

The 11th International, Invention, Innovation & Design 2022



*Ushering in the Age of Endemic*

**THE 11TH INTERNATIONAL INNOVATION,  
INVENTION & DESIGN COMPETITION  
INDES 2022**

**EXTENDED ABSTRACTS BOOK**



e ISSN 2756-8733



9 772756 873009

© Unit Penerbitan UiTM Perak, 2023

All rights reserved. No part of this publication may be reproduced, copied, stored in any retrieval system or transmitted in any form or by any means; electronic, mechanical, photocopying, recording or otherwise; without permission on writing from the director of Unit Penerbitan UiTM Perak, Universiti Teknologi MARA, Perak Branch, 32610 Seri Iskandar Perak, Malaysia.

Perpustakaan Negara Malaysia

Cataloguing in Publication Data

No e-ISSN: e-ISSN 2756-8733



Cover Design : Nazirul Mubin Mohd Nor

Typesetting : Wan Nurul Fatimah binti Wan Ismail

## ***EDITORIAL BOARD***

*Editor-in-Chief*

*Wan Nurul Fatimah binti Wan Ismail*

*Editors*

*Nor Hazirah Mohd Fuat*

*Noor Fazzriene J Z Nun Ramlan*

*Dr Nuramira Anuar*

*Dr Shazila Abdullah*

*Halimatussaadia Iksan*

*Iza Faradiba Mohd Patel*

*Jeyamahla Veeravagu*

*Mahfuzah Rafek*

*Nor Nadia Raslee*

*Nurul Nadwa Ahmad Zaidi*

*Peter Francis*

*Zarinatun Ilyani Abdul Rahman*

*Zarlina Mohd Zamari*

## ***The 11<sup>th</sup> International Innovation, Invention and Design Competition 2022***

*Organised by*

*Office of Research, Industrial Linkages,  
Community & Alumni Networking (PJIM&A)  
Universiti Teknologi MARA Perak Branch*

*and*

*Academy of Language Study  
Universiti Teknologi MARA Perak Branch*

## DEVELOPMENT AND VALIDATION OF ONE STOP CRISIS CENTER SERVICE QUALITY INSTRUMENT (OSCC-QUAL) FOR DOMESTIC VIOLENCE MANAGEMENT

Keng Sheng Chew<sup>1</sup>, Shirly Siew Ling Wong<sup>2</sup>, Ke Lin Siew<sup>3</sup>, Vanitha A/P Kandasamy<sup>4</sup>

<sup>1</sup>Faculty of Medicine and Health Science, Universiti Malaysia Sarawak

<sup>2,3</sup>Faculty of Economics and Business, Universiti Malaysia Sarawak

<sup>4</sup>Emergency and Trauma Department, Sarawak General Hospital

Email: [kschew@unimas.my](mailto:kschew@unimas.my)

### ABSTRACT

A multi-sectoral centre called One Stop Crisis Centre (OSCC) provides medical, social, legal, police, and shelter services to victims of rape, sexual assault, sodomy, and child abuse. Although OSCCs have been operating for almost three decades in diverse parts of the world, there is no validated tool to assess the level of service provided by the OSCC. Using a 5-stage methodology, a validated instrument known as OSCC-Qual was established. In Stage 1, focus groups were held among all authors to identify potential items for the instrument. In Stage 2, 13 experts validated the content of the instrument using the content validity index and modified kappa. In Stage 3, 141 healthcare professionals conducted an exploratory factor analysis to validate the items and determine the number of factors in the instrument. In Stage 4, 110 domestic violence survivors conducted a confirmatory factor analysis to verify the validity of the factors and items maintained in Stage 3. In Stage 5, forward and backward translations were performed into the local Malay and Chinese languages. A total of 42 objects were identified in Stage 1. In Stage 2, none was removed. Seven factors—including “information provision”, “competency of staff”, “professionalism”, “supportive environment”, “attitude of staff”, “multi-sectorial coordination” and “tangibles”—were identified in Stage 3. Insufficient factor loading led to the deletion of four items. Due to inadequate factor loading, Stage 4 saw the iterative removal of an additional 3 items. The validity for discrimination was good. With the availability of 7-factor and 35-item OSCC-Qual instrument, it is intended that the performance of OSCC in fulfilling its philosophical goals after three decades of implementation can be uncovered and remedial measures can be made, if necessary.

