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Filtering Reality: How generative AI-Driven Visual and Textual Aesthetics Shape Authenticity

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***Abstract*- The paper discusses how generative artificial intelligence (AI) can affect authenticity in higher education. Although the research was aimed to include research published in 2015 to 2025, according to the bibliometric analysis, which is conducted using the information obtained with the help of Google Scholar, the focus is made on articles published between 2023 and 2025. The article examines the effects of AI applications like ChatGPT on critical thinking, academic integrity, and assessment in learning institutions. By identifying five major categories of clusters, the analysis shows how AI technologies are transforming the modern educational environment. The results highlight how fast generative AI is developing in the academic field, thus casting serious doubts on the concepts of creativity, originality, and evaluation. This paper concludes by providing an insight into the way AI can be ethically incorporated into higher education to enable the development of critical thinking and at the same time solve the problem facing academic authenticity.**

Keywords: Generative AI, Critical Thinking, Authenticity, Higher Education, bibliometrics.

I. INTRODUCTION

The digital technologies have radically transformed how people build and express their identities. Instagram, along with language interfaces driven by generative artificial intelligence (AI), avails the user the ability to participate in extremely edited forms of self-expression, which are usually tailored to meet particular aesthetic and algorithmic standards [1]. Such expressions are mediated more and more by visual filters, i.e. retouched images and algorithmic templates, and by language scaffolding provided by AI-generated, grammatically perfected prose [2]. Although these tools provide users with increased control over their presence and style of communication in the digital environment, they also pose justifiable issues in the context of eroding the sense of authenticity and diminishing rational thinking in online communication.

The theoretical framework that can be useful in the explanation of this shift in self-presentation is the dramaturgical framework presented by Erving Goffman. According to Goffman, social interactions are essentially performative, and people assume roles and tune their behaviors to conform to the demands of their audience [3]. Within the digital space of modern times, such performances are not only unrelenting

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and highly visible, but also shaped by technical affordances, like image filters, algorithmic curation, and predictive mechanisms, which treat specific content as the most desirable one [4]. This has had the effect of making the field of self-presentation significantly homogenized and more oriented to seek external confirmation and algorithmic visibility rather than encourage real self-understanding.

The example of ChatGPT (the brightest representative of generative AI) demonstrates this shift in the performance of the language. Such systems allow users not only to load off the crude mechanics of writing, but also the finer and more complex cognitive functions of the formulation of arguments, evaluation of evidence, and expression of uncertainty. The empirical studies propose that widespread use of AI in text generation can lead to cognitive offloading, thus reducing users to reflective thought, iterative writing, and discovery writing [5][6]. The urgency and immediacy introduced by AI systems are dangerous to the practices that develop independent judgment and critical thinking [7].

It leads to the following topical research question: to which degree are visual and textual filters aided by generative AI interfere with the authenticity and reduce the possibilities of critical thinking?

To answer this question, the current research will use a bibliometric approach, tracing the development of the academic discussion of the topic of generative AI, authenticity, and critical thinking since 2019 and through 2025. Using co-word and co-citation studies, we define thematic groups, find key authors, and trace emerging trends in the field of research. This method will allow evaluating the way the academic community is conceptualizing the implications of mediated expression to cognition, identity, and education. The overall purpose is to provide the general summary of known information along with defining the gaps in the theoretical and empirical research that need investigation.

The study is part of a growing interdisciplinary attempt to evaluate critically cultural and psychological implications of AI in the daily life. By exposing the intersection of filtered expression, authenticity and cognition, the research is insightful not just to the scholars in the communication and media studies field but also to the educators, designers and policymakers who are interested in maintaining opportunities to express authentic and deliberate expression in a more automated world.

