AJLLSE GLOBAL RESEARCH NETWORK

AMERICAN Journal of Language, Literacy and Learning in STEM Education
Volume 3, Issue 6, 2025 ISSN (E): 2993-2769

Challenges and Prospects in Producing Inclusive Multimedia Content for Visually Impaired Users

Iroda Nasimova
Doctor of Philosophy in Philology

Abstract. *This article analyzes the adapted formats designed for audiences with visual impairments, the technological solutions currently implemented in global and local media practices, and the existing challenges and future prospects in this domain. The paper aims to identify pathways for the development of journalism based on the principles of information equity, thereby contributing to the theoretical and practical foundations of inclusive journalism.*

Key words: *multimedia journalism, social groups, longread, storytelling, web documentary.*

As a result of technological advancement, multimedia journalism has introduced new and efficient forms of information delivery through the integration of text, audio, video, graphics, and interactive tools. This article explores how effectively such materials convey information to various social groups today.

Before addressing the challenges in the field, it is essential to clarify the concept and characteristics of multimedia journalism. Russian scholar A.A. Tertichny defines multimedia journalism as "an information model that integrates the transmission, interpretation, and influence of content using various media tools, including text, audio, video, graphics, animation, and interactive elements [Tertychniy, 2014].

In other words, multimedia journalism relies on multi-channel information delivery methods beyond just text. Readers are not only able to read the content, but also hear and see the events—and in some cases—engage with them interactively. Presenting information through multiple formats enhances the coverage, clarity, and emotional resonance of journalistic content.

Multimedia journalism is characterized by the following key features:

- **Hypertextuality** – This term, which emerged with the rise of online journalism, refers to a structure in which hyperlinks embedded within the text provide explanations, supplementary information, or clarifications. When used appropriately, hypertext enhances the quality of informational content and facilitates a deeper understanding of ongoing events for readers. Hyperlinks can theoretically expand the textual field infinitely. Additionally, hypertext supports "prooflinking," which offers verifiable sources that help substantiate the facts presented.
- **Multiformat Structure** – Multimedia journalism combines visual (text, graphics) and dynamic content (speech, music, video clips, animations, etc.) through computer technologies, integrated into a single interface or control system [Champen & Chapman, 2006]. These components serve to deliver information via digital platforms using both internal and external links. The integration of various formats amplifies the expressive power of media content and ensures more immersive user engagement.

- **Interactivity** – This is primarily associated with the transmission of information in an engaging and comprehensible manner. Readers benefit from multimedia features such as video, audio, and infographics, often presented through interactive combinations. Multimedia content creators employ interactivity to foster active engagement with information. As a result, interactivity strengthens the direct communication between author and audience, enhancing the effectiveness and memorability of the message.
- **Synthetization** – The combination of several genres within a web-based material leads to the formation of new, complex genre structures. The integration of text, sound, video, and static images increases the depth and impact of the material. This composition results in richer and more compelling content that attracts users' attention. Ultimately, such synthesis not only improves aesthetic appeal but also enhances comprehension.

However, these multisensory formats may pose significant limitations for visually impaired users, who typically access only one or two layers of content—usually text or audio. If visual elements, graphics, infographics, animations, or interactive components are not supplemented with proper descriptive alternatives, they remain completely inaccessible to such audiences. When multimedia journalism is not designed with inclusive principles in mind, it risks excluding blind users from fully understanding the content and grasping its essential informational components. Therefore, to realize the full potential of digital tools, multimedia journalism must be not only technically advanced but also socially inclusive. Otherwise, advanced technologies and interactive formats may form a "closed system" that serves only sighted audiences.

At this point, it is relevant to cite another prominent scholar's perspective on multimedia journalism. As M. Deuze states, "Multimedia is not merely a technological ensemble, but a logic of storytelling that requires the integration of formats, platforms, and participants" [Deuze, 2005, p. 450]. According to Deuze, if multimedia storytelling does not involve the participant — meaning if the content is not equally accessible and comprehensible to all — it ultimately fails to fulfill its core purpose.

Even when the integration of formats and platforms is technically achieved, if such content is not enhanced with inclusive features—such as **audio descriptions**, **alt text**, **transcripts**, or **Braille interfaces**—the resulting media environment excludes users with visual impairments and creates a journalistic space in which their participation is effectively impossible.

So, what are audio descriptions?

Audio description is a specialized audio-narrative format designed for users with visual impairments. It provides verbal explanations of key visual elements within a film, video, theatrical production, or other visual media content. Typically, these descriptions are inserted during pauses in dialogue, background music, or silent scenes. Russian researcher S.A. Makeyeva defines audio description as "a linguistic tool that enables the auditory interpretation of visual material. It allows blind users to comprehend visual information through hearing" [Makeyeva, 2015, p. 85]. In this sense, audio description is not merely a voiceover commentary; it functions as a **linguistic substitute for vision**, with its main purpose being the accurate articulation of actions, settings, facial expressions, gestures, environments, and visual transitions.

