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MANAGING INDUSTRIAL ATTACHMENT RECORDS: STUDENTS' PERCEPTIONS IN OPTIMISING ONLINE REPOSITORY AUTOMATED SYSTEM

Sharin Sulaiman[1], Azlina Bujang[2], Aiza Johari[3], Zainon Haji Bibi[4], Mohd Syazwan Mohd Aris[5].

[1]*Faculty of Information Management, UiTM Sarawak Branch, 93050, sharinsulaiman@uitm.edu.my*

[2]*Faculty of computer Science and Mathematics, UiTM Sarawak Branch, 93050, azlina80@uitm.edu.my*

[3]*Academy of Language Studies, UiTM Sarawak Branch, 93050, aiza@uitm.edu.my*

[4]*Faculty of Information Management, UiTM Sarawak Branch, 93050, zaino054@uitm.edu.my*

[5]*Infrosturucture Unit, UiTM Sarawak Branch, 93050, syazwanaris@uitm.edu.my*

ABSTRACT: The study aims to discuss the students' perceptions towards the implementation of automated system in helping the organization to manage records and documents, in which relate to practical or industrial training. Students who are registering for practical/industrial training have increased every semester, therefore the amount of data to be recorded has also increased. In the search of systematic and cost-effective ways of managing the information, there is a need to overcome the problem of keying data into the system and managing the filing manually. In consequence, this study would examine whether the development of automation system has significantly made the data management more efficient and effective (data collection, data storage and data retrieval). From the evaluation, 200 students' perceptions from the implementation were analyzed where the surveys were distributed to the students of random programmes in Universiti Teknologi MARA Sarawak. The returned questionnaires were then analyzed using SPSS. The findings indicated that the implementation of such application could really contribute to the improvement of the information resources of the practical/industrial attachment students. This further ensures that the connection between the faculty and the students is uninterrupted. Apart from that, a good industrial relationship between the management and organization can also be established. The study outcome indicated positive perceptions and responses from the student users which could impact the development of the application. Thus, the implementation of the proposed system should be used continuously as an automated information delivery tool.

Keywords: Record Keeping, Automated System, Industrial Attachment

INTRODUCTION

Online Repository Automated Information System (IS) is a tool for the purposes of recording, storing, processing and dissemination of information, and it is designed to support groups of people purposefully. This IS has included a variety of computational and software technologies that can be utilized for a variety of purposes such as data management, communication, supporting decision making at different scales and scenario exploration.

Industrial attachment (Practical Training) is one of the components in the various programme curriculum conducted in Universiti Teknologi MARA(UiTM) Sarawak Branch, in which they shall be exposed to the reality of the industrial environment. It aims to elevate the students' knowledge and skills in a specific profession of their respective fields and at the same time, produce graduates who are credible, creative, and proficient. The situation involves a lot of data management and record especially when it comes to

the big number of students to be managed every semester. Thus, there is a necessity to implement IS in managing student records, specifically for students who undergo the industrial attachment.

During the attachment, students will be able to apply all their knowledge and theories in real working environment. This training is necessary to prepare and enhance students' skills. Besides that, students can also gain experience and knowledge. Many students register for the Industrial Training every semester and the total number of students keeps increasing semester by semester, and therefore the amount of data to be recorded has also increased. Due to this, the process of collecting, keeping, and retrieving data could be tedious and time consuming when they are done manually. As cited from Desmukh (2019), online platform for the industrial training students must be prepared where they can share their learning along with problems associated to various task of industrial training (Kukreti & Dani, 2020).

With regards to this, Information System is initiated as a platform to improve the process of managing loads of information. This study aims to oversee the users' views on the Online Repository Automated Information System for managing the industrial attachment records and supplying students with relevant related information, and the two main objectives are indicated below:

1. To oversee an Online Repository Information System for the management of practical training /industrial attachment information.
2. To identify students' evaluations (users) towards the Information System in managing their information and retrieving pertinent data.

LITERATURE REVIEW

To improve the efficiency and usefulness of data and information, many institutions and agencies have entered their records into online repository. The management of Information System plays a significant role in contributing the success of an organization's performance through a set of procedures and functions (Hasan, 2018). As such records are continuously growing, proper management on the implementation of records needs to be in place especially academic records that become the asset that needs to be managed properly (Yunus et. al, 2016). Electronic record management systems that are based on cloud repositories allow students to access from remote locations (Millican, 2020). Chin and Lee (2000) affirmed that users' satisfaction with an information system can be defined as the overall affective evaluation of an end-user regarding their experiences in relation to the information system. Data management for educational institution is crucial for each student's academic record and, database management system (DBMS) is the best solution to accommodate this requirement (Callista & Fiona, 2015). Effective record-management systems can assist an organisation to run smoothly, including universities to manage large volumes of data and ensure the reliability of their records within a framework (Kemoni and Wamukoya, 2000).

