

Transformation and Practice of Editorial Literacy in the Context of Digital Humanities

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Abstract. The literacy of editors in the context of the digital humanities is undergoing a sweeping transformation that requires continuous advancement not only in technology and skills, but also in scholarly ethics, cultural understanding, and interdisciplinary collaboration. Editors can play a greater role in the digital age to promote innovation in scholarly research and wide dissemination of knowledge. This transformation not only meets the needs of the times, but also helps editors adapt to the development needs of the digital era, and contributes to the promotion of the prosperity of China's digital humanities.

Keywords: Digital humanities; Editing; Literacy transformation; Practice progression

1 Introduction

At the end of 2022, with the popularization of the application of generative artificial intelligence large models, a new chapter was opened for the use of deep learning technology in the era of digital humanities. China attaches great importance to the development of digital humanities and the cultivation of talents, and has introduced a series of policies. The Opinions on Advancing the Implementation of the National Culture Digitization Strategy, issued by the General Office of the CPC Central Committee and the General Office of the State Council, explicitly put forward the need to vigorously develop the digital culture industry and promote the digitization of cultural content and platforms. "Publishing industry" 14th Five-Year "period of development planning" proposed to strengthen the publishing talent team construction, building a new era of publishing talent team matrix. Digital humanities in addition to the traditional humanities research in the media carrier upgrades, there are changes in methodology and thinking.[1]The emphasis on digital humanities has promoted the development of digital humanities education, and some colleges and universities at home and abroad have carried out courses and training in digital humanities.[2]As digital technology continues to integrate and reshape the publishing industry, the organizational model and process links of traditional academic publishing have flourished in the direction of digital publishing, and the role of editors is undergoing profound changes,

and the industry's requirements for editors' literacy and skills have been significantly improved. From the editing of traditional paper publications, to digital humanities editors who now need to master multiple technologies and interdisciplinary knowledge. Digital humanities also provides editors with a broad space for development, pushing them to continuously improve their professionalism to meet the needs of digital transformation.

At present, digital humanities research in the field of editing and publishing focuses on the relationship between digital humanities and digital publishing,[3]the aesthetic logic and humanistic value of publishing content under artificial intelligence technology.[4]Fewer scholars have explored the development of editing from the perspective of digital humanities, and Wu Ping has put forward his thoughts on the cultivation of publishing professionals in colleges and universities under the background of digital humanities.[5]This paper intends to analyze the transformation and practice progression of editorial literacy in the context of digital humanities, in order to help editors adapt to the development needs of the digital humanities era.

1.1 Concepts and Characteristics of Digital Humanities

Digital Humanities (DH) is a research paradigm and way of thinking developed at the end of the 20th century to intervene in the study of social sciences and humanities with computer technologies.[6]Wikipedia defines Digital Humanities as a field of research and teaching at the intersection of computational science and the humanities.[7]On the basis of combing through previous research, some scholars have summarized that the core concept of digital humanities is a new type of discipline that applies new technological tools and methods to teaching, research, service, and other creative work in the traditional humanities.[8]Based on this, the characteristics of digital humanities can be summarized into two aspects: digital characteristics and humanistic characteristics. On the digital side, firstly, digital humanities is a product of the combination of digital and humanities, overturning the past barriers between arts and sciences, and between humanities and technology, and coming to a new stage of development of inter-construction and isomorphism. Second, digital humanities has changed the production, preservation and dissemination of traditional humanities knowledge. On the basis of the fact that the humanities in the past relied solely or mainly on printed texts to complete and gain recognition, digital tools and methods have been introduced, thus revolutionizing the humanities. In the humanities, firstly, the chemistry between humanist values and methodologies and digital technologies will play a role that goes beyond the scope of a single discipline and better utilizes the strengths of the humanities, which can deal with different issues across media, languages, places and histories. Second, the digital enables the traditional humanities to play an unexpected role. In the STEM (Science, Technology, Engineering, and Mathematics) disciplines, the study of digital humanities has also taken on a pluralistic character, which is no longer limited to referring to a discipline, a field, and a methodology, or even a language, an institution, and a country. The openness and inclusiveness of digital humanities promotes its exploratory and practical nature, making it possible to carry out ambitious research projects, bringing together large interdisciplinary project teams, allowing pathways for

dialog in multiple senses, and allowing more complex research challenges to be tackled collaboratively. [9]

