DATA MANAGEMENT PRACTICES AT UNIVERSITI PUTRA MALAYSIA

BY
[1]SALMAH ABDULLAH, [1]ROZIANA SHAMSURI, [1]SITI NOORHANIZA HAMDAN, [1]LIZA AB LLAH,
[1]KHAIRIL RIDZUAN KHAHIRULLAH AND [2]AZIZAH ZAINAL ABIDIN
[1]RESEARCH AND INFORMATION SERVICES DIVISION, PERPUSTAKAAN SULTAN ABDUL SAMAD
[2]DIGITAL RESOURCE MANAGEMENT DIVISION, PERPUSTAKAAN SULTAN ABDUL SAMAD
UNIVERSITI PUTRA MALAYSIA

INTRODUCTION

Data management has grown in importance with the rapid increase in the ability to capture and store data. There has been increasing interest in university, especially in an open access environment nowadays. With data management services, users can find data they need in a platform without having to search from many other sources. Proper data management throughout the research process is essential for making it openly accessible, intelligible, assessable, usable and reduces the redundancy of data. These attributes of good data management reduce costs in terms of time and money. Therefore, it can avoid wasting time and efforts on data collection and reinventing the wheel.

RESEARCH OBJECTIVES

- to investigate the way staff and students manage and store their data
- to identify the need of data storage and preservation

SIGNIFICANCE OF THE STUDY

This study investigates the data management practices at Universiti Putra Malaysia. The findings of this study can be beneficial to the university. From this study, the university will know about the current practices of the staff and students in managing and storing their data. The university can improve their services and gain knowledge that is related to data management. Besides that, the university can come out with an idea and decision to possibly enhance the services regarding data management in order to gather all data and information that is produced by UPM staff that can be shared among the research fellow. This study may also help the university to improve its services in order to meet the users' need.

From this study, UPM citizens will know about the situation of data management in UPM as a whole. Moreover, this study acts as a platform for them to express their views regarding the data management practices. If those views are taken into consideration by the university, they can get benefits by getting better services hopefully.

LITERATURE REVIEW

Storage, sharing and preservation of data are important elements in data management practices. It needs to keep pace with the latest technological developments that greatly help researchers in disseminating information. Previous studies related to research data management practices have been conducted at several universities abroad.

Students, researchers and lecturers have different types of data. This data should be stored at safe places before it is being analyzed. According to Buys and Shaw (2015), researchers store data in a variety of different ways such as computer hard drives, external hard drives, use departmental or school servers, flash drives and use cloud-based storage services. Data storage is one of the important factors in data management. Data need to be documented for easy access, preservation and dissemination purposes. Data documentation may require large storage depending on what types of data they have.

Unal, Chowdhury, Kurbanoglu, Boustany and Walton (2019) published results of a survey about using and sharing research data in Open Access mode. The study found that Open Access is still not common amongst researchers. Data ethics and legal issues appear to be the most significant concerns for researchers. Most researchers have not received any training in Research Data Management (RDM). However, most researchers would welcome formal training in various aspects of RDM. Formal training is needed for all parties involved in data management.

METHOD OF STUDY

The authors used a quantitative descriptive design to develop surveys that included questions about data storage, data preservation and data sharing. The survey link was sent to all lecturers, post graduate and undergraduate students, and selected staff (Management & Professional Group) at UPM from a total population of 28,698 by e-mail and WhatsApp. The survey was conducted from 18th November 2019 to 24th July 2020. Two reminder emails were sent during the course of the survey. The stratified random sampling is used in this study because there is a subgroup in the position that are likely to differ substantially in their responses.

ANALYSIS AND FINDING

612 respondents were invited to participate in the surveys, 432 responded, a total of 70.6% response rate. Out of which 170 (39%) were male responded while 262 (61%) were female. They comprised 215 (50%) undergraduate students, 134 (31%) postgraduate students, 33 (8%) lecturers, and 50 (11%) management & professional staff. Data were analyzed and summarized with frequencies and percentages. For questions that allowed multiple responses, the frequencies and percentages were calculated for each response option. The survey results indicate a need for assistance with data management or data sharing as well as long term data storage and backup during active projects and preservation solutions. Key findings include:

- 41% of the respondents highlighted they need 1-500 gigabytes of data storage.
- Much of UPM data is stored on PC hard drives, Internet based storage or cloud and USB flash drives.
- The most common scope of data is research data in text format, Image and statistical data.
- 52% of the respondents indicated that they shared or plan to share their data. Sharing tends to occur within members of their research group, expanding to more public availability after publication. The reasons for data sharing is for the advancement of public knowledge and to be used by other researchers.
- Most of UPM data is shared through a shared site with public access and uploaded to a UPM public repository such as UPM IR and Memory@Serdang.
- Respondents selected the time span of 1-5 years most often over all types of data collectively. A time span of less than 1 year was also selected by many respondents for keeping raw data. The following table shows the responses time span to keep all types of data.
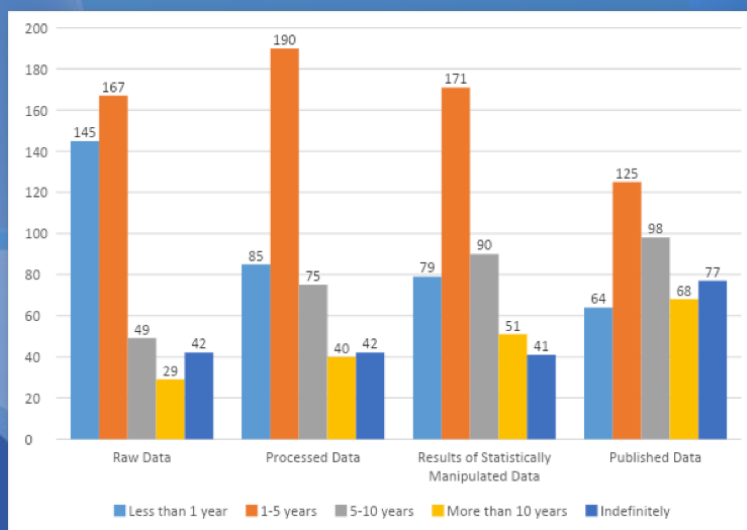

Figure 1: Graph of respondents' time span to keep data

Another key point that need to highlight is:

- 48% respondents would not share their data for the reason of privacy or protection of data and to protect their intellectual property rights. Most of the comments address the issue of policy making. This issue needs to be taken into consideration before UPM develops a data management plan.

CONCLUSION

The survey results will be used to identify potential services regarding data management in UPM. By categorizing the respondents into lecturers, management and professional staff, librarians, undergraduate students and postgraduate students, the researcher is able to view different data management needs and attitudes among its populations. The dissimilarities among category of respondents will help guide the management in developing data management services that can be designed to the unique needs of different respondents, thereby resulting in more effective and comprehensive approaches to data storage and preservation.