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From History to Innovation: Feminist Pedagogies, Artificial Intelligence, and Anxiety in Educational Approaches

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Abstract

The notion of "feminist" has historically been a topic of contention, especially regarding its implementation in educational methodologies. This study examines the convergence of feminist pedagogies, artificial intelligence (AI), and anxiety in higher education, emphasizing the potential of AI technologies to revolutionize educational methodologies while mitigating gender biases and promoting inclusion. This research investigates the impact of AI on resource distribution and academic experiences at universities, drawing upon the historical fight for equality in voting, pay, housing, property ownership, and education. The research seeks to examine the effectiveness of AI-enhanced feminist pedagogies and their capacity to mitigate fears associated with technology integration in educational settings. Semi-structured interviews were performed with female faculty members across many disciplines—education, management sciences, social sciences, natural sciences, and medicine—to obtain perspectives about AI's role in perpetuating prejudices and fostering inclusive learning. The findings, derived from phenomenological and qualitative research approaches, including thematic analysis, indicate both problems and potential in the integration of AI into feminist pedagogical practices. Discussions emphasise that ethical monitoring and multidisciplinary collaboration may reduce gender biases and improve educational experiences.

Keywords: Feminist Pedagogies, Anxiety, Artificial Intelligence, Educational Approaches,

Introduction:

The word "feminism" is contentious. Equality involves voting, work, fair compensation, property ownership, housing, and education. Feminists support legal abortions, contraception, and rape prevention (Davidow, Messer 2002). Feminism's richness and variety make it hard to understand, writes Beasley (1999, ix). Feminism is the study and change of historical sexual distinctions, where man and 'women' are socially assigned hierarchical and antagonistic roles. The term "feminist pedagogies" describes a variety of instructional strategies that aim to question and alter conventional wisdom by drawing on feminist theory and practice. Feminist pedagogy incorporates feminist philosophy, activism, and women's experiences to textbooks, learning environments, teacher-student interactions, and outer world links. The 1980s approach was influenced by feminist activism, critical pedagogical theory, and US progressive education. Feminism as a whole,

including these pedagogies, fights for equal rights for women and girls, social justice, and the overthrow of patriarchal systems. When applied to the field of education, feminist pedagogies seek to eliminate prejudice, privilege, and power dynamics by establishing classrooms that are welcoming, supportive, and ultimately transformational for all students. According to Shrewsbury (1993), feminist pedagogy is a theory that helps inform classroom practices by outlining criteria for evaluating various educational tactics and procedures in relation to the course aims or results. Feminist pedagogies call for an analysis of the ways power functions in classrooms. This necessitates being aware of and fighting against gender, racial, class, sexual orientation, and other intersecting identity-based systems of oppression and privilege. The goal of these pedagogies is to make classrooms more welcoming and accepting of students with a wide range of backgrounds and experiences. The disruptive potential of feminist teaching is still constrained, according to some, because in the very framework of the school (Busse 2020). The course content, supplementary resources, and classroom discourse all reflect this inclusive philosophy. The focus of much feminist pedagogy is on the learner and their perspectives and experiences, with an emphasis on student-centered methods. An emphasis on students' real-life experiences, collaborative learning, and other forms of student participation can all play a role in this. Feminist pedagogies take an intersectional stance, acknowledging the interdependence of many social identities. This necessitates thinking about the ways in which privilege and oppression interact and affect people in specific ways. Conventional gender roles and assumptions are aggressively contested in feminist pedagogy. This might include creating spaces where students of all gender identities can succeed, encouraging critical conversations about gender roles, or adding feminist viewpoints to existing curricula. Empowering students is a key objective of feminist pedagogies. Among these goals is the encouragement of introspection, critical thinking, and the growth of a robust feeling of personal agency. The value of students' lived experiences is recognized by feminist pedagogies. By critiquing power structures, feminist pedagogies provide students and educators a platform to share their stories and perspectives (Ziv 2015). The three main principles shared by feminist pedagogies include using experience as a resource, resisting hierarchies, and transformative learning (Lawrence, 2016). When given the tools they need, students can more effectively fight injustice and have a constructive impact on society. Learning experiences that are truly transformational are what feminist pedagogies strive for. Feminist teachers must challenge power systems and gender inequalities in the classroom. According to Freire (2005), instructors

now manage and encourage learning rather than "banking" knowledge. Acquiring information is just the beginning; one must also engage in critical reflection in order to transform their comprehension of cultural norms and institutions. An action-oriented approach is emphasised by several feminist educators. Students are urged to go beyond merely learning theoretical concepts and actively apply their knowledge to fight for social justice, question injustices, and make a good impact in their communities.

