A Needs Analysis Study on the Development of a Mobile Counselling Supervision System (MoCoSS) For Counselling Internship

Norazani Ahmad¹, Hapsahbinti Md Yusof², Nurul ‘Ain bintiMohd Daud³,FauziahbintiMohdSa’ad⁴

¹,²,³,⁴Universiti Pendidikan Sultan Idris
norazani@fpm.upsi.edu.my³

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Abstract: This needs analysis study focused on acquiring feedback from trainee counselors for developing the Mobile Counseling Supervision System (MoCoSS). This system was developed based on the Client Server framework. Based on this framework, MoCoSS would be developed in three phases; the Client phase, the Server phase and the integration phase. The questionnaire regarding the needs analysis was administered using Google form to acquire feedback about the need for mobile Counseling Supervision while undergoing the counselling internship. The needs analysis study was conducted on 57 respondents who comprised the unedugrads and the Masters degree students who were having their counselling internship in schools and other organisations. The findings showed that 67.3 percent of the respondents agreed that the counselling internship should be conducted on-line to support the trainees’ counselling tasks. The majority of the respondents also showed a positive attitude towards the usage of a mobile counselling supervision system in fulfilling the tasks of counselling internship. The needs analysis provided a basic framework for the development of a mobile counselling system for supervisors and the trainee counselors to support supervision in a conventional manner as well as to reinforce the management of filing and records system continuously during the counselling internship. As such, the development of a mobile Counselling Internship Supervision system could assist the academic supervisors, the supervising counsellors and the trainee counselors in becoming more systematic while fulfilling the maximum 5 supervisions as stated by the Malaysian Counselling Board.

Keywords: MoCoSS, needs analysis, client phase, server phase, integration phase

1. Introduction

Counselling internship is a supervised clinical experience which enables the student to refine, improve and reinforce their knowledge application and counselling skills in the place of professional practice. The internship practice should be completed in a premise which provides professional counselling services (Lembaga Kaunselor Malaysia, 2008). Counselling internship requires 8 credit hours, and it is compulsory for the trainee counselors especially those from the Bachelor and Master of Education in Counseling and Guidance. The trainee counselors would undergo counselling internship at schools, and they would be supervised by the university lecturers and supervising counsellors in schools appointed by the Centre of Teaching and Industrial Practice at Universiti Pendidikan Sultan Idris.

The counselling supervision or known as the clinical supervision involves professional supervision by the supervisor by focusing on the trainee counselors giving their services to the clients in a competent and ethical manner. The clinical supervision aims to ensure that the trainee counselors conduct sessions which would not harm the clients as well as being based on proper counseling ethics and principles. Administrative supervision involves the examination of legal matters, rules and policies of an administered organization. Individual supervision involves the type of supervision which is often utilized as the supervisor can interact better with the trainee counselor and it focuses more on the two-way communication between the two individuals. On the other hand, group supervision focuses on the involvement of a group of individuals under one supervisor. In this regard, the supervisor would be given the responsibility of supervising trainee students undergoing the practicum or internship (Malaysian Counselor Board, 2009).

In line with the technological advancement and globalization requirements in the Pelan Pembangunan Pendidikan Negara, the sustainability of the education field in UPSI which is based on translational research and issues related to the 4th Industrial Revolution (4th IR), as such, the field of counselling supervision should also be given attention for developing its functions and roles using ICT. Based on the 10 thrusts of the Pelan Pembangunan Pendidikan Malaysia with a focus on the education field, the counselling supervision is based on online supervision to fulfill the 9th thrust which is online learning.

Counselling supervision using technology is not a replacement for the conventional supervision practice, but it adds value and provides support for the academic supervisor and field supervisor for increasing the quality of supervision in line with the global development and requirements. Nelson et. al. (2010) conducted a study on
online supervision using video conference via Adobe Connect and Skype of 3 trainee counselors simultaneously from different locations. Online supervision enables the supervision of trainee counselors from far away. As for e-supervision or counselling supervision using the mobile phone, this has not been developed yet. However, there has been a study conducted using online counselling such as the one done by Mohammad Aziz Shah (2015) on the management system and service of Counselling and Guidance known as OC-FAR-IS. This system provides an online filing and record which is practical and systematic and thus it assists counsellors in observing the client’s development effectively. The counselling supervision practice which is being utilized at the moment can be quite limited in terms of the face-to-face supervision; at the Bachelors’ degree level, the supervisor would need to supervise only twice while according to the Counselling Board Internship standards (2014), the supervisor needs to supervise the trainees at least 5 times. As such, with the mobile counselling supervision system (MoCoSS), the supervisor can continue with the supervision using the technology to fulfill the requirements of the counselling board.

