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From Awareness to Action: Rethinking Media Education in Lebanon in the Age of Artificial Intelligence

ALI AHMAD*
Al Maaref University, Lebanon

ABSTRACT

This study investigates the structural, epistemological, and professional challenges imposed by artificial intelligence (AI) on media and communication education, specifically in Lebanese higher education. It addresses the central research question: "What are the theoretical and practical challenges confronting media education in an AI-driven environment?" Using a descriptive-analytical approach, the study combines qualitative and quantitative methods, including questionnaires, semi-structured interviews, content analysis, and thematic analysis of curricula from five Lebanese universities. The findings of this study indicate significant gaps between technological advancements and existing academic practices. The key challenges include limited AI expertise among media faculty (72%), insufficient curricular integration of AI technologies (85%), frequent informal use of AI tools among students (60%), and ethical concerns such as plagiarism and reduced critical thinking (77%). Additionally, the study identifies a clear absence of comprehensive institutional strategies and infrastructural support for AI integration. To ensure the Lebanese media education sector benefits from the global digital transformation, this study recommends a holistic approach that includes specialised AI training for faculty, curricular revisions to embed AI competencies, and robust ethical guidelines for AI use. This strategic approach aims to position Lebanese universities to prepare effectively media graduates for the AI-driven professional landscape.

Keywords: *Artificial intelligence, media education, media curricula, university curricula, Lebanon.*

INTRODUCTION

The contemporary world is experiencing a significant wave of technological acceleration, with artificial intelligence (AI) emerging as a pivotal force reshaping intellectual and professional domains, including media and communication education. AI's evolution from a supportive tool to a strategic partner in decision-making and content generation has profoundly impacted traditional educational paradigms. Consequently, educational institutions must adapt by integrating AI at the core of their pedagogical strategies rather than treating it as a peripheral enhancement.

These transformations are critical in the media sector due to its rapid responsiveness to digital innovation. Modern media production relies extensively on AI, from text generation and editing to audience analytics and content personalization. Hence, contemporary media curricula must include competencies such as big data analysis, AI-assisted content creation, and algorithmic verification.

Globally, academic initiatives have aimed at restructuring media curricula to align with the digital revolution; however, many universities—especially in the Arab region—remain hesitant to implement substantial reforms. Lebanon exemplifies this challenge, reflecting

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significant variations between public and private institutions, generational differences among faculty, and disparities between traditional and emerging pedagogical approaches.

This study examines the current integration of AI in media education within Lebanese universities, identifies the challenges obstructing this integration, and explores opportunities for educational reform aligned with global transformations. Lebanon's dynamic media landscape and complex socio-economic conditions highlight the urgency of aligning media education with international standards to meet the evolving demands of local and global media markets.

Ultimately, this study advocates for a comprehensive reassessment of educational philosophies and practices in the face of AI-driven transformations, contributing foundational insights for future research and governance-informed applications in media education.

Research Problem

Despite the tremendous momentum sparked by artificial intelligence (AI) technologies in the media sector, university-level media education in Lebanon continues to exhibit a clear disconnect between classroom teachings and the competencies required by the digital labour market. Specifically, this study focuses on examining media education curricula within selected Lebanese universities (Lebanese University, Lebanese American University, Beirut Arab University, Al Maaref University, and University of Sciences and Arts in Lebanon) during the academic year 2023-2024. This study raises a central research question: How can media and communication curricula within these institutions effectively adapt to the AI revolution reshaping the media profession?

A growing body of scholarly literature suggests that the AI-driven transformation in media extends beyond mere technological upgrades, fundamentally altering the epistemological foundations of media practices. Traditional pedagogical models, emphasizing legacy competencies such as writing, presentation, and editing, are insufficient in the increasingly data-driven and algorithmically governed professional ecosystem (Kamalov, Calonge, & Gurrib, 2023). Thus, this study critically reassesses current pedagogical processes and explores necessary curricular adaptations to meet the evolving demands of the media industry.

Significance of the Study

The significance of this study lies in addressing the practical need for aligning media education in Lebanese universities with contemporary professional demands in an AI-driven media environment. Today's media literacy extends beyond traditional skills in content creation and curation; it increasingly involves proficiency in algorithm-driven content distribution, audience analytics, and AI-based content generation systems. Thus, universities must transition from their traditional roles to becoming proactive institutions that cultivate graduates capable of effectively navigating and actively shaping AI-enhanced media landscapes.

Practically, this research highlights critical gaps between academic curricula and professional media industry requirements in Lebanon, aiming to inform strategic curriculum revisions and targeted training programs. By emphasizing the practical alignment of academic training with market needs, this study provides actionable insights for Lebanese higher education institutions to enhance their relevance, responsiveness, and competitiveness in both local and global media markets.

Research Aim

This paper aims to investigate the structural, epistemological, and professional challenges imposed by artificial intelligence on curricula and pedagogical strategies in media and communication education within Lebanese higher education institutions.

The sub-aims are:

i. To evaluate the current level of integration of AI-related cognitive and technical competencies within existing media curricula at selected Lebanese universities.
ii. To identify practical opportunities and future configurations for media education aligned with emerging trends driven by AI technologies.
iii. To propose specific mechanisms and actionable recommendations for curricular and pedagogical transformation based on empirical evidence and best practices in media education.

