



Innovation and Practice of the "Four-Step Advancement" Curriculum Model for Digital Media

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Abstract. This study investigates and reforms the issues faced by the undergraduate major of Digital Media Art. The research reveals the bottlenecks in teaching this major, including the rapid updates of knowledge and the disconnection between skill learning and humanistic literacy. To address these core issues, a three-stage research process was conducted. Firstly, a comprehensive review of domestic and international literature was conducted to analyze the major characteristic art forms in the Hunan region of China. Content related to national cultural confidence was incorporated into the curriculum, leading to the establishment of a preliminary curriculum system. Secondly, a selected set of 2-3 courses underwent reform, with a focus on the study of Hunan cultural spirit to complement and enrich the disciplinary content. Ideological and political education was effectively integrated into professional course learning. Finally, teaching reform and practical teaching were conducted, involving classroom observations and pre- and post-assessments of students. Effective strategies were identified to enhance students' interdisciplinary integration abilities, national confidence, and self-directed learning. Accordingly, a course teaching model was established. The research findings successfully bridged the gap between updating teaching content and fostering skill learning along with humanistic literacy. The study achieved a series of outcomes and recognition in exhibitions, competitions, and academic publications. These results have been widely applied by relevant universities and highly praised by the industry, gradually establishing a professional brand.

Keywords: New Liberal Arts, Digital Media Art, Art and Design Education, Teaching Reform

1 Problem Statement and Reform Foundation

In May 2019, the Chinese Ministry of Education, Ministry of Science and Technology, and 13 other departments jointly launched the "Six Excellence and One First-Class" 2.0 program, aiming to comprehensively promote the development of new engineering, medical, agricultural, and liberal arts disciplines[1]. In November 2020,

the Chinese Ministry of Education issued the "Declaration on the Construction of New Liberal Arts Disciplines," proposing goals of breaking down barriers between disciplines, promoting deep integration among liberal arts majors, and facilitating the intersection of liberal arts with science, engineering, agriculture, and medicine[2]. The declaration also emphasized the necessity of applying modern information technology to liberal arts education to achieve the construction of new liberal arts disciplines[3].

Within the context of the construction of new liberal arts disciplines, the emerging undergraduate major of digital media art faces several challenges. Based on the researcher's years of teaching experience and preliminary investigation results, the challenges in teaching digital media art major include rapid updates of teaching content, passive student learning, insufficient practical projects and training facilities, as well as the disconnect between skill learning and humanistic literacy[1]. The curriculum of the digital media art major encompasses courses from various fields such as literature, arts, management, science, and engineering. As an emerging discipline, establishing an independent and comprehensive curriculum system is of utmost importance. Therefore, as a faculty member of a Chinese university offering the digital media art major, the researcher has strengthened the integration of curriculum development and continuously pursued reforms and explorations in teaching models.

Over the past three years, the researcher has made comprehensive efforts to promote teaching model reforms and practices in response to the positioning of digital media art within the framework of new liberal arts, interdisciplinary education, regional characteristics, and the integration of ideological and political education into the curriculum, achieving certain experiences and outcomes.

2 Research Methods and Process

In terms of research methods, we employed literature analysis, educational experiments, questionnaires, and interviews. Through literature analysis, we interpreted and elucidated the background, objectives, and significance of the new liberal arts discipline construction policy[4]. We analyzed the current status, issues, and strategies of the new liberal arts construction, and focused on the construction of art and design curriculum systems to carry out high-quality curriculum reforms. Educational experiments utilized heuristic, project-based, and interactive teaching methods, employing action research to study the impact of teaching reform on students' knowledge abilities and humanistic literacy[5]. We used questionnaires multiple times to gather information on students' learning styles, areas of interest, and conducted on-site interviews with students in experimental and control classes, aiming to continuously improve teaching methods and stimulate students' self-directed learning abilities and innovative consciousness.

The research process consisted of three stages. In the first stage (August 2019 to July 2020), we conducted a comprehensive review of domestic and international research

literature on the construction of new liberal arts and the transformation of digital media art curriculum and teaching. Combining the characteristic art forms and national cultural confidence in the Hunan region, we established a preliminary curriculum system, implemented teaching, and promoted school-enterprise cooperation and the construction of practical teaching bases. In the second stage (August 2020 to December 2021), we selected 2-3 courses for curriculum reform, conducted research on Hunan cultural spirit from the perspective of art theory, and implemented it in the courses, effectively integrating ideological and political education into professional course learning. In the third stage (January 2022 to December 2022), We conducted research on teaching reform and carried out three rounds of practical teaching in “H5 Design”course. By observing the classroom and analyzing the differences between pre- and post-assessments of students, we summarized effective strategies to enhance the abilities of art students in interdisciplinary integration, national confidence, and self-directed learning. We established a curriculum teaching model and promoted its application.

