



## **Ethical Boundaries and Artificial Intelligence in Design and Photojournalism: Educating the Next Generation for Responsible Creativity**

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### **Abstract**

The rapid incorporation of artificial intelligence (AI) into creative fields such as photojournalism and design has redefined traditional concepts of creativity, authenticity, and responsibility. This paper investigates the ethical implications of AI-driven tools on the practice and education of design and visual communication, with a particular focus on developing countries like Pakistan. Using a qualitative approach that includes case studies and semi-structured interviews with educators, students, and professional designers, this study explores how AI challenges the ethical foundations of visual creation. Global examples, including the 2023 Sony World Photography Awards controversy and Nike's AI-based brand experimentation, are juxtaposed with Pakistan's emerging use of AI in design education and visual media. The findings reveal a pressing need for educational institutions to establish ethical frameworks that guide responsible AI usage, emphasizing the cultivation of critical awareness, visual literacy, and moral accountability among students. The paper concludes with recommendations for embedding AI ethics within design curricula to nurture ethically responsible creators who can balance innovation with integrity.

**Keywords:** Artificial Intelligence, Design Ethics, Photojournalism, Visual Communication, Design Education, Pakistan, Media Responsibility, Digital Literacy

### **Introduction**

Artificial Intelligence (AI) is transforming the creative landscape at an unprecedented pace, reshaping how designers, artists, and journalists conceive, produce, and disseminate visual content. Once perceived as a futuristic concept confined to science fiction, AI has now become an integral part of everyday creative workflows, from automated image generation and algorithmic editing to intelligent design systems that can predict visual trends and propose aesthetic variations. This technological evolution has blurred the boundaries between human authorship and machine creativity, prompting new debates about what it truly means to be a "creator" in the digital age. While AI-driven design and photojournalism tools have broadened access, efficiency, and innovation, they have also introduced complex ethical challenges concerning authenticity, originality, intellectual ownership, and moral responsibility in visual communication.

The transformation is not merely technological; rather, it is deeply philosophical. At the heart of the debate lies the question: *can creativity exist without*



consciousness? When algorithms trained on millions of human-created artworks and photographs begin producing images indistinguishable from those of skilled professionals, the traditional notions of imagination and artistic intent are called into question. AI systems such as DALL-E, Midjourney, and Stable Diffusion can now generate strikingly realistic visuals from a few lines of textual input, producing results that once required years of training and artistic intuition (Thampanichwat, et al., 2025). Similarly, platforms like Adobe Firefly and Canva's AI tools have made design processes accessible to non-designers, effectively democratizing creativity. However, this democratization also dilutes professional authorship and can devalue the intellectual rigor behind original creative thought. The tension between human intention and algorithmic execution forms the central ethical dilemma of AI in visual communication.

The duality of AI's impact is therefore striking. On one hand, AI tools empower users to overcome technical barriers, opening new avenues for experimentation, inclusivity, and global collaboration. Students and amateur designers can now visualize complex ideas rapidly, bypassing constraints of skill or resource (Patel, Puaah, & Kok, 2024). On the other hand, the very same accessibility introduces ethical delicacy, enabling the misuse of AI-generated visuals, plagiarism, and the manipulation of truth. In the realm of photojournalism, for example, AI-generated imagery can fabricate events, alter historical documentation, and distort the visual record of reality. The credibility of visual evidence, once considered irrefutable, now demands skepticism and verification. The core principles that have long governed ethical journalism, truth, transparency, and accountability, are being challenged by the ease with which synthetic media can imitate authenticity. The implications extend beyond journalism to encompass advertising, political communication, and public discourse, where manipulated visuals have the potential to shape perceptions and influence collective consciousness.

Designers, as cultural communicators, hold a unique moral responsibility (Kokil, 2025). Their work not only reflects but also constructs social realities and visual identities. In this context, AI complicates the ethics of authorship and representation. When AI-generated visuals borrow stylistic elements from existing artists or exploit biased datasets, questions arise regarding consent, credit, and fairness. Furthermore, AI systems trained on unfiltered internet datasets risk perpetuating stereotypes, cultural misrepresentations, and gender or racial biases embedded within the data. Hence, ethical design in the age of AI is not only about avoiding plagiarism, but it is also about ensuring that creativity aligns with principles of inclusivity, honesty, and respect for human dignity.

The urgency of addressing AI ethics is particularly significant in developing countries such as Pakistan, where the intersection of technology, education, and ethics remains underexplored. In Pakistan, design education has expanded remarkably over the past decade, with universities such as the University of the Punjab, COMSATS University, National College of Arts (NCA), Lahore College for Women University (LCWU), Beaconhouse National University (BNU), and Indus Valley School of Art and Architecture introducing advanced courses in digital media and communication design. However, the pedagogical frameworks guiding these programs have yet to fully integrate discussions on AI ethics, authorship, and accountability. As a result, young designers are engaging enthusiastically with open-access AI tools without a structured understanding of their ethical implications. For many, AI becomes an



instrument of convenience rather than a medium of critical exploration. The absence of clear institutional guidelines or ethical literacy creates an environment where students may unknowingly reproduce unoriginal or ethically problematic content.

