



Reimagining Media Studies Education in Pakistan through Artificial Intelligence: Curriculum Integration, Competencies, and Challenges

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ABSTRACT

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This paper studies how artificial intelligence (AI) is reshaping media studies education in Pakistan. It uses primary policy data from the Higher Education Commission (HEC), mainly the 2025 revised curriculum for Media and Communication Studies and the national decision to make AI a compulsory course, together with recent international research. The paper shows that AI has moved from the edges of the media curriculum to its centre. In the new HEC scheme, a three-credit course called “AI & Data Analytics in Media” is mandatory for every undergraduate student, a Data Journalism course sits in the core, and a full specialization in Data and Computational Journalism is offered as an option. Drawing on competency frameworks from UNESCO and leading scholars, the paper sets out the knowledge, skills, and values that media graduates now need: understanding AI, using AI tools responsibly, reading data and algorithms, judging AI outputs, and keeping ethics and human judgement central. The paper then explains the real problems that stand in the way, including weak infrastructure and the digital divide, limited teacher training, academic integrity worries, weak support for Urdu and regional languages, and the difficulty of enforcing bans. It closes with practical steps for universities, teachers, and policymakers. The main argument is simple: Pakistan has taken an important first step on paper, but turning policy into real classroom learning will decide whether the reform succeeds.

Introduction

Media work is changing quickly because of artificial intelligence. Newsrooms now use AI to transcribe interviews, translate text, sort large sets of documents, suggest headlines, and even draft short reports. Studios use AI to edit video, clean audio, and create images. At the same time, AI makes new problems easier, such as fake images, cloned voices, and automated disinformation. Media graduates will spend their careers inside this new environment, so the way we teach them must change too. Recent studies agree that AI is no longer a side topic for media and journalism programmes; it now touches writing, production, data work, and ethics all at once (Wenger et al., 2025; Muzhingi et al., 2026).

Pakistan is part of this global shift. In early 2026, the Higher Education Commission (HEC) decided to make a three-credit-hour AI course compulsory in every undergraduate and postgraduate degree across the country (Geo News, 2026). HEC described AI as “a revolutionary force” of the twenty-first century and said the aim was to prepare students for a digital economy (Geo News, 2026). A year earlier, HEC had already revised the curriculum for Media and Communication Studies and placed AI and

data skills inside the core of the degree (Higher Education Commission [HEC], 2025). Together, these two steps mark a clear policy turn: AI is now an official and required part of media education in Pakistan.

This paper asks three questions. First, how is AI being written into the media studies curriculum in Pakistan, based on HEC's own documents? Second, what competencies, that is, what knowledge, skills, and values, do media students now need? Third, what challenges stand between the policy and real learning in classrooms? The paper answers these questions in plain language so that teachers, department heads, and policymakers can use it directly. It argues that the reform is welcome and overdue, but that success depends on teacher training, infrastructure, local-language support, and honest assessment, not on the policy text alone.

Approach and Data Sources

This is a document-based, descriptive study. The primary data come from HEC, Pakistan's national regulator for higher education. The main source is the HEC curriculum booklet for Media and Communication Studies, notified on 14 March 2025, which sets the minimum national standard for Associate Degree, Bachelor, and Master programmes (HEC, 2025). A second primary source is the national decision to make AI a compulsory course, announced in 2026 (Geo News, 2026). The paper also draws on the HEC Undergraduate Education Policy Version 1.1 of 2023, which the media curriculum is built upon (HEC, 2023).

The secondary data come from recent peer-reviewed research on AI in journalism and media education, and from competency frameworks published by UNESCO and other scholars between 2020 and 2026. These sources help explain what the Pakistani policy means and how it compares with efforts in other countries. The method is simple: read the HEC documents closely, pull out the AI-related content, place it inside a competency framework, and then discuss the practical challenges using both the Pakistani evidence and the international literature.