The phrase "feminist artificial intelligence" is used at the end of Adam's (1995) paper titled "Artificial Intelligence and Women's Knowledge." Artificial intelligence is having a profound impact on the distribution and use of these funds in the dynamic sector of higher education. One important step in this regard is the growing use of AI chatbots as educational counselors and tutors in schools. Education is one area that often utilizes AI technology. The way students learn and use knowledge is changing, and this has far-reaching consequences for the educational system. Artificial intelligence chatbots are becoming increasingly popular in this age of rapid technological development, which is more evidence of their usefulness and entertainment value. Gursoy et al. (2019) emphasized that digitizing business operations and incorporating AI into different production techniques are crucial parts of AI adoption. According to Eynon and Young (2021), researchers in the field of AIED investigate learning processes using AI approaches. As a result of including characteristics such gender, ethnicity, age, financial disparity, and social standing, the use of artificial intelligence (AI) computer programming to reduce design biases may affect student rights (Tarran, 2018). Data processing, interpretation, and distribution are all areas where Holmes et al. (2019) found significant difficulties. Cox et al. (2019) found that directories and IT specialists at British libraries are expecting AI to significantly change reference services, information retrieval, browsing, and information literacy. Thus, feminist pedagogy recognizes that women and other oppressed populations may experience the world from distinct perspectives due to the social positions they hold, and it appreciates these perspectives for producing unique situated knowledges (Crabtree et al. 2009). The goal of Feminist Pedagogy for Teaching Online is to help undergraduates who are taking classes online, in hybrid formats, or in more conventional classrooms learn how to use feminist pedagogy in conjunction with technology. The editors made a point of crafting the manual with an eye on promoting active learning strategies within the humanities, liberal arts, and social sciences, as well as across disciplines. Keeping these feminist

pedagogical principles in mind, the editors have designed and curated this resource. Stromquist (2015) defines empowerment as “a set of knowledge, skills, and conditions that women must possess in order to understand and act upon their world.” Limited diversity and inclusion in AI has far-reaching effects. Increased evidence indicates that under-representation of women and marginalized groups in AI and data science leads to bias in machine learning systems. According to the European Commission (Quirós et al. 2018), technology reflects what its creators value. Diversifying teams in technology development may help discover and mitigate biases.

AI algorithms and decision-making systems are often portrayed as unbiased, neutral, and objective, however bias may still be present and exacerbated (Leavy 2018; Gebru 2020). Algorithm training data may under-represent particular populations or reflect past bias against marginalized demographics owing to data collection and curation choices. Unequal power structures when creating, processing and interpreting data may perpetuate societal exclusions and discriminations. Multiple AI products and systems are gaining attention for discriminating results. One example is Amazon's employment algorithm discriminating against female candidates (Dastin 2018). This research began to argue in the 1980s that Western scientific discussions were inadequate and slanted since women's expertise was excluded (Jansen, 1988; Turkle, 1984). In feminist science and technology studies and the philosophy and sociology of science; constructivist ideas underpin feminist criticisms of AI. This research examines the integration of feminist pedagogies and AI in Pakistani higher education. The goal is to explore how these methods can address gender disparities, empower students, and create inclusive learning environments, while also identifying the challenges specific to the region’s cultural, social, and educational context. However, implementing such transformative approaches inevitably introduces anxiety in educational approaches as institutions and individuals adapt to novel, untested strategies.The integration of feminist pedagogies with AI in education is a complex issue that demands careful examination of strategies, methodologies, and obstacles. While the potential for innovation is vast, this intersection often provokes anxiety in educational approaches, requiring stakeholders to address ethical concerns and ensure that the adoption of these methods leads to equitable and supportive outcomes.

Research objectives:

- To investigate the integration of feminist pedagogies with artificial intelligence in educational settings, focusing on addressing challenges and anxieties in the learning process.
- To evaluate the effectiveness of AI-enhanced feminist pedagogical approaches in fostering inclusive, equitable, and transformative learning environments.