To add, the evaluation of users' satisfaction is used to identify what people think and feel about using a product, to assess and perceive the quality of use. Scholarly literature has highlighted the positive impact of information system usage on institutional administration and management which provide better accessibility, efficient administration, higher utilization of resources, better time management, and better quality of reports (Shah, 2014). Xiao & Dasgupta (2002) have listed five important items that can be measured to obtain users' satisfaction results, which include ease of use, content, timeless, format and accuracy. A proper system is developed to provide better management besides, giving a guideline of the industrial attachment for both students and organization (Hasmin et.al, 2003). Web-based information system can provide the administrators a tool for monitoring and managing the records of manuscripts collections on the graduates of the academic institutions (Mesa, 2017). Zaragose (2022) has also affirmed that the developed system must apply the good criteria in term of its functionality, usability, performance and be up to date in order to maximize its potential.

METHODS

This study involved the use of the online repository that is functionally used as a medium to storage and retrieval system in managing Practical Training/Industrial attachment student records. Quantitative method was applied in this study based on the development of a research instrument to assess. This study has collected primary data through questionnaire. The sets of questionnaires were disseminated through structured self-administered printed questionnaire and web-based computer-assisted survey by using a provided link. A set of 200 questionnaire had been distributed among the student users who would be doing industrial attachment.

Adapted from Measuring Usability with the USE questionnaire (Lund, 2001), the questionnaire aimed to gauge information based on the respondents' views towards the platform. The instrument was also developed based on the review of literature. The questionnaire was divided into two sections which were Section A and B. Section A focused on the essential aspect of the demographic information of the respondent while Section B identified the students' evaluation and feedback.

RESULTS AND DISCUSSIONS

The survey indicates the respondents' perception and expectation evaluations towards the Online Repository in managing information. To clarify the objectives of the study, the analysis shows positive responses based on the implementation of online platform elements. The criteria for the evaluations are based on the content, accuracy, informative and ease of use. The users' evaluations of the automation platform have illustrated whether the users were satisfied in using the application, hence proving the benefits and usefulness of the automated system in managing the information, with the support of the database component.

Table 1.0: Respondents' Demographic Profiles

Items	Details	Percentage (%)
Gender	Male	60.0
	Female	40.0
Level of Education	Degree	48.0
	Diploma	52.0
Computer experience	1-3 years	27.5
	4-6 years	25.0
	7-10 years	25.0
	More than 10 years	22.5

The basic demographics of the respondents are shown in Table 1.0. There were 6o percent male students and 40 percent female. More than half of the diploma students were taking part to answer the questionnaire. Most of the respondents had more than 5 years' experience in using computer.

Table 2.0 *Students' Evaluation and Feedback on The System's Features*

Items	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Design	0	3.9	24.3	60.2	11.6

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User friendly interface	0	1.9	26.2	58.3	13.6
Cloud Accessibility	0	2.9	20.4	54.4	22.3
Ease of use	0	4.8	20.4	54.4	20.4
Attractiveness	0	1.0	22.3	49.5	27.2
Relevant information	0	1.9	21.4	49.5	27.2
Cost Saving	0	1.0	22.3	49.5	27.2
Quicker Response	0	0	17.5	59.2	23.3
Usefulness	0	1.0	29.1	46.6	23.3
Save time	0	1.0	30.0	44.7	24.3
Accuracy	0	0	10.7	39.8	49.5
Timely information	0	1.0	15.5	49.5	34
Flexibility	0	1.0	38.8	54.4	5.8

Table 2.0 has shown the users' evaluations on the important features of the repository platform that they had used in their programme (web based, cloud drive, Gsite and etc). The respondents were satisfied with the layout and format of the website. The results show that 60.2 percent of the respondent agreed and felt that the design is an important element to direct them to use the platform. Only 4% of them disagreed and felt that the design is not one of their criteria. More than 50 percent respondent agreed that the interface should be user friendly. A well-designed industrial attachment repository to keep track of the students' attachment record is very important and has significantly minimised the use of paper (paperless working environment), in which it is an automated information delivery tool and has run efficiently and effectively in terms of data collection, data storage and data retrieval.

It is indicated that 54.4 percent from the population of the respondents agreed that the cloud service accessibility is efficient. This was supported by Kibe (2019), where cloud-based services have the potential of increasing efficiency and effectiveness of public organizations through effective records management. Almost all respondents agreed that the ease of use is one of the important features that they are looking for, as the instructions provided in the system must be simple and easy to understand. The information delivery method is good for correct interpretation. This platform must be very useful for practical students to gain information and to provide the latest information on practical training without frequently referring to lecturers or supervisors. It gives convenience to both lecturers and students to be able to catch up with current news and information. The percentage of 49.5% shows that most of the respondent agreed that the information provided in the system were relevant and useful. Guidelines and rules for students to refer must be provided appropriately. This includes the report writing guideline and template that will help student in preparing their final report.

Another important advantage discussed here is cost saving, as a well-conceived and implemented automated student record system can reduce the costs of handling the report, record keeping procedures and printing the documents. Thus, majority of the respondents had shown agreement to strong agreement (76.7%) where cost saving is one of the elements to be highlighted.

