

An Exploration of University Digital Publishing Curriculum Reform Guided by Industry Demand

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Abstract. Digital publishing has emerged as a strategically vital industry in the fields of journalism and publishing. It represents a significant direction for the industry's growth and is playing a vital role in the economic and social development of nations. In order to respond to the increasing demand for skilled professionals during this industrial transformation, the quality of talent cultivation in digital publishing must be prioritized. As a relatively new discipline, the effectiveness of talent cultivation directly impacts the industry's healthy development. Professionals in digital publishing are required to possess knowledge in digital technology, publishing business, content processing, market operation, and innovative capabilities to succeed. Therefore, it is recommended that the digital publishing majors' curriculum reform aligns with the talent cultivation needs explained above.

1 Introduction

The rise of online media and the rapid growth of the internet have led to the emergence of digital publishing as a distinct industry. This industry seamlessly integrates technology and culture, and is experiencing significant growth both globally and domestically.

1.1 Background of Digital Publishing Industry

The Chinese publishing industry is currently facing a unique set of challenges, particularly in terms of nurturing talent. The traditional publishing talents are not capable of meeting market demands anymore and the shortage of new digital publishing talents is alarming. As a result, the primary battleground for talent cultivation, higher education institutions, is faced with an intimidating task.

Currently, there are certain shortcomings in the cultivation of publishing professionals in higher education institutions. These include unreasonable course training objectives, unscientific course settings, and a significant disconnect between students' abilities and market demands. Therefore, digital publishing majors must carry out comprehensive industry research, take enterprise demand as guidance, focus on curriculum reform, and construct a curriculum system to meet market demands.

1.2 Current Situation of Talent Demand

A significant demand for skilled professionals in the industry has been created by the rapid growth of digital publishing. The "2021-2022 China Digital Publishing Industry Annual Report" released by the China Academy of Press and Publication indicates that the industry's valuation increased from ¥4,403.85 billion in 2015 to

¥12,762.64 billion in 2021, up 8.33% from the previous year, demonstrating a continuous upward trend. [1] (See Figure 1)

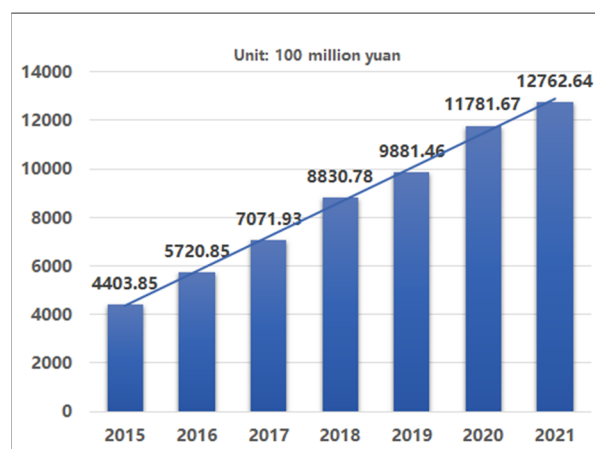


Fig. 1. The scale of China's digital publishing industry has continued to grow from 2015 to 2020

The digital publishing industry's rapid development is hindered by the talent bottleneck, as professionals currently trained by universities fall short of the enterprises' demands. Accordingly, it is crucial to identify the types of talent that enterprises need. The knowledge and skills requisite for diverse positions in the digital publishing industry directly reflects the talent demands of these positions. For instance, job searches were conducted on the top-ranked recruitment website, 51job.com, using keywords such as "digital publishing + full-time" and "publishing house + full-time" according to Alex's website rankings.

The search for "digital publishing + full-time" produced 72 results, while "publishing house + full-time"

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returned 588 results. Duplicate data was removed, and positions in traditional publishing and not related to digital publishing, such as customer service, traditional editing, and senior management positions, were filtered out from the results. The job requirements were counted separately, generating the results shown in Table 1.

Table 1. Digital publishing industry talent demand brief table

Talents	Professional Knowledge	Technical Skills	Ability and Quality
Product Design	Editing Publishing marketing management market analysis, editorial publishing graphic design	Office PS AI AE Illustrator CorelDraw InDesign	writing skills, communication skills, teamwork and organization , and sense of responsibility
New Media Technology	digital and social media platforms, website development, data analysis, programming	JavaScript Java HTML Python	responsibility, teamwork, professional , and communication
Operations	media communication editing publishing economics	Google Analytics SEO principles Office Access	writing skills, marketing, execution ability, communication
Marketing	market analysis and research, design marketing materials, Analytical skills communication	Analytics, SEMrush, Ahrefs, Adobe Creative Suite	coordination skills, stress resistance, and public relations skills

Table 1 presents the four primary talent types required by enterprises in the digital publishing industry: product design and production, new media technology, operations and marketing, and market sales. The general professional knowledge necessary for different positions encompasses areas such as editing and publishing, operations, management, design, and computer technology. However, the focus may vary depending on the role. For instance, designers require graphic design knowledge, new media technology professionals need software development and programming knowledge, and operations and marketing professionals need an understanding of economics. Effective communication, teamwork, market research and analysis, creative planning, and copy-editing skills are common requirements for this industry. Additionally, Office software is frequently used, although more technical positions may require software related to programming and computer specialties.