Research methodology:

This research uses a phenomenological methodology to investigate the convergence of feminist pedagogies and artificial intelligence (AI) within educational contexts. The approach is based on qualitative research, as suggested by Bourdieu (2000), to examine participants' experiences within their social situations. The sample consists of five female professors from education, social science, management science, pure science, and medical science, selected for their varied viewpoints on the subject. Semi-structured interviews were performed to obtain comprehensive and adaptable replies, concentrating on the amalgamation of feminist pedagogies with artificial intelligence in education.

The interviews were transcribed and subjected to thematic analysis, revealing key themes including Empowerment through Inclusive Design, Challenges in Overcoming Gender Biases, Pedagogical Shifts for Gender Equality, Real-time Feedback and Personalised Learning, Intersectionality in Educational Technology, and Ethical Considerations in AI. An integrationist coding methodology was employed, amalgamating both deductive and inductive methodologies to guarantee the precision and reliability of the findings. Ethical issues were paramount, ensuring confidentiality and prompting participants to engage in honest reflection. This technique offers an in-depth analysis of the benefits and problems associated with integrating feminist pedagogies with AI in education.

Qualitative Data analysis of the study

Female professor responses in the field of education:

The female education professor imagines a future where AI and feminist pedagogies work hand in hand, with a focus on tailoring and individualizing the educational experience. According to her,

AI algorithms are great resources for making classrooms more welcoming to all students and accommodating their unique learning styles and demands. Nevertheless, this hopeful outlook is limited by the realization of a major obstacle: the possibility of AI algorithms reinforcing prejudices, which might prolong current educational disparities. Notwithstanding this obstacle, the lecturer sees a promising chance to use AI for individualized lesson planning, which will help meet the demands of a wide range of students and create a more welcoming classroom.

The professor goes on to say that there have been good effects of AI on inclusive education. One area where adaptive learning platforms have received a lot of praise is for the way they make learning easier and more accessible for students with different abilities. These platforms provide personalised feedback and resources to help students succeed. In spite of all these benefits, the professor is aware that AI-enhanced feminist pedagogies carry the danger of perpetuating harmful gender stereotypes. She stresses the need to be watchful during the design and implementation phases to make sure that AI technologies combat unconscious bias and promote fair representation. Concerns about data security and privacy are also seen as important factors to take into account while reducing dangers related to feminist pedagogies that use artificial intelligence.In light of this, the professor is optimistic about the future of education and the ways in which feminist pedagogies and AI might work together to advance gender parity and student agency. As part of this effort, we must promote a curriculum that questions established gender norms and integrate AI systems that value diversity and inclusion. Mainly, we want to make sure that all pupils, regardless of their gender, have the tools they need to succeed in school. Through this theme analysis, the female professor's complex viewpoints on the topic of AI pedagogy integration become clear, including both hopeful goals and cautious concerns. The proposed contribution is promoting a curriculum that questions conventional gender norms and using AI techniques that prioritise inclusiveness. The ultimate objective is to provide an educational setting that enables every student, regardless of their gender, to flourish and succeed in their academic endeavors. The main focus of this issue is to emphasize the profound impact that can be achieved by integrating feminist teaching methods with artificial intelligence in the field of education. The professor also emphasised the conflict between technology advancement and inclusive education. They stress the significance of properly developing and applying AI systems to promote justice and inclusion to address these concerns. AI's ability to reinforce prejudices must be managed while creating a feminist pedagogical environment.

Female professor responses in the field of science:

The integration of feminist pedagogies with artificial intelligence (AI) presents a complex but transformative opportunity within educational contexts, particularly in disciplines such as science and management. As educators and scholars explore this integration, responses often highlight the tension between the potential for technological advancement and the preservation of inclusive educational practices. Many female professors across various fields express anxiety regarding the role AI might play in reinforcing existing power structures, particularly traditional gender roles. Based on my own observations, artificial intelligence (AI) has significantly contributed to creating a more inclusive and inviting environment in science classes, accommodating students from all backgrounds. Adaptive learning technologies have facilitated a more inclusive approach to science education by allowing students with diverse abilities to independently explore and understand scientific topics at their own pace.

An inherent drawback of using AI algorithms in scientific education is their potential to perpetuate existing gender biases. Ensuring that AI technologies promote diversity and inclusion is of utmost importance and it requires constant vigilance throughout the development process. Moreover, it is essential to meticulously scrutinize apprehensions around the accessibility and potential exclusion resulting from technology. The integration of feminist pedagogies with AI has significant potential in promoting gender equality and empowering individuals to exercise their own agency in scientific education. In order to promote more female representation in STEM fields and enhance their achievements in traditionally male-dominated domains, it is imperative to use instructional approaches that counteract gender bias and leverage AI technologies that foster equitable engagement.