Moreover, the growing influence of global AI tools introduces cultural and contextual challenges specific to Pakistan. Most AI platforms are developed in Western contexts and trained on datasets that reflect Western aesthetics, cultural symbols, and visual hierarchies. When Pakistani designers and students rely on these tools without questioning their embedded biases, they risk contributing to cultural homogenization, where local visual languages and indigenous design sensibilities are overshadowed by algorithmically globalized aesthetics. This raises concerns about cultural identity and visual sovereignty in design practice. The challenge, therefore, extends beyond technological adoption; it involves protecting the integrity and diversity of creative expression within local contexts. This research therefore seeks to explore how educational institutions and professional design communities can respond to these emerging challenges by establishing ethical frameworks that guide responsible AI usage in visual communication. It investigates the current awareness of AI ethics among students, educators, and practitioners in Pakistan's design sector and examines how global discourses on AI responsibility can be contextualized within local educational and cultural frameworks. By analyzing case studies, interviewing design professionals, and reviewing existing literature, the study aims to develop a critical understanding of how ethics can be effectively integrated into design education and practice.

Ultimately, this paper argues that the ethical dimension of AI in creative practice must evolve alongside technological progress. Innovation should not come at the expense of integrity. The fusion of AI and human creativity should be guided by principles of accountability, respect, and truth, preserving the moral foundation upon which visual communication is built.

## Literature Review

### Artificial Intelligence and the Transformation of Creative Practice

The advent of Artificial Intelligence (AI) has redefined the paradigms of creativity and innovation across all visual and communication design disciplines. In its simplest sense, AI refers to computational systems capable of performing tasks that traditionally required human intelligence, such as visual perception, language understanding, and problem-solving (Russell & Norvig, 2020). However, in the creative domain, AI transcends this definition, it has become a collaborator that can autonomously generate, interpret, and modify artistic forms. Scholars like Boden (2016) have long discussed the concept of "computational creativity," suggesting that AI can produce outputs that are not only novel but also contextually valuable. This reimagines creativity as a shared process between human intention and algorithmic execution.

Contemporary design tools such as Midjourney, DALL·E 3, and Adobe Firefly have transformed how designers conceptualize visual ideas. They enable users to produce high-quality visual compositions through natural language prompts, drastically reducing the time and skill barriers once associated with professional design. As noted by McCormack, Gifford, and Hutchings (2019), such tools represent a shift from "manual creation" to "curatorial creativity," where the designer's role is no longer limited to crafting visuals but curating and



refining machine-generated content. This transformation invites a broader discussion on authorship and ownership, issues that have historically underpinned design and artistic ethics. AI's ability to replicate human creativity, however, is inherently rooted in the data it consumes. The datasets used to train AI models are often derived from millions of human-generated artworks, photographs, and designs sourced from the internet, frequently without explicit consent from creators (Crawford & Paglen, 2021). Consequently, questions of copyright infringement, data privacy, and creative autonomy have come to the forefront of ethical discourse. When AI generates an image by referencing existing works, to what extent is the output truly original? And who holds the moral and legal rights over such content, the algorithm's developers, the end-user, or the countless anonymous contributors whose works formed the AI's dataset?

Scholars like Elgammal (2020) argue that AI's "creativity" lacks intentionality and emotion, two qualities central to human art-making. This absence of subjective consciousness renders AI outputs technically impressive but ethically ambiguous. For instance, when an AI model generates a powerful visual narrative about social injustice or cultural identity, it does so without genuine empathy or lived experience, thereby raising questions about authenticity. This tension between aesthetic value and ethical accountability remains a central concern in AI-assisted creative practice.

In the broader context, AI is not only transforming design production but also altering the relationship between creators, audiences, and institutions. Algorithms now dictate visibility and taste by influencing which images are promoted, reproduced, or monetized. As Rieder and Simon (2022) note, the "algorithmic gaze" has replaced the human editor or curator, creating a system where creativity is increasingly shaped by data patterns rather than cultural meaning. This algorithmic mediation risks reducing artistic diversity, as AI tends to reproduce dominant visual tropes embedded in its training data, thereby marginalizing alternative or culturally specific aesthetics.

## **Ethical Dilemmas in Photojournalism and Visual Authenticity**

Photojournalism, as a profession built on the pursuit of truth through images, is particularly vulnerable to the ethical disruptions caused by AI. Historically, photojournalism has been anchored in the belief that a photograph represents an objective fragment of reality (Ward, 2018). However, with the emergence of AI-driven image generation, deepfakes, and automated retouching tools, the distinction between authentic documentation and digital fabrication has become increasingly blurred.