II. LITERATURE REVIEW

2.1 Digital Self-Presentation, Authenticity, and Generative AI

In the modern digital environments, these mediation of personal curations by algorithmic logic and platform affordances increasingly mediate the manner in which individuals perform their own personal curations. The dramaturgical model that Goffman describes, as dramatising and anticipating the performative and situational aspects of interpersonal communication, will not be displaced in the digital age, where performativity is enhanced by such tools as visual filters and text optimisation applications. Although these mechanisms enable the user to have a greater degree of agency in the process of self-presentation, it also affects the traditional ideas of authenticity, which is grounded in spontaneous, reflexive self-expression. It was revealed by Bruns and Meissner study [2] that the use of generative AI tools in the creation of social-media content is biased towards standardisation of tone and style, and, therefore, devalues the perceived genuineness of such content and makes the voice of the content creator less noticeable. Furthermore, the mediation of the human accounts to machine-produced output, which has been labeled as augmented authenticity, has turned out to be a conspicuous phenomenon in digital branding. Moller et al. (2025) examine the functions of generative AI used by athletes to create a brand,

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thus asking an essential question of whether digital identities created through such hybridisation can be real [6].

The rise of AI-generated work in social-media and other online platforms challenges the established ideas of authorship and authenticity because the platforms establish a disincentive to work that is rooted in a sense of authentic self-expression and instead dependent on algorithmic optimisation. A recent systematic review of generative AI and digital authenticity [5] argues that an effective system of trust and transparency (such as the use of blockchain technologies) might be a necessity to protect authorship integrity during the epoch of widespread digital manipulation.

2.2 Critical Thinking, Cognitive Offloading, and AI Dependence in Learning

Critical thinking is one of the foundations of education and the democratic society, which consists of the strict questioning of arguments and the careful assessment of evidence. However, modern-day research points to the fact that these fundamental talents are being offshored to the external computer systems, which is further worsened by the emergence of generative AI and the resultant cognitive offloading. According to Gerlich (2025), there is a negative relationship between the frequent AI use and proficiency in critical thinking, which reduces to attributing this downturn to the process of delegating cognitive processes to AI devices [7]. These trends are also particularly noticeable in the educational field, where the use of AI in the form of drafting and refutation is negatively affecting the ability of students to contemplate and work on their tasks through trial and error. Gerlich et al. (2025) also describe the conflicting effects of AI interaction modalities (AI alone and human plus AI directed) on cognitive performance and find that, although AI can enhance efficiency, it is also likely to cause disengagement with more profound cognitive tasks like problem-solving and critical analysis [6].
On the other hand, it has been hinted that generative AI, provided it is properly scaffolded, can be used to enhance learning experiences. According to the research article Impact of Generative AI in Critical Thinking and Academic Integrity [8], feedback generated by AI has the potential to boost the logical organization of the writing and improve the quality of the writing written by the students with the score in the lower performance ranges, although it should be controlled as an over-reliance. Similarly, systematic review by Zhai, Wibowo, and Li (2024) [9] highlights the cognitive dangers of an AI dialogue system, especially their propensity to undermine the decision-making and analytical reasoning abilities of students. However, other aspects of AI and critical thinking are not equally negative. Similarly, in studies of generative AI in science education [10], it has been found that with appropriate implementation in the classroom in the curricula, AI tools can enhance conceptual understanding, academic achievement, and student motivation, particularly in the STEM fields.

2.3 Epistemic Authority, Authorship, and Educational Practice in the Age of AI

There is an immeasurable influence on the constructs of epistemic power and authorship by generative AI. The more learners and professionals use AI not only to assist them in compositions but also to ideate and reason, the more pressing the issues about ownership and originality are. Dwivedi et al. [9] go a step further to indicate that the confusion of human and AI authorship disputes established academic norms on originality and intellectual property. In its context, Zhai et al. (2024) [11] outline the risks of AI in the

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pedagogical environment, in particular, in relation to academic integrity, cognitive development, and credibility in authorship claims.

Generative AI can compromise the authority of the epistemics but, at the same time, it creates new opportunities to learn and cooperate. The empirical research, including the article by A. Hill, A. Hill, and K. Krahbull [12] proves that AI is capable of boosting collaborative problem-solving and team creativity in the academic environment. Group-based learning assignments can invite increased innovative solutions by introducing AI, which implies that AI, when implemented strategically, may support high-order thinking capabilities.