When multimedia content—particularly visually rich formats such as **longreads**, **web documentaries**, and **storytelling-based narratives**—lacks audio descriptions, users with visual impairments are deprived of essential portions of the material's meaning and narrative coherence.

Another vital accessibility feature is **alt text**, or alternative text, which consists of textual descriptions provided for images, graphics, infographics, and other visual elements on a webpage. These descriptions are read aloud by screen reader software, allowing blind users to understand and interpret visual content. Russian scholar E.A. Baranova describes alt text as "a concise textual description that conveys the core meaning of an image for users with limited visual capabilities. It is one of the most critical components for adapting web pages to universal accessibility" [Baranova, 2019, p. 98]. Alt text functions as a practical tool that conveys what is depicted in an image and is essential for comprehensive content perception. If an image lacks alt text, a visually impaired user may be aware

of its presence but will remain unaware of its informational significance. This represents a significant barrier to full access to multimedia content.

In today's digital information environment, the accessibility of multimedia content for blind or visually impaired information consumers is directly linked to the effectiveness of screen reader software (such as **JAWS**, **NVDA**, or **VoiceOver**) and **text-to-speech (TTS)** technologies, as well as the adaptability of web-based resources. These tools convert on-screen text into audio and provide descriptive information about each element on the page—including headings, body text, buttons, links, images, and form fields.

This context is particularly relevant when discussing multimedia formats such as **longreads**, **storytelling**, and **web documentaries**.

The term *longread* originates from English, with "long" meaning extended, and "read" referring to the act of reading. A landmark example of early longform multimedia journalism is *"Snowfall"*, published on the website of *The New York Times*, which incorporated photographs of skiers, a 3D model of the mountains, audio narration, video content, and an interactive map of the avalanche. Within just six days, the story was viewed over **3.5 million times"** [N.Kasimova, 2019, p. 263].

A well-structured longread allows the reader to deeply explore and emotionally engage with the subject or issue at hand. It is intended to offer unique, high-quality information that cannot be found in traditional mass media formats. A longread should be perceived as a cohesive narrative that draws users into the heart of the story. Another essential feature is the **diversified presentation** of information—allowing for a multidimensional analysis of the topic being covered (N.Kasimova, 2019, p. 263).

The term *storytelling* also originates from English and refers to the **art of narration**. Through storytelling, authors explain complex events in ways that retain audience interest. It is a powerful narrative method used across a variety of domains—legends, folktales, children's stories, literature, theatrical performances, and mass entertainment—all embody elements of storytelling. While the styles of delivery may vary, the effectiveness of storytelling lies in its ability to evoke **active emotional responses** such as empathy, outrage, or a sense of solidarity from the audience.

Multimedia formats enhance storytelling by allowing users to read, listen to, or watch the narrative. As such, the terms **viewer**, **reader**, and **listener** become interchangeable when describing the multimedia audience experience.

Today, **contemporary storytelling** encompasses a broad range of platforms. With the rapid growth of social media, digital marketing, and blogging, the ability to craft narratives with clear structure, vivid details, and illustrative examples has become an essential skill for professionals seeking public influence.

In terms of format, storytelling is categorized into three types: **oral**, **written**, and **multimedia (digital)**.

- **Oral storytelling** involves live verbal communication with an audience. In such cases, facial expressions, gestures, and emotional delivery play a crucial role. This format is widely used in presentations, training sessions, and interpersonal communication.
- **Written storytelling** is a format frequently used by **copywriters**, **bloggers**, **marketers**, and **journalists**. It typically presents narratives in the form of compelling texts aimed at engaging the target audience, often to promote a product, idea, or brand.
- **Digital (multimedia) storytelling**, on the other hand, is widely applied across **websites**, **digital journalism**, **social media**, and in the production of **presentations** and **video content**[1]. These stories can take various forms and serve different functions in online media. In this context, variations such as **data storytelling** and **digital storytelling** have become especially prevalent in Western scholarly and professional practice.

Unlike longreads, storytelling is often presented in a **nonlinear format**—meaning that the reader or user is free to navigate the story in a personalized way, choosing which segments to read, watch, or listen to. As a result, each component must be self-contained, offering complete and comprehensible information on its own. These components typically include not only core content but also **statistical data**, **interactive charts**, and **hyperlinks** to related resources, thereby allowing users to explore the topic in greater depth.

Another distinguishing feature of storytelling is its **narrative expression**—the style emphasizes emotional engagement and thematic coherence rather than linear reporting. To better understand the similarities and differences between **longread** and **storytelling** formats, this paper analyzes case studies from *Lenta.ru* and *The Guardian*—two notable digital journalism platforms that actively employ both models.