The 2023 Sony World Photography Awards controversy serves as a symbolic turning point in this debate. When Boris Eldagsen submitted an AI-generated image titled *The Electrician*, it was mistakenly awarded in the "Creative" category before the artist revealed its synthetic origin. Eldagsen's subsequent rejection of the award was intended to spark reflection on how AI challenges the definition of photography itself (Morrison, 2023). The incident exposed the lack of institutional preparedness in handling AI-generated submissions and highlighted how easily audiences and even professional juries can be deceived by algorithmic realism. Such cases echo deeper concerns about the erosion of public trust in visual journalism. Deepfake technology, for instance, has been used to fabricate political events, falsify evidence, and spread



misinformation (Chesney & Citron, 2019). This capacity for manipulation threatens not only journalistic integrity but also democratic discourse, as visual misinformation can shape public perception more powerfully than text-based propaganda. As Ward (2018) emphasizes, the ethical core of journalism rests on accuracy, independence, and accountability, all of which are jeopardized when AI-generated imagery enters the visual ecosystem without transparency or labeling.

Beyond fabrication, AI also raises questions about representation and bias in visual narratives. If the datasets used to train AI image generators predominantly feature Western subjects or aesthetic norms, the resulting imagery risks reinforcing cultural hierarchies and erasing marginalized identities (Crawford & Paglen, 2021). This “data colonialism,” as some scholars describe it, perpetuates a cycle where non-Western perspectives are underrepresented or distorted, undermining the cultural diversity that ethical journalism seeks to preserve. From a pedagogical standpoint, educators in visual communication and photojournalism now face the urgent task of teaching students how to critically engage with AI technologies. Verification skills, contextual analysis, and ethical discernment must become central components of journalism education. As Shneiderman (2020) argues, human-centered AI should prioritize transparency, reliability, and accountability, ensuring that technology augments rather than replaces ethical judgment. Thus, the future of photojournalism depends not only on technological adaptation but also on moral resilience, the ability to uphold truth in an era of synthetic reality.

## **AI and Design Ethics: The Challenge of Human Responsibility**

Design, as both a profession and a cultural practice, occupies a unique ethical position. Designers act as mediators between technology and society, shaping visual languages that influence behavior, identity, and ideology. In the context of AI, this mediating role becomes more complex, as designers must now navigate the moral implications of co-creating with autonomous systems. According to Floridi and Cowls (2019), ethical AI design requires adherence to principles of beneficence (promoting well-being), non-maleficence (avoiding harm), justice, and explicability. These principles are especially relevant in visual communication, where images have the power to persuade, include, or exclude. However, the commercial pressures of the design industry often prioritize efficiency and innovation over reflection. Corporate entities increasingly deploy AI to automate design workflows, optimize user engagement, and analyze consumer data (Lee & Kim, 2024). While these applications enhance productivity, they can also lead to ethical compromises, such as the commodification of creativity and the erosion of designer autonomy. Nike’s experimentation with AI-driven branding between 2022 and 2024 exemplifies this duality. The brand’s use of generative design algorithms to create personalized visual content was celebrated for its innovation but criticized for the lack of transparency regarding data usage and the displacement of human designers (Lee & Kim, 2024). Such examples underline the importance of developing ethical frameworks that balance technological innovation with respect for human labor and creative authorship.

Ethical design also encompasses the responsibility to produce non-vulgar, respectful, and socially constructive content. AI’s ability to generate hyper-realistic imagery has raised concerns about the potential for producing harmful



or exploitative visuals, including those that perpetuate violence, objectification, or misinformation. Designers and educators must therefore establish moral boundaries that ensure AI tools are employed to enhance cultural understanding rather than to sensationalize or degrade. This notion aligns with what Shneiderman (2020) terms “human-centered AI design” technology that amplifies empathy, responsibility, and shared human values.

## **AI Ethics and Education: Addressing the Pedagogical Gap**

Education remains the most critical arena for shaping ethical awareness in AI usage. The integration of AI tools into classrooms, especially in design and communication disciplines, offers immense opportunities for creativity and experimentation. However, without structured ethical frameworks, students may develop a purely instrumental relationship with technology, focusing on output rather than reflection. As Fiesler and Garrett (2023) note, ethical literacy in AI education must involve both conceptual understanding and experiential learning; students should not only learn *what* AI can do but also *what it should do*.

In Pakistan, design education is at a developmental crossroads. Universities such as LCWU, NCA, and Beaconhouse National University (BNU) have embraced digital media and AI-based tools in studio practices. Yet, as interviews with educators suggest, the discussion of ethics often remains peripheral, treated as an optional topic rather than a core curricular theme. This reflects a broader trend identified by UNESCO (2021), which found that most developing countries lack comprehensive policies on AI ethics in education. The absence of regulatory or pedagogical guidance leaves both teachers and students navigating ethical questions intuitively rather than systematically.

