course content to evaluate students' mastery and understanding of knowledge. This can provide timely feedback for teachers and students.
- Course participation and discussion evaluation: Teachers should consider students' classroom participation, post class discussions, and group discussions to assess their level of participation and ability to help cultivate their teamwork and communication skills.
- Practice project evaluation: By evaluating the practical projects completed by students, including design works, animation production, interactive design, etc., teachers evaluate students' practical ability and creative problem-solving ability.
- Regular feedback and improvement mechanism: Teachers should provide

detailed feedback to students regularly, pointing out their strengths and areas for improvement, and help them understand their academic performance. At the same time, they should collect feedback from students to adjust course content and teaching methods, and continuously improve teaching quality.

- Final assessment and graduation project: A final assessment or graduation project should be designed at the end of the course, requiring students to demonstrate their knowledge and skills learned, in order to comprehensively evaluate their growth and mastery in the course learning process.

These evaluation and feedback mechanisms should be combined with the characteristics and course objectives of digital media art majors to ensure that students fully develop and gradually achieve the expected academic and practical goals during the learning process.

3.12 Ethical and Legal Issues

It is necessary to explore the ethical, copyright, privacy and other legal and moral issues involved in the field of digital media art, and guide students to regulate their creative behavior, aiming to explore the ethical, copyright, privacy and other legal and moral issues involved in the field of digital media art, guiding students to regulate their creative behavior, and improving their legal awareness and moral literacy. Firstly, the course will introduce the ethical issues that may be involved in the field of digital media art, such as information authenticity, social impact, cultural respect, etc. Students will gain a deeper understanding of the potential impact of digital media works on society and individuals, guiding them to carefully consider their creativity and ethical discussions that may arise from their works. Secondly, this module will delve into copyright and intellectual property issues. Students will learn about the copyright legal framework, scope of copyright protection, and creative sharing of digital media works, in order to avoid infringing on the intellectual property rights of others and protect their own creative achievements. In addition, the course will also cover privacy and data security issues. Students will understand the privacy risks that digital media may face when collecting, processing, and displaying personal information, as well as how to take measures to protect user privacy and data security.

Overall, the ethics and legal issues module aims to guide students to understand the legal and moral standards in the field of digital media art and regulate their creative behavior through theoretical explanations, case studies, and discussions. This teaching design can enable students to have the ability to comply with legal regulations and moral standards, strengthen their sense of responsibility and social responsibility. In the field of digital media art, good ethical and legal literacy is crucial for the healthy development of creators and the entire industry.

4. CONCLUSION

The construction and development of online courses for digital media art majors are carried out from multiple aspects, aiming to create a comprehensive and in-depth learning experience. Firstly, the course should present a comprehensive interdisciplinary approach to digital media art, integrating knowledge from multiple disciplines such as computer science, art, design, and media studies to ensure that students establish comprehensive skills and theoretical foundations. Secondly, emphasis should be placed on practice-oriented and project-driven approaches, aiming to enhance practical and creative problem-solving abilities through project learning. Rapid updating technology is also a key focus of course design, ensuring that the content always keeps pace with industry development. The rich application of multimedia teaching resources can enrich courses, such as video tutorials, instance projects, interactive simulations, etc., presenting course content in diverse ways and improving learning effectiveness. The personalized learning path and evaluation mechanism should consider the different learning backgrounds and interests of students, providing a personalized learning experience. Industry orientation and practical connection should combine course content with actual industry needs, and through case analysis, internship opportunities, etc., enable students to better understand the industry. The international perspective will enable the curriculum to have a cross-cultural and global perspective, covering artistic expressions from different cultural backgrounds and countries. Collaborative learning and community collaboration encourage students to engage in collaborative learning and cultivate teamwork skills. Designing an effective evaluation and feedback mechanism will help students continuously improve and adjust course design. Finally, continuous updates and sustainable development mechanisms

ensure that the curriculum is continuously optimized and updated to meet the needs of the industry and students, providing substantial support for their future careers. These ideas and design directions provide comprehensive and targeted guidance for the development of online courses for digital media art majors.

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