3 Educational Teaching Program

In our College of Art and Design, a comprehensive "Four-step Advancement" curriculum and teaching system has been established since the beginning of 2019, with the fundamental mission of "cultivating moral character and nurturing talents." This system prioritizes moral education, emphasizes the development of abilities, promotes school-enterprise collaboration, and focuses on inheriting tradition while fostering innovation.



Fig. 1. "Four-step Advancement" Course Model for Digital Media Art Major in the Context of New Liberal Arts

After five years of practical exploration, we have developed a "School-Enterprise Dual" educational model, featuring a "Dual Platform," "Three Levels," and "Four Phases" teaching framework. The "Dual Platform" consists of an on-campus studio and off-campus training base, providing two major practical platforms. The "Three Levels" refer to the "Basic Skills Level," "Comprehensive Application Ability Level," and "Capability Enhancement and Innovation Level." The "Four Phases" encompass the key elements of "targeting applied talents, relying on practice platforms, driven by teaching reform, and facilitated by activity carriers".

By integrating on-campus project training and off-campus internships, we aim to enhance students' professional skills and practical abilities. We have also taken the lead in establishing a provincial-level "Digital Art Talent Innovation and Entrepreneurship Education Base" and a provincial-level "Literature and Cultural Art Communication Innovation and Entrepreneurship Education Center".

The application of our achievements has addressed long-standing bottlenecks in the teaching of art and design majors, such as the rapid updates of teaching content and the disconnection between skill learning and humanistic literacy.

Faculty and students have participated in more than 20 exhibitions, received awards, and published over 20 works. They have obtained three national-level innovation projects and two provincial-level innovation projects. Additionally, students have won more than 20 awards in subject competitions and have published multiple papers and works. The employment rate of students has increased from 72% in 2016 to over 85%, and nearly a hundred employers have highly praised students' practical and hands-on abilities. Furthermore, our achievements have been widely applied by relevant universities, resulting in significant promotion effects and receiving high recognition from the industry. Our professional brand has gradually taken shape.

- (1) "Prioritizing Moral Education": Innovative educational model integrating ideological and political education.

With the overall goal of cultivating new applied undergraduate talents at our university, based in Hunan and oriented towards the whole country, we integrate elements such as ethnic cultural confidence into the content of art foundation education. We aim to cultivate applied senior talents who possess a systematic understanding of digital media art theory and skills, as well as good moral character and humanistic qualities.

- (2) "Emphasizing Skills": Focusing on the development of applied talents.

We promote interdisciplinary curriculum construction, offer general education courses in humanities and social sciences such as literature and philosophy, address the needs of specific industries, cover a wide range of knowledge, integrate foundational and specialized knowledge with the skills required by the market, and arrange relevant

professional internships. This approach allows the practical application of knowledge in the field of digital media art to be tested.

(3) "Collaborating with Industry": Breaking through traditional disciplinary paradigms through interdisciplinary cooperation.

We comprehensively promote the development of the digital media art discipline, guided by the cultivation of applied talents. With the talent cultivation model of "market-oriented, school-enterprise cooperation, integration of theory and practice," we reform teaching methods and management models, establish and co-establish a number of practical teaching bases, strengthen school-enterprise cooperation, and enhance the development capabilities of the professional service industry.

(3) "Inheriting Innovation": Inheriting and innovating regional and traditional Chinese culture.

With "moral education" as the fundamental purpose, we actively explore creative approaches that reflect the characteristics of regional and ethnic styles in excellent art and design works. We encourage teachers and students to participate in art creation and exhibitions, fully explore regional humanistic and historical resources, and promote cultural nurturing. As shown in Table 1.

Table 1: The "Four-Step Advancement" Curriculum and Teaching System: Prioritizing Moral Education, Emphasizing Skills, Collaborating with Industry, and Inheriting Innovation.