Integrating AI ethics into design education requires a multidimensional approach. First, curriculum development must emphasize *critical making*, an approach that combines hands-on creative experimentation with theoretical reflection on social and ethical implications. Second, educators need professional development programs that equip them to teach ethics effectively within rapidly evolving technological contexts. Third, institutions should promote interdisciplinary collaboration, bringing together designers, technologists, philosophers, and social scientists to develop a holistic understanding of AI’s cultural impact. Globally, scholars such as Coeckelbergh (2020) advocate for “ethical imagination” in education, a capacity to anticipate the moral consequences of technological innovation. This approach moves beyond rule-based ethics toward cultivating empathy, accountability, and civic awareness among future creators. For design students, ethical imagination translates into the ability to foresee how their AI-assisted work might affect audiences, societies, and cultural narratives.

## **Responsible Innovation and Digital Moral Agency**

This study draws upon the theoretical framework of Responsible Innovation (Stilgoe, Owen, & Macnaghten, 2013), which emphasizes anticipation, reflection, inclusion, and responsiveness in technological development. Within this framework, AI in creative fields should be developed and used in ways that align with societal values and ethical accountability. The concept of Sony World Photography Awards (Johnson, 2015) further extends this notion, arguing that designers, educators, and institutions share a collective responsibility for the moral outcomes of AI-assisted creation.



In the context of Pakistan, adopting these frameworks requires recognizing cultural and infrastructural constraints while aligning with global standards such as UNESCO's *Recommendation on the Ethics of Artificial Intelligence* (2021). These guidelines stress inclusivity, fairness, and human oversight, principles that can be adapted into design curricula to ensure that technological advancement contributes positively to social and cultural development.

The reviewed literature reveals a growing global concern over the ethical implications of AI in creative practice, particularly in terms of authorship, authenticity, and moral responsibility. While much research has been conducted in Western contexts, there remains a significant gap in understanding how these issues manifest in developing regions such as South Asia. The democratization of AI tools has made creativity more accessible, yet the absence of ethical literacy risks fostering dependency, imitation, and cultural homogenization. This study seeks to bridge this gap by examining how design education in Pakistan can incorporate AI ethics as an essential component of creative learning. It posits that the future of ethical design lies not in resisting technology but in educating future generations to engage with it critically, responsibly, and creatively. Through this lens, AI becomes not a threat to human creativity but a catalyst for rethinking what it means to create ethically in a digital age.

## Methodology

This study employs a qualitative research design rooted in interpretivist and constructivist paradigms, seeking to explore the ethical implications of Artificial Intelligence (AI) in the fields of photojournalism and visual communication design. The qualitative approach allows for an in-depth understanding of how educators, students, and design professionals perceive AI's influence on creative practice and moral responsibility. As Creswell and Poth (2018) emphasize, qualitative inquiry is particularly suited for investigating evolving socio-technological phenomena that require contextual interpretation rather than quantifiable measurement.

Given the novelty and complexity of AI-driven design, this study adopts an exploratory case study method. This approach enables the integration of diverse data sources, including interviews, institutional documents, and online observations, to identify recurring ethical patterns and challenges in creative education and practice. Yin (2018) suggests that case studies are ideal for investigating "how" and "why" questions in real-world settings where the boundaries between phenomenon and context are fluid. Accordingly, this study examines both global examples and Pakistan-based educational and professional experiences, thus situating local practices within a global ethical discourse.

## Research Objectives

The primary objectives of this study are:

1. To analyze how AI technologies are influencing ethical decision-making in visual communication and photojournalism.
2. To examine the level of awareness and preparedness among design educators and students regarding AI ethics.
3. To identify the existing gaps in design curricula concerning the responsible use of AI tools.
4. To propose an educational framework for integrating AI ethics within design and visual communication programs in Pakistan.



These objectives align with the broader goal of promoting ethical literacy and accountability in the era of algorithmic creativity.

## Sampling and Participants

The study utilized purposive sampling to select participants who possess relevant expertise and experience in the field of design, media, and education. The sample consisted of twelve participants, divided into three key groups:

**Table 1: Sampling Method**

Group A (Design Educators) (n=4)	Group B (Design Practitioners) (n=4)	Group C (Design Students) (n=4)
University faculty members from institutions including Lahore College for Women University (LCWU), National College of Arts (NCA), and National University (BNU)	Professionals working in graphic design, photojournalism, and advertising who have integrated AI-assisted tools such as Adobe Firefly, Midjourney, and DALL·E into their creative workflows.	Undergraduate and postgraduate students enrolled in communication design and visual arts programs, actively experimenting with AI-generated imagery and digital storytelling.

The participant group was selected to provide a balanced representation of academic insight, professional experience, and emerging creative perspectives. All participants were informed about the study's aims and procedures, and informed consent was obtained prior to participation, adhering to ethical research standards (APA, 2020).

## Data Collection Methods

Data were collected through semi-structured interviews, each lasting approximately 45–60 minutes, conducted either face-to-face or via video conferencing platforms such as Zoom and Microsoft Teams. The semi-structured format allowed for open-ended exploration while maintaining focus on the core themes of AI use, ethical awareness, and educational needs. The interview guide consisted of five thematic sections:

1. Understanding of AI in Creative Practice: Participants' definitions, experiences, and perceptions of AI-assisted tools.
2. Ethical Awareness: Perceived ethical challenges such as authorship, manipulation, plagiarism, and data misuse.
3. Impact on Design Education: Experiences with AI integration in curricula or classroom projects.
4. Institutional Policies and Guidance: Availability (or absence) of institutional frameworks addressing AI use.
5. Future Directions: Suggestions for embedding AI ethics into design education and professional standards.