The Policy Turn: AI Becomes Official

For many years, AI sat at the margins of higher education in Pakistan. It appeared mostly in computer science and engineering, not in the social sciences or the humanities. That has changed. HEC first set up a committee to prepare a policy framework for generative AI tools such as ChatGPT, looking at ethical, legal, and policy questions in teaching and research. It then moved from guidance to a firm rule.

The clearest sign of this change is the 2026 decision to make a three-credit AI course compulsory in all degree programmes, in both public and private universities, starting from the 2026 academic session (Geo News, 2026). The course is meant to cover the basic ideas of AI, its applications, and its ethics, with attention to transparency, accountability, and privacy. Because the rule covers every degree, media and communication students are included by default. This is important: it means a media student in Pakistan will now study AI twice, once through the university-wide compulsory course and again through the media-specific content inside their own degree.

The policy turn is not without risk. Observers have noted that parts of the draft rules copy ideas from Western universities and may be hard to apply locally. For example, rules that ban AI-generated assignments and demand full disclosure are difficult to enforce, because teachers cannot reliably verify what a student used, and no AI-detection tool has been validated for Pakistani students. This early tension, between a strong policy on paper and weak tools for enforcement, runs through the rest of this paper. It suggests that the better path is to teach students how to use AI well, rather than to rely mainly on bans and detection.

Curriculum Integration: What the New Media Degree Contains

The most detailed primary evidence is the 2025 HEC curriculum for Media and Communication Studies. This document is a national minimum standard. Universities may add to it, but they may not fall below it (HEC, 2025). In its preface, HEC says it wants Pakistani graduates to “lead innovations in media production, digital content creation,” strategic communication, investigative journalism, and emerging technologies (HEC, 2025). The word “innovations” and the phrase “emerging technologies” are not decoration; they are matched by real AI and data content inside the scheme of study.

A compulsory AI course for every media student

The strongest signal is a course named “AI & Data Analytics in Media.” In the four-year Bachelor of Studies, this is a three-credit interdisciplinary course marked as mandatory, placed in the fifth semester (HEC, 2025). HEC even writes the learning outcomes for this single interdisciplinary course itself, instead of leaving them to each department, which shows how important it treats the subject. According to the curriculum, by the end of the course students should be able to understand the role of AI and data analytics in modern media, apply basic AI-driven tools for audience analysis, content personalization, and media production, and explain the ethical and social effects of AI in media and communication (HEC, 2025). In other words, the course asks for understanding, use, and ethical judgement together, not just tool handling.

Data and AI inside the core and the electives

AI and data skills are not limited to one course. A core major course called “Data Journalism” sits in the fifth semester and teaches data collection, analysis, and visualization for news stories (HEC, 2025). Earlier in the degree, students take “Applications of ICT” and “Media & Information Literacy,” which build the digital base needed for AI work. Beyond the core, HEC offers a full specialization called “Data & Computational Journalism.” Its recommended courses include AI and Automated Journalism, Machine Learning for Journalism, Natural Language Processing in Journalism, Computational Fact-Checking, Predictive Analytics for Journalism, and Coding for Journalists using Python or JavaScript (HEC, 2025). Other specializations add AI-related electives too, such as “Ethical Dilemmas in Artificial Intelligence & Media” in the Media Ethics and Policy stream and “Algorithmic Impacts on Social Media Content” in the Social Media stream (HEC, 2025). Table 1 summarizes where AI and data content appears in the new degree.

Table 1. AI- and data-related content in the HEC 2025 Media and Communication Studies curriculum (Bachelor of Studies).