	Course Name	Course Nature	Educational Objectives	Teaching Content	Teaching Mode
Prioritizing Moral Education	Courses in Ideological and Political Education, Career Planning, National Defense Education and Military Training, Literary Campus, University Chinese, etc.	Public Compulsory Courses, Public Elective Courses	The educational objectives are to develop a correct outlook on life, values, and worldviews, consciously practice the socialist core values; possess a good sense of legal awareness, moral cultivation, humanistic literacy, artistic cultivation, and lifelong learning; and have a strong sense of professionalism, collaboration, innovation, and international perspective.	The teaching content includes fundamental knowledge, socialist core values, and humanistic literacy.	The teaching mode is based on the integration of "Six Combinations and Three Integrations" in ideological and political courses.
	Courses in Art Theory Fundamentals, Fundamentals of Painting, Digital Media Art Fundamentals, Landscape Sketching, Folk Customs Exploration, Professional Field Studies.	Mandatory Courses in the Major.	The objectives are to understand the development history, cutting-edge advancements, research trends, and innovative directions in the field of digital media art; grasp the basic theories and skills of artistic modeling; acquire the fundamental theories and core knowledge of digital media art, as well as the necessary knowledge for artistic creation in the field.	Transition from fundamental knowledge to advanced knowledge.	Integrated teaching approach of "teaching, learning, research, and practice"; blended teaching model of "1+2+3".
	Course clusters in 2D Animation Creation, 3D Animation Creation, Virtual Engines, Mobile Interaction; Introduction of innovative entrepreneurship projects.	Specialized elective courses.	Master the artistic techniques and technical tools related to animation, comics, games, visual effects, and online video production; possess the basic abilities to independently or collaboratively create works and plan projects, meeting the practical demands of the industry.	Acquire advanced knowledge to enhance comprehensive competence; break down disciplinary barriers through the integration of university and enterprise.	Progressive practical teaching through the "Dual Platforms, Three Levels, Four Phases" approach.
	Social practices, landscape sketching, folk fieldwork, professional investigations, comprehensive graduation training	Focused practical teaching	Actively explore creative approaches for producing outstanding art and design works that embody "local characteristics and ethnic styles," fully tapping into regional cultural and historical resources to cultivate individuals through culture and education.	Incorporate regional culture and Chinese traditional culture into the creative process,	emphasizing the features of ethnic culture, educational philosophy, and regional development.

4 Implementation Process

Under the context of the new liberal arts, we actively promote the reform of teaching models and deeply advance the integration of science and education.

4.1 Curriculum and Textbook Development:

Construct a curriculum system based on abilities and prioritize nationally planned textbooks.

4.2 Practical Teaching Development:

Improve the construction of the provincial-level "Digital Art Talent Training Demonstration Base," guide students to engage in project-based practices, cultivate their problem analysis and solving abilities through a combination of theory and practice, and explore the mechanism of school-enterprise and school-community collaboration in talent cultivation. Establish new off-campus internship bases and develop innovative and practical courses tailored to industry enterprises.

4.3 Talent Cultivation Program and Model Reform:

Further improve the applied talent cultivation model based on the concept of "application-oriented." Align with market demands and employment needs, and incorporate student participation in scientific research, discipline-specific skill competitions, social practices, and public welfare activities as necessary components of the talent cultivation program. Restructure the digital media art curriculum system.

4.4 A Teaching Research and Reform:

Highlight project-based teaching, case-based teaching, and the application of virtual technologies in teaching reform. Actively promote teaching models such as small-class teaching, flipped classrooms, and blended learning. Implement diversified assessment methods in learning evaluation and assessment reform.

5 Characteristics and Innovations of Achievements

5.1 Characteristics of Achievements

Under the background of the new liberal arts, the construction of the Digital Media Art major shoulders the responsibility of promoting the creation, production, and dissemination of artistic works to enhance people-to-people connectivity. Under this guidance, the development of this major should embody the concept of the integration

of "ethnic culture, educational philosophy, and regional development" as the characteristics of disciplinary development.

This perspective reflects the value recognition of the "Four Confidences," namely confidence in the socialist path with Chinese characteristics, confidence in theoretical innovation, confidence in the system, and confidence in cultural self-assurance. It also reflects the educational concept of cultural soul-building and building a strong cultural nation. Under this perspective, emphasis is placed on using ethnic history, phenomena, representative figures, totems, folk customs, and genres as the main research objects. It deepens the exploration of the basic principles of digital media art and the cultural arts of ethnic minority regions, and explores the innovative development path of inheriting and innovating national temperament, national spirit, and cultural temperament.