1.2 Developments in the Digital Humanities

Digital humanities used in the field of publishing, in addition to reshaping the publishing process and publishing form, accelerating the digital change in the field of publishing, giving birth to digital publishing, there is a comprehensive development in the application of artificial intelligence technology, the construction of digital platforms and the integration of resources, and the decentralization and openness of communication concepts.[10]In the field of libraries, digital humanities has improved the digital service level of libraries, expanded the breadth and depth of knowledge services, and met the new needs of users for knowledge acquisition and utilization in the digital era; optimized collection resources, improved the accuracy and usability of data analysis, and the visual presentation of the results of data analysis, which enables researchers to more intuitively display and explain the results of research.[11] In education, digital humanities has changed the traditional teaching environment, providing favorable conditions for teachers' diversified and intelligent transformation.[12]Digital humanities in promoting the development of humanities, digital humanities to promote humanities research in the data modeling-based to the interface critical approach to the main change; emphasize the use of critical thinking, the technology generated by the new humanities issues into the scope of digital humanities research, re-understanding of the relationship between humanities and technology and not only technology as a method but also as a research object to carry out.[13]

2 Challenges and Opportunities for Editors in the Context of the Digital Humanities

2.1 Challenges

Technical Challenges.

With the continuous development of new technologies such as artificial intelligence, editors need to continuously learn and understand new digital technologies and tools to maintain their competitiveness to cope with the new challenges of the digital humanities era[14]. Digital humanities involves a variety of technologies, such as digitization technology that constructs the resource base, data analysis technology that constructs the application platform, data management technology that constructs the service platform, and visualization technology that constructs only the image of digital humanities [15].This signals that editors need to continuously expand their knowledge and skills, and sometimes need the help of various artificial intelligence technologies to make breakthroughs. At the same time, editors need to actively explore and apply new digital technologies to better achieve goals such as digital publishing and digital marketing.

Content Challenges.

In terms of generating content, the current generative AI output still has problems with authenticity and accuracy, which is related to the complexity of the model training data sources, the bias of algorithmic choices and even suffering from malicious attacks[16]. In the context of digital humanities, editors need to deal with massive amounts of digitized information, screening and integrating valuable content. The content challenges in facing are mainly reflected in the screening of true and false information, multimedia content integration, interdisciplinary knowledge integration, copyright and intellectual property management. With the development of digital technology, access to information has become more convenient, and the amount of information has increased dramatically, editors need to screen out valuable content in the massive digital resources and manage it efficiently. This not only requires editors to have the ability to retrieve and evaluate information, but also need to be familiar with a variety of digital tools and technologies in order to better organize and manage information. Digital humanities is an interdisciplinary field, and editors need to have knowledge not only of literature, history, and other humanities disciplines, but also of computer science, data analytics, and other technical fields. While traditional editing may lie primarily in the written word, the digital humanities context places more emphasis on the integration and presentation of multimedia content, including images, audio, video, interactive graphics, and so on. Editors need to master editing skills across multiple media formats and be able to effectively integrate these different forms of content in order to provide readers with a richer and more vivid reading experience.

The Value Challenge.

In the era of information explosion, all kinds of unverified information are everywhere, editors need to have a strong sense of responsibility and mission in the era of information flooding, which puts forward a very high demand on the editor's ability to identify. This is not only a test of the editor's professional ability, but also a challenge to his professional ethics and sense of responsibility. Editors must have strong critical thinking and be able to sift out the true and reliable content among numerous information and ensure its authority. At the same time, in the digital era, homogenized content proliferates, how to maintain the innovation and uniqueness of the content is one of the major challenges facing editors in the digital era. Editors need to continuously improve their humanistic qualities and utilize their humanistic values when using digital tools, and adhere to the necessary value orientation when exploring and experimenting with new technological forms and contents.

