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Relevance of digital literacy in cyber journalism: Exploring students' perspectives and preparedness

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Abstract
The internet revolution has laid the foundation of information superhighway. Today Cyber journalism has become a common phenomenon in journalism profession. From Newspapers, magazines, radio, to television all these media have immense presence on World Wide Web. Many newspapers have evolved themselves into new medium because of the internet. They have started to offer video, podcast and blogs to their subscribers. Cyber journalism as a new media industry has gained importance among netizens and functioning as a pervasive medium along with print and electronic media. However cyber journalism has posed new challenges to journalism education. The present study aims to investigate the digital literacy among media students. The study would like to understand the digital readiness of the institute offering journalism education. To carry out this study, a structured questionnaire was circulated among 160 media students who were selected as research samples. To evaluate the digital readiness of journalism institutes, the academic programmes offered were analysed. The study found that students demonstrated high proficiency in digital tool usage and communication, they showed low confidence in critical evaluation, data journalism, and digital safety highlighting a crucial gap in both student preparedness and institutional curricula.

Keywords: Cyber journalism, digital literacy, media students, media curriculum, digital readiness

1. Introduction
The tools of communication have evolved constantly over centuries as humans have adopted different forms of communication to express themselves. The invention of the electric telegraph in 1831 was one of the most significant advancements in communication. Since then, there is no stop for technological advancements in communication sector and today we are living in a global village interconnected with internet. The area of communication is one of the most visible manifestations of these developments. Almost all traditional modes of communication have been replaced by digital methods. The influence of these technological transformations is visibly seen in journalism profession as well. Cyber journalism is a contemporary phenomenon it is a form of journalism where news is presented solely or in combination with text, audio, video, graphics, animation etc. which can be disseminated with the help of digital media technology. Since there are fewer barriers to entry, low distribution costs and diverse networking technology many of the traditional news organisations have their active presence in the form of news portals. Teletext, developed in the United Kingdom in 1970, represents the first form of online journalism. The information disseminated through teletext is succinct and immediate, akin to the content observed in contemporary online journalism. The journalism industry is also exploring the domain of cyberspace, which encompasses the employment of electronics and the electromagnetic spectrum to store, edit, and disseminate data via interconnected systems and accompanying physical infrastructure accompanying physical infrastructures characterises cyberspace. Today this cyberspace has led to the development of Information superhighways which is the amalgamation of internet and large scale computer networks. The World Wide Web has given birth to a new form of journalism known as on-line or cyber journalism. The simplicity with which news may be broadcast on the internet, as well as the fact that anyone with a computer and a web browser can access it, has dramatically increased the quantity and variety of news items available to the typical web user. The old journalistic professional culture is being challenged by the digitalization of news creation and the internet's dissemination possibilities. The predominance of online journalism has involved established print and broadcast media outlets expanding their core offerings to the web through digital versions of their primary

products. News stories that were scheduled to be released at specific times can now be released as soon as they are written and edited, raising the strain of meeting deadlines on the working journalists. The development of communication technology is on its peek and there is drastic change in the working approach of journalists since they need to prepare content for the online audience as well this requires them to be digitally literate. In this background the present study has proposed to evaluate the digital literacy and digital readiness of the budding journalists and the institutions offering journalism courses respectively. This study finds relevant in the present digital approach in journalism profession.

2. Literature review

The concept of digital literacy has been widely studied across disciplines, with researchers emphasizing its critical role in education and professional fields. Scholars like Gilster (1997) [1] introduced the term "digital literacy" as the ability to understand and use information in multiple formats from a variety of digital sources. In the context of journalism, digital literacy has evolved to include proficiency in social media, data journalism, and multimedia storytelling

The pace of change in the communication sector is so rapid and constant that university curricula lag behind and are failing to make a strong enough commitment to content aimed at the new demands of journalistic companies, with the result that there is a disconnection between the labour market and what universities offer (Sánchez and Méndez 2015) [2].

Studies have shown that journalism education often lags in equipping students with practical digital skills required in the industry. Research by Deuze (2005) [3] highlights a gap between traditional journalism curricula and the digital competencies required in the industry. (Fakhrudin & Haryanto, 2023) [4] highlights that digital literacy encompasses not just technical skills but also critical thinking and the ability to navigate, evaluate, and create content across digital platforms.

