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FACILITATOR MANAGEMENT SYSTEM FOR CAMPUS ORIENTATION PROGRAMME

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5.1 INTRODUCTION

Campus Orientation Programme (COP) designed for higher education institution aims to provide students with knowledge and skills that will assist them in making a smooth transition to university life (Benavides & Keyes, 2014). The COP conducted at University Tun Hussein Onn Malaysia (UTHM) is preparing new students with knowledge and skills to survive in academic, personal management, and social life in higher education environment. Indeed, the COP takes the opportunity to introduce to the new students a wide range of activities such as ‘starting school’ session, academic briefing, and college events. The activities are planned and carried out by the Student Affairs Office (SAO) staff and college residence fellow. Besides that, SAO also recruits senior students to become facilitators to aid the running of students’ activities throughout the COP week. However, the
existing procedures directly related to managing the facilitators are carried out manually:

- **facilitators** – A senior student who is interested to apply for the facilitator position has to obtain the application form from the SAO and complete it with necessary details. The completed form has to be submitted at the SAO information counter. Shortlisted candidates will be called for interview session. A candidate has to check the interview results at the SAO counter or call the person in charge.

- **Claim calculation** - Appointed facilitators are assigned tasks for day and night shifts. The facilitators are paid based on their attended shifts. The calculation is counted manually using calculator or spreadsheet software.

- **Information dissemination** – The information of the COP activities are made available in hard copy forms only. If there are changes in the agenda, such details are informed to the facilitators using walkie-talkie.

The manual conduct of the recruitment, claim calculation and information dissemination procedures, are prone to various weaknesses that may affect the management of the COP operation as a whole. The problems are briefly presented as follows:

- **Inefficient recruitment process** – An applicant has to be present physically at the SAO to obtain and submit the application form. Then, the applicant has to call SAO staff or check the SAO notice board from time to time to gain details and results of interview session.

- **Tedious calculation in claim process** - The claim calculation is very time consuming and tedious even with spreadsheet software. Indeed, such manual procedure is prone to error if the formula is not properly entered.

- **Difficulty to access updated information** – The dependency on hard copy forms availability acquires
expenditures on papers for printing. Besides, there is a limited number of walkie-talkie being provided to the facilitators and staff.

Therefore, a facilitator management system (FMS) is proposed to address the problems confronted in the manual procedures. The details of the FMS development are presented in the following sections.

5.2 FACILITATOR MANAGEMENT SYSTEM (FMS)

Some existing information systems have been reviewed to obtain guidelines in developing the proposed FMS. The information systems reviewed may be directly or indirectly related to the proposed FMS. Indeed, the chosen information systems reviewed were not implemented for similar users in the proposed FMS. However, the processes or functionalities are considerably similar in nature. Some of the information systems are described briefly as follows:

- Job application system: There are existing job application systems that allow online submission of job application forms (Ahmad & Alla, 2009). Qualified applicants are then shortlisted and notified for interview procedure. The online job application systems are claimed as a potential solution to provide efficient and effective solutions to the problems of mass data and information handling (Kmail & Belkhatir, 2015). Some advanced job application systems integrate artificial intelligence utilities in selecting qualified candidates too (Siraj, et al., 2011). Different from the existing job applications system, the proposed FMS is implementing online facilitator application module. While the job application system involves potential employees
and employers, the proposed FMS is implemented to reach potential facilitators and SAO staff.

- Payroll system: The existing system focuses on calculation of periodically salary and allowance for every employee and implemented as part of employee record system (Betchoo, 2016) (Yan, 2013). The full time staff are normally paid monthly, while the part-time staff are paid hourly. In some cases, deduction is implemented for taxation and other expenses. In the case of the proposed FMS, calculation is required to ensure the accuracy of claim amount for every facilitator according to attended shift. The deduction like in the payroll system is not applicable in the claim calculation procedure.

- Event management system: There are initiatives to update community members with itinerary of events. Such system optimized the use of web-based information system to reach target community members (Chunjiao, Dianhui, & Chunshan, 2015). In the case of the proposed FMS, web-based notification and SMS are considered to update changes in the agenda of the COP.

The activities in the development of the proposed FMS follow are carried out according to the phases in waterfall model (Sommerville, 2011): planning, analysis, design, implementation and testing. The development activities in each phase are summarized in Table 1.

<table>
<thead>
<tr>
<th>Phases of waterfall model</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Planning</td>
<td>The objectives, scope, and milestones for the project were defined. The staff of SAO and facilitators were identified for investigation procedures to determine the requirements of the proposed FMS.</td>
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<tr>
<td>Analysis</td>
<td>Interviews were carried out with the SAO staff and facilitators. Besides, details on the application forms, claim forms and calculation were studied.</td>
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workflow for the application submission and information update was documented.