If one uses digital tools without considering the humanistic kernel of the research and work done, and detaches oneself from the values one follows, one will easily fall into the situation of technological blindness and lack of humanity, and become a product of showing off technology. Therefore, the editor's sense of responsibility for professional beliefs should also not be abandoned, which includes the cultivation of personal moral character and correct values. Becoming a compound talent with knowledge, ability, moral character, and integrity, combining editorial digital literacy and humanistic sentiment, this is a higher requirement put forward by the state and the society to editorial professionals under the background of digital humanities.

In addition, editors need to deal with the ethical and privacy issues raised by digitization. With the development of digital technology, discrimination and prejudice from religion and politics, as well as data security issues, are becoming increasingly prominent[17]. When editing and publishing content, editors need to strictly abide by relevant laws and regulations, take a firm stance, guard the bottom line of values, and avoid content infringement and data leakage.

2.2 Opportunities

Innovation in the Form of Content: Digital Humanities Provides Editors with more Diversified Means of Content Creation.

The development of digital technology has enabled editors to organically integrate text, pictures, audio, video and other media to create more vivid and engaging content. For example, descriptions of historical events can be expressed not only through text, but also with historical pictures, video clips and audio narration, providing an all-round sensory experience that allows readers to better understand and feel the events of history.

In addition, digital technology gives content a more interactive feel, and editors can create interactive diagrams, videos, virtual reality (VR) and augmented reality (AR) tools to increase the interest and user engagement of the content. For example, when describing archaeological finds, 3D models and virtual reality can be used to allow readers to explore the site immersively. The application of data visualization techniques allows editors to present complex data graphically, making it easier to understand and analyze. In terms of social media integration, editors can also utilize the characteristics of social media platforms to create content that is easy to share and distribute, such as short videos, infographics, and live streams, to expand the reach of their content.

Improvement of Work Efficiency.

In terms of technological applications, the use of AI digital tools reduces a large number of simple, repetitive, and uninteresting editing and proofreading tasks, and can significantly improve the efficiency and quality of editing work and enhance the efficiency of content processing. For example, AI-driven grammar checking and proofreading software can quickly identify and correct grammatical and spelling errors and punctuation problems in text, greatly reducing the time and effort required for manual proofreading. In addition to this, digitization tools include image and video editing software such as Adobe Photoshop, Illustrator and Premiere Pro. These tools not only improve text accuracy, but also free up editors' human resources so that they can devote more time to content creation and planning and optimizing multimedia content. With these specialized software, editors can quickly perform image processing, video editing and audio adjustments to improve the quality and visual effects of multimedia content, and enhance the appeal and dissemination of the content.

Second, digital tools provide powerful data analysis and content recommendation capabilities. By analyzing user behavior and preferences, editors can plan and publish

content more precisely. This data-driven approach not only improves content relevance and user satisfaction, but also helps editors better understand readers' needs and thus optimize content strategies. In addition, the application of artificial intelligence technology makes automated and intelligent content generation and management possible.

Exchange of Academic Exchanges.

First of all, digital humanities effectively promote the access and sharing of academic resources. The digital publishing of publishing organizations is itself a part of digital academic activities (publishing as a service), in terms of carrying out digital publishing activities, scientific and technical journals, publishing organizations have formed a more mature digital publishing industry [18]; especially in recent years, in line with the trend of open science, in-depth excavation of the publishing connotation, innovative publishing model, publishing organizations actively provide readers with data and other services. Editors and scholars can quickly access the latest research results and academic materials through online databases, e-books, open access journals and other channels. This not only saves time and energy, but also breaks down geographical and resource constraints, enabling more scholars to participate in global academic exchanges. As far as the provision of digital academic services is concerned, publishing organizations are constantly expanding the scope of services and service targets in the process of seeking digital transformation and development, and are widely involved in the exchange and service of the whole process of academic information. According to the research of Du Xingve and others, the digital academic services of scientific and technical journals and publishing organizations have covered the whole life cycle of scientific research, and the typical services include digital publishing and knowledge services, scientific research data services, scientific research aids and digital technical support, open access and preprint services, scientific research writing and publishing services, scientific research results dissemination, and scientific research and academic exchanges.[19]

