

## **ENGAGING ENTO'S EFFECTIVE INNOVATIVE ASSESSMENTS (ENTEIA) IN LEARNING ENTOMOLOGY**

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### **Abstract**

Innovative approaches to assessment can help learners to demonstrate skills in learning Entomology course effectively. Entomology is the study of the insects. In order to help the learners fully achieved the learning outcomes, several innovative approaches to assessment to help learners demonstrate certain skills have been incorporated in this course. These innovative assessments are meant to be used to closely reflect what is taught and how learning can be more closely aligned to the skills required for employment and access to higher education. In order to encourage learners to explore and learn effectively in Entomology course, several innovative assessments are introduced namely submission of assignment by developing video recording of insect life cycle, executing butterfly net project by sharing their technical drawings through padlet and submitting lab report through an e-Campus platform. The utilisation of innovative assessment will assist learners to demonstrate their reflection skills to indicate their applied skills and knowledge to a real-world scenario.

**Keywords:** Entomology, Padlet, Video Recording, e-Campus.

### **1. INTRODUCTION**

Innovative assessment is a concerted endeavor to rethink assessment as a liberating tool. It provides an opposition to the previous assertions of objectivity and dependability in evaluation (Brian & Clegg, 2019). Innovative evaluation methods can assist students in demonstrating abilities for society, work, and education. Many students now have immediate access to portable computers thanks to mobile technologies. Consequently, several sorts of evaluation may now be created and used. In higher education, innovative classroom practice brings difficulties and conflicts to programmes and institutional systems. With the recent emphasis on curriculum reform, assessment, and pedagogical techniques to enhance student learning are receiving a lot of attention. In addition, the learners are able to develop specific and generic competencies required to either progress in their education or progress into employment (McCartney, 2020).

This innovation includes the subject of Entomology where it is basically referred to the studies of insects. Entomology is the field of biological science concerned with the study of insects and their relatives in relation to humans, animals, plants and the environment. The learners that enrolled in the Entomology course are able to participate in weekly reflection activities that includes live and preserved insects (Amanda, Jarrad & Melody, 2020). Because of that, an interactive approach should be done in order to keep the classes more interesting and increase the two-way communication between the educators and the learners.

The current assessments are time consuming for the learners to submit their assignments that are done using conventional method such as written assignment or presentation in front of the class. Apart from that the normal practice is relatively expensive as the students need to spend money on papers and printing equipment. In fact, most of the hardcopy assignments are meant only for short term as most of the hardcopy need to be disposed once the storage capacity in the filing cabinet reaches the maximum capacity storage.

These innovate assessments were introduced and implemented in Entomology course in order to create an innovative evaluation method that can assist students in demonstrating abilities and creativities in problem solving based on the given assignments, to provide environmentally friendly ecosystem in teaching and learning (paperless) and to provide less time-consuming assessment submission for both lecturer and learners.

## **2. MATERIALS AND METHODS**

The innovative assessments of evaluating the students understanding and skills in Entomology were based on their submission through Video recording, Padlet and e-lab report. These new ways of assessments promote creativity among the students and provide ample space for them to express their thoughts or perceptions relating to Entomology course. In fact, this way is more economically due to less paper utilization and no printing cost incurred.

### **2.1. Video recording**

Video recording is a very useful educational tool to use with a variety of educational purposes. A recording will help to allow learners to practice in an effort to learn or just to allow them to have the opportunity to document their findings. Video recordings are used in many ways and have become so standard in the school environment that they will generally be considered as part of a complete learning package. In this case, the learners are being able to record every process of the life cycle of an insect from the beginning. It is also designated to encourage direct learning through observation, investigation and hands-on activities. Students also can improve their social skills in interacting with others indirectly where it may be helpful whenever they started their own career journey.