Course or content	Where it sits	Status
AI & Data Analytics in Media	Interdisciplinary, Semester 5	Mandatory for all students
Data Journalism	Major (core), Semester 5	Required
Applications of ICT	General Education, Semester 1	Required
Media & Information Literacy	Major, Semester 3	Required
Data & Computational Journalism (AI/ML, NLP, fact-checking, coding)	Specialization (electives)	Optional stream
Ethical Dilemmas in Artificial Intelligence & Media	Elective (Media Ethics & Policy)	Optional
Algorithmic Impacts on Social Media Content	Elective (Social Media)	Optional
Emerging Trends in Digital Media; VR/AR Production	Elective (Digital Media Production)	Optional

The overall shape of the degree gives this content room to breathe. The Bachelor of Studies needs a minimum of 134 credit hours over eight semesters, including a supervised internship and a capstone project (HEC, 2025). Table 2 shows how those credits are divided. The mandatory AI course sits inside the twelve credit hours set aside for interdisciplinary work, while Data Journalism sits inside the large major block. This structure means a student cannot graduate without touching AI and data at least twice.

Table 2. Structure of the BS Media and Communication Studies programme (HEC, 2025).

Component	Credit hours	Courses
General Education	32	13
Discipline / Major	84	28
Interdisciplinary / Allied (incl. mandatory AI course)	12	4
Internship	3	—
Capstone	3	—
Total (minimum)	134	—

At the master’s level, the picture is lighter but still present. The MS programme is thirty credit hours with a compulsory thesis, and its research methods courses ask students to apply digital tools for data collection, analysis, and interpretation (HEC, 2025). This reflects a wider truth in the research literature: graduate media education is being pushed to treat AI both as a tool for research and as an object of study (Okela, 2025).

Seen together, the Pakistani curriculum follows a pattern now visible across the world. Studies of journalism programmes in Spain, Egypt, Turkey, and Vietnam show the same movement of AI from optional add-on to required content, usually arriving first through data journalism and ethics (Tejedor et al., 2024; Okela, 2025; Linh & Thang, 2026). An analysis of United States syllabi likewise found AI appearing across writing, production, data, and ethics courses rather than in one place (Muzhingi et al., 2026). Pakistan's new scheme is well aligned with this international direction. The gap, as the next sections show, lies less in the plan and more in the means to deliver it.

Competencies: What Media Graduates Now Need

A curriculum lists courses; competencies describe what a graduate can actually do. To use the new courses well, it helps to be clear about the skills they should build. The most widely used starting point is the definition by Long and Magerko (2020), who describe AI literacy as a set of competencies that let people evaluate AI critically, communicate and work with AI, and use AI as a tool in daily life and work. Ng et al. (2021) grouped these into four simple ideas: know and understand AI, use and apply AI, evaluate and create with AI, and act ethically. UNESCO's 2024 framework for students adds a human-centred mindset and organizes learning around ethics of AI, AI techniques and applications, and AI system design (UNESCO, Miao, & Shiohira, 2024). A teacher-focused companion framework stresses that teachers need their own AI competencies before they can build them in students (Miao & Cukurova, 2024).

These general frameworks must be translated into media terms. A media graduate does not need to build large AI models, but does need to use AI tools with judgement, read data, spot bias, verify content, and protect sources and audiences. Recent work on hard and soft skills in journalism makes the same point: technical skill without critical and ethical judgement is not enough (Wenger et al., 2025; Fernández-Barrero et al., 2024). Table 3 brings these ideas together into a short, media-specific competency map that departments can adopt directly.

Table 3. A competency map for media students (synthesized from Long & Magerko, 2020; Ng et al., 2021; UNESCO et al., 2024).

Competency area	What it means	Example media task
Understand AI	Know what AI and machine learning can and cannot do	Decide when an automated tool fits a story and when it does not
Use and apply AI	Operate AI tools responsibly and write clear prompts	Transcribe interviews, translate text, sort documents, draft and check
Evaluate and create	Judge AI outputs and build simple AI-assisted products	Verify AI text, detect fake images or voices, make data visualizations
Data and algorithm literacy	Read data and see how algorithms shape what people view	Analyze a dataset; explain how a platform's feed affects public opinion
AI ethics and law	Apply fairness, privacy, transparency, and accountability	Disclose AI use, check for bias, follow media law, protect sources
Human-centred mindset	Keep human values and judgement at the centre	Decide which tasks only a trained journalist should do

