Marine Biotoxins and Emerging Viral Threats: Exploring the Role of Harmful Algal Blooms in Bivalve Disease Susceptibility under Climate Change

Hajar Bouda

Bio-Geosciences and Materials Engineering Research Laboratory, Ecole Normale Supérieure, Hassan II University, Morocco & Marine Biotoxins Laboratory, National Institute of Fisheries Research, Morocco

Rajae El Bourki

Bio-Geosciences and Materials Engineering Research Laboratory, Ecole Normale Supérieure, Hassan II University, Morocco

Hind El Mortaji

Marine Biotoxins Laboratory, National Institute of Fisheries Research, Morocco

Nadia Takati*

Bio-Geosciences and Materials Engineering Research Laboratory, Ecole Normale Supérieure, Hassan II University, Morocco

The integration of Artificial Intelligence (AI) in education is reshaping how students learn and interact with academic content. While its application has been widely explored in developed nations, there remains a significant gap in understanding AI adoption in developing countries like Nepal. This study explores undergraduate students' perceptions of AI tools in learning, focusing on two colleges in Lalitpur that offer Computer Science and Computer Engineering programs. Adopting a positivist paradigm, the research used a quantitative descriptive survey design, drawing on the Technology Acceptance Model (TAM) with extended indicators, Awareness and Usefulness, Ease of Use and Continuity, Trust and Integrity, and Attitude toward AI. Data were collected through a structured questionnaire distributed to 150 students, selected through random sampling. The analysis involved descriptive statistics and comparative analyses using SPSS. The findings reveal a generally positive attitude toward AI tools, particularly in terms of usefulness and ease of use. However, concerns emerged around ethical usage, academic integrity, and trust, reflecting a need for deeper engagement and guidance from institutions. The study highlights that while students are open to integrating AI tools into their academic practices, they require institutional support in the form of digital infrastructure, ethical guidelines, and awareness initiatives. By identifying both readiness and concerns, this research offers timely insights for educators, administrators, and policymakers seeking to align Nepalese higher education with global trends in AI-enhanced learning.

Index Terms—Artificial Intelligence in Education; Technology Acceptance Model; Student Perceptions; Higher Education; Ethical Use of AI