

Postprint: Research on New Media Applications of the Journal Nature

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Abstract

Nature, a top-tier international academic journal, represents the Ivy League of academic publishing. Its distinctive publishing model and advanced publishing philosophy merit thorough study and emulation by publishing professionals, particularly as it leads the academic journal community in new media application. This article primarily investigates the integrated development model of Nature with new media, encompassing “news media” and “audio and video”, summarizes its experiences in new media utilization, and aims to provide valuable insights for the development of academic journals in China.

Full Text

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A Study on New Media Applications of the International Top-tier Academic Journal *Nature*

Abstract: *Nature*, as an international top-tier academic journal and an evergreen in the academic publishing world, offers valuable insights for publishers through its unique operational model and advanced publishing philosophy. Its new media applications, in particular, place it at the forefront of academic journal innovation. This paper examines *Nature*'s integrated development model with new media, specifically “news media” and “audio and video,” summarizes its experiences, and aims to provide references for the development of Chinese academic journals.

Keywords: *Nature*; Nature; academic journal; new media; integration

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For academic journals, even the best media technology is useless without high-quality content to match it. Conversely, it would be regrettable if excellent content failed to reach its potential due to unsuitable media technology. The rapid development of network technology has brought both opportunities and tremendous challenges to traditional media [1]. Faced with new media technologies that have emerged alongside network technology, a key concern for many academic journal publishers and researchers is how to leverage new media to achieve extended development, make epoch-making progress in journal publishing and information dissemination, and ultimately enhance the influence of academic journals.

Nature's research website, nature.com, receives over 8 million monthly visitors, offering access to Nature Publishing Group's publications and services, including news and commentary from *Nature* magazine and the international leading researcher recruitment platform Naturejobs. As an authority in the natural sciences, *Nature* has actively utilized new media for the dissemination and inheritance of academic research achievements within the context of media convergence, accumulating considerable experience worthy of our study. Therefore, researching *Nature's* new media application strategies and development models holds significant importance. This study primarily examines *Nature's* new media applications from two major perspectives: news media, and audio and video.

1. Literature Overview

Researchers have studied new media technology and summarized its concept from different perspectives. Regarding the concept of new media, Wang Ye from CCTV's Chief Editor's Office believes that new media refers to media forms that emerge under new technological support systems, such as digital magazines, digital newspapers, digital broadcasting, mobile text messages, mobile television, networks, desktop windows, digital television, digital movies, and touch media. Relative to the four traditional media forms—newspapers, outdoor media, broadcasting, and television—new media is figuratively called the “fifth media” [2]. Chen Weizhen considers new media a dynamic concept whose scope continuously expands with technological progress and whose connotation becomes increasingly rich with continuous innovation in media products. Currently, there are five media forms: paper media, including newspapers and journals; broadcasting, namely sound transmitted via radio waves—the “podcast” audio column studied in this paper falls under this category; television, transmitting audio and video; networks, simultaneously carrying multiple information forms such as text, images, audio, and video; and wireless mobile media such as mobile phones, enabling instant mass and interpersonal communication. Therefore, Chen Weizhen defines new media as media forms that emerge under new digital technology support systems, such as digital magazines, digital newspapers, digital broadcasting, mobile text messages, mobile computers, wireless networks, desktop windows, digital television, digital movies, and touch

media [3].

2. *Nature*'s New Media Application Research

Nature (established in 1869) has a 148-year history, with an impact factor of 38.14, covering life sciences, physics, chemistry, and applied sciences.

2.1 News Media

For academic journals, we tend to emphasize the academic nature of research achievements while unconsciously neglecting their news attributes. In fact, like popular publications, radio, and television, academic journals possess news attributes as media [4]. In today's rapidly developing multimedia environment, academic journal competition is increasingly fierce. Emphasizing and leveraging the news attributes of academic journals is an effective way to enhance their influence and promote new development. Moreover, academic research achievements, having undergone sufficient argumentation and experimentation by researchers and based on detailed data and materials, possess strong authority and credibility, which can compensate for deficiencies in science and technology news reporting [5].