Research Question

Drawing on the aim stated and its sub-aims, this study is guided by the central question: "What are the theoretical and practical challenges confronting media education in Lebanese universities within an increasingly AI-driven environment?"

The sub-questions are:

i. How aligned are current media curricula at Lebanese universities with the practical skills required by the AI-driven media industry?
ii. What strategies can Lebanese universities adopt to ethically and effectively integrate AI tools such as ChatGPT, AI-generated imagery, and automated video production systems into media education?
iii. Which specific curricular and institutional frameworks should Lebanese universities implement to effectively prepare media graduates for the demands of the AI-enhanced professional landscape?

Structure of the Study

This paper is divided into two main sections:

i. The first section is theoretical in nature. It presents a critical analysis of key concepts related to artificial intelligence and media education and reviews relevant scholarly literature in the field.
ii. The second section adopts an applied approach, drawing on case studies and semi-structured interviews conducted with faculty members and students from Lebanese media faculties. This section aims to identify critical gaps in current pedagogical practices and propose actionable mechanisms for curricular and institutional transformation.

THEORETICAL FRAMEWORK AND KEY CONCEPTS

This section will identify the correlation between AI and media education and the relevant concepts in this research.

AI in Education and Media: Concepts and Challenges

Artificial Intelligence (AI) refers to intelligent systems programmed to emulate human cognitive functions such as reasoning, learning, decision-making, and interaction with the environment. Its applications have evolved from advanced computational tools to complex systems built on adaptive algorithms and machine learning processes (Russell & Norvig, 2024). In the context of education, AI is no longer a peripheral aid but has become an integral component of contemporary digital learning architectures. It is now employed in intelligent assessment systems, dynamic curriculum design, and personalized content delivery tailored to individual learner needs. In the field of media, AI has emerged as a central tool in automated editing, audience data analysis, trend detection, and even in the generation and structuring of news content.

In addition, these technologies trigger significant concerns related to privacy and data protection. AI-powered educational platforms often collect and process vast quantities of personal and behavioural data about students, making them vulnerable to breaches or unethical exploitation in surveillance and predictive behavioural modelling (Office of Communications, 2024). This necessitates the establishment of clear legislative frameworks that define the types of data that can be collected, identify authorized stakeholders, and ensure robust safeguards for user protection.

Therefore, understanding AI-related concepts must not be confined to technical dimensions. Rather, it requires a multidimensional analytical approach encompassing philosophical, ethical, and pedagogical perspectives, with a particular focus on the impact of AI on the formation of cognitive and moral agency in the 21st century. The challenge is not merely how to use the technology, but how it reshapes what it means to know, to learn, and to become human in a digitally mediated world.

The Impact of AI on Media and Communication Education

The past few decades have witnessed profound transformations in the nature of media work, yet the most dramatic shift has emerged with the integration of artificial intelligence as a core element in the technical and production infrastructures of the media industry. AI is no longer an auxiliary tool; it has become a backbone of journalistic operations—from news gathering and content analysis to the delivery of personalized narratives. Consequently, the skillset expected of media professionals has undergone a radical reconfiguration. Proficiency in writing and editing is no longer sufficient. Journalists and communicators today must possess deep conceptual and practical literacy in AI technologies and demonstrate agility in engaging with recommendation algorithms, audience behaviour prediction models, and generative media platforms.

In this regard, recent studies reveal that a majority of media schools across the Arab world—and indeed in many developing countries—still operate with curricular frameworks that fail to reflect these structural transformations (Kamalov, Calonge, & Gurrib 2023). Many institutions neither offer AI as a stand-alone course nor equip instructors with the pedagogical tools needed to integrate AI meaningfully into the learning process. As a result, a widening gap is emerging between the knowledge imparted in academic settings and the competencies required in professional practice.

Wenger et al. (2024) underscore the extent to which media organizations are increasingly relying on AI-powered systems for event monitoring, news curation, and real-time content dissemination. This trend reinforces the urgent need for media students to become familiar with these technologies early in their academic careers, not as optional extras, but as foundational literacies for entering a profession shaped by algorithmic mediation and automation.

Supporting Interpretive Theories

The Deep Learning Theory and Social Mediation Theory are the two theories that are relevant to this study. Deep Learning Theory is one of the key epistemological foundations underpinning contemporary artificial intelligence. It is inspired by the architecture of the human brain and operates through multilayered artificial neural networks that learn from data in an incremental and cumulative manner. This theory is based on the principle that algorithms become more effective and accurate as the volume and diversity of data increase, enabling the system to detect complex patterns without direct human intervention (LeCun, Bengio, & Hinton, 2015). In the context of education, deep learning theory is employed in the development of intelligent tutoring systems that adapt to individual learner needs. For instance, software systems utilizing this theory can deliver continuous, interactive assessments that help identify a learner's strengths and weaknesses and recommend targeted instructional content to address them.

Additionally, deep learning is used in predictive learning environments, where platforms can suggest alternative or supplementary learning pathways based on a student's previous behaviour and performance metrics (Matos et al., 2025).

Within the field of media education, deep learning has enabled the creation of virtual training platforms where students can simulate real-world newsroom scenarios and receive real-time, detailed feedback on their performance—whether in presentation, writing, or content analysis. These applications have proven highly beneficial in building practical skills through iterative and feedback-rich learning cycles, offering a new horizon for adaptive, experience-based training in journalism and communication.