Female professor in the field of management science:

Moving to the challenges and opportunities, the professor emphasizes the overwhelming challenges associated with implementing AI-enhanced feminist pedagogies in management science. The perceived risk that AI technologies may exacerbate existing gender inequalities becomes a predominant concern, overshadowing potential opportunities. This negative outlook is rooted in the belief that AI presents more obstacles than opportunities for promoting diversity and inclusivity within the field. The anxiety stems from a fear that AI technologies could perpetuate

gender stereotypes, especially in a discipline like management science where gender imbalance is still prevalent. These concerns reflect a deep-rooted apprehension about the ways in which AI might undermine the goals of feminist pedagogies, which aim to create more equitable and inclusive educational environments.

Discussing the positive impact on inclusive learning, the professor struggles to identify instances where AI technologies have positively influenced learning environments in management science. This struggle is attributed to the perceived limitations of current AI applications in addressing the complexities of gender dynamics, with concerns that the potential for reinforcing stereotypes outweighs any perceived benefits. When contemplating consequences and drawbacks, the professor foresees potential negative outcomes with a sense of disheartenment. The highlighted drawback is the risk of perpetuating biases within algorithms and unintentionally excluding certain groups of students. The perceived uphill battle in finding effective mitigation strategies contributes to the overall negative outlook. In the realm of contribution to gender equality and empowerment, skepticism prevails. The intersection of feminist pedagogies and AI in management science is viewed skeptically in terms of its potential contribution to gender equality and empowerment. The professor expresses doubt in the current limitations of AI technologies to challenge deeply ingrained biases, making it challenging to believe in their potential to foster genuine change in gender dynamics within the discipline. This overarching skepticism casts a shadow on the transformative potential of the intersection between feminist pedagogies and AI in the field of management science. The convergence of feminist pedagogies and artificial intelligence (AI) in the field of management science is met with skepticism, namely over their capacity to advance gender equality and empowerment. The professor expresses skepticism, voicing worries about the current constraints of AI technology in successfully confronting deeply rooted prejudices. This skepticism hinders the belief in the ability of AI to truly change gender dynamics in the field of management science. The concern centres on the efficacy of AI technologies in breaking conventional gender norms and creating an atmosphere that promotes genuine gender equality and empowerment. The professor's doubt emphasizes the necessity for a thorough analysis of the existing abilities and future developments in AI to guarantee substantial progression in resolving gender inequalities inside the sector.

Female professor in the field of social science:

The female professor in the field of social science provides a nuanced perspective on the integration of feminist pedagogies with artificial intelligence (AI). In envisioning integration, she expresses a positive outlook, visualizing a seamless fusion where AI technologies enhance feminist pedagogies. The vision includes personalized content, diverse learning styles addressed, and critical discussions on social issues facilitated, all contributing to a more engaging and inclusive learning experience. However, a counterpoint emerges as the professor identifies challenges in this integration, particularly the risk of AI inadvertently reinforcing biases. The apprehension revolves around the potential for technological determinism and the perpetuation of gender stereotypes, posing a concern about undermining the very principles of feminist pedagogies.

Addressing challenges and opportunities, the professor acknowledges the daunting nature of implementing AI-enhanced feminist pedagogies. Despite the challenges, she emphasizes the immense opportunities, pointing to AI's potential in creating customized learning paths, deepening understanding of social issues, and providing valuable resources for diverse student needs. However, the negative perspective surfaces as the professor sees these challenges as formidable, with concerns about algorithmic bias and the potential commodification of education through AI technologies, potentially exacerbating existing inequalities.

Examining the contribution to gender equality and empowerment, the professor offers a positive perspective on the intersection of feminist pedagogies and AI, perceiving it as holding promise. She envisions the incorporation of AI tools that highlight diverse perspectives and challenge stereotypes, preparing students to actively contribute to social change. On the flip side, skepticism emerges regarding the actual contribution, expressing concerns about the commodification of education and the potential for AI to reproduce societal biases, posing a hindrance rather than advancement in empowering individuals within the social science discipline.