**Keyword:** *One Stop Crisis Center, domestic violence*

### 1. INTRODUCTION

To manage patients in OSCC, Colombini et al. (2012) created a structure of five healthcare principles, namely (i) healthcare providers must have good knowledge and awareness about domestic violence, protocols and referral networks to manage these cases; (ii) healthcare providers must have the skills and competency to examine and manage injuries sustained by the survivors; (iii) healthcare providers must have the right attitudes (e.g., non-judgmental and non-condescending and empathy); and (iv) healthcare providers must have the right behaviour (v) Healthcare professionals need integrity and appropriate ethical values. We designed and validated a new service quality instrument to evaluate service quality in OSCCs through a

sequential process of item development, instrument development, and instrument validation, with Colombini's model serving as our main conceptual framework.

## **2. METHODOLOGY**

The two phases of item development were carried out in this study. In Stage 1, focus group discussions were held to examine potential criteria for evaluating OSCC service quality using Manuel a Colombini's methodology. The content validity index (CVI) and modified kappa were used to conduct content validation in Stage 2. Exploratory factor analysis was used during Stage 3 of the instrument development process to determine the number of factors or constructs that needed to be extracted as well as the items with the best validity. Confirmatory factor analysis was used to determine the number of components or constructs to be included in our instrument and their validity during instrument validation (Stage 4). Forward and reverse translations into the local Malay and Chinese languages familiar to Malaysians were also conducted (Stage 5). Malaysian Medical Research and Ethics Committee granted permission for the study with reference number NMRR-20-1437-54831 (<https://nmrr.gov.my/>).

## **3. FINDINGS**

A total of 42 objects were identified in Stage 1. In Stage 2, none was removed. Seven factors—including “information provision”, “competency of staff”, “professionalism”, “supportive environment”, “attitude of staff”, “multi-sectorial coordination” and “tangibles”—were identified in Stage 3. Insufficient factor loading led to the deletion of four items. Due to inadequate factor loading, Stage 4 saw the iterative removal of an additional 3 items. The validity for discrimination was good. The final version of OSCC-Qual has 35 items in 7 factors/constructs.

## **4. CONCLUSION**

With the availability of this objective measurement tool, it is hoped that the question of whether the philosophical goals of OSCC have been met after three decades of implementation can soon be clarified. If necessary, corrective action can then be taken to guarantee that OSCCs continue to meet the delicate needs of the survivors.

## **REFERENCES**

Colombini M, Mayhew SH, Ali SH, Shuib R, Watts C. (2012). An integrated health sector response to violence against women in Malaysia: Lessons for supporting scale up. *BioMed Central Public Health*. 2012;12(1):1-10.

## PRACTICAL TRAINING PORTAL (PTP) ver 1.1

Nurulhudaya binti Abdul Hadi<sup>1</sup>, Nurul Ida Farhana binti Abdull Hadi<sup>2</sup>,  
Noor Syafiqah Binti Mohd Sabri<sup>3</sup>, Mohammad Nabil Fikri Bin Saaid<sup>4</sup>, Balkhiz Binti Ismail<sup>5</sup>,

<sup>1</sup>Centre of Studies for Construction, College of Built Environment, Universiti Teknologi MARA Shah Alam

<sup>2</sup>Infenion Technologies (Malaysia) Sdn. Bhd.

<sup>3,4</sup>Department of Quantity Surveying, College of Built Environment, Universiti Teknologi MARA Sarawak Branch

<sup>5</sup>Department of Building, College of Built Environment, Universiti Teknologi MARA Shah Alam

*E-mail: nurulhudaya@uitm.edu.my*

### ABSTRACT

Digitalization has gained the attention of professionals and academics in the past decade. All data and input should be easy to access, convenient, and manageable. Practical Training Portal (PTP) ver 1.1 is developed to cater to and help the data collection process and keep track of the practical students' applications until the evaluation process. Apart from monitoring the practical training application and acting as a data-based hub for all students and coordinators, PTP ver 1.1 also provides all the necessary evaluation forms. Students' marks will automatically appear in this portal. Access to this feature will only permit the practical coordinator to monitor, the first supervisor, and the second reader to key in the marks. PTP ver 1.1 can make the application and evaluation of students more efficient, secure, and systematic while reducing the administrative work done by the practical coordinator. PTP ver 1.1 used Hypertext Preprocessor (PHP) as a scripting language for database purposes. Thus, PTP ver 1.1 can make practical students' application process and evaluation more organized and functional in this digital era.