In addition, based on the students' views on the system's features, they preferred to get more and timely information about practical training such as the presentation schedule, supervisor in charge and any other information. This is supported based on the results above, which shows that 44.7 percent agreed that by having the online information system can save their time. The downloadable information is relevant for students who had they practical training outside the campus. Student can also register online compared to the process before they need to fill in the form and returned the completed form manually.

n term of quicker response, when information from a student record is requested, it is often needed promptly, so a well-designed student record system allows for timely retrieval of the needed information at any time. Accuracy is vital at every stage, from data collection, to entry, to maintenance in the system. The information accuracy provides the users with the confidence so that they will continuously rely on the system. An effective automated record IS system should also provide the information required on request easily and not time consuming, and without burdensome trial-and error searching. Like an office filing system, the adequacy of a student record system is often judged by how much time and effort are required to find and retrieve information. Therefore, a key part of the design of a record IS its process for access, retrieval, and reporting.
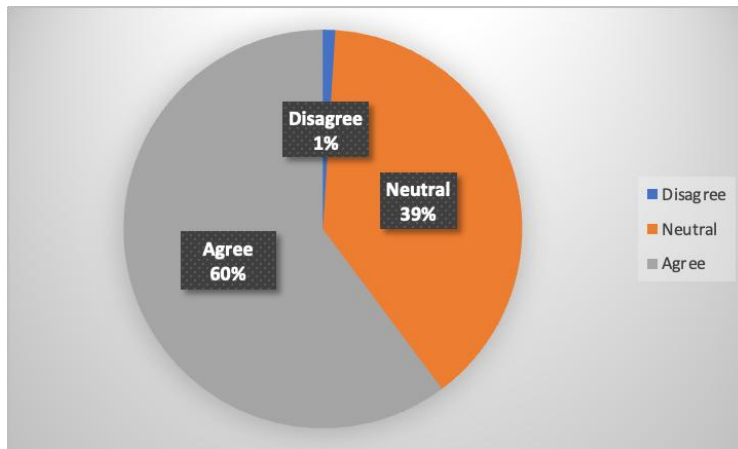
Figure 1.0 Feedback on The Students' Satisfaction in Using the Platform
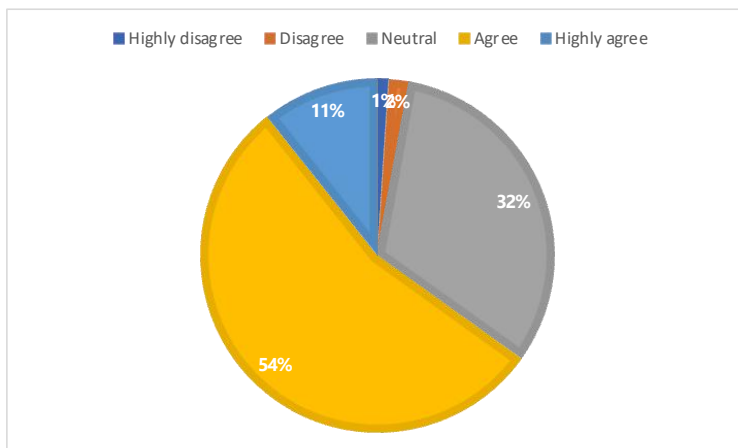
Figure 2.0 Feedback on System's Usage (Recommendation for Future Use)

Based on the analysis in Figure 1.0, more than 60 percent respondent that they agreed that they are satisfied with the platform used and would continue to use the application (Figure 2.0) in which 54.4 percent agreed and positively recommended the usage. These results show that the development of online repository has significantly made the data management be more efficient and effective (data collection, data storage and data retrieval). The outcome has also revealed positive perceptions and responses from the students regarding the development of the application. Thus, the implementation of the online repository should be continuously used as an automated information delivery tool in the future.

CONCLUSION

This study can contribute to knowledge recovery on the development of the online repository that has digitalized the management process of Practical/Industrial attachment. Identified elements can be a reference to deploy appropriate features for the system that will increase the end user productivity. Future planning involves the development of a very comprehensive application which will make the practical training coordinator tasks such as updating the information become easier and save time, providing end user with more user-friendly interface and informative system that helps practical training coordinator and students in managing the records.

The purpose of the platform is to bring the users to relevant resources regarding their practical training and their report materials. Effective automation system is the key to provide access to numerous resources and deliver this content dynamically through a well-constructed back-end database implementation. Moreover, the implementation of the system will increase the user performance and productivity with that transition from manually documented filling system to become web based online automation application. It can be concluded that the implementation of such application can really contribute to the improvement of the information resources of the Practical/Industrial attachment students. This will ensure that the connection between the practical training coordinator and the students is uninterrupted. Apart from that, a good industrial relation, relationship between the management and organization, can also be established. The study outcome has indicated positive perceptions from the students who were also the users and therefore, the implementation of such system should be used as an automated information delivery tool.

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