

JPT DEPARTMENT OF HIGHER EDUCATION



MEIPTA MALIS KETUA-KETUA PENYELARAS E-PEMELAJARAN IPTA MALAYSIA



# IUCEL 2023

INTERNATIONAL UNIVERSITY CARNIVAL ON E-LEARNING

کرنیول ای قمبلاجرن اونیورسیتی فریثکت انتار ابغسا



## PROCEEDINGS

### INTERNATIONAL UNIVERSITY CARNIVAL ON E-LEARNING (IUCEL) 2023

■ Awards ■ Competition ■ Exhibitions ■ Features Talk ■

## 25<sup>th</sup> – 26<sup>th</sup> SEPTEMBER

DEWAN MBK KUANTAN PAHANG DARUL MAKMUR

UNIVERSITI MALAYSIA PAHANG AL-SULTAN ABDULLAH (UMPSA)

in support of



JPT DEPARTMENT OF HIGHER EDUCATION



MEIPTA  
MALIS KETUA AKTUA PENYELARAS E-PEMELAJARAN IPTA MALAYSIA



# IUCEL 2023

INTERNATIONAL UNIVERSITY CARNIVAL ON E-LEARNING

کرنیول ای قمبلاجرن اونیورسیتی فریختک انتارابغسا



## PROCEEDINGS

### INTERNATIONAL UNIVERSITY CARNIVAL ON E-LEARNING (IUCEL) 2023

■ Awards ■ Competition ■ Exhibitions ■ Features Talk ■

## 25<sup>th</sup> - 26<sup>th</sup> SEPTEMBER

DEWAN MBK KUANTAN PAHANG DARUL MAKMUR

UNIVERSITI MALAYSIA PAHANG AL-SULTAN ABDULLAH (UMPSA)

in support of



SUSTAINABLE DEVELOPMENT GOALS



TEKNOLOGI  
UNTUK  
MASYARAKAT



**Proceedings of the**  
International University Carnival on e-Learning (IUCEL) 2023

**Editors**

Dr Nor Yazhi Hj Khamis  
Dr Azwin Arif Abdul Rahim

**Design**

Nursurainie Mohamed Shateri

**Web Master**

Nursurainie Mohamed Shateri  
Yuzawani Yusoff  
Mohd Amerul Shuib  
Zul Idham Yahya



©2023 Copyright 2023 by Pusat Sumber Pengajaran & e-Pembelajaran (PSPe)

Cetakan Pertama 2023

Hak cipta terpelihara. Tiada bahagian daripada terbitan ini boleh diterbitkan semula, disimpan untuk pengeluaran atau ditukarkan ke dalam bentuk atau dengan sebarang alat juga pun, sama ada dengan cara elektronik, gambar serta rakaman dan sebagainya tanpa kebenaran bertulis daripada Copyright ©2023 by Pusat Sumber Pengajaran e-Pembelajaran (PSPe) terlebih dahulu.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the Centre of Instructional Resources & e-Learning (CIReL).



## **ACKNOWLEDGEMENT**

Heartfelt gratitude and appreciation from the Centre of Instructional Resources & e-Learning (CIReL)  
to:

Ministry of Higher Education Malaysia  
Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)  
Malaysian e-Learning Council for Public Universities (MEIPTA)  
Pejabat (SUK) Kerajaan Negeri Pahang  
Majlis Bandaraya Kuantan (MBK)  
Yayasan Pahang  
Yayasan UMP  
UMP Holdings  
UMP Advanced  
eLearning Minds Sdn. Bhd.

and

All individuals, whether directly or indirectly, contributing to the success of IUCEL 2023.