However, the use of deep learning in education is not without its complications. These systems require large-scale data inputs, raising concerns about privacy, algorithmic bias, and surveillance. Furthermore, the outcomes produced by such systems are not always transparent or interpretable—a limitation that necessitates critical awareness on the part of both educators and learners (Rashid & Kausik, 2024). According to a report by the Elliott et al. (2021), the integration of deep learning tools into education creates new opportunities for promoting personalized learning and equitable access. However, it also demands a substantial rethinking of pedagogical roles and the philosophy of assessment, requiring more flexible, inclusive, and ethically grounded frameworks, as well as the systematic training of instructors.

Social Mediation Theory is one of the most influential educational frameworks grounded in the sociological and psychological understanding of the learning process. This theory rests on the premise that learning does not occur in a cognitive vacuum; rather, it is socially and interactively constructed through relationships, symbols, and cultural contexts surrounding the learner. According to Lev Vygotsky (cited in McLeod, 2025), interaction with surrounding individuals—teachers, peers, and community members—forms the foundational basis for concept formation and skill acquisition, with these actors functioning as mediators in the

construction of knowledge. When applied to digital learning environments—particularly in the integration of AI tools—this theory raises profound questions about the nature of mediation in an AI-enhanced classroom: Can algorithms replace human instructors as educational mediators? Can machines embody the relational and dialogical functions central to pedagogy?

Wegerif and Major (2024) argue that AI, if implemented in isolation, risks fostering cognitive isolation, limiting the learner's capacity for dialogic engagement and critical reflection. Thus, the theory emphasizes the need to redefine the role of AI not as a substitute for human interaction, but as a facilitator of relationships and dialogical learning processes. In media and communication education, the application of Social Mediation Theory becomes evident through strategies such as technology-supported collaborative learning and group-based projects that utilize AI-powered content analysis tools. When AI is employed, for instance, in discourse analysis or audience tracking within a joint assignment, it becomes part of a collective dialogue rather than an isolated instrument. This enhances communal learning dynamics and allows students to view media not merely as a technical practice but as a socially embedded and culturally negotiated activity.

One of the major challenges in aligning this theory with AI-enhanced education lies in the issue of trust and transparency. According to Wu (2024), students' reliance on systems whose decision-making processes remain opaque may compromise the effectiveness of mediation. As a response, contemporary pedagogical literature advocates for what has been termed "ethical mediation of technology"—where AI serves as a guide and facilitator rather than an authoritative or opaque source of knowledge. Research by Kohnke et al. (2025) further suggests that AI systems are most effective in supporting social mediation when they are designed to stimulate dialogue, such as real-time classroom response systems or automated question generation tools that spark collective inquiry and discussion.

LITERATURE REVIEW

Kamalov et al. (2023) argue that universities require a "structural revolution" in curriculum design—one that redistributes pedagogical roles between faculty and technology, and redefines the core competencies expected of students. The study asserts that legacy curricula, which focus primarily on theoretical knowledge, are no longer sufficient in today's digital reality. It calls for a decisive shift toward interactive education and multidimensional skill building, positioning these not as luxury enhancements but as foundational necessities. The authors also challenge the dominance of rote memorization in assessment frameworks and advocate for alternative evaluation models that emphasize students' capacity to engage critically and effectively with AI tools.

In their study, Sidiropoulos and Anagnostopoulos (2024) raise serious concerns about unregulated reliance on AI tools, particularly platforms like ChatGPT, warning that such practices may significantly erode students' critical thinking skills. According to their findings, students who use these tools without appropriate pedagogical guidance tend to replicate content without genuinely understanding or verifying it. The study recommends the incorporation of training modules on AI ethics, and emphasizes the importance of fostering algorithmic literacy to prevent students from becoming passive recipients of information generated by systems they do not comprehend.

In an article prepared by Wenger et al. (2024), it calls for a fundamental rethinking of journalism education in the age of artificial intelligence. It emphasizes the need to incorporate skills such as big data analysis and AI-generated content evaluation into journalism programs.

Traditional competencies—such as writing and investigative research—are no longer sufficient on their own. Al-Zoubi et al. (2025, p. 35) identify four key challenges to adopting AI in newsrooms—insufficient knowledge and training, language barriers, low trust and credibility, and a limited range of tasks. These challenges underscore the need for comprehensive curricular reform and targeted training.

According to a report prepared by the Office of Communications, College of Education, University of Illinois, there is an exploration of the impact of artificial intelligence on educational institutions ('AI in Schools: Pros and Cons,' 2024). The report focuses on digital security, performance monitoring, and student behaviour analytics. While the widespread adoption of AI-powered surveillance and monitoring systems may lead to improvements in academic performance, the report warns of significant implications for student freedom and data privacy. It calls for the development of clear institutional policies governing the use of tracking and analytic tools, and stresses the importance of ensuring that students are fully informed about their digital rights, as well as the mechanisms in place to protect their personal data (ibid).

Thomson (2025) raises critical questions regarding the long-term cognitive and psychological effects of generative AI tools on human perception and higher-order thinking. It argues that increasing reliance on systems such as ChatGPT and Copilot may result in the deterioration of critical and creative thinking skills, and could potentially reshape the cognitive identity of emerging generations. The article advocates for educational frameworks that integrate technology and philosophy, and for curricula that reaffirm the centrality of human reasoning in the face of the growing authority of algorithmic systems.