Concerning the positive impact on inclusive learning, challenges in identifying positive examples are highlighted. The professor finds it challenging, expressing concerns that AI might inadvertently exclude certain groups or reinforce dominant narratives, potentially hindering the goal of inclusivity. In terms of consequences and drawbacks, the professor foresees troubling outcomes, particularly the risk of reinforcing gender norms and amplifying existing power imbalances through biased AI algorithms. This recognition underscores the need for careful consideration and the development of effective mitigation strategies in the integration of feminist pedagogies with AI in the social science discipline. The professor's nuanced perspectives capture

the complexities and dualities surrounding this integration, offering a comprehensive understanding of the opportunities and challenges at hand.

Female professor responses in the Field of medical science:

The female professor in the field of medical science presents a nuanced perspective on the integration of feminist pedagogies with artificial intelligence (AI), offering both positive and negative insights. Envisioning integration, she optimistically foresees a seamless merging facilitated by adaptive learning platforms. These platforms, driven by AI, are anticipated to provide personalized education, tailored resources, and clinical simulations, catering to diverse learning needs and styles. However, a shadow is cast as concerns emerge about the potential reinforcement of gender biases by AI algorithms, acknowledging the risk of perpetuating stereotypes in medical education. Delving into challenges and opportunities, the professor accentuates the substantial opportunities within AI-enhanced feminist pedagogies in medical science. AI is seen as a revolutionary force capable of offering real-time feedback, virtual patient interactions, and personalized learning experiences that address the unique challenges posed by a diverse student body. Nevertheless, negative responses surface, underscoring challenges tied to algorithmic bias and the potential reinforcement of existing gender stereotypes. These challenges are portrayed as significant and, if not adequately addressed, may overshadow the positive impacts envisioned.

Highlighting the positive impact on inclusive learning, the professor points to AI technologies positively influencing medical science education. Specifically, virtual reality simulations and AI-driven diagnostic tools are recognized for enhancing clinical skills training, ensuring a more accessible and inclusive learning experience for students with varying abilities. In the realm of contribution to gender equality and empowerment, the professor holds an optimistic view. The intersection of feminist pedagogies and AI is deemed promising for fostering gender equality, emphasizing equal opportunities for male and female students. Additionally, the combination is envisioned as challenging traditional gender norms, fostering inclusivity, and empowering individuals of all genders to excel in the medical field. The negative responses concerning the intersection of feminist pedagogies and AI in medical science offer a critical perspective, highlighting significant concerns that warrant careful consideration in the development and implementation of these intersectional approaches. The expressed reservations center on the potential reinforcement of gender biases by AI algorithms, presenting a tangible risk of

perpetuating stereotypes within the realm of medical education. This concern emphasizes the importance of scrutinizing AI systems to ensure they do not inadvertently introduce or amplify existing biases, particularly those related to gender. Furthermore, the acknowledgement of challenges in achieving a seamless integration adds depth to the discourse. The negative responses emphasize the potential for bias in algorithms and the associated risk of reinforcing prevailing gender stereotypes. These challenges are portrayed as substantial and, if not adequately addressed, have the potential to overshadow the anticipated positive impacts of the intersection between feminist pedagogies and AI in medical science.

The recognition of these challenges underscores the necessity for a thoughtful and meticulous approach in navigating the complexities of merging feminist pedagogies with AI in the medical education domain. Addressing bias reinforcement, mitigating the perpetuation of stereotypes, and overcoming the challenges associated with seamless integration are crucial components of this process. Tackling these issues head-on is imperative for maximizing the potential positive contributions of this intersection, ensuring that gender equality and empowerment are actively fostered within the medical education landscape. In essence, the negative responses offer valuable insights that guide the strategic development and implementation of these intersectional approaches, emphasizing the importance of a proactive and inclusive approach to achieve meaningful progress in the pursuit of gender equality within medical education. From history to innovation, the integration of feminist pedagogies with AI brings both potential and anxiety, as it requires careful navigation to balance technological advancement with the preservation of inclusivity and fairness in educational approaches.

