

# EXPLORING THE INCREDIBLE DIVERSITY OF INVERTEBRATES THROUGH MICRO-CREDENTIALS

## Abstract

Invertebrates are hugely diverse and constituting the vast majority of species on earth. However, it is impossible to learn about these amazing creatures in a short period of time. Traditional learning in biology involves a typical face-to-face interactions that occur in a physical location and require longer time to learn. Therefore, by implement the technology-enhanced learning, we can enhance the outcomes of the teaching and learning process in biology. Hence, a Micro-credential (MC) course on invertebrates diversity has been developed to increase students' knowledge about invertebrate's life.

The designed MC provides a flexible educational approach with a shorter duration of 2-5 minutes of learning materials and accessible chunks without feeling overwhelmed or overworked. Learning takes place through activities such as quizzes and reflection as a form of formative assessment. For summative assessment, students are required to submit their answers through the MC portal. In addition, to provide a real life experience for learners, some videos were recorded in a natural habitat of invertebrates. Based on the selected respondents from the reflection section in Padlet embedded in the MC course, the designed MC is relevant and suitable for open and distance learning (ODL) as it allows learners to have repetition and flexibility in their learning. For working adult learners, they claim that they are able to apply some of the concepts learned in the designed MC at their workplace.

## Objectives

- To develop a Micro-credentials course on invertebrates diversity
- To increase student's interest and knowledge about the invertebrate's life via technology-enhanced learning.



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### Added value

Learning takes place through activities such as different types of quizzes and reflection as a form of formative assessment. Videos were recorded live in the invertebrate's natural habitat to provide a real life experience for learners,



### Usefulness

Introduce innovative and creative videos in online learning, by using various types of digital tools to develop visual learning material.



### Commercialization

Can attract conservationist, citizen scientist, and government agencies or NGOs related to biodiversity to take this course and increase their knowledge.