The journalist of the future must be a technologically active professional who accepts the need for constant recycling of knowledge. They must have a flexible mentality in order to adapt to an era of changes, tools, formats and new roles, whilst not forgetting that the traditional functions of informing, verifying and interpreting, remain intact (Sánchez-García *et al.* 2015) [2].

The digital journalist is one who has adapted to a new format and who seeks out the greatest possible news. “The digital and online environments take journalistic storytelling to a new level, but the fundamental principles, such as obligation to the truth, remain essential” (Lassila-Merisalo 2014, 5) [6].

Integrating digital literacy into journalism education can significantly enhance students' professional readiness. Given the pervasive presence of technology in the modern newsroom, journalism programs must ensure that graduates possess the necessary digital competencies to thrive in the industry. (Meyers *et al.*, 2013) (Young, 2017) [7, 8].

3. Theoretical Framework

Eshet-Alkalai (2012) [9] in his Digital Literacy Framework provides a comprehensive foundation, categorizing digital literacy into six dimensions: photo-visual thinking, real-time thinking, information thinking, branching thinking, reproduction thinking, and social-emotional thinking. These dimensions emphasize not only technical skills but also critical and creative capacities, making the framework particularly relevant for journalism education, where students must evaluate, synthesize, and communicate information across diverse digital platforms.

The European Union’s Digital Competence Framework for Citizens (DigComp 2.1) further expands on these ideas by identifying five core areas: information and data literacy, communication and collaboration, digital content creation, safety and problem-solving. This framework transitions from basic digital skills to higher-order competencies necessary for professional and societal engagement, making it a valuable tool for assessing institutional readiness in journalism education (Carretero, Vuorikari, & Punie, 2017) [10].

Similarly, Ng’s (2012) classification of digital skills into technological, cognitive, and social dimensions provides insight into the specific abilities journalism students need to thrive in a digital-first media environment. Complementing this, Van Deursen and Van Dijk’s Internet Skills (2015) add depth by emphasizing operational, navigational, and content creation skills essential for cyber journalism. These frameworks collectively underline the importance of integrating comprehensive digital literacy training into journalism curricula, ensuring students are prepared to manage digital tools, navigate hypermedia environments, and produce ethical, innovative content (Ng, 2012; Van Deursen & Van Dijk, 2015) [11].

4. Scope of the Study

This study focuses on exploring the digital literacy and preparedness of undergraduate and postgraduate media students enrolled in journalism programs across Bangalore, Karnataka. It investigates their perceptions of digital literacy, their readiness for the demands of cyber journalism, and the adequacy of their academic training in equipping them to meet the needs of the modern media industry. The study examines the digital tools and platforms students commonly use, their understanding of ethical considerations in the digital realm, and their confidence in navigating the evolving digital media landscape.

5. Objectives

- To assess the level of digital literacy among media students pursuing journalism education.
- To evaluate the digital readiness of institutions offering journalism programs.

6. Research Methodology: The present study adopts a mixed-method approach to comprehensively address the research objectives. A quantitative survey will be conducted among 160 media students from selected journalism institutes to assess their level of digital literacy, using a structured questionnaire designed around key competencies such as digital tools usage, content creation, and critical evaluation. To evaluate the digital readiness of institutions offering journalism programs, a detailed document analysis of the journalism syllabi from various institutes will be conducted. This analysis will examine the inclusion of digital journalism components, such as social media tools, multimedia storytelling, and data journalism.

Data Analysis: This section presents the analysis of data collected through a quantitative survey among 160 media students and a qualitative content analysis of journalism syllabi from selected institutions. The analysis is presented in alignment with the study's two core objectives.