Findings from Qualitative Interviews with Education Professors:

- Positive Outlook on Integration: The education professor dreams of a world where feminist pedagogies and artificial intelligence work together to personalize and adapt learning for all students.
- Obstacle of Bias Reinforcement: Although there is reason for optimism, one big concern is that AI algorithms may reinforce prejudices, leading to a worsening of educational inequality.
- Promising Chance for Individualized Lesson Planning: The professor is excited about the potential of AI in personalized lesson preparation, which can help meet the needs of all students and create a more inclusive classroom.
- Positive Effects on Inclusive Education: The professor acknowledges positive effects of AI on inclusive education, especially in the realm of adaptive learning platforms that provide personalized feedback and resources for students with different abilities.
- Concerns about Gender Stereotypes: Nevertheless, it is acknowledged that AI-enhanced feminist pedagogies have the potential to reinforce detrimental gender norms, underscoring the need of being cautious in their design and application.
- Data Security and Privacy Concerns: The professor of education emphasized the necessity to address privacy and data security issues in order to reduce hazards related to feminist pedagogies that use artificial intelligence.
- Optimism about Future Impact: Gender equality and student agency may be advanced via the use of artificial intelligence and feminist pedagogies, which the professor maintains as a positive vision for the future of education.
- Call for a Challenging Curriculum: The professor supports a program that challenges gender norms, which is in line with feminist ideas, in order to promote gender equality.
- Emphasis on Diversity and Inclusion: The professor promotes AI strategies that promote diversity and inclusion is considered essential in establishing an educational environment that fosters the growth and achievement of every student, irrespective of their gender.
- Complex Viewpoints: The professor's viewpoints are complex, reflecting both hopeful goals and cautious concerns, emphasizing the need for a balanced and thoughtful approach.

- Need for Vigilance: It is crucial to tread cautiously when integrating AI and feminist pedagogies to prevent unforeseen outcomes, as the professor emphasizes throughout the comments.
- Balancing Hope and Caution: Overall, the results of the professor's interview show that there is a delicate balancing act between being optimistic about possible improvements and being cautious about possible dangers, highlighting how complex the integration process is.

Findings from Qualitative Interviews with Management Science professor:

- Challenging Envisioning: The results of the interview with the management professor some have voiced worries that biased algorithms might perpetuate old gender roles, making it difficult to envision a future where feminist pedagogies and AI seamlessly coexist in management science.
- Overwhelming Challenges: The professor highlights the significant difficulties involved in integrating AI-enhanced feminist teaching methods in management science. They raise concern that AI technologies may worsen the already existing gender disparities.
- Struggle to Identify Positive Impact: The professor finds it challenging to find examples of how AI technologies have had a good impact on learning settings in management science. This is because present AI applications are limited in their ability to handle the intricacies of gender dynamics.
- Foreseen Negative Consequences: The main downside of anticipating possible repercussions is the danger of propagating biases inside algorithms and unknowingly eliminating particular groups of pupils, which is discouraging. The general pessimism is exacerbated by the difficulty of developing workable mitigating methods.
- Skepticism on Contribution to Gender Equality: The professor concerns that AI cannot overcome deep-rooted biases. Feminist pedagogies and AI in management science are seen skeptically as promoting gender equality and empowerment. AI's inability to overcome deep-seated prejudices raises doubt. Skepticism clouds the revolutionary potential of feminist pedagogies and AI in management science.

Findings from Qualitative Interviews with Social Science professor:

- Positive Envisioning: Words of the professor When contemplating integration, embrace an optimistic viewpoint by envisioning a seamless fusion in which AI technologies enhance

feminist pedagogies, therefore providing a useful addition to a more engaging and all-encompassing educational experience.

- Concerns about Bias Reinforcement: Nevertheless, the professor highlights potential obstacles in this integration, including the risk of AI unintentionally perpetuating prejudices. The concern is on the possibility of technological determinism and the continuation of gender norms.
- Acknowledgment of Daunting Challenges: The professor recognizes the challenging task of applying AI-enhanced feminist pedagogies. However, they highlight the significant advantages, such as AI's ability to create personalized learning routes, boost comprehension of social concerns, and provide useful resources to cater to the various requirements of students.
- Skepticism on Contribution: There is growing skepticism about the real impact, with some voicing worries about how education is being commercialized and how AI may perpetuate prejudices, which could get in the way of social scientists' efforts to empower people.
- Challenges in Identifying Positive Impact: There are issues identifying excellent examples, and AI may mistakenly exclude groups or reinforce dominant narratives, making inclusiveness harder to accomplish. Worst-case scenarios include biased AI algorithms maintaining gender stereotypes and power imbalances. It's important to deliberate and create effective mitigation strategies.