The study objectives

These involve two aspects:

a) To identify the development requirements of the Mobile Application System for Counselling Supervision in the field of counselling supervision.

b) To design and develop the Mobile Application System for Counselling Supervision.

2. Methodology

This study utilized the descriptive quantitative method to collect data to identify the development requirements of the mobile counselling supervision system. This study also involved the MoCoss system development and design based on the Client Server model. Based on this model, the development of MoCoSS was done in 3 phases which were the client phase, the server phase and the integration phase. Based on the extended discussion, the scope of study was narrowed down so that the MoCoss development would only focus on the Android Phone platform. The Kotlin programming language was used as the source code for the Android Phone. For the server phase, a server machine with the Apache HTTP Server application was used as the Web Server and the Web Logic Server application was used as the Application Server. The web server application communicated with the application server via the proxy using Java Web Service. The integration phase, on the other hand, connected the communication between the client and the server. The integration between client and the web service occurred in the server machine using the JAX RS technology which supported the JSON source code. The integration between the web service with the data station was conducted using EclipseLink technology via the SQL source code.

Study Sample

A needs analysis was conducted on the 58 study respondents with females comprising 62.1 percent and males comprising 37.9 percent of the population. Regarding the level of studies, 51.7 percent were students from the Bachelor in Education of Counselling and Guidance programme while 48.3 percent were from the Masters of Counselling and Guidance programme. A total of 44.8 percent were respondents who had completed their studies while the rest were students who were in their counselling practice. 100 percent of the respondents used the smartphone and 84.5 percent used phones with the Android operation system. 15.5 percent of the students utilised the IOS as can be seen in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Demographic profile of the respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
</tbody>
</table>
| Age  
20-24 | 15 | 25.9  
25-29 | 33 | 56.9  
30-34 | 3 | 5.2  
35-39 | 3 | 5.2  
40-44 | 4 | 6.9  |
| Gender  
Female | 36 | 62.1  
Males | 22 | 37.9  |
| Study level  
Masters | 28 | 48.3  
Bachelors degree | 30 | 51.7  |
| Semester  
4 | 8 | 13.7  
5 | 10 | 17.2  
6 | 1 | 1.7  
7 | 13 | 22.7  |
Table 2 looks at the trainee counsellors’ perception towards counselling supervision. Overall or roughly 87.9%, the trainees (KP) felt comfortable being supervised face-to-face by their supervisors. This was the usual practice in counselling supervision. The highest percentage of 94.8 percent referred to the statement “The supervision of the logbook and the individual and group counselling record sessions helped me to be more systematic” and “The supervision of the counselling programme and psycho-education activities by my supervisor helped me to increase my skills in handling programmes.” On the other hand, the majority of trainees (KP) did not agree that the preparation of files and records during the counselling internship was not systematic. Based on the findings, the trainees (KP) were positive towards the face-to-face supervision by the supervisor by as much as 91.4 percent, and the supervision also used this approach to help the trainees in increasing their understanding and skills in counselling internship.

**Table 2. Perception of trainee counselors towards counselling supervision**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel comfortable being supervised face-to-face by my supervisor</td>
<td>51</td>
<td>87.9</td>
</tr>
<tr>
<td>2.</td>
<td>I feel more prepared if the supervisor could view the recording of my counselling session which I conducted using the video.</td>
<td>49</td>
<td>84.4</td>
</tr>
<tr>
<td>3.</td>
<td>I prefer to send my weekly reflective writing via e-mail</td>
<td>50</td>
<td>86.2</td>
</tr>
<tr>
<td>4.</td>
<td>Three supervisions by the supervisor during the counselling internship is adequate</td>
<td>50</td>
<td>86.2</td>
</tr>
<tr>
<td>5.</td>
<td>The preparation of the final internship counselling report is a burden to me.</td>
<td>52</td>
<td>89.6</td>
</tr>
<tr>
<td>6.</td>
<td>The individual and group supervision of the logbook and the counselling session records by the supervisor help me to become more systematic.</td>
<td>55</td>
<td>94.8</td>
</tr>
<tr>
<td>7.</td>
<td>The supervision of the counselling programme and the psycho-education activities by the supervisor help me to increase my skills in handling programmes.</td>
<td>55</td>
<td>94.8</td>
</tr>
<tr>
<td>8.</td>
<td>The preparation of files and records during my counselling internship was not systematic.</td>
<td>24</td>
<td>41.3</td>
</tr>
<tr>
<td>9.</td>
<td>During the face-to-face supervision, my understanding and skills in handling counselling session became more effective.</td>
<td>53</td>
<td>91.4</td>
</tr>
<tr>
<td>10.</td>
<td>I am very satisfied with the face-to-face supervision conducted by my supervisor.</td>
<td>53</td>
<td>91.4</td>
</tr>
</tbody>
</table>

Based on the needs analysis of the mobile counselling supervision during the counselling internship in Table 3, generally the trainee counselors were positive about the usage of the mentioned tool. Statements for items 5 and 9 recorded the highest responses from the trainee counselors which were 79.3%. For item 5, the trainee
counselors agreed to use the mobile phone for their discussion with the supervisor as it helped them to face problems during the counselling internship. As for item 9 which was the “Delivery of the final Counselling Internship Report on-line would decrease the use of paper and more economical” also received a positive view from the trainee counselors.