III. METHODOLOGY

This paper uses a bibliometric analysis model to examine the intersection of generative artificial intelligence (AI), critical cognition, and authenticity in the context of tertiary education. The search of the literature was carried out on Google Scholar using the following search terms; Generative AI, ChatGPT, Critical Thinking, Authenticity and Higher Education with an inclusive time range of 2015 to 2025. Apparently, the search result produced 410 academic outputs, most of which were written within the past three years, i.e., 2023-2025, which highlights the ongoing, but not yet well-established, body of research exploring the consequences of AI in the pedagogical context and especially considering the emergent systems, like ChatGPT.

The Publish or Perish software was organised to gather a lot of citation data to measure and contextualise the scholarly output, and conduct a meta-analytic evaluation of the literature. Supplementary, VOSviewer was used to run a cluster analysis, thus outlining major thematic constructions, which are inherent to the corpus. This procedure produced five thematic clusters that were salient:

- Cluster 1: artificial intelligence, authentic assessment, ChatGPT, critical thinking abilities, generative AI, GPT, medical education, technology.
- Cluster 2 academic writing, concern, generative AI, originality, critical thinking.
- Cluster 3: Future, authentic learning, education, challenge, opportunity.
- Cluster 4 Age, generative AI, higher education.
- Cluster 5: Academic integrity, ethical implications, plagiarism, AI in academic settings

These clusters, the following analytical discourse questioned, aimed to clarify existing trends, what challenges are co-occurring, and what pathways can be marked out in the future with an aim to integrating generative AI tool sets into the learning environments. The narrow period between 2023 and 2025 gives a nuanced sense of the modern world where AI in the pedagogy context is actively developing.

IV. RESULTS

1- Keyword Co-occurrence Network

The co-occurrence network reveals five dominant terms; ChatGPT, AI, generative, critical, and thinking that are tightly linked. This indicates a strong thematic convergence in current scholarship, particularly around how large language models (LLMs) are reshaping cognitive practices, especially in education. The prevalence of terms like students, skills, and learning suggests a strong educational framing.

2- Thematic Clustering

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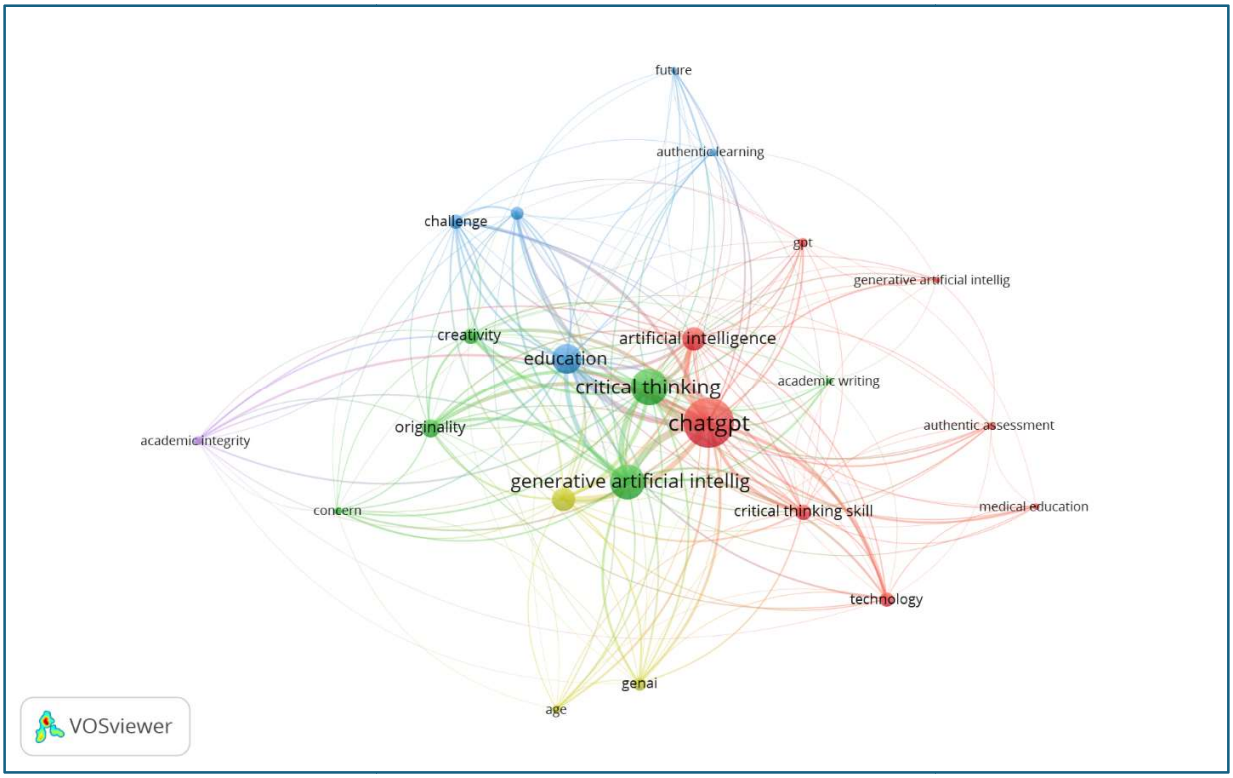
Using the Non-Negative Matrix Factorization (NMF) on the titles and abstracts of publications published in 2023 and 2025, the corpus has received five major thematic clusters. All the clusters represent separate academic directions in the ever-changing discussion of generative AI tools, including ChatGPT, in education. A detailed discussion of the four thematic clusters that were identified using the data is given below.