### **2.2. Padlet**

Padlet is a simple online collaboration platform that allows learners to publish text, photos, links, documents, videos and voice recordings (Lindsay, 2017). In this innovative approach, the learners are being able to share their technical drawings in executing butterfly net project. The Padlet is very user friendly where it can be easily access by the learners in just one single click through website or app. In addition, Padlet is a platform that allows students to share their work with a larger audience including their peers and parents or guardians or whoever that have the access to it. They can obtain feedbacks on their work and review past work to determine progress. With that, the learners can have a social interaction as Padlet also have an option that provides a forum style format where learners can discuss a topic as they might on social media. Padlet also can assists educators in properly assessing the learning of all learners in the classroom, which can be difficult even in medium-sized courses. The educator may then assess learning and plan the rest of the class and future lessons based on what they see.

### 2.3. e-Campus platform

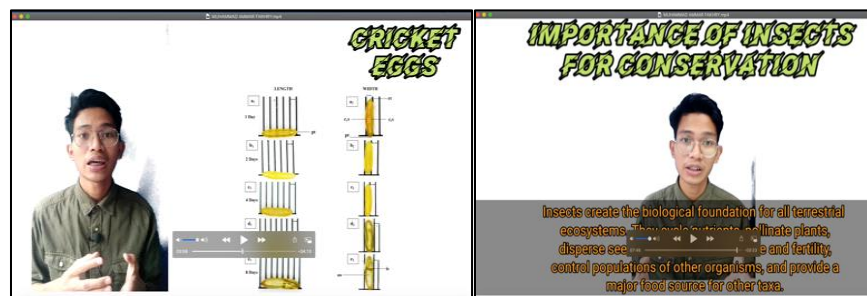
e-Campus is a web-based learning system and electronic community center for learners and faculty. This secure, configurable portal provides courses, collaboration and communication tools, evaluation features and access to a wide range of teaching and learning materials. The learners can find the announcement from the educators, course contents, chat rooms, online courses and library resources in this e-Campus. As of this approach, the learners can just upload their laboratory reports in the e-Campus and the educator can access to that. In that way, it can be more practical and more time saving for the learners rather than have to meet up the educator just to pass their work. The educators also can easily access and sort their work according to their classes.

## 3. RESULTS AND DISCUSSION

### 3.1. Video recording on insect life cycle

The learners were allowed to have opportunities and submit their documentation of insect life cycles, brief explanation of their observations, problems that their encountered and the importance of the insects for conservation (Figure 1) by recording it individually.

Throughout the process, the learners had to record the whole process of the insect life cycles that can be easily found in their houses compound namely housefly, cockroaches, crickets, and butterflies. It was also designated to stimulate creativity and encourage direct learning through observation, investigation and hands-on activities. During the process, the learners learned by doing by themselves while creating something with lasting impacts and further enhanced their communication skills when presenting their findings.



**Figure 1.** Screenshot of One of The Learners' Video Recordings on Insect Life Cycle

### 3.2. Padlet as a platform for butterfly net project, technical drawing and student's feedback

In this innovative assessment approach, Padlet is a platform that allows learners to share their work of building the butterfly nets, technical drawings, brief explanations of butterfly nets, their feedbacks of this project with a larger audience including their peers and public that have the access to it (Figure 2). This will enable them to obtain feedbacks on their work.

Padlet may assist lecturers in properly assessing the learning of all learners easily based on their submission via Padlet.