Additionally, some 70.7 percent of the respondents were comfortable in using the mobile phone to discuss with the supervisor. 55.2 percent of the respondents felt comfortable in uploading the counselling session records online for the purpose of checking by the supervisor. 65.5 percent of the respondent’s agreed that the individual and group log notes and the counselling records available online would help in their duties as trainee counselors. The log notes concerning the psychological test would be more organised if it was done online using the mobile phone and 63.8 percent agreed with this. Some 67.2 percent were positive that the calculation of hours of counselling sessions and the professional tasks of the trainee counselors were more suitable to be done online to decrease the error of calculating hours. 67.3 percent of the respondents agreed that the counselling internship supervision should be conducted online to support the tasks of the trainee counselor.

**Table 3. Requirements for the usage of mobile counselling supervision during the counselling internship**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>1 Strongly disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Strongly agree</th>
<th>Cumulative percentage between Agree and strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I felt comfortable being supervised face-to-face by my supervisor</td>
<td>1 1.7%</td>
<td>8 13.8</td>
<td>8 13.8</td>
<td>26 44.8%</td>
<td>15 25.9%</td>
<td>41 70.7%</td>
</tr>
<tr>
<td>2.</td>
<td>I felt more prepared if the supervisor could view the recording of my counselling session which I conducted using the video.</td>
<td>6 10.3%</td>
<td>10 17.2%</td>
<td>10 17.2%</td>
<td>21 36.2%</td>
<td>11 19%</td>
<td>32 55.2%</td>
</tr>
<tr>
<td>3.</td>
<td>I preferred to send my weekly reflective writing via e-mail</td>
<td>3 5.2%</td>
<td>3 5.2%</td>
<td>9 15.5%</td>
<td>26 44.8%</td>
<td>17 29.3%</td>
<td>43 74.1%</td>
</tr>
<tr>
<td>4.</td>
<td>Three supervisions by the supervisor during the counselling internship were adequate</td>
<td>4 6.9%</td>
<td>9 15.5%</td>
<td>7 12.1%</td>
<td>22 37.9%</td>
<td>16 27.6%</td>
<td>38 65.5%</td>
</tr>
<tr>
<td>5.</td>
<td>The preparation of the final internship counselling report was a burden to me.</td>
<td>2 3.4%</td>
<td>3 5.2%</td>
<td>7 12.1%</td>
<td>28 48.3%</td>
<td>18 31%</td>
<td>46 79.3%</td>
</tr>
<tr>
<td>6.</td>
<td>The individual and group supervision of the logbook and the counselling session records by the supervisor helped me to become more systematic.</td>
<td>3 5.2%</td>
<td>10 17.2%</td>
<td>14 24.1%</td>
<td>18 31%</td>
<td>13 22.4%</td>
<td>31 53.4%</td>
</tr>
<tr>
<td>7.</td>
<td>The supervision of the counselling programme and the psycho-education activities by the supervisor helped me to increase my skills in handling programmes.</td>
<td>1 1.7%</td>
<td>5 8.6%</td>
<td>13 22.4%</td>
<td>25 43.1%</td>
<td>14 24.1%</td>
<td>39 67.2%</td>
</tr>
</tbody>
</table>
8. The preparation of files and records during my counselling internship was not systematic.

9. During the face-to-face supervision, my understanding and skills in handling counselling session became more effective.

10. I was very satisfied with the face-to-face supervision conducted by my supervisor.

In the aspect of system design and development, MoCoSS had gone through 3 phases. The first phase was the development of the MoCoss smartphone application using the Android Studio template and the source code was written using the Kotlin software. The latest version of the MoCoss application would be the 1.3.1 version and this application was divided for the usage of three users: the Supervising Lecturer, the Supervising Lecturer and the Trainee Counselor.
Each user had 4 tabs which were the Log-in tab, Info tab, Settings tab and Log-out tab. The users had different interface for accessing the pages such as IndividualSession Log (example 4), Group Counselling, Counselling and Psycho-education activities, Psychological test, Professional Development, Reference and Consultation, Administrative Management, Daily log records (Example 3), Case analysis, Reflection and Full Marks. The Info tab showed the information such as Internship Standards which explained the Internship implementation process while the Settings tab would be used to change the settings such as the language medium. When the user chose English as the language medium, the whole application would use English as the localization mode.
The second phase was the Web Service Development and the related network settings such as the Web Server settings. Application server and the data base. The Web Service application was developed using the Eclipse IDE template with the Java API for RESTful Web Service framework or JAX-RS. This application contained the source code which was connected to the JAX-RS main source code, which was the source code for the controller, query, modelandentity manager. The source code for the controller supported the JSON source for the integration between the Web Service and the MoCoSS Android platform application. The source code for the query supported the EclipseLink for the integration between the data base and the web service. The database utilized the PostgreSQL scheme as well as the network settings such as the port number. The data related to the counselling supervision such as meeting dates with clients and supporting documents were stored in the scheme tables. This scheme utilized the Sequence Language technology or SQL and supported the persistence technology which was upgraded from the SQL technology.