Thematic Clustering of Research Topics (2023–2025)

Cluster	Key Topics	Main Focus
Cluster 1: AI and Authentic Assessment	Artificial intelligence, authentic assessment, ChatGPT, critical thinking skills, generative AI, GPT, medical education, technology	Explores how AI tools like ChatGPT influence authentic assessment practices, critical thinking, and AI integration in educational assessments.
Cluster 2: Critical Thinking and Academic Writing	Academic writing, concern, creativity, critical thinking, generative AI, originality	Examines the impact of generative AI on academic writing, creativity, and the originality of student outputs.
Cluster 3: Authentic Learning Opportunities	Authentic learning, challenge, education, future, opportunity	Focuses on the potential for authentic learning opportunities enabled by AI in higher education and the challenges it presents.
Cluster 4: Generative AI in Higher Education	Age, generative AI, higher education	Investigates the role of generative AI tools in higher education, particularly their integration in teaching and learning environments.
Cluster 5: Ethical Concerns and Academic Integrity	Academic integrity, ethical implications, plagiarism, AI in academic settings	Addresses ethical concerns surrounding the use of AI in academic settings, including issues of plagiarism and academic integrity.

The table above presents the five main thematic clusters extracted from our dataset:

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Cluster 1: AI and Authentic Assessment.

The cluster question the application of AI in the context of real-life assessment activities. Recent research has shown that AI-based generative tools like ChatGPT can re-tune the evaluation procedures by providing suggestions of personalized learning experiences, live-time feedback, and scaffolding in the critical thinking process. The ability of AI to support authentic learning environments, especially in areas like medical education, increases the acquisition of skills required in the real world in problem solving and clinical reasoning. Empirical evidence highlights the importance of AI in the use of authentic assessment, where students are expected to use their knowledge in authentic real-life contexts [12], [14].

Cluster 2: Critical Thinking and Academic Writing

This cluster discusses how AI is used in enhancing critical thinking and academic writing. Generative AI applications such as ChatGPT can help students to polish their scholarly writing by providing recommendations on structure, style, and clarity and, therefore, can help students express creativity. However, it still raises some questions of originality and academic integrity where the author can be obscured with AI making it difficult to establish intellectual property. On the one hand, it is argued that AI can develop an independent thinking ability since it assists students in arranging ideas, but, on the other hand, it leads to the weakening of students in the ability to think autonomously and critically [15], [18].

Cluster 3: Authentic Learning Opportunities

This group discusses how generative AI can be used to provide learners in higher education with an authentic learning experience. AI enables individuals to be able to approach real-world problemsolving tasks through adaptive and customized learning paths and participate in deep scholarship. The use of AI through simulations, assessments, and feedback systems develop critical thinking and makes sure that students are able to apply theoretical information into practice. Such technologies play a significant role towards an interactive, dynamic learning environment [19], [20].