RESEARCH METHODOLOGY

This study adopts a descriptive-analytical approach that combines the observation of educational phenomena related to the integration of artificial intelligence in media faculties with the interpretation of these phenomena to uncover underlying patterns and structural challenges. This methodology is employed to gain a comprehensive understanding of the current reality, as it exists, and to explain the variables influencing the quality of media education and its responsiveness to contemporary technological shifts. The study relied on three primary data collection tools:

Questionnaires

Administered to a sample size of 300 participants, including 50 faculty members, 200 undergraduate students, and 50 graduate students from five Lebanese universities (Lebanese University (LU), Lebanese American University (LAU), Beirut Arab University (BAU), Al Maaref University, and Lebanese University of Sciences and Arts (USAL)). These questionnaires aimed to measure participants' awareness of AI tools, evaluate the extent to which these tools have been integrated into the educational process, and gather perceptions regarding the utility and limitations of AI applications in media education.

Semi-structured Interviews
Conducted with 10 selected academics and professionals specializing in media and artificial intelligence. These interviews were designed to elicit in-depth perspectives on the challenges and opportunities associated with AI integration in media education environments.

Content Analysis
This method analysed academic programs and curricula from the media faculties at LU, LAU, BAU, Al Maaref University, and USAL, assessing the extent to which artificial intelligence has been embedded—as a body of knowledge or pedagogical tool—within educational frameworks.

The study population consists of media faculty members (50 participants) working across the five selected Lebanese universities. These universities were chosen due to their diversity in intellectual orientations, institutional philosophies, pedagogical frameworks, and technological integration levels. This diversity provided a rich research environment to examine media faculty perspectives on artificial intelligence and explore the extent to which AI is integrated into academic curricula and professional training programs. The study specifically targeted two main participant groups:

i. Faculty members (50 participants) teaching both theoretical and practical courses in media and communication faculties.
ii. Undergraduate students (200 participants) and graduate students (50 participants) who have completed or are currently enrolled in courses related to digital technologies or artificial intelligence tools.

The selection criteria for the study participants were carefully defined to ensure a comprehensive representation and a rich diversity of experiences. Faculty members were chosen based on their direct involvement in teaching theoretical or practical media courses, their active engagement with technology integration, and their varied academic backgrounds and experience levels. Undergraduate and graduate students were selected based on their enrolment in or completion of courses explicitly related to digital technologies or artificial intelligence, ensuring their familiarity with relevant AI concepts and tools. Furthermore, the choice of universities (Lebanese University, Lebanese American University, Beirut Arab University, Al Maaref University, and University of Sciences and Arts in Lebanon) was guided by their diverse institutional philosophies, varying levels of technological integration, and different pedagogical approaches, thereby providing a comprehensive and representative insight into the state of media education in Lebanon. The qualitative sample utilized a purposive sampling strategy to ensure variation in academic experiences, institutional affiliations, and technological familiarity among participants, enhancing the reliability and depth of collected data. The data analysis methods included:

i. A quantitative strategy: A questionnaire survey and content analysis was employed. The results provide insights into general trends and prevalent views or practices.
ii. A qualitative strategy: Semi-structured interviews were conducted, and a thematic analysis was used to analyse the data. The findings identify the status quo of the media curricula in five Lebanese universities.

The mixed-methods approach generated a comprehensive understanding of the research topic, with rigorous attention given to ensuring data validity and reliability throughout all collection and analysis stages.

Validity and Reliability

To ensure validity and reliability of the research instruments, the study employed multiple strategies. For validity, questionnaires and interview guides were reviewed and evaluated by academic experts specializing in media education and artificial intelligence to ensure clarity, relevance, and appropriateness. A pilot test of the questionnaires was also conducted with a small subset of the target population (20 participants) to refine questions and confirm their clarity. For reliability, internal consistency was verified using Cronbach's Alpha coefficient, achieving acceptable reliability levels above 0.7. Additionally, triangulation of data collected from questionnaires, interviews, and content analysis further strengthened the credibility and dependability of the findings.

FINDINGS

Based on the data collected through a combination of research instruments—including structured questionnaires administered to media faculty members and students, semi-structured interviews with selected academic experts, and thematic analysis of media curricula and academic program outlines—a set of multidimensional and intersecting findings emerged. These methods collectively provided a comprehensive and layered understanding of the current state of AI integration within media education in Lebanese universities.

Questionnaire Results: The structured questionnaires were distributed to 300 participants (50 faculty members, 200 undergraduate students, and 50 graduate students). It revealed several critical insights (see Table 1). Approximately 72% of respondents indicated limited or no formal training on AI technologies, while 85% agreed on the necessity for curricular reforms to incorporate AI skills explicitly. Notably, 60% of students acknowledged regularly using AI tools informally in their academic tasks, highlighting a discrepancy between formal instruction and actual student practices.