Among today's multimedia formats, the **web documentary** holds a prominent position due to its complexity, factual grounding, attention to detail, and reliance on professional production tools. This format has gained substantial popularity among modern audiences. The web documentary is a **creative nonfiction narrative** based on **historical events**, **real-life stories**, or **biographical subjects**, blending artistic interpretation with factual documentation.

In the context of multimedia journalism, the term "web documentary" also signals the **evolution in the quality and sophistication** of content published by online outlets. There are various alternative terms used to describe this genre, including: **web doc**, **i-doc**, **interactive documentary**, **new media documentary**, **transmedia documentary and art-doc.**

Each editorial team or media outlet may choose the terminology that best suits their stylistic and narrative preferences. Despite the terminological variation, these formats share a common emphasis on **audience engagement**, **multisensory storytelling**, and **technological innovation**.

The **narrative structure of a web documentary** is determined by a predefined script. In order to effectively convey the essence of a factual event, collaborative efforts with relevant individuals and experts are planned in advance.

The **instrumental and visual elements** are also outlined prior to production. This includes anticipating how the subject matter will be illustrated through images or video, the sequence of background music, and which medium will play the primary communicative role. The technological aspects of web documentaries must be strategically designed beforehand—for example, determining the platform for publication and whether to incorporate animation or 3D visualization.

Web documentaries are characterized by a **high level of interactivity**. For blind users, access to this type of content is only possible if **audio descriptions**, **transcripts**, and **narrative alternatives** are provided. Unfortunately, most web platforms do not offer these features, making it difficult to interpret such content consistently via TTS (text-to-speech) or screen reader software.

Globally, leading media platforms such as **BBC**, **The Guardian**, and **The New York Times** have adopted advanced approaches to **digital inclusivity**, creating accessible web interfaces specifically tailored to users with disabilities, particularly the blind and visually impaired. The **BBC**, for instance, has committed to aligning all of its online services with the **Web Content Accessibility Guidelines (WCAG) 2.1**. BBC web pages are structured with **semantic HTML** that is fully compatible with screen readers, and all images and graphics include **alt text**. In addition, **Braille-compatible downloadable versions** of text content are available.

The Guardian produces not only text-based articles but also actively engages in visual longreads and interactive storytelling. Its pages are fully navigable using a keyboard, and **interactive graphics and diagrams** are supplemented with textual alternative descriptions.

In recent years, Uzbekistan's online media space has developed significantly, introducing greater flexibility through mobile-friendly design, infographics, audio podcasts, and visual content. Platforms such as **Daryo.uz**, **Kun.uz**, **Gazeta.uz**, and **Qalampir.uz** have improved in areas such as news delivery speed, effective use of visuals, and gradual integration of multimedia formats.

However, the level of **inclusivity** for blind users remains very limited. Most notably, images on these platforms **lack descriptive alt text**, and **semantic structures** compatible with screen readers are largely absent. Furthermore, **transcripts**, **subtitles**, and **audio descriptions** for audio and video content are insufficient or nonexistent.

Conclusion

Creating an environment of **informational equality** among users is not only a technical matter, but a core issue of **journalistic ethics, legal obligation, and social justice**. Ensuring that multimedia formats such as **longreads**, **storytelling**, and **web documentaries** are accessible to blind information consumers is a critical indicator of a media space's **digital inclusivity**.

In digital journalism, **technological advancement** must go hand-in-hand with **accessibility standards**. The shortcomings outlined above indicate that a **systemic model of inclusive journalism** has not yet fully emerged in Uzbekistan. Therefore, it is increasingly important to **mobilize financial and institutional support** for inclusive media initiatives—through partnerships among **government agencies**, **non-governmental organizations**, **international donors**, and **grant-making institutions**.

REFERENCES

1. Tertychniy, A. A. (2014). *Multimedia journalism* [Мультимедийная журналистика]. Moscow: Aspect Press.
2. Champen, N., & Chapman, D. (2006). *Digital multimedia technologies* (2nd ed., Trans. from English) [Цифровые технологии мультимедиа]. Moscow.
3. Deuze, M. (2005). What is journalism? Professional identity and ideology of journalists reconsidered. *Journalism*, 6(4), 442–464. https://doi.org/10.1177/1464884905056815 *(Add DOI if available.)*
4. Makeyeva, S. A. (2015). *Audiodescription as a means of adapting visual information for the blind* [Аудиодескрипция как средство адаптации визуальной информации для слепых]. Moscow: Logos.
5. Baranova, E. A. (2019). *Digital inclusion and accessible web design* [Цифровая инклюзия и доступный веб-дизайн]. Moscow: Academic Project.
6. N.Kasimova (2019). *Online journalism and new media trends* [Онлайн журналистика ва медиада янги трендлар] (Vol. 7). Tashkent: O‘zbekiston.