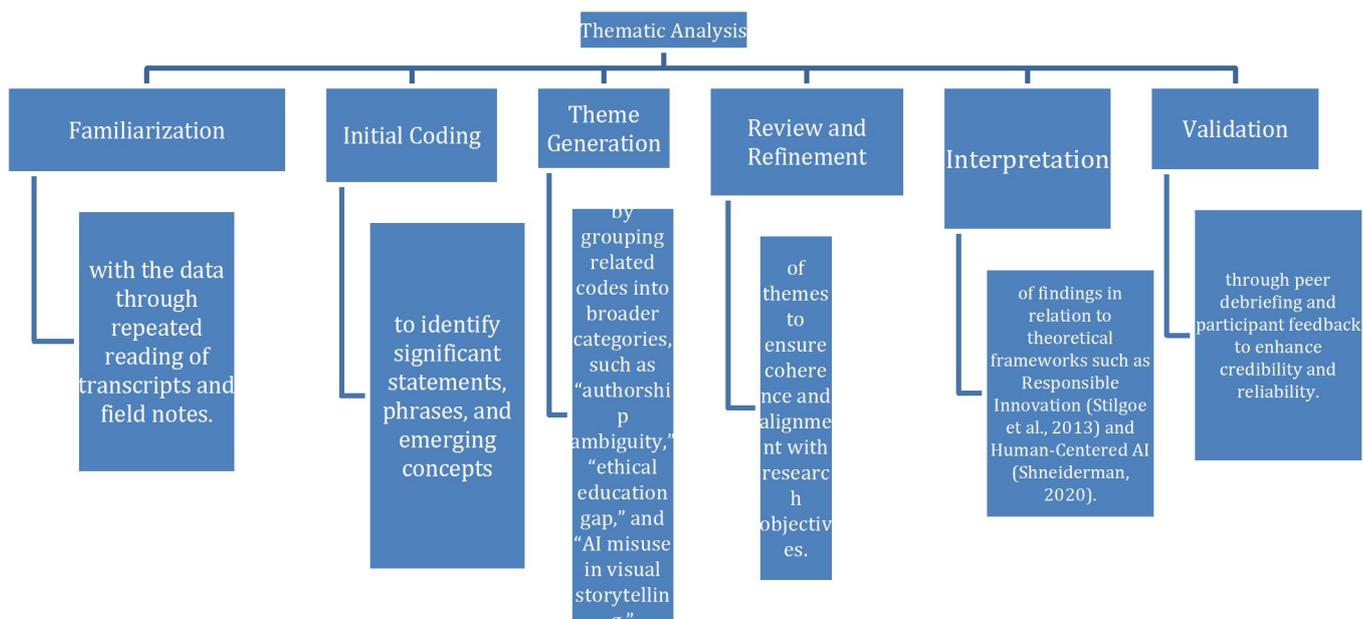
All interviews were transcribed verbatim for thematic analysis. Additionally, secondary data sources were reviewed, including academic policy documents, university course outlines, UNESCO (2021) reports on AI ethics, and visual content from professional design portfolios and competitions. These



supplementary materials provided contextual depth and supported triangulation of findings.

**Data Analysis**

Thematic analysis was used to identify and interpret patterns within the data (Braun & Clarke, 2019). The process involved six systematic stages:



**Table 2: Data Analysis Process**

This method enabled a nuanced understanding of how design educators, practitioners, and students conceptualize AI ethics and where gaps exist between technological capability and moral accountability.

**Case Studies**

To contextualize the findings, the study incorporates four illustrative case studies, two international and two Pakistan-based, selected for their relevance to AI’s ethical impact on design and journalism.

**Global Case 1: Sony World Photography Awards Controversy (2023)**

As discussed earlier, Boris Eldagsen’s submission of an AI-generated image, which was mistakenly awarded, provoked global debate on authenticity and authorship. This case exemplifies the urgent need for clearer labeling and ethical disclosure in creative competitions, reflecting how institutions are struggling to define “real” creativity in the AI age.

**Global Case 2: Nike’s AI-Driven Brand Campaign (2024)**

Nike’s AI-powered personalization system created millions of individualized advertisements using generative design algorithms. While it showcased technological innovation, critics raised concerns about transparency, data privacy, and the ethical implications of replacing human designers (Lee & Kim, 2024). This case demonstrates how AI transforms the ethics of authorship and labor in commercial design.



## ***Pakistan Case 1: AI Use in University Design Projects (2024)***

Interviews revealed that design students at LCWU and NCA frequently use AI tools like DALL-E and Adobe Firefly in course assignments. While these tools expand creative exploration, educators reported concerns about plagiarism, lack of originality, and insufficient ethical guidelines. One faculty member stated: “We have reached a stage where students rely on AI for every visual solution. The challenge now is not their creativity but their ethical understanding of creativity.” This case highlights the pedagogical need to balance technological fluency with ethical literacy.