5.2 Characteristics of Educational Philosophy

Based on factors such as the school's disciplinary system, faculty structure, and educational expertise, the construction of the major forms a conceptual framework suitable for the long-term development and positioning of the school. Emphasis is placed on cultivating applied talents who can serve frontline needs accurately and efficiently.

5.3 Characteristics of Regional Development

Combining the unique regional advantages and geographical advantages, the major serves national strategic actions and radiates related integrated interdisciplinary majors to better drive the development of industry-university-research projects. It incorporates the culture and spirit of Hunan into the teaching of artistic creation, encouraging students to inherit and innovate the excellent traditional Chinese culture.

Constructing the "Four-step Advancement" Curriculum and Teaching System for Digital Media Art major, emphasizing moral education as the priority, focusing on abilities, promoting school-enterprise cooperation, and inheriting innovation. This system is in line with national education policies.

The curriculum fully utilizes ideological and political elements in design and integrates excellent traditional Chinese culture and Hunan's regional culture into case studies. It strengthens the school-enterprise talent development model and incorporates real cases. By integrating the culture and spirit of Hunan into the teaching of artistic creation, the system inherits and innovates the excellent traditional Chinese culture, solving the problem of combining student skill learning with humanistic literacy.

5.4 Designing and implementing the "One Center, Two Subjects, Three Stages" interactive teaching model based on the flipped classroom.

Integrating high-quality teaching resources and improving teaching efficiency by combining the characteristics of the Digital Media Art major and student needs. Reforming teaching models, cultivating students' core competencies, and enhancing teachers' teaching abilities through a combination of internal training and external recruitment. It encourages student initiative in learning and addresses the issue of rapid knowledge updates in the digital media art field and the disconnect between course content and social reality.

Significant improvements have been made in the quality of talent cultivation, nurturing a group of high-quality professionals capable of solving practical problems. Over the past four years, students have received over 40 provincial and ministerial-level awards, including two national innovation projects and two provincial-level innovation projects. Students have also published multiple papers and artworks. The employment rate of students has increased from 72% to over 85%, and nearly a hundred employers have highly praised the abilities of graduates. This achievement, with its advanced teaching concepts and teaching system, enhances students' professional capabilities and problem-solving abilities in real-world scenarios.

6 Characteristics and Innovations of Achievements

The knowledge and information in the field of digital media art are updated rapidly, requiring teachers to keep up with industry trends and hot topics. How to ensure the quality and quantity of assisting teachers in lifelong learning on existing platforms is a new challenge for professional development in the new era.

Teachers in this major should flexibly utilize online educational resources, based on their own research directions, to complete the online learning updates of core courses. Efforts should be made to adapt to new industry trends and make the upgrading and updating of teaching content a norm. Measures to encourage and support teachers' participation in academic exchanges should be taken, and the college should invite renowned scholars and industry experts from domestic and international institutions to give lectures. Additionally, avenues should be explored to facilitate cross-appointment and horizontal communication between professional teachers and professionals from digital media art-related companies.

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Authors' contributions

Author 1: Conceived and designed the study, collected and analyzed the data, and drafted the manuscript.

Author 2: Provided guidance on manuscript writing, revised the teaching design, and made significant revisions to the manuscript.

Author 3: Provided guidance on the writing of the literature review and data analysis.

References

- [1] Chen, X., & Wang, Y. (2018). Curriculum Reform and Integration of Ideological and Political Education in Art and Design Courses. *Journal of Art Education*, 25(3), 45-61.
- [2] Ministry of Education of the People's Republic of China. (2019). Six Excellence and One First-Class 2.0 Program.
- [3] Ministry of Education of the People's Republic of China. (2020). Declaration on the Construction of New Liberal Arts Disciplines.
- [4] Ministry of Education. (2022). Guidelines for Promoting Innovation and Entrepreneurship Education in Art Disciplines. *Educational Policy Report*, 15(3), 145-162.
- [5] Johnson, L. K. (2019). The Impact of Teaching Reform on Students' Knowledge Abilities and Humanistic Literacy. *Education Research Quarterly*, 33(4), 112-129.
- [6] Johnson, L. (2018). Establishing Effective Practice Platforms for Art Education: Lessons from a Case Study. *International Journal of Art and Design Education*, 32(4), 231-246.
- [7] Smith, J. (2020). New Approaches to Liberal Arts Education. *Journal of Higher Education*, 45(2), 78-91.
- [8] Smith, J. (2017). The Role of School-Enterprise Collaboration in Enhancing Students' Practical Skills. *Journal of Applied Education*, 45(2), 89-105.

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