Effectiveness of Academic Integrity in the Age of AI in Sri Lankan Higher Education Sector: Challenges and Solutions

M.H.F. Nuskiya[1], Fareena Ruzaik[2]

[1]*Department of Geography, South Eastern University of Sri Lanka*
[2]*Department of Geography, Faculty of Arts, University of Colombo, Sri Lanka*

The rapid integration of artificial intelligence (AI) into higher education has revolutionized teaching and assessment practices, yet it has also presented significant challenges to maintaining academic integrity. The study focuses on higher education institutions in Sri Lanka. The purpose of this study is to analyse the effectiveness of academic integrity practices in the context of AI technologies within the higher education sector of Sri Lanka. Specifically, it examines AI-driven assessment methods, concerns about plagiarism detection tools, and the effectiveness of current certification methods in preserving academic integrity. A structured online questionnaire was administered to 147 participants from diverse academic backgrounds and institutions across Sri Lanka. Quantitative data were collected through extracted from Likert-scale responses and demographic data. Hypothesis tests including the chi-square test and ANOVA were used to assess the statistical significance of differences in perceptions among demographic variables. The survey findings suggest mixed views on the effectiveness of academic integrity practices in the AI age. While 64% of respondents expressed confidence in AI-driven assessment methods, they raised particular concerns about the potential for algorithmic biases to influence assessment fairness ($\chi^2 (1) = 15.32, p < 0.001$). Additionally, 79% of participants highlighted the importance of increasing transparency and accountability in AI-based theft detection tools. Statistical analysis reveals notable differences in perceptions based on participants' academic discipline and years of experience in higher education. In particular, respondents from engineering disciplines showed greater confidence in AI technologies compared to those from humanities and social sciences ($F (2, 144) = 5.78, p < 0.01$). Based on the research findings, strategic recommendations are made to address these challenges and enhance academic integrity practices in AI development. This survey-method study provides empirical insights and compelling statistical evidence on the evolving landscape of academic authenticity in higher education in the context of hybrid AI technologies in Sri Lanka. It provides practical recommendations for institutions and policymakers to address ethical challenges and effectively promote honesty in educational settings.

Keywords: *Artificial Intelligence, Academic Integrity, Higher Education, Assessment Methods, Plagiarism Detection*