This map matches HEC's own learning outcomes closely. The mandatory course already asks for understanding, application, and ethical reflection in one place (HEC, 2025), which lines up with the "understand, use, evaluate, act ethically" structure of Ng et al. (2021). The value of the table is that it gives departments a common language. When teachers write course outlines, assessment rubrics, and capstone criteria, they can point to specific competencies rather than vague goals. It also helps students see that prompt-writing or tool use alone is not the point; the point is sound judgement supported by technical skill.

One more competency deserves special attention in Pakistan: the ability to detect and respond to synthetic media, such as deepfakes and AI-written disinformation. Pakistan's media environment already faces strong pressures around misinformation, and generative tools make the problem worse. Recent studies on disinformation and media literacy argue that verification and critical evaluation must be taught as everyday skills, not advanced extras (Ioscote et al., 2024; Mayo-Cubero, 2026). The HEC scheme supports this through its Media and Information Literacy course and its ethics electives, but departments should treat synthetic-media detection as a core outcome for every graduate, not an optional topic.

Challenges on the Road from Policy to Practice

Writing AI into the curriculum is the easy part. Delivering it well is much harder, especially in a developing country with uneven resources. The challenges below are drawn from the Pakistani evidence and from international studies of AI in journalism education. Table 4 summarizes them with possible responses.

Infrastructure and the digital divide

AI work needs working computers, stable internet, reliable electricity, and sometimes paid software. Many Pakistani departments do not have enough of these. Studies of Pakistani journalism repeatedly point to a growing digital divide and weak AI infrastructure as the biggest barrier to adoption (Husnain et al., 2024; Noor & Zafar, 2023). HEC's curriculum requires editing labs, radio studios, and print-media labs with industry software (HEC, 2025), but requiring a lab on paper does not pay for it. Rural and smaller universities will struggle most, which risks turning AI education into another source of inequality rather than a cure for it. The same concern appears in studies of other developing countries, where cost and access limit what classrooms can actually teach (Linh & Thang, 2026).

Faculty capacity and training

A course is only as good as the teacher who delivers it. Many media teachers were trained before AI tools existed and have had little formal training in data or AI methods. International research confirms that faculty readiness, not student interest, is often the real bottleneck; studies in Egypt and Spain both recommend urgent faculty development as the first step (Okela, 2025; Mayo-Cubero, 2026). UNESCO's framework for teachers was written precisely because teachers need structured support to build their own AI competencies before they can teach them (Miao & Cukurova, 2024). Without a national teacher-training push, the new AI course may be taught weakly or avoided, and the policy will exist mainly on paper.

Academic integrity and the limits of bans

Generative AI makes it easy for students to produce essays, scripts, and reports with little effort. The draft HEC rules respond by banning AI-generated assignments and demanding disclosure, but these rules are hard to enforce, because teachers cannot verify what students actually did and detection tools are unreliable for local students. The research literature warns against leaning on detection and suggests redesigning assessment instead (Kasneci et al., 2023). Oral defenses, in-class work, process portfolios, and tasks that require local reporting are harder to fake and better aligned with real skills. Studies of student AI use also show that training moves students from copy-pasting toward editing, verifying, and directing AI, which is the behaviour educators actually want (Husnain et al., 2024).

Local language and local context

Most AI tools work best in English and perform poorly in Urdu and Pakistan's regional languages. This matters for a media degree, because most journalism in Pakistan is produced in Urdu and local languages. Tools that cannot transcribe, translate, or check facts well in these languages are of limited use in a real newsroom. Teaching materials and case studies also tend to be imported, so they may not fit Pakistani media law, politics, or audiences. The curriculum's strong local base, including courses such as Mass Media in Pakistan and Media Ethics and Laws in Pakistan (HEC, 2025), is a good foundation, but AI teaching needs local datasets, Urdu-language projects, and Pakistani case studies to be meaningful.