Design | Important diagrams were produced to guide implementation phase: flowchart, data flow diagram, entity relationship diagram and interface. The interface and diagrams produced were verified with the SAO staff.

Implementation | The system was implemented according to project specification finalized in design phase.

Testing | Questionnaires were released to get feedback from the potential users at SAO and facilitators. The comments were noted for further improvement.

5.3 IMPLEMENTATION

Figure 1 shows the architecture of the FMS. The SAO staff, facilitators, and new UTHM students may access the system which is implemented to operate online. The server will reply the request from all the users. Information may be retrieved from the server database. Short messaging service (SMS) is also applied to allow timely notification through the server GSM modem/phone to the facilitator mobile phone. SAO staff can also send email to the UTHM students for information dissemination and notification.

![Figure 1 System Architecture of the FMS](image-url)
The SAO staff is required to log in to the system before performing any activity in the system. A valid user form the SAO may manage facilitator applications, record appointed facilitator attendance, process claims and manage COP activities or agenda. The facilitators are also required to log in into the system. Once the login is success, they can view COP details, attendance record, and announcement. The facilitator may also update their personal information.

Figure 2 shows the main page when the SAO staff has successfully login into the system. The primary operations can be performed include management of COP information, announcement, facilitators, and attendance. The staff may log out to exit from the system.

Figure 3 shows the COP information management page. As illustrated in Figure 3, the staff will be able to update COP information, activate event, and process facilitator application. Staff can also view COP activities in different ways by choosing different view from the sorting options: by programme level (e.g.
diploma or degree), and by day of event. The staff may also insert new agenda or update the existing agenda for the COP as shown in Figure 4.

Staff can also view list of applications from senior students who are interested to become facilitators as shown in Figure 5. From the list, the staff is able to view applicants’ information and perform assessment and finally shortlist the potential facilitators for further interview and appointment. When assessment is completed, the applicants will be informed through email and SMS.

Figure 6 shows a page that will display list of appointed facilitators and their contact details. cont. The list of contact can be sorted according to the unit they belong to for better view. The staff can simply click in the check box to select the contact. Message will be sent once the send button is clicked. The staff may also update attendance record of the facilitators by noting date and time of their assigned shift as in Figure 7. The staff can also calculate the claims for the facilitators and produce report for management reference from the system as shown in Figure 8. The report lists the facilitators’ information, attendance records, and amount of claims. The report can be generated in various forms such as according to unit or session of appointment.

Besides the functionalities for the staff, the FMS is also implemented to facilitate the application procedure from potential senior students as shown in Figure 9. Applicants must fill in their details and upload their passport image through the system. Shortlisted candidates will be notified through email and SMS for interview session and application status.
**Figure 3** COP Information Management Page

**Figure 4** Insert and Update Agenda for the COP
Figure 5 Facilitator Assessment Page.

Figure 6 Contact Details of Appointed Facilitators
Figure 7 Attendance Record

Figure 8 Claim Report
5.4 EVALUATION

The evaluation session involves thirty students who were appointed as facilitators in previous semesters and staff of SAO. More than 90% of the respondents agree on the improvement in recruitment process. The respondents commented on the usability of the system in allowing online submission of applications. Indeed, alternatives of viewing application status from the website, e-mail and SMS are more efficient than the existing manual procedures. The SAO staff have also given positive feedback to the accessibility to assess the applications and update feedback notification via online. Such utilities have reduced their burden in attending phone calls to check feedback status. Indeed, the time is reduced to prepare files for each application, as all necessary information can be accessed through online.

All of the account department of SAO has found that the claim process module has the potential to reduce human errors and time required for the calculation procedure. The module is very useful in improving the accuracy of the claim too. About 95% of
redundant tasks can be reduced as most information can be retrieved directly from the database. Indeed the time taken for claim calculation and claim report preparation for all facilitators can be reduced from an average of three days to a half day routine.

Majority of the SAO staff found that the utilities to update changes in the COP agenda and alternatives to disseminate the updated information are very helpful. The alternative channels are very helpful to ensure the updated information reach the facilitators and new students. About 98% of the respondents believe that SMS and web based notifications are more efficient in ensuring timely dissemination of updated information.

5.5 CONCLUSIONS

In conclusion, the FMS has been designed and developed to accommodate the needs of the SAO staff and potential applicants. The proposed FMS include functionalities to improve facilitator recruitment process, claim calculation and information dissemination. The FMS allows online application and assessment. Indeed, availability of alternative channels to update and view feedback are very useful to both stakeholders, SAO staff and potential facilitators. Additionally, the availability of automated calculation may increase the efficiency and accuracy of claim process. Finally, the use of web based notifications and SMS notifications will release the dependency on availability of walkie talkie as medium of communication.

5.6 REFERENCES

the Applications of Digital Information and Web Technologies, (pp. 452-455).