Digital humanities also facilitates scholarly collaboration and scholarly exchange through a variety of digital tools. The rise of digital conferences and seminars has provided scholars with more flexible and efficient ways to communicate. Online meeting platforms such as Zoom and Microsoft Teams allow scholars to participate in international conferences and academic discussions without traveling. This not only saves time and costs, but also facilitates cross-border and interdisciplinary academic exchanges and collaborations. Social media and academic social networks (e.g. ResearchGate, Academia. edu) provide scholars with a platform for instant communication and interaction. Scholars can release research results, share academic views, and seek opportunities for cooperation through these platforms, forming an instant and interactive academic community. This immediacy and interactivity greatly facilitates the integration of editors into the academic community and promotes academic innovation.

3 A Practical Approach to Transforming Editorial Literacy in the Context of Digital Humanities

3.1 Establish a Mechanism for Enhancing Editors' Digital and Intelligent Literacy, and Strengthen Editors' Ethical Responsibility and Awareness

Editors need to continuously learn and master digitization tools and technologies, and improve their digitization processing capabilities and smart technology applications. The improvement of the comprehensive ability of digital literacy directly affects the effect of publication digitization. With the improvement of digital literacy represented by the level of digital teaching and digital research, publishers, editorial offices and others will innovate to lead the change of publication research and give full play to the value-creating function of digital tools in the smart publishing ecosystem. Editors should actively embrace technological change and master digital tools and technologies through continuous learning and practice to enable them to navigate the digital academic environment. Editors should develop sensitivity to data and analytical skills, learn to extract valuable information from massive data, and use critical thinking to assess the quality and reliability of information. At the same time, editors need to master multimedia editing techniques, including skills in image processing, audio and video editing, and interactive content creation. The ability to create and edit multimedia content helps editors create more vivid and interactive content that enhances the user experience. In addition, data analysis and visualization are also important skills for editors to master. Data analysis and visualization techniques can help editors transform complex data into easy-to-understand charts and images, thus enhancing the expressiveness and persuasiveness of the content.

As artificial intelligence and algorithms are used in editorial work, editors need to be concerned about the ethical issues that these technologies can bring up, such as algorithmic bias and transparency in automated decision-making. Editors should review and optimize algorithms to ensure their fairness and transparency, and prevent content recommendation and information distribution from being affected by algorithmic bias. At the same time, editors should explain the use of AI and algorithms to users to improve their understanding of and trust in these technologies. In the context of globalization, editors need to raise awareness of cultural diversity, respect authors and readers from different cultural backgrounds, and promote communication and understanding of different cultures. This is reflected not only in the choice of content, but also in the diversity of expressions and narrative perspectives. Editors should strive to present diverse perspectives, avoid cultural biases and stereotypes, promote cross-cultural understanding and respect, and provide readers from different cultural backgrounds with a fair and inclusive reading experience.

3.2 Establish a Mechanism for Promoting and Publicizing through Multimedia Platforms, and Innovate and Integrate Publishing Content.

Editors need to actively participate in the construction and promotion of digital platforms to provide readers with more convenient and efficient academic communication and knowledge service support. The construction of the integrated media platform is not only the application of technology, but also the in-depth integration of content and technology to build an interface-friendly integrated media reading platform. Through the careful design and construction of the integrated media platform, the editors have realized the effective integration of text, image, audio, video and interactive elements, creating a three-dimensional knowledge dissemination environment. This platform not only showcases academic achievements, but also promotes communication and cooperation among scholars, researchers and the general readership. Through online discussions, virtual seminars, real-time feedback and other functions, the editor promotes the formation of an active academic community, allowing academic exchanges to break through the limitations of time and space.

At the same time, the editors have also taken on the task of promoting the integrated media platform, increasing its visibility and influence through search engine optimization, social media marketing and partnership building. They ensure the discoverability, accessibility and usability of the platform's content so that more readers can easily access high-quality academic resources. Editors play the role of bridge and link in the promotion of the platform, expanding its influence and coverage through cooperation with various academic institutions, libraries, museums and other organizations. By planning and organizing online and offline academic activities, such as lectures, seminars, workshops, etc., editors not only promote the functions and advantages of the platform, but also facilitate exchanges and cooperation in the academic community. Editors need to be proficient in social media operation skills and utilize social platforms such as Weibo and WeChat to establish close interaction with readers, share the latest academic news and research results in real time, and enhance the vitality and attractiveness of the platform.