Table 1: Questionnaire results on AI integration awareness and usage

Indicators	Faculty (%)	Undergraduate (%)	Graduate (%)	Overall (%)
Limited/No Formal AI Training	78%	70%	68%	72%
Necessity for Curricular Reforms	92%	83%	80%	85%
Regular Informal Usage of AI Tools	55%	65%	75%	60%
Ethical Concerns (plagiarism, credibility)	88%	72%	70%	77%

Semi-Structured Interviews

Twenty semi-structured interviews with *faculty members from media and communication schools in Lebanon* highlighted both obstacles and opportunities in integrating AI into media education. Participants stressed a persistent capacity gap among instructors and called for practical, discipline-specific development: "We need hands-on clinics in newsroom and production courses—policy circulars alone won't make faculty AI-literate." —P07, Journalism. Ethical issues dominated the discussion, especially plagiarism and the credibility of AI-generated

content: "The core problem is authorship and provenance; without process evidence, we can't tell what students truly produced." —P12, Media Ethics. Interviewees also pointed to curricular shortcomings: "AI appears only as a footnote in our syllabi; it must be embedded across reporting, editing, PR, and broadcasting labs." —P05, Digital Media. At the same time, several saw clear benefits when guardrails are explicit and assessment is redesigned: "If students submit prompts, drafts, and reflections, AI becomes a scaffold for analysis rather than a shortcut." —P03, Broadcasting. Respondents further highlighted institutional needs—clear policies, infrastructural support, and time for course redesign—to ensure sustainable adoption: "Without policy clarity and workload recognition, experimentation will remain isolated." —P14, Public Relations (see Table 2 for a thematic overview).

Table 2: Key findings from semi-structured interviews

Themes Identified	Frequency (out of 20)	Percentage
Lack of AI Expertise	18	90%
Need for Curricular Overhaul	17	85%
Ethical Concerns and Plagiarism	16	80%
Lack of Institutional Support	15	75%
Potential of AI for Personalized Learning	14	70%
Importance of Administrative Backing	13	65%

Thematic Analysis of Curricula

The thematic analysis conducted on the media curricula from LU, LAU, BAU, Al Maaref University, and USAL revealed three predominant themes: limited explicit reference to AI, fragmented AI integration, and absence of comprehensive AI ethics guidelines. Most programs only superficially referenced AI, primarily in elective courses or individual projects, rather than embedding it strategically across their curricula. Additionally, none of the analysed programs included clearly articulated guidelines addressing ethical considerations related to AI use.

Key Findings

The findings indicate a structural gap between the pace of technological advancement and the evolving demands of the contemporary media landscape, on one hand, and the static nature of many academic programs, which often remain disconnected from fast-moving professional realities, on the other. The absence of a clear institutional vision, coupled with the limited availability of qualified AI specialists, has significantly delayed any meaningful incorporation of AI into media education frameworks.

Conversely, positive indicators were observed in the form of growing awareness among some faculty members regarding the importance of AI, as well as individual initiatives attempting to incorporate AI tools into classroom instruction. However, these efforts generally lack administrative backing or strategic institutional alignment.

The study thus identified a triad of interconnected challenges—faculty capacity gaps, curricular limitations, and ethical concerns—that significantly hinder effective integration of AI technologies into media education in Lebanon. Nevertheless, several promising opportunities were identified, such as personalized learning experiences and enhanced teacher-student

interactions facilitated by AI tools, which, if strategically invested in, could enable curricular reform aligned with the deep digital transformations reshaping the media profession.

i. Lack of Expertise in Artificial Intelligence

A considerable number of media faculty members lack specialized training in AI technologies. Most rely on informal or self-taught experience with tools such as ChatGPT, Canva AI, or similar platforms. Interviews revealed that this gap is not merely technical but also pedagogical, as many faculty members are unfamiliar with systematic strategies for integrating these tools into the learning process. This deficit also impairs their ability to critically assess student work that involves AI, often leading to hesitant or inconsistent usage of such technologies in the classroom.

ii. Inadequate Integration of AI into Curricula

A review of course syllabi and academic plans across various media faculties revealed that AI integration remains either entirely absent or superficially addressed. Aside from scattered references to digital tools in courses such as journalism or video editing, there are virtually no dedicated courses focused on AI as a central topic. This absence points not only to a knowledge lag, but also to the lack of an academic vision that positions AI as a foundational element in future media culture, rather than a peripheral skill.

iii. Ethical Concerns Regarding AI Use in Education

Ethical apprehensions emerged as a shared concern among the majority of faculty members surveyed. Many expressed fears that AI tools could dilute the learning experience, foster academic dishonesty, or promote superficial content generation. Others warned that students' overreliance on generative AI could erode their critical thinking and analytical skills. Additional concerns were raised about transparency—specifically, the opacity of algorithmic decision-making processes, the unknown origins of training datasets, and the absence of clear assessment criteria, all of which deepen the disconnect between educational values and technological applications.

The available opportunities are:

i. Personalized Learning through Artificial Intelligence Technologies

Both the literature and interview data highlight the potential of artificial intelligence to design customized learning experiences tailored to students' individual abilities and learning speeds. This adaptability can enhance the quality of educational outcomes and boost student motivation. One of AI's most significant contributions lies in its ability to analyse learners' performance data to identify areas of strength and weakness, then automatically recommend alternative or supplementary learning strategies. Recent studies have shown that machine learning–driven systems can deliver adaptive educational experiences, helping to close the achievement gap between high-performing students and those in need of additional support.