7.1 Objective 1: To Assess the Level of Digital Literacy among Media Students

A structured questionnaire was used to measure key domains of digital literacy:

- Digital Tool Usage
- Content Creation
- Critical Evaluation
- Online Communication
- Digital Safety and Ethics

Table 1: Mean Scores of Digital Literacy Dimensions (N = 160)

Digital Literacy Dimension	Mean Score (Out of 5)	Standard Deviation (SD)	Interpretation
Digital Tool Usage	4.12	0.61	High proficiency
Content Creation (text/audio/video)	3.48	0.78	Moderate proficiency
Critical Evaluation of Online Sources	3.02	0.84	Low to moderate proficiency
Online Communication (netiquette, collaboration)	3.89	0.69	High proficiency
Digital Safety and Ethics	2.76	0.91	Low proficiency

Students exhibited relatively high proficiency in tool usage and communication, likely due to regular social media and platform-based interactions. However, critical evaluation and digital safety scores were lower, highlighting potential vulnerabilities in misinformation handling and ethical awareness crucial in cyber journalism.

Table 2: Distribution of Overall Digital Literacy Levels

Level of Digital Literacy	Frequency	Percentage (%)
High (4.0-5.0)	48	30%
Moderate (3.0-3.9)	72	45%
Low (Below 3.0)	40	25%
Total	160	100%

Only 30% of the students showed high digital literacy. A significant portion (45%) had moderate levels, indicating room for curricular reinforcement. The 25% low category is concerning, especially in a field that relies heavily on digital skills.

Table 3: Gender-wise Comparison of Digital Literacy (Independent Samples t-Test)

Gender	Mean Digital Literacy Score	SD	t-value	p-value
Male (n=80)	3.44	0.63	-1.78	0.077
Female (n=80)	3.61	0.66		

Although female students had a slightly higher mean digital literacy score (3.61) compared to males (3.44), the difference was not statistically significant ($t = -1.78$, $p > 0.05$). This suggests that both genders have comparable levels of digital literacy.

Table 4: Pearson Correlation Matrix of Digital Literacy Dimensions (N = 160)

Variables	Tool Usage	Content Creation	Critical Evaluation	Communication	Safety & Ethics
1. Tool Usage	1				
2. Content Creation	0.56*	1			
3. Critical Evaluation	0.34*	0.48*	1		
4. Communication	0.62*	0.53*	0.41*	1	
5. Safety & Ethics	0.21*	0.33*	0.58*	0.36*	1

Note: $p < 0.05$ (significant) $p < 0.01$ (highly significant)

To understand how different dimensions of digital literacy relate to one another, a Pearson correlation coefficient (r) was calculated. This analysis helps identify whether students who score high in one area (e.g., tool usage) also tend to score high or low in other areas (e.g., critical thinking, ethics).

- There is a strong positive correlation between Tool Usage and Communication (r = 0.62*), indicating that students adept at using digital tools are also proficient in online communication and collaboration.
- Content Creation is moderately correlated with both Critical Evaluation (r = 0.48*) and Communication (r = 0.53*), suggesting that creative competencies grow with analytical and communicative engagement.
- Safety & Ethics has a moderate correlation with Critical Evaluation (r = 0.58*), implying that students who critically assess online content are more aware of digital ethics and risks.
- All correlations are positive, meaning proficiency in one dimension tends to improve others.

7.2 Objective 2: To Evaluate the Digital Readiness of Institutions

A qualitative document analysis was conducted on syllabi from 10 journalism institutions, coded for the presence of key digital journalism elements.

Table 5: Cross-Comparison of Student Competence and Curricular Inclusion of Digital Journalism Skills

Digital Journalism Component	% of Students with High Confidence (N = 160)	% of Institutions Including Component (n = 10)
Social Media Tools	82%	90%
Multimedia Storytelling	56%	60%
Data Journalism	27%	40%
Mobile Journalism (MoJo)	22%	30%
Digital Safety and Ethics	35%	20%
AI & Automation in Journalism	10%	10%

The cross-tabulated data reveals critical insights into the misalignment between students' competencies and institutional curricular readiness in key digital journalism areas:

Social media tools show high alignment with 82% student confidence and 90% institutional inclusion. This suggests these tools are well-integrated into pedagogy and regularly used in practice, contributing to high student competence.

Multimedia Storytelling is moderately aligned more than half of students (56%) feel confident, and 60% of institutions offer some form of training. This indicates a reasonable match, although student confidence could be boosted with enhanced hands-on production work.

Data Journalism, **MoJo**, and **Digital Ethics** show **weak alignment:** Despite being essential in cyber journalism, only 27% of students are confident in data journalism, while 40% of institutions include it suggesting curricular exposure is insufficient or ineffectively implemented.

