Short Communication

Understanding the AI Integrity in Academic Excellence: Bangladesh Perspective

Nazneen Akhter[1] , Umme Suriea[2] , Sabrina Afrin Soha[3]

Abstract: Artificial Intelligence (AI) and Machine Learning (ML) are revolutionary tools that have opened up a new technology-driven horizon in academic learning to enhance and accelerate the higher education journey. This article describes and discusses the convergence of academic integrity and AI, both of which are fundamental to our intellectual environment. An effective approach to AI-integrated learning can balance the use of AI-generated tools and techniques to stimulate students' creativity, analytical thinking, and real-life observation. As we strive for academic excellence, it is essential to integrate AI in academics and all other spheres of development with balance and rationality, through appropriate policies and regulated ethical and value-based use. Educational institutes should have many open platforms to discuss, debate, and smoothly integrate AI technology into academic practices while maintaining the integrity that underpins our scholarly pursuits. Investing in academic and policy debates and discussions regarding the ethicality of AI applications can create a brighter future for academia. This will allow us to leverage the power of AI to advance our knowledge and understanding and to build a stronger nation with greater impact.

Keywords: Artificial Intelligence (AI); ethicality; academic integrity; academic learning

1. Ph.D. (USA), DLSHTM, MSc. in Health Policy Planning Financing (LSE, UK), MPH,(DU), MBBS, (CU). Founder & MD VAALO avant-garde Ltd .Email.: nazneenakhter317@gmail.com ORCID ID: https://orcid.org/0000-0002-8326-9042
2. B.Sc. (Biotechnology & Genetic Engineering), MPH, Sr. Associate Program Associate, VAALO avant-garde Ltd. Dhaka, Bangladesh. Email: suriea.vavgl@gmail.com ORCID ID: https://orcid.org/0000-0002-0724-7386
3. B Pharm, MPH, Associate Program & Research, VAALO avant-garde Ltd, Dhaka, Bangladesh. Email: soha.vavgl@gmail.com ORCID ID: https://orcid.org/0000-0002-3641-0170

Corresponding Author: Nazneen Akhter, Email.: nazneenakhter317@gmail.com

Introduction: Artificial intelligence (AI) and machine learning have caused a lot of excitement in academia. The use of technology to enhance learning has led to a debate about the impact of machine learning on students' creativity and abilities[1]. This descriptive article discusses the convergence of academic integrity and AI, which are both fundamental to our intellectual environment.

It suggests that an effective approach to AI-integrated learning can balance the use of AI-generated tools and techniques to stimulate students' creativity, analytical thinking, and real-life observation. A high degree of dependence on AI would also hinder the learning system's ability to foster social engagement and develop emotional intelligence in students[2]. Under the visionary leadership of the honorable Prime Minister of Bangladesh, the country has made remarkable progress in various fields, including significant strides in the health sector. The country has achieved impressive results in reducing maternal and neonatal deaths, introducing community clinics, and digitalizing healthcare services. As a result, Bangladesh is now a significant partner in the global 'Smart Revolution,' where the 'Smart Bangladesh-2041 Vision' leading the way[3]. With visionary leadership, the country is keeping pace with the rest of the world and is in a way to expect more constructive progress in the future. The use of AI-driven technology can greatly enhance changes in speed, quality, and efficiency. However, it is important to approach its integration in academics and all other spheres of development with balance and rationality, through appropriate policies and regulated use.

Methodology: This article writes up methodology followed through a reflective journaling approach rather than a science-based research work approach. A reflective quick and intensive desk review and web search were made to capture the insights from secondary data facts, stories, shreds of evidence, news features, and the findings blended with personal insights and experiences. Finally, a compilation of insights and views was written in descriptive narrates. The article purposefully ignored the figure and quantity data reflection since the author wanted to portray an understanding perspective on AI integrity in academic excellence from a country context.

Discussion: With the great progression of technology, machine learning, and AI, our pursuit of knowledge has reached new heights, and with it comes the responsibility to maintain the highest standards of ethical conduct in academic pursuits. In today's world of artificial intelligence, students at all levels of education have ample opportunities to incorporate AI into their learning process. The recent years rapid technological advancements, AI has become a revolutionary tool to enhance and accelerate the higher education journey. However, educational institutions remain concerned about how this learning process can be tailored and adapted more ethically and beneficially to enhance students' intellectual and creative abilities instead of causing intellectual and moral decay due to over-dependency on AI-generated processes[4].