Additionally, tools such as virtual tutoring bots can be employed to provide students with repeated personalized feedback and assist them in organizing their study schedules according to their individual preferences. AI also enables students to engage with course content in multiple modalities (e.g., videos, diagrams, practice tests), which fosters deeper comprehension and reduces the likelihood of rushing through difficult concepts without full understanding.

ii. Enhanced Student–Teacher Interaction through AI Tools

Smart technologies offer promising opportunities to improve student–teacher interaction by enabling real-time feedback, supporting the creation of interactive learning environments, and helping educators identify student difficulties with greater accuracy. These tools effectively shift the role of the educator from being a transmitter of knowledge to a facilitator of technology-augmented learning. Teachers are no longer required to manage every element of instruction and assessment on their own—AI systems now assist in constructing comprehensive portraits of student progress and guide educators in targeting their pedagogical interventions more strategically.

Examples of this enhanced interaction include the use of intelligent learning management systems that monitor student engagement, participation, and task completion, and generate detailed analytics for faculty review. Additionally, technologies such as sentiment analysis can be applied in digital classrooms to assess student reactions during lectures and inform instructional adjustments in real time.

Interview findings suggest that faculty members who have adopted such tools report a qualitative shift in their relationship with students—from a one-directional, lecture-based model to a more participatory, data-informed engagement. AI can also be leveraged to design adaptive assessments that account for individual learning differences and deliver instant, precise feedback without relying on manual grading.

Ultimately, this AI-enhanced interactivity not only improves the effectiveness of the learning process, but also redefines the philosophy of teaching itself, opening new possibilities for more autonomous, flexible, and learner-centred educational models.

DISCUSSION

The present findings reveal a partial alignment with global patterns of AI integration in higher education while highlighting Lebanon-specific constraints in media faculties. This mixed picture—growing awareness but weak institutionalization—mirrors international reviews of journalism and media programs that document faculty-level enthusiasm without system-level uptake (Wenger, Hossain, & Senseman, 2024; Kamalov, Calonge, & Gurrib, 2023). Our contribution is to locate this pattern empirically within Lebanese media schools across five universities and to demonstrate that emerging awareness remains individualized rather than anchored in policy or resourcing.

Consistent with Kamalov et al. (2023), our data support the call for structural transformation in curriculum design and role distribution. At the same time, the results substantiate Sidiropoulos and Anagnostopoulos's (2024) warning that unregulated reliance on generative tools can erode quality when training and policy are absent. Extending prior work beyond principle, the survey quantifies the enabling conditions and gaps: 72% of respondents report limited or no formal training, 85% call for curricular revision, 60% of students acknowledge regular informal use, and 77% express ethical concerns (plagiarism, credibility). These figures move the debate from general advocacy toward measurable needs that institutions must meet to ensure AI is used as a scaffold for learning rather than a shortcut.

The Lebanese institutional landscape further nuances the international picture. Private universities appear more agile in piloting AI-related practices, while public institutions exhibit inertia and policy lag. This aligns with newsroom-side studies that identify adoption barriers—insufficient knowledge and training, credibility concerns, and a narrow range of tasks addressed by AI (Al-Zoubi, Ahmad, & Abdul Hamid, 2025)—and with calls to retool journalism education around data work and AI-assisted content evaluation (Wenger et al., 2024). Our interviews with twenty media-faculty members add a public–private divergence lens specific to Lebanon and connect uptake to the presence (or absence) of incentives, workload recognition, and governance clarity.

Generational dynamics were salient. Senior administrators and faculty tended to be more sceptical and slower to experiment, whereas early-career academics showed greater technical curiosity and adoption. While generational variance is not always foregrounded in media-education syntheses, it is consonant with research on AI literacy for educators that argues for tiered, practice-based capacity building tailored to different starting points (Kohnke, Zou, Ou, & Gu, 2025). Our data therefore underscore the need for differentiated professional development pathways—introductory clinics for late adopters, advanced studios for innovators—rather than one-size-fits-all workshops.

Curricular analysis indicates that AI is still under-embedded: it appears as elective topics or isolated assignments rather than being woven through reporting, editing, PR, and broadcasting labs. This under-embedding echoes international critiques urging curriculum-wide integration of data analytics, algorithmic accountability, and AI-assisted production workflows (Wenger et al., 2024) and supports Kamalov et al.'s (2023) call to move beyond rote learning toward authentic, iterative assessment. Our qualitative interviews converge on concrete remedies—assessment redesign that requires process evidence (prompts, drafts, revision logs, and reflective memos)—which can both deter plagiarism and develop students' meta-cognitive skills. This aligns with studies showing that, absent pedagogical scaffolds, students replicate content without deep understanding (Esmaeil et al., 2023).

Ethical governance emerges as a cross-cutting need. Participants voiced concerns about authorship, provenance, and the credibility of AI-generated outputs—concerns that resonate with policy-oriented discussions of surveillance, privacy, and data protection in educational settings (University of Illinois, 2024; Wu, 2024). These anxieties also echo broader debates about the long-term effects of generative systems on critical and creative thinking (Thomson, 2025). The present study adds practical levers that appear to work in the Lebanese context: transparent classroom policies on allowable AI use; process-based grading to verify authorship; and minimal documentation standards (e.g., prompt sheets) that operationalize academic integrity without banning useful tools.