Cluster 4: Generative AI in Higher Education

This cluster examines the way in which generative AI is transforming pedagogical approach in higher education. Not only are AI tools, especially ChatGPT, being integrated into teaching delivery to provide immediate feedback and personalised learning and address various teaching practices, they are also seen as beneficial to support different teaching styles. The issue of upholding academic integrity and general change in student interaction with learning resources is also dealt with in this cluster. Although AI has a potential of revolution, one of the areas of concern is the impact it has on conventional educational models [21], [22].

Cluster 5: Ethical Concerns and Academic Integrity

The ethical issues that this cluster deals with are the ones that arise as a result of the adoption of generative AI in academic life in general and academic dishonesty, in particular. The popularization of AI-based solutions like ChatGPT has already led to the emergence of the debate regarding whether the student work is authentic and whether the academic dishonesty will occur. Researchers demand the creation of ethical systems that can direct the application of AI in education and make sure that technologies are implemented in a responsible manner and do not harm the integrity of the academic

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process. The problems of plagiarism and cheating are the dominant discussions, which require clear policies in order to reduce the risks [23], [24].

3- Influential Authors and Citations

Out of 410 analyzed papers, such authors as Grant Cooper, Fiona Fui-Hoon Nah, Jurgen Rudolph, and Miriam Sullivan appear most often in it and make their significant contribution to the discussion of AI in the context of education and cognitive development. They have conducted research with a wide scope of AI applications, ethical consideration, and the importance of generating AI to improve educational activities, especially the influence of AI on academic integrity and student learning.

Highly Cited Works:

1. Grant Cooper's contribution [25], especially the exploratory research on ChatGPT in the field of science education (2023), speaks volumes about how revolutionary the potential of generative AI would be for educational purposes. The paper by Cooper explores the possibilities of employing ChatGPT in science education, providing information on the use of AI as a research method and its adherence to prominent educational ideas, such as critical thinking and inquiry-based learning.

2. The article by Fiona Fui-Hoon Nah et al., [26] explores the ethical issues of generative AI and its applications in different fields, including the field of education. This article also shows the possibilities of AI in personalized learning and the threats it brings to academic integrity, bias, and misinformation. Their usage brings out the critical nature of AI-human collaboration, especially in the academic environment where AI applications, such as ChatGPT, have the potential to supplement the learning process and enhance student engagement.

3. Jurgen Rudolph 2023 [27] explores the implications of ChatGPT in education, higher education. Rudolph explores its advantages and drawbacks, with the emphasis on the possible effect of AI on the conventional educational assessment. The present work offers an insightful approach to the opportunities and threats of AI to higher education by promoting the concept of adaptive teaching and assessment frameworks that would embrace the possibilities of AI and reduce its dangers.

4. Miriam Sullivan and Andrew Kelly [28] examine the popularity of using ChatGPT in universities, claiming that it has both a positive and negative effect on academic integrity. They find that universities have a mixed reaction to it and point out the ethical quandary of permitting AI generated material in scholarly examination, as there is a growing worry regarding the possibility of AI cheating and plagiarism.

Focus of Highly Cited Works:

These prominent writers have majored on the following aspects:

- Effect of AI on writing and critical thinking: It has been noted that AI-based tools, specifically ChatGPT, are increasingly gaining relevance in enhancing the writing abilities and critical thinking among the learners. Nonetheless, the ethical issues regarding the possibility of AI to produce the plagiarized materials or weaken the originality of the academic work continue to be at the center of the discussions.
- Ethical Implications of AI in Education: There is a significant number of works that are highly cited, including that of Nah and her team, which emphasize the necessity to consider ethical issues when

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using generative AI in higher education. These issues are data privacy concerns, bias concerns, copyright concerns, and the threat that AI tools will reproduce harmful stereotypes.

