Artificial Intelligence Use and Perceived Academic Performance: Student Perceptions in the Age of Smart Learning

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Abstract:
The rapid uptake of generative artificial intelligence (AI) tools is reshaping how university students' study, yet evidence from Gulf higher-education settings, and from Oman in particular, remains limited. This study examined how undergraduate health-science students use AI tools, how they perceive the effect of these tools on their academic performance, and which ethical and practical concerns accompany adoption. A mixed-methods, cross-sectional survey was conducted among 84 Medical Laboratory Sciences students at A'Sharqiyah University, Oman, in January–February 2025. A structured online questionnaire (Cronbach's α = 0.72) captured usage patterns, motivations, perceived academic impact, challenges and willingness to recommend AI tools; open-ended responses were analyzed thematically. AI use was routine: 53.6% of students used AI tools for 1–2 hours daily and a further 45.2% for more than two hours. ChatGPT dominated (86.9%). Time saving (33.3%) and efficiency (27.4%) were the main motivations, and speed and ease of use were valued far above accuracy. Most students (73.8%) reported that AI had partly or completely replaced textbooks and manual research, and 86.9% perceived improved academic performance. Yet more than half (53.6%) doubted the reliability of AI outputs, while smaller groups cited ethical or plagiarism concerns and limited skill in using AI. Although 71.4% would recommend AI tools, only 54.8% felt that they foster creativity and independent thinking. Students therefore embrace AI mainly as an efficiency tool while

expressing low trust in its accuracy, revealing a gap between reliance and critical, ethical use. Structured AI literacy, clear institutional policies and assessment designs that reward verification are needed so that AI supports, rather than substitutes for, learning.

Keywords:
Artificial intelligence, academic performance, AI literacy, academic integrity, higher education, smart learning.