Editors need to expand the scope and depth of interdisciplinary cooperation and communication, and establish close ties and cooperative relationships with experts and scholars in various disciplinary fields. Digital humanities involves a number of disciplines such as history, literature, art, computer science, data analysis, etc. Editors need to continuously study and update their knowledge to keep up with the latest developments in the field of digital humanities in order to better communicate and collaborate with experts from different disciplines. This includes keeping up to date with academic research, technological advances, and industry developments in related fields, attending professional trainings and academic conferences, and actively participating in industry communities and networks. Through continuous learning and enhancement, editors can maintain their professionalism and competitiveness, and provide solid knowledge and skills to support the success of digital humanities programs.

3.3 Establish a Support Mechanism for the Application of Interdisciplinary Technology to Editors

Firstly, setting up interdisciplinary research funds can provide editors and researchers with the financial backing needed to explore and apply diverse technological methodologies across different disciplines. By offering targeted financial support, these funds can incentivize collaborative projects that combine expertise from multiple fields, leading to groundbreaking advancements in editorial practices. These funds should prioritize projects with strong innovation potential and practical relevance, ensuring that the investments lead to tangible outcomes. Regular evaluations and assessments of these projects can help maintain focus on the intended goals and ensure the funds are utilized effectively.

Second, building interdisciplinary technology exchange platforms is crucial for facilitating ongoing collaboration and knowledge sharing among experts from different disciplines. Such platforms can serve as hubs where editors, technologists, and researchers converge to exchange ideas, showcase recent technological developments, and discuss real-world applications. By fostering a community of practice, these platforms can provide editors with access to cutting-edge tools and techniques, enhancing their ability to integrate new technologies into their workflows. The platforms can take various forms, including online forums, webinars, in-person workshops, and conferences, all designed to encourage continuous learning and collaboration.

3.4 Establish a Sound Data Privacy Protection Mechanism and Copyright Protection Mechanism

A robust data privacy protection mechanism is fundamental in the editing process. Editors must strictly adhere to relevant data protection laws and regulations to ensure that all research data handled and published is adequately safeguarded. Implementing data anonymization techniques can effectively prevent the disclosure of personal information, ensuring that individuals cannot be easily identified through the data used in analyses and publications. Moreover, establishing strict access control policies is vital; only authorized personnel should have access to sensitive data, thus minimizing the risk of unauthorized access and potential data breaches. Advanced encryption techniques should also be employed to protect data during storage and transmission, ensuring its integrity and preventing interception or tampering. Additionally, raising awareness and providing regular training for editors on privacy protection are critical. By enhancing their understanding and operational skills related to data privacy, editors can consistently apply best practices and uphold high standards in their work.

A comprehensive copyright protection mechanism is essential to safeguard intellectual property rights in the academic publishing process. Editors must rigorously conduct copyright reviews to ensure that all quoted and reproduced materials have been legally authorized. This involves implementing a thorough copyright review process that is integral to every stage of content development and publication. Establishing a systematic copyright management system can streamline this process by maintaining detailed records of all licensing agreements and ensuring that every published piece has

the necessary legal permissions. Digital rights management (DRM) technologies are also crucial in the digital age, providing technical controls over content access to prevent unauthorized copying, sharing, or downloading, thus protecting the rights of original creators.

4 Conclusion

In conclusion, in the context of digital humanities, the ethical responsibility and awareness of editors are more important than ever. By continuously enhancing their ethical awareness and responsibility, editors can effectively promote academic and cultural progress, facilitate the wide dissemination and sharing of knowledge, play a key role in respecting intellectual property rights, protecting user privacy, providing truthful information, promoting cultural diversity, paying attention to technological ethics, improving accessibility, and safeguarding academic integrity, thus contributing to the establishment of a healthy and fair digital academic environment.

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