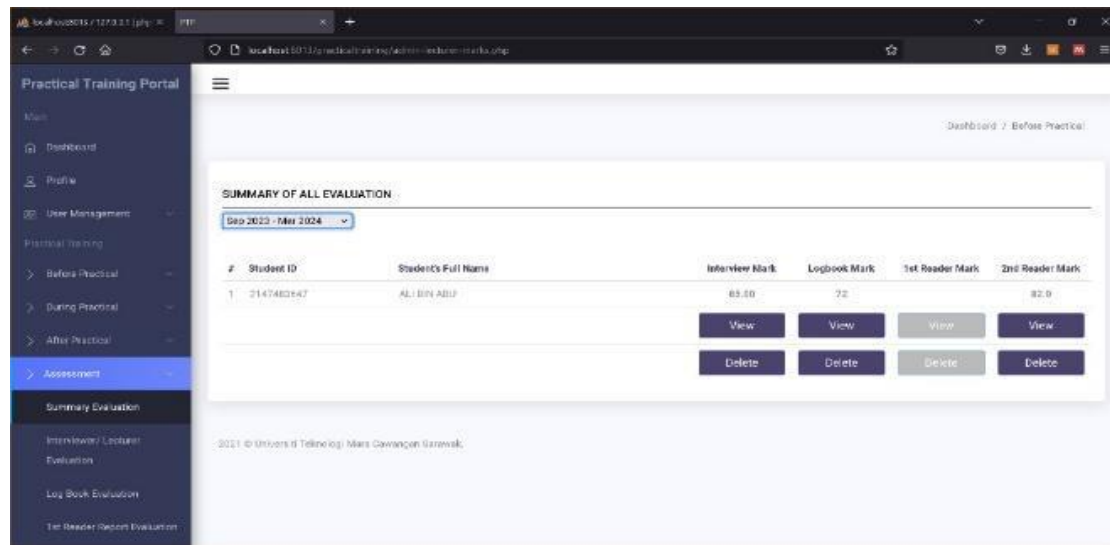
**Keywords:** *Portal, Practical training, Internship, Application, Evaluation*

### 1. INTRODUCTION

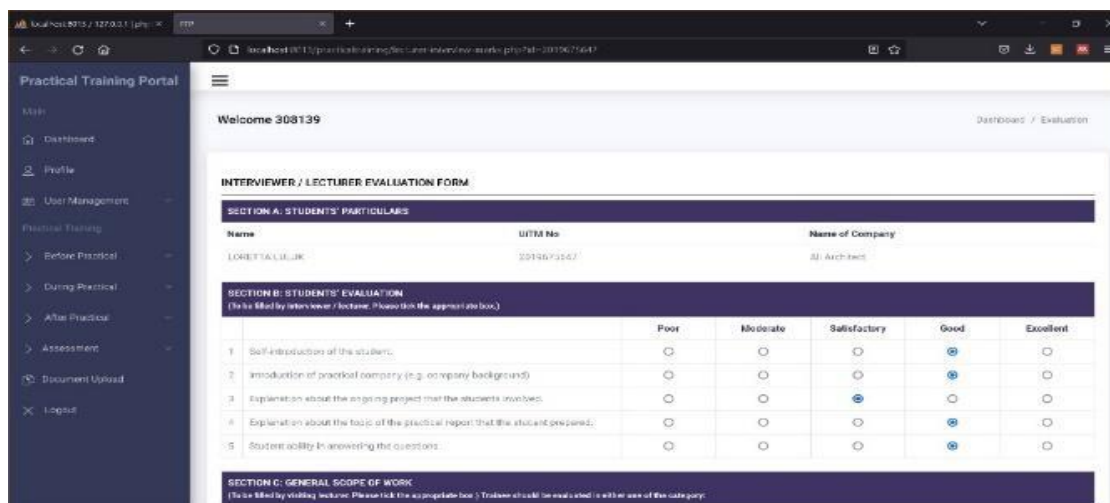
As mentioned by Salvi et al. (2021), digitalisation has gained the attention of both professionals and academics. Practical Training Portal (PTP) is a system that can assist the data collection process and keep track of practical students' applications from the start until the end of their practical period (Hadi et al., 2021). It is also a data-based hub for all students and the coordinator. It does not only allow the student to fill up their details and the selected company for their practical session, but the coordinator will also be able to retrieve details of the student's application. This application can produce an application letter instantly and enable the evaluation to be done at the end of their practical session.