There are both advantages and disadvantages to using AI in academic activities. If, we start with the advantages. AI has completely transformed the way journals are edited, enhancing efficiency, streamlining the review process, and raising publication standards. AI tools have significantly improved authorship attribution and plagiarism detection mechanisms, which help maintain academic integrity. AI-assisted peer review has the potential to improve the impartiality and thoroughness of evaluations, leading to more robust intellectual conversations. If we refer back to Microsoft and McKinsey's recent report of over 2,000 students and 2,000 teachers from Canada, Singapore, the UK, and America shows that artificial intelligence (AI) is already providing teachers and schools with innovative ways to understand how their students are progressing, as well as allowing for a fast, personalized, targeted duration of content[5]. AI technology has played a critical role in the development of sophisticated indexing systems, assisting researchers in navigating the vast sea of available information. The adoption of ISSN and DOI, aided by AI technology, has resulted in standardization

and increased access to scholarly works. Furthermore, AI-driven algorithms have aided in the calculation of impact factors, allowing for a deeper comprehension of the impact of research in various academic domains[6].

As we begin to incorporate AI technology in academia, it is crucial to recognize the benefits and challenges that come with it. While AI can enhance efficiency, it also raises concerns about potential algorithmic biases that could affect academic outcomes. Therefore, ethical considerations must be taken into account when using AI in decision-making processes, particularly in determining authorship and evaluating the significance of scholarly contributions[7]. There is also a risk of unintended plagiarism by AI algorithms if not monitored closely, which could compromise academic integrity. Additionally, overreliance on AI technology among students could potentially hinder critical thinking and creativity. As we strive for academic excellence, we must embrace the opportunities presented by AI while upholding our ethical values. It is our collective responsibility to lead this path with caution and a firm commitment to comply with our ethicality, values, and principles. There should be many open platforms in educational institutes to discuss, debate, and smoothly integrate AI technology into academic practices while maintaining the integrity that underpins our scholarly pursuits.

The regulatory process should encompass the opportunities and challenges that arise from the intersection of academic integrity and AI technology. There should be enough orientation and technical learning scope and approaches on various topics such as journal editing systems, authorship, peer review, plagiarism, indexing, ISSN, DOI, and impact factors with a clear purpose and a commitment to uphold the values that guide scholarly efforts. As we explore the many facets of this connection, it is crucial to stay focused on maintaining the integrity of scholarly pursuits.

Conclusion: Bangladesh is a country with innovative and forward-thinking leaderships who are working towards advancing digitalization, and integrating new technologies, scientific advancements, and AI into various sectors. To extract meaningful benefits from AI-driven machine learning technology across multiple sectors, especially in education, it is necessary to have more debate and discourse with government policy-level officials and higher educational institutions. This will provide valuable insights that will guide us toward a future where the collaboration between academic integrity and AI technology will drive progress and benefit humanity as a whole. Investing in academic and policy debates and discussions regarding the ethicality of AI applications can create a brighter future for academia. This will allow us to leverage the power of AI to advance our knowledge and understanding and to build a stronger nation with greater impact.

References:

1. Seo K, Tang J, Roll I, Fels S, Yoon D. The impact of artificial intelligence on learner–instructor interaction in online learning. International Journal of Educational Technology in Higher Education. 2021 Dec 1;18(1): PP:1, DOI: https://doi.org/10.1186/s41239-021-00292-9
2. Hughes S, Project M. The AI Revolution & Higher Education: Why 21st Century Durable Skills Are Needed More Than Ever. Available from: https://www.researchgate.net/publication/370637059 (Access date: 2024 January 15)
3. Intro_S5_PM unveils vision to build Smart Bangladesh by 2041 _ The Business Standard. [cited 2024 Jan 15]; Available from: https://www.tbsnews.net/bangladesh/pm-hasina-unveils-vision-build-smart-bangladesh-2041-550018 (Access Date: 2024 January 15)
4. Ahmad SF, Han H, Alam MM, Rehmat MK, Irshad M, Arraño-Muñoz M, et al. Impact of artificial intelligence on human loss in decision making, laziness and safety in education. Humanit Soc Sci Commun. 2023 Dec 1;10(1): PP:3, DOI: 10.1057/s41599-023-01787-8.
5. Bryant J, Heitz C, Sanghvi S, Wagle D. insights/how-artificial-intelligence-will-impact-k-12-teachers#/ 1/11 T [Internet]. Available from: https://www.mckinsey.com/industries/education/our-insights/how-artificial-intelligence-will-impact-k-12-teachers (Accessed Date: 2024 January 15)
6. Rodgers W, Murray JM, Stefanidis A, Degbey WY, Tarba SY. An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes. Human Resource Management Review. 2023 Mar 1;33(1): PP:2.
7. Bankins S, Formosa P. The Ethical Implications of Artificial Intelligence (AI) For Meaningful Work. Journal of Business Ethics. 2023 Jul 1;185(4):725–40. DOI: https://doi.org/10.1007/s10551-023-05339-7

Author Contributions: The principal author Dr. Nazneen Akhter who is also the corresponding author in this article, and provided substantially contributed to this article's writing starting from idea generation to synthesizing idea and reflecting those with desk review literature to develop this article write-up. The other two co-authors also

supported in doing desk review, referencing related support to complete this article.