## ***Pakistan Case 2: Digital Misinformation and Visual Manipulation in Local Media (2023–2025)***

Several local photojournalism projects were found to incorporate AI-edited or AI-enhanced visuals without disclosure, particularly in online reporting and social media campaigns. Such practices risk undermining journalistic credibility and the public’s trust in visual documentation. This underscores the urgency of developing ethical standards and AI verification mechanisms within Pakistan’s media institutions.

## **Ethical Considerations**

Ethical conduct was maintained throughout the research process in compliance with APA (2020) ethical guidelines. Participants’ confidentiality and anonymity were protected through pseudonyms. Sensitive data, particularly visual materials or institutional information, were handled with care to avoid reputational harm. The study also observed the principles of informed consent, voluntary participation, and data transparency. Furthermore, the researcher remained reflexively aware of their own positionality as both a design educator and observer, acknowledging potential biases in interpretation.

## **Case Studies and Findings**

The findings of this study reveal a complex and evolving relationship between artificial intelligence (AI), ethics, and creative education. Analysis of interview data and case studies suggests that while AI has democratized access to creative tools and expanded the boundaries of design and visual storytelling, it has simultaneously generated ethical uncertainties surrounding authorship, authenticity, and accountability. The discussion below presents key themes that emerged from the data, linking participant insights with existing theoretical frameworks and global examples.

## **Theme 1: AI as a Double-Edged Tool, Creativity and Dependence**

Across all participant groups, AI was perceived as a “double-edged tool,” a source of creative empowerment and ethical risk. Educators and professionals consistently described AI as both revolutionary and potentially destabilizing. One educator from NCA stated:

“AI has opened new doors for imagination, but it’s also closing the space for genuine thought. Students tend to use it as a shortcut rather than a creative partner.”

Similarly, a professional designer working in Lahore noted:

“Clients are excited about AI because it’s fast and cheap. But we are losing the sense of authorship; everyone can produce the same kind of design now.”



These comments echo global findings where AI's capacity for instant image generation has redefined the creative process from craftsmanship to *curation* (McCormack et al., 2019). The shift from human-made to machine-assisted design has blurred traditional notions of originality and artistic value.

Internationally, Nike's 2024 AI-based advertising campaign demonstrated this duality. While AI enabled mass customization and dynamic visual storytelling, it also displaced human designers and raised concerns about data ethics and creative homogenization (Lee & Kim, 2024). Participants in this study expressed similar apprehensions, emphasizing that the value of creativity must extend beyond efficiency to encompass meaning, authenticity, and responsibility. In Pakistan, design students revealed heavy reliance on AI generators such as DALL·E, Midjourney, and Adobe Firefly. While these tools allowed them to visualize ideas quickly, they admitted that such convenience discouraged experimentation and manual skill development. As one student explained:

"Sometimes, we don't even sketch anymore. We just type prompts. The problem is that the result looks impressive, but we didn't really make it."

This growing dependency reflects what Balsamo (2021) calls the "automation of imagination," where human creativity becomes increasingly mediated by algorithmic systems. Without critical intervention, design education risks producing passive users of technology rather than active thinkers and ethical creators.

## **Theme 2: Authorship, Originality, and the Ethics of Attribution**

Authorship and originality emerged as central ethical dilemmas. All twelve participants expressed uncertainty about the ownership of AI-generated content. Educators were particularly concerned about plagiarism and copyright ambiguity in student projects.

One LCWU faculty member stated:

"Our grading criteria rely on originality, but how do we define originality when students use AI prompts trained on existing artworks? Even if the output looks new, it's not truly theirs."

This sentiment reflects international debates in creative law and ethics. As Crawford and Paglen (2021) highlight, AI models are trained on massive datasets of copyrighted works, raising moral questions about consent and fair use. The Getty Images vs. Stability AI lawsuit in 2023, for example, underscored the legal vacuum surrounding data sourcing and artistic rights.

Students in Pakistan admitted that they rarely consider the origins of AI-generated images. Many perceived AI tools as "free creative assistants," not realizing that they indirectly replicate or remix existing visual data. This finding demonstrates a gap in ethical awareness rather than intent. To address this, educators suggested incorporating ethical reflection exercises into studio courses, where students analyze the lineage of AI outputs and credit datasets where possible. Such practices align with Floridi and Cowls' (2019) principle of explicability, which demands transparency and traceability in AI-assisted creation. Globally, the Boris Eldagsen case at the Sony World Photography Awards (2023) further intensified this discourse. Eldagsen's admission that his winning photo was AI-generated revealed how institutions lack preparedness for algorithmic authorship. For Pakistani educators, this case was frequently cited as an example of why clear ethical policies and disclosure requirements must be introduced in academic and professional contexts.