It is observed that it is a hassle to put all the students' marks manually because there are so many evaluation forms to fill in. PTP ver 1.1 has been upgraded to integrate with all the evaluation forms and students' marks. All this will be available in one interface, where the student's supervisor and second reader will key in the marks in the portal.





**Figure 1** Evaluation Form Interface **Figure 2** Student's Marks Interface



**Figure 2** Student's Marks Interface

PTP ver 1.1 will also include all the necessary evaluation forms, and students' marks will automatically appear in this portal. Access to this feature will only be permitted to the practical coordinator to monitor, the first supervisor, and the second reader to key in the marks.

## 2. METHODOLOGY

PTP ver 1.1 integrates the previous version of PTP with the newly added Hypertext Preprocessor (PHP) and JQuery coding. Hence, this coding will create the portal and be embedded into HTML.

```
82 else
83 {
84     $sel_query="SELECT count(*) as count, ques_id FROM quesinterview WHERE section = '1';
85     $result_ques1 = $conn->query($sel_query);
86     $result_ques1_2 = $result_ques1-> fetch_assoc();
87
88     $select = "SELECT office_site FROM assessinterview where uita_id= ".$GET['id']."";
89     $select1 = $conn->query($select);
90     $select1 = $select1-> fetch_assoc();
91     $office_site = $select1['office_site'];
92
93     if ($office_site == 1) {
94
95         $sel_query="SELECT count(*) as count, ques_id FROM quesinterview WHERE section = '2a';
96         $result_ques2 = $conn->query($sel_query);
97         $result_ques2_2 = $result_ques2-> fetch_assoc();
98
99         $total_ques = $result_ques1_2['count'] + $result_ques2_2['count'];
100
101         while ($total_ques > 0) {
102             $mark = $POST['ques_'.$total_ques];
103             $ques_no = $POST['ques_id_'.$total_ques];
104
105             $sql = "INSERT INTO interview mark ( assessint_id, ques_no, mark)
106                 VALUES ('$assessint_id', '$ques_no', '$mark')";
107             mysqli_query($conn, $sql);
108             $total_ques --;
109         }
110         if ($sql)
```

**Figure 3** PHP and HTML Coding

### 3. CONCLUSION

PTP ver 1.1 can make practical students' application and evaluation more efficient, secure, and systematic. It is hoped that PTP ver 1.1 can be incorporated with all departments' office systems or faculties in the university and can be fully utilized to keep up with the digitalization trend.

### REFERENCES

- Salvi, A., Vitolla, F., Rubino, M., Giakoumelou, A., & Raimo, N. (2021). Online Information on Digitalisation Processes and Its Impact on Firm Value. *Journal of Business Research*, 124, 437-444.
- Hadi, N.A., Hadi, N.I.A., Sabri, N.S.M., Saaid, M.N.F., Yunus, A.I.A. (2021). *Extended Abstract eBook- The 10<sup>th</sup> International Innovation, Invention, & Design Competition 2021*, 104 &105, UiTM Perak Press, ISBN 978-967-2776-00-0



Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim  
Rektor  
Universiti Teknologi MARA  
Cawangan Perak



Tuan,

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK  
MELALUI REPOSITORI INSTITUSI UiTM (IR)**

Perkara di atas adalah dirujuk.

2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

**"BERKHIDMAT UNTUK NEGARA"**

Saya yang menjalankan amanah,

**SITI BASRIYAH SHAIK BAHARUDIN**  
Timbalan Ketua Pustakawan

*nar*

*Setuju.*

*27.1.2023*

PROF. MADYA DR. NUR HISHAM IBRAHIM  
REKTOR  
UNIVERSITI TEKNOLOGI MARA  
CAWANGAN PERAK  
KAMPUS SERI ISKANDAR