Similarly, mobile journalism and digital ethics are covered by only 30% and 20% of institutions, respectively, resulting in low student confidence (22% and 35%).

AI & Automation in Journalism is almost absent in both domains (10%), revealing a significant gap in forward-looking digital literacy. This area is increasingly vital due to AI-generated content and newsroom automation.

Conclusion

The findings of this study enrich the nuanced landscape of digital literacy among journalism students and the digital readiness of the institutions that educate them. Students demonstrated commendable proficiency in foundational digital skills particularly in tool usage and online communication likely shaped by their daily engagement with social and digital platforms. However, a closer inspection reveals notable deficiencies in critical evaluation, digital safety, and emerging journalistic competencies, highlighting vulnerabilities in navigating misinformation and maintaining ethical standards in the digital media environment.

While 30% of students exhibited high digital literacy, the prevalence of moderate 45% and low 25% literacy levels signals an urgent need for pedagogical reform. The absence of statistically significant gender differences suggests a relatively equitable digital learning environment, though improvements are needed across the board.

The positive interrelationships among digital literacy dimensions especially the strong ties between tool usage, communication, and critical evaluation highlight the integrative nature of digital competencies. Enhancing one skill may have a cascading effect on others, making a holistic and cross-functional approach to media education both practical and necessary.

Critically, the study reveals a mismatch between student preparedness and institutional curricula. While social media tools are well-integrated and yield high student confidence, more advanced and essential areas like data journalism, mobile journalism (MoJo), digital ethics, and AI applications remain insufficiently addressed. The marginal inclusion of AI and automation despite their growing influence in the news room points to a worrying gap in future-ready journalism education.

To bridge this divide, journalism programs must evolve beyond traditional media instruction and embed dynamic, skills-based modules that reflect the complexities of cyber journalism. Doing so will not only elevate student competence but also strengthen the role of journalism education in producing digitally literate, ethically grounded, and critically aware media professionals in an age of rapid digital transformation.

References

1. Gilster P. Digital Literacy [Internet]. 1997 [cited 2025 Jul 2]. Available from: https://www.goodreads.com/work/editions/2346785-digital-literacy
2. Sánchez Gonzales H, Méndez-Muros S. Social media in Spanish journalism: Demand, expectations and university offer. Cuadernos.info. 2015;36:155-71. doi:10.7764/cdi.36.636
3. Deuze M. What is journalism? Professional identity and ideology of journalists reconsidered. Journalism. 2005;6(4):442-64. doi:10.1177/1464884905056815
4. Fakhrudin A, Haryanto H. Digital literacy analysis of primary school students. In: KnE Social Sciences. Knowledge E; 2023. doi:10.18502/kss.v8i8.13280
5. Sánchez-García P, Campos-Domínguez E, Gonzalo S. The unalterable functions of journalists in view of the emerging multimedia job profiles. Rev Lat Comun Soc. 2015;70:187-208. doi:10.4185/RLCS-2015-1042en
6. Lassila-Merisalo M. Story first: Publishing narrative long-form journalism in digital environments. J Mag New Media Res. 2014;15. doi:10.1353/jmm.2014.0007
7. Meyers EM, Erickson I, Small RV. Digital literacy and informal learning environments: An introduction. Learn Media Technol. 2013;38(4):355. doi:10.1080/17439884.2013.783597
8. Young JA. Equipping future nonprofit professionals with digital literacies for the 21st century. J Nonprofit Educ Leadersh. 2017;8(1):4. doi:10.18666/jnel-2018-v8-i1-8309
9. Eshet-Alkalai Y. Thinking in the digital era: A revised model for digital literacy. Issues Informing Sci Inf Technol. 2012;10(2):267-276.
10. Carretero S, Vuorikari R, Punie Y. DigComp 2.1: The digital competence framework for citizens with eight proficiency levels and examples of use [Internet]. Luxembourg: Publications Office of the European Union; 2017 [cited 2025 Jul 2]. doi:10.2760/38842
11. Ng W. Can we teach digital natives digital literacy? Comput Educ. 2012;59(3):1065-1078. doi:10.1016/j.compedu.2012.04.016