- Potential Areas of Innovative Evaluation: The potential of AI tools to transform the assessment process is another important area. Researchers stress the fact that educational institutions should modify their assessment systems to incorporate AI and still preserve the academic integrity. These involve applications of AI in customized learning and production of new assessment models that transcend the conventional ones.

V. Discussion and conclusion

This study analyzed a corpus of 500 academic publications from 2019 to 2025, retrieved via Google Scholar and processed using Publish or Perish, to map how scholarly discourse has evolved around generative AI, authenticity, and critical thinking. Using co-word frequency analysis and topic modeling, the results reveal an intensively developing research field, largely shaped by the rapid emergence of tools like ChatGPT. Keyword analysis shows that terms such as *ChatGPT* [8], *AI*, *generative*, *critical*, and *thinking* dominate the landscape, indicating a strong thematic orientation toward educational implications and cognitive impact. This cluster of terms frequently co-occurs with *students*, *learning*, and *skills*, suggesting that recent scholarship frames generative AI through a pedagogical and psychological lens, with a particular emphasis on how it reshapes classroom practices and critical thought.

The thematic clustering further reveals four distinct yet interconnected research directions. The first and most prevalent cluster centers on the cognitive and intellectual dimensions of AI use in education. Articles in this domain interrogate whether the use of generative AI enhances or diminishes students' problem-solving abilities, critical thinking, and capacity for autonomous reasoning. Authors often reflect on how ChatGPT can support surface-level productivity while simultaneously raising concerns about the erosion of deeper intellectual habits, such as argumentation and doubt—elements traditionally associated with critical thinking. These concerns align with previous work on cognitive offloading, which suggests that dependence on intelligent systems may reduce users' incentive to engage in reflective processing [17].

The second cluster focuses on the institutional integration of generative AI in higher education. Here, the literature addresses administrative responses to the rise of tools like ChatGPT, policy adaptation, and the transformation of pedagogical strategies. Many of these works take a pragmatic view of AI adoption, evaluating both the potential for enhancing efficiency and the ethical dilemmas posed by automation in academic work. This strand of research highlights that educational institutions are not only adapting reactively to AI's presence but are also exploring proactive strategies to embed these technologies within curricula and instructional design [9], [13].

The third thematic area comprises studies that evaluate the performance and usability of ChatGPT within specific disciplinary contexts. This includes applications in medical education, STEM fields, and language learning, where the chatbot is used either as a learning assistant, a tool for feedback generation, or a research aid. These studies are frequently empirical in nature, involving pilot tests, surveys, or comparative experiments that measure the impact of AI on learning outcomes or engagement. The tone of these papers is often cautiously optimistic, recognizing both the functional power of AI and the risks of overdependence [10], [11].

The final and arguably most intellectually provocative cluster concerns authenticity and academic expression. Although smaller in volume, this cluster engages deeply with the philosophical and ethical dimensions of AI-generated content. Scholars in this area examine how tools like ChatGPT are reshaping

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notions of authorship, originality, and self-presentation, particularly in academic writing and among English-as-a-Foreign-Language (EFL) learners. The emergence of these studies suggests a growing concern over whether machine-assisted expression can still be considered a genuine manifestation of the self. The tension between fluency and authenticity is especially pronounced in this cluster, as researchers question the implications of linguistic optimization for the epistemic agency of students [16].

Taken together, these findings illustrate a field that is highly dynamic but thematically concentrated. The dominance of educational and cognitive frameworks demonstrates that scholars are primarily concerned with the practical and psychological consequences of AI. Yet the relative underrepresentation of work focused on authenticity and identity reveals an important research gap. While many studies address how AI changes what we do in educational settings, fewer investigate how it changes who we are as communicators and thinkers.

The implications of this study are twofold. First, there is a need for more research that examines metacognitive strategies in AI-assisted environments such as designing AI systems that prompt users to reflect or engage in deeper analysis rather than simply accept polished outputs. Second, the concept of authenticity, although emerging, must be foregrounded more explicitly as a theoretical and methodological category in future AI-in-education research. If educational practice is to preserve the goals of autonomy, criticality, and ethical communication, then it must contend not only with how AI supports learning, but also with how it transforms the meaning of expression itself.

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