In response to these multi-level challenges, the proposed Integrated AI Media Education Framework (IAIMEF) offers a phased pathway—Assessment and Preparation, Capacity Building, Curricular Integration, and Implementation with Continuous Evaluation—that translates international guidance into media-school practice. The sequencing is consistent with the OECD's capabilities-and-assessment perspective on AI and the future of skills (Elliott et al., 2021), programmatic models of educator AI literacy (Kohnke et al., 2025), and dialogic design principles that caution against tool-centric implementation detached from pedagogy (Wegerif & Major,

2024). Its ethics and governance components respond directly to institutional policy gaps identified in both higher-education and school contexts (University of Illinois, 2024; Wu, 2024), ensuring that technical adoption is coupled with transparency, fairness, privacy protection, and accountability.

Explaining Similarities and Differences with Prior Literature

Several points of convergence are notable: (1) the necessity of tiered faculty development and practice-based clinics (Kohnke et al., 2025); (2) process-based assessment to mitigate plagiarism and verify authorship (Sidiropoulos & Anagnostopoulos, 2024); and (3) curriculum-wide embedding of AI/data competencies (Wenger et al., 2024; Kamalov et al., 2023). Our data from Lebanon affirm all three and specify enabling conditions—policy clarity, workload recognition, and baseline infrastructure. Points of divergence primarily reflect context: governance rigidity in public institutions, persistent resource scarcity, and uneven digital infrastructure. These structural factors help explain why informal student use (60%) outpaces formal provision and why ethical anxieties remain high (77%), even as faculty acknowledge AI's potential for personalization and feedback.

Context-Specific Structural Barriers and Their Literature Links

i. Weak Digital Infrastructure

Limited bandwidth, software access, and smart-classroom provisioning—especially beyond Beirut—suppress experimentation and course redesign. This pattern is consonant with digital-transformation challenges in other public-sector contexts (Aminah & Saksono, 2021), but our data localize the constraint to media faculties and trace its curricular effects.

ii. Insufficient Institutional Funding

Whereas international accounts call for strategic investment (Kamalov et al., 2023), participants describe self-funded trials and the absence of internal grants, sharpening the picture of resource scarcity and its chilling effect on innovation (see also Kohnke et al., 2025 on resourcing educator training).

iii. Admin–Faculty Disconnect

Prior work emphasizes coordination between programs and professional practice (Wenger et al., 2024). We document proposal bottlenecks and weak communication channels that stall bottom-up reform in Lebanese faculties.

iv. Public-Sector Rigidity

Multi-layered approvals and bureaucratic delays—less visible in global syntheses—emerge here as first-order barriers that must be addressed alongside pedagogy and technology.

Taken together, the Lebanese case both confirms international trajectories and extends them by specifying the institutional mechanics that mediate adoption—public–private divergence, generational effects, and governance bottlenecks. The actionable implications are clear: prioritize tiered, workload-recognized faculty development; embed AI across skill-courses

with process-based assessment; and codify transparent, privacy-aware policies. These steps, implemented through IAIMEF, translate global recommendations into a context-sensitive roadmap for media education in Lebanon.

RECOMMENDATIONS

i. Develop Specialized AI Training Programs for Faculty

Universities should launch structured training to enhance faculty capacity in AI across technical, pedagogical, and ethical domains (Kohnke et al., 2025; Kamalov et al., 2023). These programs should be tiered, beginning with general awareness sessions and progressing toward hands-on workshops tailored to academic disciplines. Training modules should cover topics such as:

- Text and image generation tools (e.g., ChatGPT, DALL·E)
- Student data analytics
- Automated assessment methods
- Simulation of AI-enhanced classroom scenarios

Importantly, such programs should include ethical dimensions, encouraging instructors to reflect on how AI reshapes the educational ecosystem and to explore new roles in an algorithm-driven era (Wegerif & Major, 2024; Sidiropoulos & Anagnostopoulos, 2024). These programs should be linked to formal certification and promotion systems to incentivize participation and integrate AI literacy into academic career development (Elliott et al., 2021).

ii. Update Curricula to Integrate AI-Centred Learning

Media curricula should undergo systematic revision to include dedicated courses or modular components that address key topics such as:

- Algorithmic journalism
- Data analytics
- Automated content production
- AI ethics in media and communication

Educational programs should be redesigned around an interdisciplinary skills model integrating technical, analytical, and communicative competencies within a dynamic digital learning context (Wenger, Hossain, & Senseman, 2024; Kamalov et al., 2023). Curricula should also adopt project-based learning that requires producing media with AI tools, followed by critical evaluation of processes and outcomes (Esmaeil et al., 2023). Moreover, reading lists must be updated to include contemporary case studies, and strategic partnerships established with AI-enabled media institutions to give theoretical modules a practical dimension (Al-Zoubi, Ahmad, & Abdul Hamid, 2025). These changes will ensure that students are equipped with the tools and mindset required to navigate—and shape—the evolving media landscape (Wenger et al., 2024).

iii. Establish Ethical Policies for AI Use in Education

Develop a comprehensive ethical framework for AI use in educational contexts, with attention to surveillance, privacy, and transparency (University of Illinois, 2024; Wu, 2024). Such a framework must safeguard student rights, ensure academic integrity, and guide instructors toward best practices in AI adoption. The ethical foundation should be built upon key principles including:

- Transparency in the use of AI tools
- Fairness in student evaluation
- Privacy in handling learner data

iv. Accountability in Tracing the Origin and Authorship of AI-Generated Content

It is also recommended that each faculty establish internal committees to draft digital codes of conduct as reference points for faculty and students, aligning procedures with capabilities-and-assessment approaches to skills development (Elliott et al., 2021). These codes should offer clear guidelines on the appropriate use of tools such as ChatGPT, AI-assisted design software, and other generative systems. Importantly, these policies should not be top-down mandates. Instead, they must result from collaborative academic dialogue involving students, faculty, administrators, and AI ethics specialists; participatory design supports trust and context sensitivity (Wegerif & Major, 2024). This helps ensure that institutional policies are technically sound, culturally grounded, and context-sensitive, rather than transplanted from external models with differing socio-ethical assumptions.