## **STEERING COMMITTEE**

Patron : Professor Ir. Ts. Dr. Ahmad Ziad Sulaiman  
UMPSA Vice-Chancellor

Advisor : Professor Ts. Dr. Ziad Sulaiman  
Deputy Vice-Chancellor (Academic and International Affairs)

Profesor Madya Ts. Dr. Awanis Binti Romli  
Director, Centre of Instructional Resources & e-Learning (CIReL)

Chairman : Dr. Sureena Binti Abdullah  
Deputy Director, Centre of Instructional Resources & e-Learning (CIReL)

Co-Chairman : Mohd Shahri Bin Mohd Akhir

Secretary I : Mohd Shahri Bin Mohd Akhir  
Secretary II : Nurin Afina Binti M.Bakri

Treasurer I : Iskandar Salehudin  
Treasurer II : Nurul Asyikin Binti Mohd Anasir

## **ORGANISING COMMITTEE:**

Dr Ahmad Mahfuz Bin Gazali  
Marhaniza Binti Othman  
Mohd Ferdaus Musa  
Mohammad Hakimi Bin Kamarudin  
Amerul bin Shuib  
Dr Azrin bin Ahmad  
Nurul Wahidah Arshad  
Mimi Rabitah  
Azman Md Diah  
Nursurainie Mohamed Shateri  
Yuzawani Yusoff  
Mohd Rizal Ismail  
Badrul Naim bin Abidin  
Noor Azmi Bin Mohamed  
Ahmad Zairazi Bin Shabudin  
Mohd Zulkifly Bin Hamzah  
Muhammad Naufal B Samsudin  
Dr Nor Yazni Binti Khamis  
Datin Norazidah Shamsudin  
Dr Rizal Alias  
Ezahtul Sahzreen Abd Wahab  
Dr Azwin Arif bin Abdul Rahim



## Content

	page
IUCEL2023 Programme	7-8
IIDEL presentation abstracts	10-200
e-TEACHER presentation abstracts	202-210
STEAM@SCHOOL presentation abstracts	212-244

## SELF-DIRECTED ASSESSMENT: LEARNING TAKES PLACE IN BLENDED LEARNING

Ashley Edward Roy Soosay

Department of Paraclinical Sciences, Faculty of Medicine & Health Sciences,  
Universiti Malaysia Sarawak, Kota Samarahan, Sarawak, Malaysia

sashley@unimas.my

### Abstract

Blended Learning emerged from traditional electronic learning. As normality is easing back after the COVID-19 pandemic, BL is again widespread in teaching and learning in Higher Institutions of Learning. The objective of this endeavour is to empower learners with meaningful BL experiences. To achieve this, a meticulously planned Online Instructional Design (OID) was used on Moodle version 3.14 among learners of MDU1023 at the Faculty of Medicine & Health Sciences, University Malaysia Sarawak (UNIMAS). The OID consists of Micro-Learning, Personalised Learning and Accessible Assessment. For the component of Accessible Assessment, Self-Directed Assessment (SDA) was made available for learners of MDU1023. Self-directed Assessment (SDA) is an online module where learners complete interactive work to demonstrate their proficiency in a subject matter. SDA is a compilation of questions in a database with careful annotation and curation relevant to the learning outcome of the learning units of MDU1023. The access to SDA is via Moodle platform known as the electronic Learning Enrichment & Advancement Platform (eLEAP) at UNIMAS. Learners' perceptions of the OID used in MDU1023, particularly the SDA, were gauged via a Google form questionnaire. A healthy response rate was obtained from a potential 107 learners. The learners of MDU1023 reported unanimously that the SDA in BL via eLEAP created a path for them to experience an impactful learning experience. Therefore, it is evident that a carefully curated SDA in BL can ensure the instructor that the learners are experiencing impactful and meaningful learning.