### **Theme 3: Visual Manipulation and the Crisis of Authenticity**

The issue of authenticity, particularly in photojournalism, was a major concern among both educators and professionals. Interviewees agreed that AI's ability to fabricate hyper-realistic imagery has made it increasingly difficult to distinguish truth from illusion. A professional photojournalist working with a Lahore-based media organization remarked:

"In our newsroom, AI tools are sometimes used to enhance photos. The line between enhancement and manipulation is very thin. Once you cross it, you risk credibility."

Another participant added:

"There are already examples of AI-edited political images circulating on social media. It's alarming how easily misinformation can spread through visuals."

These findings align with Chesney and Citron's (2019) argument that deepfakes and synthetic media represent a new frontier of disinformation, capable of eroding public trust in journalism. Internationally, major news agencies like Reuters and The Associated Press have begun developing AI verification protocols to authenticate images before publication (Reuters Institute, 2024).

However, Pakistani media institutions largely lack such ethical or technological infrastructure. Educators emphasized that media literacy and verification skills must become part of design and journalism curricula. Without these safeguards, the use of AI-generated visuals in news or documentary work risks undermining both academic integrity and journalistic ethics.

A faculty member from BNU reflected:

"Photojournalism used to be about capturing reality; now it's about questioning reality. Our students must learn not just how to make images, but how to verify them."

This redefinition of visual truth underscores Shneiderman's (2020) notion of human-centered AI, where technology should augment ethical reasoning rather than obscure it. The future of ethical photojournalism thus depends on cultivating human judgment within machine-driven workflows.

### **Theme 4: Ethical Education Gap in Design Curricula**

A recurring pattern across interviews was the absence of structured AI ethics education in Pakistani universities. While digital literacy and software training are widely taught, explicit discussion of moral or social responsibility remains limited.

As one LCWU educator explained:

"We have integrated Adobe Firefly and AI-based design tools into assignments, but there's no official module on ethics. Students are learning how to use technology without understanding its consequences."

Another faculty member from NCA observed that most ethics discussions are reactive, occurring only when plagiarism or misconduct arises, rather than being proactively embedded in the curriculum. This reflects a broader global pattern identified by UNESCO (2021), which reported that fewer than 10% of design and communication programs worldwide explicitly teach AI ethics. The lack of curricular emphasis reinforces the perception that ethical considerations are secondary to technical skills.

Students echoed this sentiment, expressing a desire for structured guidance on how to use AI responsibly. One student remarked:



“We are told to be creative, but not how to be ethical with these new tools. Sometimes, we don’t even know what’s allowed.”

To address this, participants proposed developing interdisciplinary courses that combine design, technology, and ethics, for instance, modules titled “AI in Visual Culture” or “Digital Ethics in Design.” Educators also suggested collaborations with industry partners to expose students to real-world ethical dilemmas.

Globally, leading institutions such as Parsons School of Design (U.S.) and Royal College of Art (U.K.) have begun integrating AI ethics into their curricula, framing technology as a socio-cultural practice rather than a neutral tool (Fiesler & Garrett, 2023). Pakistani universities can draw inspiration from these models to cultivate ethically informed designers capable of critical engagement with AI.

## **Theme 5: Responsibility, Regulation, and Institutional Readiness**

The findings also highlight a lack of institutional readiness for managing AI ethics. None of the surveyed universities or design organizations in Pakistan currently have formal AI usage policies for students or staff. Educators reported the absence of plagiarism detection tools compatible with AI-generated visuals and no standardized criteria for evaluating AI-assisted work.

A participant from LCWU noted:

“If a student submits an AI-generated artwork, we have no clear policy to decide whether it counts as original. This uncertainty affects assessment and integrity.” This institutional gap reflects the early stage of AI governance in creative education. In contrast, some international bodies have begun establishing formal frameworks. For example, the European Commission’s *Ethical Guidelines for Trustworthy AI* (2021) recommend transparency, human oversight, and accountability as guiding principles. Similarly, the U.K. Higher Education Academy (HEA) has proposed the inclusion of AI disclosure statements in student submissions.

Without comparable measures, Pakistani institutions risk perpetuating ethical ambiguity and uneven standards. Participants emphasized that universities must develop AI policy handbooks, conduct faculty training workshops, and establish ethics committees to oversee the responsible use of generative tools. Such steps would align Pakistan’s creative education sector with international ethical benchmarks.

## **Theme 6: The Role of Cultural and Religious Values in Ethical Design**

Interestingly, participants also highlighted that ethical awareness in Pakistan is not only an academic concern but also a cultural and moral one. Several educators emphasized that Islamic values of honesty, respect, and modesty should inform AI ethics in local contexts.

As one participant explained:

“Ethics in design cannot be borrowed entirely from Western frameworks. Our students must also understand ethics through cultural and spiritual perspectives, creating content that is non-vulgar, respectful, and socially meaningful.”

This aligns with the notion of contextual ethics, as discussed by Ess (2020), which argues that moral frameworks must be adapted to local traditions and social values. Incorporating indigenous ethical perspectives can enrich global discourse by offering non-Western models of responsible design practice.