Findings from Qualitative Interviews with Science professor:

Transformative Potential of AI-Integrated Feminist Pedagogies in Science Education:

- The combination of feminist pedagogies with artificial intelligence has the potential to profoundly alter the dynamics of the scientific classroom. AI-powered simulations and virtual labs that cater to various learning preferences enable students to immerse themselves in scientific ideas, hence defying conventional gender stereotypes in STEM fields.

Inclusive Environment Facilitated by AI Contributions:

- To a large extent, AI has helped make science classrooms more welcoming and inclusive places for students of all backgrounds. Students with a wide range of abilities may now learn about scientific concepts at their own speed with the help of adaptive learning tools, which has been a huge step toward equality in the classroom.

Potential of AI-Enhanced Feminist Pedagogies in Promoting Gender Equality:

- Feminist pedagogies have a lot of promise for advancing gender equality and student agency in STEM classrooms when combined with AI.it is critical to use instructional strategies that combat gender prejudice and utilize AI technology for equitable participation if we want to see more women in STEM professions and higher accomplishments in areas where males have historically reigned.

Findings from Qualitative Interviews with Medical Science professor:

- Optimistic Envisioning: Envisions the integration of AI-driven adaptive learning systems in medical education to enable smooth merging, offering individualized resources and clinical simulations to cater to various learning requirements.
- Concerns about Gender Biases: Recognizes the concerns about AI's potential to strengthen gender prejudices in medical education, emphasizing the hazards of propagating preconceptions and the difficulties connected with algorithmic bias.
- Substantial Opportunities: Delving into challenges and opportunities, the professor accentuates the substantial opportunities within AI-enhanced feminist pedagogies in medical science. AI is seen as a revolutionary force capable of offering real-time feedback, virtual patient interactions, and personalized learning experiences that address the unique challenges posed by a diverse student body.
- Challenges of Algorithmic Bias: Nevertheless, negative responses surface, underscoring challenges tied to algorithmic bias and the potential reinforcement of existing gender stereotypes. These challenges are portrayed as significant and, if not adequately addressed, may overshadow the positive impacts envisioned.
- Positive Impact on Inclusive Learning: Highlighting the positive impact on inclusive learning, the professor points to AI technologies positively influencing medical science education. Specifically, virtual reality simulations and AI-driven diagnostic tools are recognized for enhancing clinical skills training, ensuring a more accessible and inclusive learning experience for students with varying abilities.
- Optimistic View on Contribution to Gender Equality: In the realm of contribution to gender equality and empowerment, the professor holds an optimistic view. The intersection of feminist pedagogies and AI is deemed promising for fostering gender equality, emphasizing equal opportunities for male and female students.

- Empowerment through Intersection: The intersection envisions a future where people of all genders are empowered to thrive in the medical industry, where conventional gender conventions are challenged, and where inclusion is fostered.
- Critical Concerns: A critical viewpoint is offered by the negative replies to the question of how feminist pedagogies and AI in medical research cross. These comments bring to light important problems that should be carefully considered while developing and implementing these intersectional methods. Understanding these obstacles highlights the need for careful planning and execution when dealing with the intricacies of combining feminist pedagogies with AI in the field of medical education.
- Importance of Addressing Challenges: These problems highlight the need for a careful approach to integrating feminist pedagogies with AI in medical education. This requires addressing bias reinforcing, preconceptions, and seamless integration problems. Tackling these concerns head-on is essential to maximize the beneficial contributions of this junction and promote gender equality and empowerment in medical education.
- Comprehensive Insights: The professor's insights include the advantages, disadvantages, and potential hazards of integrating feminist pedagogies with AI in medical research. On the whole, the professor's observations provide a thorough comprehension of the possibilities, difficulties, and possible drawbacks in combining feminist teaching methods with artificial intelligence in the field of medical research. The positive contributions are mitigated by a negative response. The combination of feminist pedagogies and AI has the potential to perpetuate existing biases in the medical field. This intricate perspective proposes meticulous examination and implementation of strategies to guarantee that the intersection positively influences gender dynamics in medical education.

