



Zoology Without Borders: Teaching Animal Science Through Global Interdisciplinary Education

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Abstract

Zoology, the scientific study of animals, plays a crucial role in understanding biodiversity, ecosystem functioning, animal behaviour, evolution, and environmental sustainability. In an increasingly interconnected world, integrating zoology into global interdisciplinary education provides opportunities to connect biological knowledge with environmental science, biotechnology, geography, economics, public health, and conservation studies. This paper explores the significance of interdisciplinary approaches to zoology education in developing scientific literacy, critical thinking, research skills, and environmental awareness among learners. It examines how the study of animal diversity, wildlife conservation, animal physiology, genetics, and ecological relationships can help students understand global challenges such as habitat destruction, climate change, biodiversity loss, emerging zoonotic diseases, and human–wildlife conflict. Furthermore, the integration of digital technologies, virtual laboratories, field studies, citizen science, and collaborative research projects can enhance experiential learning and provide students with opportunities to investigate animal life across geographical and cultural boundaries. The paper also highlights the importance of ethical scientific practices, animal welfare, and sustainable approaches to wildlife management. By connecting zoology with real-world environmental and societal issues, educators can encourage learners to recognize the interdependence of humans, animals, and ecosystems. However, limited laboratory facilities, unequal access to digital resources, and inadequate opportunities for field-based learning may restrict the implementation of interdisciplinary zoology education. Addressing these challenges requires inclusive teaching strategies, international academic collaboration, and accessible educational resources. The paper emphasizes that a global interdisciplinary approach to zoology can strengthen scientific understanding, promote biodiversity conservation, and prepare learners to contribute meaningfully to animal welfare and sustainable development.

Keywords: Zoology Education, Global Interdisciplinary Learning, Animal Science, Biodiversity Conservation, Wildlife Management, Animal Welfare, Ecosystem Sustainability, Experiential Learning, Environmental Education, Sustainable Development.