When examining various digital publishing positions, product design and production roles prioritize industry production and creative knowledge, editing and

publishing knowledge, and art design knowledge. Content layout design and creative planning are the most significant skills, while Photoshop, Office, and Premiere are among the most widely used design software. In new media technology positions, software development and programming skills are prioritized, and knowledge in software application is valued. Proficiencies in software application and communication skills are essential skills, with Java, SQL, and other development software requirements. Journalistic and communication knowledge, scientific culture, and editing and publishing skills are sought after in operations and marketing positions. Abilities to handle new media editing and operation, communication, exploration, and learning are crucial, with software like Office and ACCESS, amongst other data management applications. Coordination and communication, stress tolerance, and public relations are great skills for market sales positions. The crucial software is the basic Office suite.

2 Current Situation of Curriculum Offerings for Digital Publishing

A course system consists of various courses included in the teaching plan, organized according to the course content, nature, status, sequence, relationships, and credit and class hours distribution. The course system plays a key role in professional training programs' success and talent cultivation. Its efficacy directly affects the quality of professional talent training. The course offerings' construction reflects professional training objectives. Currently, 21 universities in China offer digital publishing undergrad programs (refer to Table 2). After analysing the course systems of digital publishing majors among these institutions, identifying the course system's features reveals itself in the following three sections.

2.1 The Characteristics of Course Setting

2.1.1 Modular Course Offerings

The course structure comprises three primary modules: the fundamental disciplinary courses, core professional courses, and practical extension courses [2]. The foundation of professional learning is fundamental disciplinary courses. Survey results reveal that all universities, except some that do not explicitly distinguish fundamental disciplinary courses, have this module. Core professional courses, on the other side, are the main modules that mirror the uniqueness of digital publishing majors, distinguishing them from other majors. These courses mainly focus on creating students' professional abilities, building core competitiveness. Practical courses emphasize the cultivation of students' multimedia skills and their abilities to operate hardware and software.

2.1.2 Interdisciplinary Course Offerings

The formulation of core professional courses is critical to the talent training program of digital publishing majors. It

is the foundation and support of the major and serves as a starting point for the unique educational features of each university. Chinese universities have different methods of providing core professional courses in digital publishing majors. This reflects their varied understandings of related disciplines and integration and utilization of existing educational resources [3]. We examined the training courses of digital publishing majors in 21 universities and identified their core disciplines and professional courses. Based on our findings, Chinese universities have generally formed a multi-branch and interdisciplinary structure in their core professional courses for digital publishing majors. This structure is related to the universities' discipline affiliation, educational conditions, and industry attributes of the digital publishing major.

	Media and Communications		
10	Sichuan University of Media and Communications	21	Chongqing University of Finance and Economics
11	Nanjing University of Media and Communications		

2.1.3 Diversity Course Offerings

The educational institutions of Central South University, Northwest Normal University, and Northwest Minzu University each provide a range of courses tailored to their unique academic history, resources, and individual characteristics. Examples of available courses provided by Central South University include Selected Readings of Chinese Ancient Literature Classics, Selected Readings of Chinese Modern and Contemporary Literature Classics, Selected Readings of Foreign Literature Classics, and Language and Writing Application. Northwest Normal University, on the other hand, offers courses such as C Programming, Java Programming, Advanced Language Programming, and Virtual Reality Design. Lastly, Northwest Minzu University offers a variety of courses including Brief History of Chinese and Western Thought and Culture, Data Structure, Introduction to Data Science, Network Application Program Design, Digital Image Processing, and Colour Fundamentals. [4]

2.2 The Inadequacy of Course Setting

2.2.1 Course Content Lagging Behind Industry Development

To meet the specific talent demands in the industry, companies are seeking individuals with skills in product design and production, new media technology, operations and marketing, and market research. The necessary skills achieved by talented individuals include content control ability, data analysis capacity, and technical expertise. However, there is a discrepancy between the skill set possessed by graduates of existing university majors and the required skills to succeed in industry. The digital publishing majors in many universities need to shift from extending traditional publishing perspectives to incorporating skills necessary for digital publishing such as content strategy, data analysis, and technological competence in course settings.