Discussion:

The professor is really optimistic about the possibilities of AI in the field of personalised course design. The enthusiasm stems from the notion that AI has the capability to tailor instruction according to the specific requirements of individual students. The use of AI in personalised lesson design has the potential to create a more inclusive and supportive classroom environment that caters to the many learning styles and preferences of students. These diverse perspectives underscore the spectrum of emotions that might arise when contemplating the potential for transformative advancements facilitated by artificial intelligence (AI) in

educational settings, ranging from cautious optimism to optimistic anticipation of the future of learning. According to West et al. (2019), the study results support the statement that the current statistics on gender diversity in the area of AI are very use of AI in personalised lesson design has the potential to create a more inclusive and supportive classroom environment that caters to the many learning styles. According to the interview with the management professor, concerns have been raised about the potential for biased algorithms to reinforce traditional gender roles. This might provide challenges in creating a future where feminist teaching methods and artificial intelligence can live harmoniously in the field of management science. The lecturer emphasizes the formidable obstacles associated with using AI-enhanced feminist educational approaches into the field of management science. They express concern about the potential of AI technology to exacerbate the preexisting gender inequities. The professor has difficulty in identifying instances where AI technologies have had a beneficial influence on learning environments in the field of management science. This is due to the current limitations of AI applications in effectively managing the complexities of gender relations. Additionally corroborated the conclusions of these systems aim to forecast the likelihood of learners not successfully finishing a class or degree programme. They use behavioral data gathered from interactions with a specific course (Tang et al., 2018, Nur et al., 2019, Márquez-Vera et al., 2016) According to the interview with the management professor, there are concerns that biassed algorithms might continue to support traditional gender roles. This could create challenges in imagining a future where feminist teaching methods and artificial intelligence can live harmoniously in the field of management science.

The lecturer emphasises the formidable obstacles associated with using AI-enhanced feminist educational approaches into the field of management science. There is fear that AI technology may exacerbate the preexisting gender gaps.

The professor has difficulty in identifying instances where AI technologies have had a beneficial influence on learning environments in the field of management science. This is due to the current limitations of AI applications in effectively managing the complexities of gender relations. Additionally corroborated the conclusions of These systems aim to forecast the likelihood of learners not successfully finishing a class or degree programme by analyzing their behavioral data from interactions with a specific course. This analysis is based on studies conducted by Tang et al. (2018), Nur et al. (2019), Lykourentzou et al. (2009), Liang et al.

(2016), and Márquez-Vera et al. (2016). Supported by The quality of education is influenced by the new paradigm, which takes into account the unique traits, talents, individual aspirations, and backgrounds of each student. Continuing education enhances the educational process and enables students to learn crucial skills and competences for their future development (Maghsudi et al., 2021). The significance of addressing challenges: These issues emphasize the need of adopting a cautious approach to integrating feminist pedagogies with AI in medical education. This necessitates tackling bias reinforcement, preconceived notions, and issues related to smooth integration. Addressing these challenges directly is crucial in order to optimize the positive contributions of this intersection and advance gender equality and empowerment in medical education.

The professor provides a thorough analysis of the benefits, drawbacks, and possible risks associated with combining feminist teaching methods with artificial intelligence in medical research. Overall, the professor's views provide a comprehensive understanding of the potential, challenges, and potential pitfalls of integrating feminist pedagogy with artificial intelligence in the domain of medical research. The beneficial contributions are offset by a negative reaction. The convergence of feminist pedagogies and AI has the capacity to sustain prevailing prejudices within the medical domain. This complex viewpoint suggests thorough analysis and use of techniques to ensure that the junction has a good impact on gender dynamics in medical education. Although commendable, according to Iris Marion Young, a postmodern feminist and political philosopher, just emphasizing identity and inclusion is insufficient to tackle the intangible mechanisms of power and oppression. Gender, sexual orientation, color, and ethnicity are just a few of the identities that have been the subject of embedded biases in computer vision research. For example, according to Buolamwini and Gebru (2018), facial recognition software has no trouble identifying white men's faces, but it often misidentifies women's faces with darker skin tones.

Conclusion:

The qualitative interviews with academics from education, management science, social science, medical, and scientific fields reveal a nuanced understanding of the integration of feminist pedagogies and artificial intelligence (AI). While education scholars see AI's potential for personalized learning, they caution against bias reinforcement. Management science experts highlight concerns about AI's role in achieving gender equality, while social science educators

worry about prejudice and the commodification of education. Scientific and medical academics recognize AI's transformative potential in promoting diversity but acknowledge the challenges of bias. A common theme across disciplines emphasizes the need for a balanced approach, combining optimism with caution. Key recommendations include implementing ethical guidelines to address bias, fostering interdisciplinary collaboration for shared insights, and providing ongoing professional development to help educators integrate AI with feminist pedagogies effectively, ensuring inclusivity and ethical standards.

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