In this sense, the responsibility of designers extends beyond avoiding plagiarism or manipulation; it involves fostering visual content that contributes positively to



cultural identity and social harmony. AI tools should thus be guided by ethical imagination (Coeckelbergh, 2020), enabling designers to anticipate the societal consequences of their creations.

## **Synthesis: Toward Ethical Literacy and Responsible Innovation**

Synthesizing these findings reveals those ethical challenges in AI-assisted design stem less from technological complexity and more from educational and institutional gaps. The study supports the argument of Stilgoe et al. (2013) that responsible innovation requires anticipation, reflection, inclusion, and responsiveness, principles that must be embedded within creative education systems.

Educators and professionals agree that ethical literacy must become an integral learning outcome alongside technical proficiency. To achieve this, the study proposes a three-tiered framework for integrating AI ethics into design education: a). **Curricular Integration:** Introduce mandatory ethics modules focusing on authorship, data transparency, and responsible visual communication. B). **Institutional Policy:** Establish AI use guidelines, disclosure protocols, and assessment standards for AI-assisted creative work. C). **Cultural Alignment:** Encourage reflection on moral, cultural, and spiritual values that shape ethical decision-making in design.

Such an approach not only equips students to use AI responsibly but also cultivates their ability to act as ethical agents in a digitally mediated world.

The findings collectively reveal that AI has reshaped the creative and ethical landscape of design and journalism education in Pakistan. While offering unprecedented creative freedom, AI simultaneously amplifies ethical ambiguity. The absence of structured education on AI ethics, coupled with weak institutional governance, leaves students and practitioners navigating complex moral terrain with limited guidance.

Yet, the data also show strong potential for reform. Educators and students alike recognize the need for ethical literacy, transparency, and cultural responsibility. By embedding these values into curricula and institutional policies, Pakistan's design education system can not only respond to the ethical challenges of AI but also contribute meaningfully to global discourses on responsible innovation.

## **Interviews Analysis**

Most participants displayed limited understanding of AI ethics beyond concerns of plagiarism. While all acknowledged AI's efficiency, only 30% could articulate issues like data bias or consent in image training datasets. Educators emphasized the need for institutional seminars and policy guidelines to contextualize ethical practice.

Students viewed AI as an "assistant" rather than a threat, yet many admitted relying heavily on generative outputs. Designers stressed that ethics should evolve from moral reflection, not regulation alone. As one professional designer noted:

"Ethics in design isn't about restriction; it's about responsibility. AI is powerful, but it must serve human values, not replace them."

This sentiment highlights the need to nurture ethical reflexivity, the habit of questioning one's creative choices. Moreover, participants unanimously identified a lack of curriculum integration regarding AI ethics. Institutions often



treat AI as a technical topic rather than a philosophical or moral concern. Interviewees proposed workshops on “Ethics of Digital Creativity,” interdisciplinary collaborations, and inclusion of case-based modules analyzing real ethical dilemmas.

## Conclusion

Artificial Intelligence (AI) has irreversibly transformed the creative and communicative landscapes of the twenty-first century. In design and photojournalism, AI’s growing ability to generate, edit, and replicate images with precision has blurred the boundary between human authorship and machine creation. The findings of this study demonstrate that while AI enhances creative potential, it simultaneously destabilizes traditional notions of authenticity, originality, and ethical accountability. Within the context of Pakistan, these tensions are especially visible in academic environments where design education is expanding rapidly but ethical frameworks have yet to catch up. The study revealed that young designers and students are enthusiastically adopting AI tools, such as DALL-E, Midjourney, and Adobe Firefly, often without formal instruction on their responsible use. This educational gap mirrors a global challenge but is intensified locally by the absence of institutional policies, ethical codes, or trained educators specializing in digital ethics.

Interviews with educators and practitioners confirmed that design departments lack structured guidelines addressing AI authorship, data ethics, and image manipulation. As a result, students navigate a moral “gray zone” in which creativity is measured by output rather than ethical reflection. Without institutional scaffolding, AI use risks encouraging dependency, plagiarism, or the normalization of synthetic manipulation, issues that threaten the integrity of both design education and visual journalism.

The global case studies examined in this research, such as Boris Eldagsen’s AI-generated image controversy in the Sony World Photography Awards (2023) and Nike’s AI-driven branding campaign (2024), demonstrate that even established creative industries face similar moral ambiguities. However, unlike Pakistan’s unstructured educational environment, these global institutions have begun implementing frameworks of transparency and accountability, requiring public disclosure of AI-assisted work. This comparative perspective underscores that ethical design practices are not solely about regulation but about cultivating a culture of openness, critical thinking, and shared responsibility.

In conclusion, AI’s impact on design ethics is not inherently negative or positive; rather, it depends on the ethical literacy of those who use it. Education, therefore, becomes the most critical arena for intervention. Integrating AI ethics into design curricula is not merely an academic priority—it is a cultural necessity that defines how the next generation of designers will shape visual truth and social responsibility in a digitally mediated world.

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