**Keywords: Self-Directed Assessment, Formative Assessment, Blended Learning**





## SELF-DIRECTED ASSESSMENT: ENSURING LEARNING TAKES PLACE IN BLENDED LEARNING

Ashley Edward Roy Soosay

Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia

sashley@unimas.my

---

### Abstract

Blended Learning (BL) emerged from the traditional electronic Learning. As normality is easing back after the COVID-19 pandemic, BL is once again widespread in Teaching and Learning (TL) in Higher Institution of Learning. The objective of this endeavour is to empower learners with meaningful BL experience. In order to achieve this, a meticulously planned Online Instructional Design (OID) was used on Moodle version 3.14, among learners of MDU1023 at Faculty of Medicine & Health Sciences, University Malaysia Sarawak (UNIMAS). The OID consists of Micro Learning, Personalised Learning and Accessible Assessment. For the component of Accessible Assessment, Self-Directed Assessment (SDA) were made available for learners of MDU1023. Self-directed Assessment (SDA) is an online module where learners complete an interactive work to demonstrate their proficiency in a given subject matter. SDA is a compilation of questions in a database with careful annotation and curation relevant to the learning outcome of the learning units of MDU1023. The access to SDA is via Moodle platform known as electronic Learning Enrichment & Advancement Platform (eLEAP) at UNIMAS. Learners perception of the OID used in MDU1023 and in particular the SDA, were gauged via a google form questionnaire. A healthy response rate was obtained from a potential 107 learners. The learners of MDU1023 reported unanimous that the SDA in BL via eLEAP created a path for them to experience an impactful learning experience. Therefore, this is an evident that a carefully curated SDA in BL can ensure the instructor that the leaners are experiencing impactful and meaningful learning.

**Keywords:** Self-Directed Assessment, Formative Assessment, Blended Learning

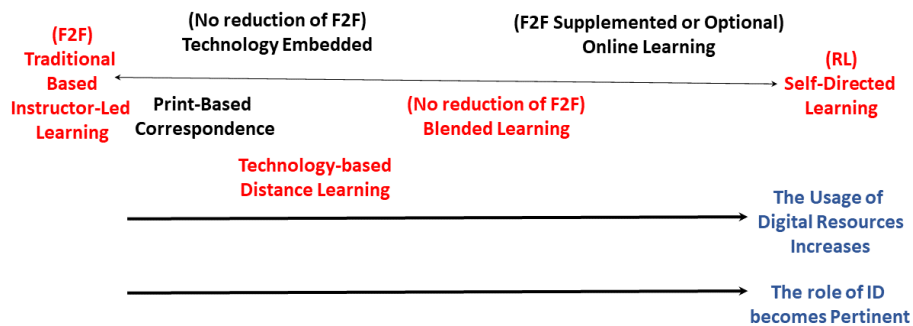
### BACKGROUND OF THE RESEARCH / INNOVATION / INVENTION / DESIGN

To overcome the pitfalls in the electronic dissemination of knowledge to learners in distance learning (DL), the introduction of blended learning (BL) came into existence. BL has been advocated in institution of higher learning from 2004. COVID-19 pandemic has transformed BL into remote learning (RL). Today BL is back as the main online mode in teaching and learning (TnL)

The declaration of Novel Coronavirus (COVID-19) as a worldwide pandemic (Bahaeldin, 2020)

has led to the Movement Control Order (MCO) in Malaysia (Bunyan, 2020; Jun, 2020; Sukumaran, 2020; Tang, 2020). The MCO forced TnL service providers to adopt and adapt new norm in TnL process. The learners together with the TnL service providers were challenged to accept the drastic change from face-to-face (F2F) classroom settings to RL (Ahmed, Allaf, & Elghazaly, 2020; Alsafi, Abbas, Hassan, & Ali, 2020). The switch has thus created an unparalleled instructional environment. Now we are back to BL. Although the evolution of these e-learning methods are in great pace, one thing that is pertinent is the instructional design (ID). The ID used in face to face (F2F) classroom setting has become very essential in BL. This paper highlights the importance of online ID in BL and how learning can be gauged using moodle analytics.

The combination of Information and Communication Technology (ICT) with the TnL disciplines made what is now known as electronic Learning (e-Learning). This electronic TnL via digital resources enables BL. Figure 1 shows the evolution of course-delivery modalities using e-Learning in higher education. The integration of technology encouraged the promotion of diverse learning environment. This nurtures learners' engagement and interaction to learn new skills with comprehensive understanding of the subject matter in a new way which is the millennials' way.