Nature, as an internationally renowned academic journal, has long emphasized both academic and news attributes, integrating them to promote academic development, which has contributed to its status as an "evergreen" among scientific journals. *Nature*'s regular column settings demonstrate its emphasis on the news attributes of academic papers. *Nature*'s regular columns include Editorials, News, News Features, News & Views, Review, Articles, and Letters. Among these seven columns, three are related to "News," and their article quantity accounts for nearly half of the total. For instance, randomly selecting the latest issue published on March 30, 2017 (pages 589–741, 153 pages, 38 articles total), we find that the three columns News, News Features, and News & Views contain 16 articles, representing 42.1% of the total articles in that issue, and occupy 40 pages, accounting for 26.1% of the total pages. Compared to articles in other columns, those in "News"-related columns are shorter, aligning with the concise and succinct nature of news reporting and meeting readers' reading needs.

Nature publishes a free weekly audio program—podcast—hosted by Kerri Smith and Adam Levy. The program highlights core content from the current issue, including interviews with renowned scientists and in-depth commentary and analysis from journalists worldwide.

On *Nature*'s official website, the primary navigation design also reflects its emphasis on news. For example, *Nature* has established a powerful independent news channel "News & Comments" on its homepage, primarily reporting the latest academic news and viewpoints, bringing scientific research achievements to the public's view at the first moment.

[Figure 1: see original paper]

2.2 Audio and Video

With the rapid development of internet technology and the popularization of new media technology, readers' reading habits and needs have changed significantly, showing a trend toward fragmentation and multimedia, with increasingly diverse knowledge acquisition pathways [6].

As an important carrier for the dissemination and inheritance of scientific knowledge, academic journals can no longer satisfy readers' needs in the new media era with only text and images. Although text information dissemination is more accurate and concise, compared to text, video or audio provides readers with greater information volume, richer and more intuitive content, and higher dissemination efficiency. The Journal of Visualized Experiments, launched in 2006, is a specialized journal for displaying visualized experiments and the world's first peer-reviewed scientific video journal, serving as a touchstone for new media application in academic journals. Video journals have attracted readers' attention and praise, helping researchers overcome significant challenges in current scientific research by saving time on reproducibility issues and learning new experimental techniques. On February 8, 2017, the American Magazine Media Conference was held in New York, where technological innovation, high-quality content, and adventurous exploration became the common aspirations of participants. Video and audio have also become one of the pathways for American journals to seek rapid development [7].

Nature attaches great importance to the application of "audio and video," featuring an independent "Audio & Video" column on its official website, as shown in Figure 2. These videos or audios generally originate from articles in the current issue and help readers grasp the core content of the articles. Videos, in particular, feature beautiful imagery and grand scenes with strong visual impact, leaving deep impressions on readers. For example, a video titled "The mystery of mosquito flight" released on the website in March 2017 presented viewers with exquisite and stunning visuals, creating a strong sense of visual shock. This video serves as a three-dimensional extension of the article "Smart wing rotation and trailing-edge vortices enable high frequency mosquito flight," transforming dry and monotonous academic papers into dynamic, three-dimensional presentations that greatly enhance the dissemination efficiency of academic information.

[Figure 2: see original paper]

3. Conclusion

In the academic journal world, new media technology has gradually become the primary information carrier and dissemination tool, exerting significant influence on traditional academic journals. *Nature's* successful applications in news media, video, and audio provide us with important insights: in the new media era, domestic academic journals should adapt to the new trend of new media integration, actively employ new media technologies while adhering to the prin-

ciple of “content is king,” explore innovative paths suitable for academic journal development, and promote long-term sustainable development.

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Note: Figure translations are in progress. See original paper for figures.

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