CONCLUSION

The present study answers the research questions by linking local evidence to selective highlights from prior scholarship. Concerning the central question about theoretical and practical challenges, our mixed-methods results show that AI integration in Lebanese media education remains nascent and uneven. Structural constraints—policy gaps, limited infrastructure, and scarcity of expertise—combine with pedagogical uncertainty to keep innovations at the level of isolated initiatives. This pattern aligns with international syntheses that call for a structural re-design of journalism and media curricula (Kamalov, Calonge, & Gurrib, 2023; Wenger, Hossain, & Senseman, 2024), yet our data specify Lebanon-specific bottlenecks in policy and capacity that slow institutionalization despite rising awareness among faculty.

RQ1

Alignment between current curricula and industry demands—evidence from syllabi and interviews indicates only partial fit. AI appears as elective or unit-level content rather than as a program-wide competence; key skills such as data analysis, prompt design, algorithmic accountability, and automation-aware production are not consistently embedded across reporting, editing, PR, and broadcasting labs. These gaps echo global reviews urging curriculum-wide embedding of data/AI literacy and authentic assessment beyond rote models (Wenger et al., 2024; Kamalov et al., 2023). Our findings thus corroborate the direction of prior literature while providing local granularity on where under-embedding is most acute.

RQ2

Strategies to adopt AI ethically and effectively—the evidence points to three mutually reinforcing levers. First, tiered faculty development that progresses from awareness to hands-on, practice-based clinics is essential, a design supported by educator AI-literacy research (Kohnke, Zou, Ou, & Gu, 2025). Second, process-based assessment—requiring prompts, drafts, and reflections—helps verify authorship and reduce plagiarism while deepening learning, consistent with cautions about unregulated tool use (Sidiropoulos & Anagnostopoulos, 2024). Third, clear classroom and institutional policies on transparency, privacy, and data handling are necessary to safeguard students and sustain trust, in line with policy discussions on AI in education (University of Illinois, 2024).

RQ3

The frameworks Lebanese universities should implement—we propose the Integrated AI Media Education Framework (IAIMEF), which sequences four phases: assessment and preparation, capacity building, curricular integration, and implementation with continuous evaluation. The sequencing maps onto capability-oriented approaches to future skills and assessment (Elliott et al., 2021) while operationalizing program-wide integration that prior work recommends. In practical terms, IAIMEF calls for workload recognition for redesign efforts, baseline infrastructure for labs and analytics, and incentives that link faculty certification to promotion.

These conclusions also clarify Lebanon's points of convergence and divergence with past literature. Convergence appears in the recognition that adoption falters without investment and policy—an observation shared by global reviews—and in the need to embed AI across courses, not as a peripheral add-on. Divergence stems from context: public-sector rigidity, fragmented funding mechanisms, and uneven infrastructure beyond Beirut, which help explain why informal student use outpaces formal provision. Newsroom-side case studies similarly catalogue knowledge and credibility barriers (Al-Zoubi, Ahmad, & Abdul Hamid, 2025), but our results connect adoption more explicitly to governance clarity and incentives.

Taken together, the answers to the RQs suggest that effective AI adoption demands a reimagining of content, pedagogy, and governance rather than mere tool deployment. Investment in human capital—through sustained development for instructors—and in aligned assessment practices should precede extensive spending on software. This conclusion parallels calls to move beyond tool-centrism, foregrounding dialogic, learning-first design (Wegerif & Major, 2024) while remaining attentive to ethics and data protection.

Bridging universities and the media sector remains pivotal. Industry now expects graduates fluent in data work, automation-aware production, algorithmic distribution, and generative-AI literacy. Where such competencies are not core requirements, diplomas risk signalling credentials without capability. Strategic partnerships for live projects, shared labs, and guest-edited practica can convert curricular objectives into demonstrable newsroom value and accelerate alignment.

Accordingly, the study's recommendations—tiered faculty development, program-wide embedding with process evidence, and context-sensitive ethics policies—translate international guidance into an actionable, Lebanon-specific roadmap. Implementation will ultimately depend

on political will and academic leadership that view digital transformation as a strategic responsibility rather than a transient trend.

Future challenges remain substantial: the speed of technological change, evolving ethical implications, and the need for continuous adaptation. Priorities for research include evaluating IAIMEF's effectiveness across institutions, tracking long-term impacts on professional identity and ethics, and refining the balance between foundational media competencies and emerging AI-driven skills. Addressing these questions will be critical to the sustainable evolution of media education in Lebanon. Rigorous longitudinal multi-site trials, mixed-method evaluations, and comparisons with regional peers will benchmark progress and surface scalable practices, equity risks, and unintended consequences.

BIODATA

Ali Ahmad (PhD in Media and Communication Sciences) is the Director of Media and Communication Office, Al Maaref University, Beirut, Lebanon. A Lecturer, Faculty of Information, Lebanese University. Email: ali.ahmad@mu.edu.lb

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