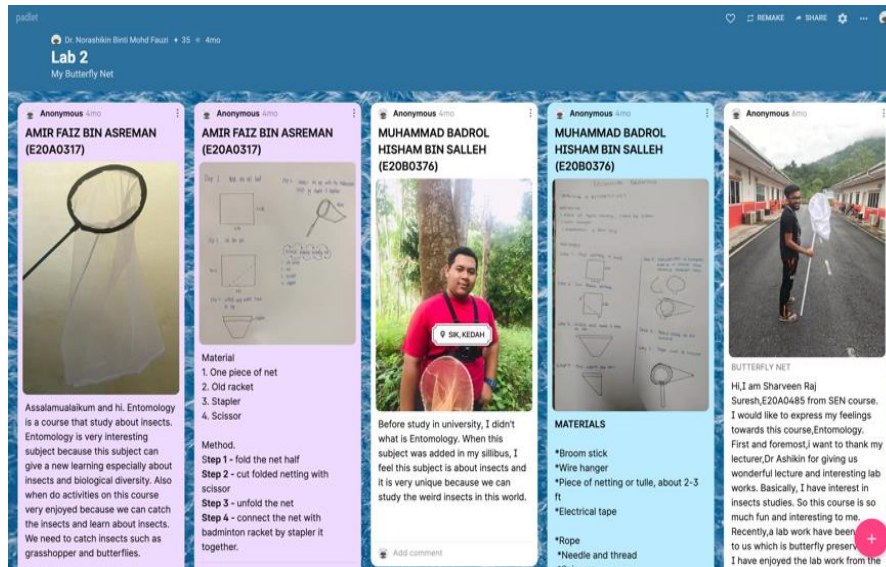


Figure 2. Screenshot of the Padlet with Students' Butterfly Net Projects, Technical Drawings and Feedbacks of Entomology Course

### 3.3. Lab report assessment via e-Campus platform

For lab report assessment, the learners were asked to upload their laboratory reports in the e-Campus platform (Figure 3) for viable access by lecturer. In that way, it can be more practical and more time saving for the learners. The lecturer also can easily monitor, access and evaluate their reports through online submission.

In fact, this approach was considered environmentally friendly where no paper was used throughout this learning process and more economic for the students since there was no cost incurred for printing expenses.

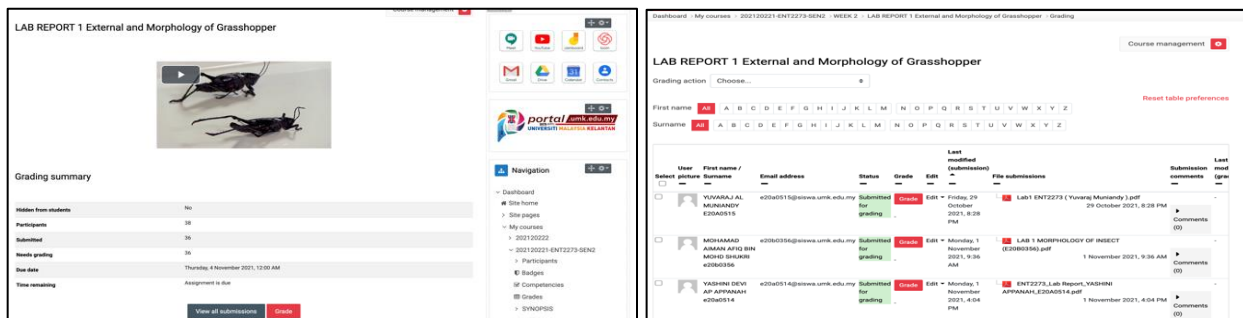


Figure 3. Screenshot of Lab Reports Submission by Students Through E-Campus Platform

## 4. CONCLUSION

In conclusion, innovative assessment can help learners to improve their academic performances effectively. In contrast to traditional assessments which require memorization of facts, innovative assessments encourage students to think critically and creatively. Moreover, these innovative assessments help to bring transparency into the teaching and learning process by providing learners with opportunities to have access to tests or solutions to practice and to reflect on what they have learnt so far. A wide range of assessment tools can be used for this purpose, including software programs that provide students with assessments

through games or online or paper and pencil tests. The learners are also more likely to enjoy these kinds of interactive classes.

## ACKNOWLEDGEMENT

We would like to thank you to Pusat Pembelajaran dan Pengajian, Universiti Malaysia Kelantan (UMK) and Faculty of Earth Science, UMK for supporting our journey in promoting the interactive approach of assessment of Entomology course as a teaching tool.

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