**Figure 1:** The evolution of course-delivery modalities in higher education

The e-Learning mode is synonymous with ubiquitous learning and has many advantages when properly done. Nevertheless, there are disadvantages of e-Learning. Firstly, minimal social interaction among learners and with instructors. Online learners must be strong will, ICT literate and efficient time managers. Assessment via e-Learning requires many ICT resources to enforce proctoring. Hands-on activity will be a challenge to execute in e-Learning platforms. E-Learners will also be burdened with data plan. On the other hand, breakout room for interactions and the cost effectiveness due to reduction in travelling, can alleviate the disadvantages of e-Learning. Overall the disadvantages of BL can be minimized via good instructional design (ID).

The F2F pedagogy requires ID and today with the extensive use of BL (Ghazi-Saidi et al., 2020) in our daily TnL activity, ID has become even more pertinent. This evolution of modes of e-Learning has given us the instructional technology. Today instructional technology is taking shape in the form of OID. This paper will suggest the role of OID to inculcate knowledge accurately and to construct Self Directed Learning material via asynchronous mode. Furthermore, this paper will inform how Accessible Assessment can ensure learning takes place in a BL environment.

## DESCRIPTION OF THE RESEARCH / INNOVATION / INVENTION / DESIGN

This innovation is regarding the importance of OID in ensuring a meaningful learning for remote learners. This paper suggests the use of meticulously constructed OID. The OID enables how to disseminate the digital learning resources to the learners in an effective and innovative way. The design includes and focuses on three pertinent area of online learning, they are micro learning,

personalized e-learning and accessible assessments (Table 1). During the peak COVID-19 pandemic, the goal of education was to keep providing learning opportunities to learners by restricting the social contact among instructors-students and student-student F2F interactions. Varied digital learning resources provide the learning opportunities. Upon mastering these resources remote learners are expected to demonstrate their learning in various assessment modalities.

**Table 1:** Key elements of Online Instructional Design (OID). Whereby self-directed assessment is a key point in enabling learning to take place.

<b>Elements</b>	<b>Functionality</b>
Micro Learning	Creation of learning content in a byte-size learning manner.
Personalised Learning	Ubiquitous learning opportunity endowed to learners enabling absorption, recalling and retention of knowledge effectively.
Accessible Assessment	Self-directed assessment (SDA) and practice ensuring learner's power of knowledge retention.

The Accessible Assessment is the part where self-directed assessment being used to ensure learning is taking place. This paper will show how using moodle platform we can monitor the learners' engagement and also ensuring that meaningful learning do take place. For this assessment purpose, SDA was made using the moodle platform. A question database is prepared and made available for learners to practice. Through the moodle configuration we are able to monitor the progress of the individual student.

### **SIGNIFICANCE OF THE RESEARCH / INNOVATION / INVENTION / DESIGN**

The current online instruction observed in many online courses have some flaws that may have been overlooked due to some reasons. One of the flaws of many current online courses is reproducing F2F approach. In an example, a one-hour lecture in a traditional TnL doesn't equate to an hour video recording in an online course setting. Instead, key points of the lecture need to be addressed in a byte-size manner using micro learning approaches. Followed by making it available in learning management system for personalized learning. Finally allowing the students to be able to do SDA for learning to happen.

We must realize that the primary goal of online learning is not only to disseminate knowledge from instructor to students but to create most effective and innovative instructional strategies to engage learners in a meaningful way. How do we ensure learning as taken place? Using SDA with the assist of LMS, we can ensure learning is happening and ensure knowledge transfer.

### **IMPACT OF THE INNOVATION/INVENTION/DESIGN TOWARDS EDUCATION OR COMMUNITY**

The user experience is vital in e-Learning. The OID suggested in this work is simple yet it encompasses key elements that are integral for online learning to happen. The goal of learning can be easily achieved by the learners. Hence, this will make the learning a breeze. In the long run this OID with the help of SDA is able to retain learners' knowledge. Learning analytics shows that learning is measurable, and can be used to determine if learners are engaging meaningfully.