2.2.2 Course Content Mismatches with Students' Ability Levels

The digital publishing industry is a product of the fusion of the publishing industry and information technology [5]. The development of internet technology has been closely related to the growth of digital publishing, making computer literacy and information skills crucial for aspiring professionals. Currently, several universities have a vague understanding of their students' cumulative knowledge, with a poor perception of their comprehension of information & communication technologies and scientific disciplines such as physics, chemistry, and mathematics. Consequently, courses built using a low estimate of students' knowledge capabilities often lack in-depth information content. Today, most university students belong to Generation Z, characterized by early exposure and deep integration of technology into their daily lives. Although they are highly adaptive to internet-enabled applications and electronic screens, they have limited understanding of computer principles. For this reason, course designs need to address the unique needs of students, aligning content to individuals' aptitudes and skill sets.

Table 2. Digital publishing industry talent demand brief table

No.	Name	No.	Name
1	Beijing Institute of Graphic Communication	12	Shanxi University of Media and Communications
2	Wuhan University	13	Liaoning University of Media and Communications
3	Central South University	14	Hebei University of Media and Communications
4	Guilin University	15	Jinling Institute of Technology
5	University of Electronic Science and Technology	16	Tianjin University of Science and Technology
6	Suihua University	17	Qufu Normal University
7	Xi'an Eurasia University	18	Northwest Normal University
8	Lanzhou University of Arts and Sciences	19	Minnan Normal University
9	Zhejiang University of	20	Northwest University for Nationalities

3 Recommendations for Curriculum System Reform

The course design must cater to the demands of the digital publishing industry by prioritizing media culture and

information technology in skill development of digital publishing professionals. Furthermore, it should adapt to the shortage of the existing curriculum system, as shown in figure 2, and aim for optimization.

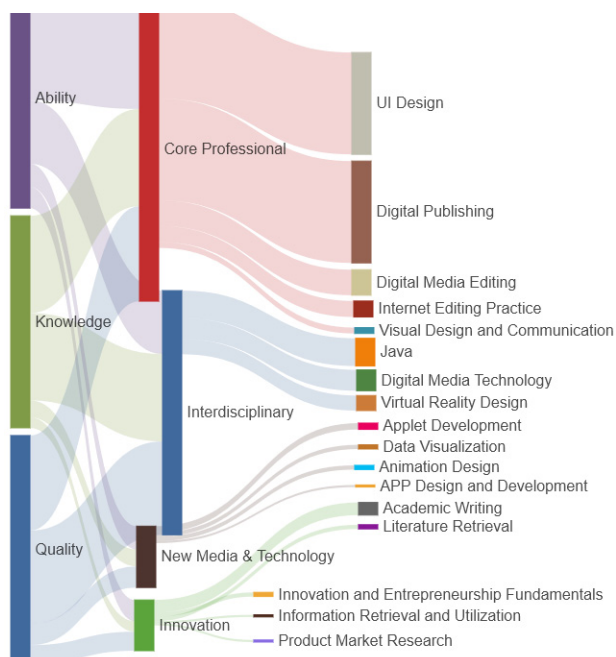


Fig. 2. Industry-oriented digital publishing curriculum design

3.1 Curriculum Should Focus on Basic Knowledge

The core coursework for this major is a fundamental element that distinguishes it from other subjects in terms of academic background, knowledge structure, and professional competencies. Essential modules, such as Digital Publishing Introduction, Chinese and Foreign Publishing History, and Digital Media Editing, provide valuable insights and training to students. Additionally, the design and technology inter-disciplinary courses address cross-functional features of the digital publishing industry. Meanwhile, new media-focused coursework is tailored to the distinguishing characteristics of digital publishing in the internet age, with a primary focus on audio and video production.

3.2 Curriculum should Focus on Skill Development

The development of new technology application abilities is centred on practical training covering areas such as animation design, mini-program development, game design and development among others. The focus on new media operation abilities is to enhance students' brand and media management competencies as well as publishing and marketing abilities. Furthermore, digital product planning and production abilities are also cultivated to support the growth of digital publishing product managers.

3.3 Curriculum Should Focus on Innovative Ability

The curriculum design plays a critical role in enabling students to adapt to the constantly changing needs of the digital publishing industry while also establishing a foundation for their career and future growth. Key qualities that aspiring digital publishing professionals must have include literacy in innovation, entrepreneurship, information acquisition, and application. These competencies can significantly enhance students' employment opportunities and overall marketability while building a strong basis for their future development.

4 Conclusion

Given the rapidly evolving landscape of the digital publishing industry, it is imperative that digital publishing undergraduate programs stay current and future-focused. In order to bridge the gap between the existing digital publishing curriculum system and current industry demands, universities must prioritize building broader and stronger foundations within the course design process. This can be achieved by training multifaceted professionals that align with industry standards. Furthermore, universities should focus on developing students' knowledge base while optimizing curriculum structure and specific teaching materials to overcome limitations in the current digital publishing talent cultivation curriculum.

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