The third phase was the integration between the Web Service database and the MoCoSS application. The JSON source code was used for the integration between the MoCoSS application and the Web Service while the Eclipse Link source code was used for the integration between the database and the Web Service.

3. Discussion

Generally, the study found that more than 50 percent of the respondents agreed that the online supervision system fulfilled the requirements in counselling supervision. The findings showed that the MoCoSS system had the good potential to be developed and utilised in counselling supervision which involved the supervisor, counsellor and field supervisor.

With the current post-COVID 19 situation, the technology-based counselling supervision, especially one which involved the usage of the mobile phone application had become the focus as well as fulfilled certain requirements to achieve the aims and objectives of supervision without risking aspects such as clients’ and trainees’ ethics and welfare. This was in line with the findings of Conn, S. R., Roberts, R. L., & Powell, B. M. (2009) which stated that group counselling supervision using the hybrid model had a positive relationship with the attitude towards technology in counselor education, the future of professional practice and the overall supervision experience. On the other hand, the difference in approach when conducting supervision did not show any effect towards the perception of the supervision quality.

The findings also showed that the discussion with the supervisor using the mobile phone could help the trainee in solving problems when undergoing the counselling internship. The findings were supported by a study by EsahSulaiman (2003) which stated that by utilising the 'E-Supervision' in the practical training, this could strengthen the clinical supervision in the teaching practice, provide guidance in the counselling practice and assist as well as monitor the trainees who were undergoing the industrial training.

Based on the findings, the respondents were positive towards the statement ‘The delivery of the Counselling Internship final report via online could reduce the usage of paper and was also more economical’. This was also similar with the findings of Mohammad Aziz Shah (2015) who had developed the management and service system for Counselling and Guidance known as OC-FAR-IS. This was a practical and systematic filing and record system which could help the counselor in monitoring the client’s development effectively. The usage of an online filing and records system could help the trainee to manage their final counselling internship report which could be a burden. As indicated in the study findings, 89.6 percent of the respondents agreed with this statement ‘The preparation of the final internship counselling report was a burden to me’.

The respondents in the study also agreed with the statement “I felt comfortable using the mobile phone to discuss with my supervisor”. This was supported by the study by Ahmad Fakrudin Mohamed Yusoff & Ammar Badruddin Romhit (2018) which stated that the mobile phone application via the mobile phone was easy to be used and 40.9% respondents strongly agreed and 59.1 percent of the respondents agreed with this.

Though the suggestion for the implementation of the MoCoSS mobile supervision was expected to fulfill part of the requirement for counselling in the future, the researchers need to take into account the guidelines put forward by professional bodies such as the Malaysian Counselling Board (LKM) and ‘Guidelines in Telepsychology Practice’ published by APA (2013) which stated that the supervisor should have the technology competency and should also balance between online and face-to-face supervision as stated below:

Psychologists using telepsychology to provide supervision or consultation remotely to individuals or organizations are encouraged to consult others who are knowledgeable about the unique issues
telecommunication technologies pose for supervision or consultation. Psychologists providing telepsychology services strive to be familiar with professional literature regarding the delivery of services via telecommunication technologies, as well as competent with the use of the technological modality itself. In providing supervision and/or consultation via telepsychology, psychologists make reasonable efforts to be proficient in the professional services being offered, the telecommunication modality via which the services are being offered by the supervisee/consultee, and the technology medium being used to provide the supervision or consultation. In addition, since the development of basic professional competencies for supervisees is often conducted in-person, psychologists who use telepsychology for supervision are encouraged to consider and ensure that a sufficient amount of in-person supervision time is included so that the supervisees can attain the required competencies or supervised experiences. (APA, 2013)

4. Conclusion

Generally, the development of the MoCoss system was a continuous upgrading effort to strengthen the counselling supervision aspect and supporting the existing conventional supervision. As such, the positive response from the respondents towards the requirement of online supervision using the mobile phone indicated that the MoCoss system had been successfully developed.

5. Acknowledgement

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