## COMMERCIALIZATION POTENTIAL

The design of the online courses based on this OID can be applied to all disciplines, this ensures the marketability of this product. The concept of ID used here is simple yet effective. The content expert in the particular discipline needs to understand the pedagogy and course design in order to appreciate the OID proposed in this paper.

## CONCLUSION

In conclusion the COVID-19 pandemic has brought about a significant alteration in our current education landscape and the TnL fraternity has accepted the challenge by going remote learning and now we have embraced blended learning. We have implemented full online learning methodology and due to this we have to ensure the quality of knowledge dissemination in this mode. This paper proposes a simple yet comprehensive online instructional design to make blended learning more meaningful to learners.

**Acknowledgement:** Grateful for the support from the Faculty of Medicine & Health Science and the Centre for Applied Learning & Multimedia, Universiti Malaysia Sarawak, during the implementation of remote learning due to COVID-19 pandemic. Last but not least, a note of thank you for the kind contribution by the wonderful enthusiastic students that were involved in the author's course during the pandemic.

## REFERENCES

- Ahmed, H., Allaf, M., & Elghazaly, H. (2020). COVID-19 and medical education. *The Lancet. Infectious diseases*, 20(7), 777-778. doi:10.1016/S1473-3099(20)30226-7
- Alsafi, Z., Abbas, A. R., Hassan, A., & Ali, M. A. (2020). The coronavirus (COVID-19) pandemic: Adaptations in medical education. *Int J Surg*, 78, 64-65. doi:10.1016/j.ijisu.2020.03.083
- Bahaeldin, H., Ayed A. Shati, Abdulaziz Alamri, Ayyub Patel, Ali Alsuheel Asseri, Muhammed Abid, Saleh M. Al-Qahatani and Ismaeel Satti. (2020). Online assessment for the final year medical students during COVID-19 pandemics; the exam quality and students' performance. *Oncology and Radiotherapy*, 14(6), 1-6.
- Bunyan, J. (2020). PM: Malaysia under movement control order from Wed until March 31, all shops closed except for essential services. Retrieved from <https://www.malaymail.com/news/malaysia/2020/03/16/pm-malaysia-in-lockdown-from-wed-until-march-31-all-shops-closed-except-for/1847204>. from Malay Mail.
- Bunyarit, F. S. M. (2006). E-learning systems: an evaluation of its effectiveness in selected higher learning institutions in Malaysia (Master's thesis, Gombak: International Islamic University Malaysia 2006).
- Ghazi-Saidi, L., Criffield, A., Kracl, C. L., McKelvey, M., Obasi, S. N., & Vu, P. (2020). Moving from face-to-face to remote instruction in a higher education institution during a pandemic: Multiple case studies. *International Journal of Technology in Education and Science*, 4(4), 370-383.
- Graham, C. R., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *The internet and higher education*, 18, 4-14.
- Haron, H., Abbas, W. F., & Abd Rahman, N. A. (2012). The adoption of blended learning among Malaysian academicians. *Procedia-Social and Behavioral Sciences*, 67, 175-181.
- Jun, S. W. (2020). Movement control order not a lockdown, says former health minister. .

- Retrieved from [Www.Malaymail.com](http://www.Malaymail.com)., from Malay Mail [Www.Malaymail.com](http://www.Malaymail.com).
- Sukumaran, T. (2020). Malaysia in partial lockdown to limit coronavirus spread. Retrieved from <https://www.scmp.com/week-asia/health-environment/article/3075456/coronavirus-malaysias-prime-minister-muhyiddin-yassin>. from South China Morning Post. <https://www.scmp.com/week-asia/health-environment/article/3075456/coronavirus-malaysias-prime-minister-muhyiddin-yassin>
- Tang, K. H. D. (2020). Movement control as an effective measure against Covid-19 spread in Malaysia: an overview. *Zeitschrift fur Gesundheitswissenschaften = Journal of public health*, 1-4. doi:10.1007/s10389-020-01316-w