Assessment, quality, and consistency

Because AI competencies are new, many departments do not yet have good ways to measure them. HEC sets minimum outcomes but leaves detailed syllabi and most assessment to each university (HEC, 2025). This flexibility is useful, but it can also produce wide differences in quality between institutions. Competency-based rubrics, shared assessment banks, and capstone projects that require demonstrated AI use with reflection can help keep standards even. Clear, shared competency language, such as the map in Table 3, makes this easier to achieve across many universities at once.

Table 4. Main challenges for AI in media education in Pakistan and possible responses.

Challenge	Why it matters in Pakistan	Possible response
Infrastructure and digital divide	Labs, devices, internet, and power are uneven across universities	Use free or low-cost tools; share labs; provide offline resources and funding for weaker campuses
Faculty capacity	Many teachers lack AI and data training	National faculty development; train-the-trainer; teacher communities of practice
Academic integrity	Generative tools are easy to misuse; bans are hard to enforce	Redesign assessment: oral defenses, portfolios, local reporting; teach responsible use
Local language and context	Tools are weak in Urdu and regional languages; cases are imported	Build local datasets and Urdu projects; use Pakistani case studies and media law
Assessment and quality	New skills are hard to measure; quality varies by university	Competency-based rubrics; shared assessment banks; capstone with reflection
Policy enforcement	Detection tools are unreliable for local students	Focus on teaching good AI use rather than policing output

A Way Forward

The gap between policy and practice can be closed with a few focused actions. First, invest in teachers. A national programme of short, practical AI-and-data workshops for media faculty, repeated each year, would do more than any single course text. Teacher competencies should be built using a clear framework such as UNESCO's teacher framework (Miao & Cukurova, 2024) and the map in Table 3.

Second, share resources so that smaller universities are not left behind. HEC and larger universities can create and freely share course outlines, slide sets, datasets in Urdu and regional languages, Pakistani case studies, and assessment rubrics. This reduces cost and keeps quality even across the country, directly addressing the digital-divide risk raised earlier (Husnain et al., 2024).

Third, change assessment before worrying about detection. Departments should move toward oral defenses, in-class exercises, process portfolios, and assignments that require original local reporting, which are naturally resistant to misuse and build the judgement employers want (Kasneci et al., 2023; Wenger et al., 2025). Students should be taught to disclose and reflect on their AI use rather than hide it.

Fourth, make synthetic-media detection and verification a core outcome for every graduate, not an elective. Given Pakistan's disinformation pressures, the ability to spot deepfakes and AI-written falsehoods is now a basic professional skill (Ioscote et al., 2024). Finally, treat the reform as a living process. HEC revises curricula on a regular cycle, and AI is moving fast; short annual updates to course content, guided by feedback from teachers and the media industry, will keep the degree current.

Conclusion

Pakistan has taken a clear and timely step. Through the 2025 Media and Communication Studies curriculum and the 2026 decision to make AI a compulsory subject, HEC has moved AI from the margins to the centre of media education (HEC, 2025; Geo News, 2026). The new degree includes a mandatory AI course, a core data journalism course, and a full computational-journalism specialization, and its learning outcomes rightly combine understanding, use, and ethics. This places Pakistan in step with international practice, where AI has become a required part of journalism and media training (Tejedor et al., 2024; Muzhingi et al., 2026).

Yet policy is only the beginning. The reform will succeed only if teachers are trained, if infrastructure reaches smaller campuses, if tools and materials work in Urdu and local languages, if assessment rewards judgement rather than output, and if verification skills are taught to everyone. The deeper message is that AI should not replace the core values of media education, which are

truth, fairness, and service to the public. Used well, AI can make Pakistani media graduates faster, sharper, and more capable. Used carelessly, it can deepen inequality and weaken trust. The task now is to turn a strong plan into strong teaching, classroom by classroom.

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