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NOTE TO CONTRIBUTORS

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Objectives

The objectives of the *Journal of Information and Knowledge Management* are:

- to promote exchange of information and knowledge in research work, new inventions/ developments of information and knowledge and on the use of information technology towards the structuring of an information-rich society.

- to assist academicians from local and foreign universities, business and industrial sectors, government departments and academic institutions, on publishing research results and studies in the areas of information management, records and archives management, library management and knowledge management through scholarly publications.

Scope

The Journal of Information and Knowledge Management publishes papers of original research work in all aspects of knowledge management, information management, records management and library management. These aspects include, but are not limited to the followings:

- Archives Management
- Communications and Networking
- Information Management
- Information Systems Management
- Information Systems and Technologies
- Internet Technologies
- Knowledge Management
- Library Science
- Records Management
- Resource Center Management

THE ROLE OF INFORMATION PROFESSIONALS IN ACADEMIC LIBRARIES IN MALAYSIA

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Abstract: *This article discusses the role of information professionals in academic libraries in Malaysia. It begins with the clarification on the concept of information professional and then it highlights the main role of the information professional in enhancing the academic library services in Malaysia. This article also highlights the responsibilities of information professionals in electronic era. Information professionals nowadays need to adapt the changes and the significance of information technology in order to support the process of teaching, learning and research. It also highlights the role of an academic librarian in providing effective reference and information services efficiently and this would contribute to the learning, teaching and research in higher learning institutions.*

Keywords: *Information, Information Professional, Academic Library and Malaysia.*

INTRODUCTION

The role of information professionals in providing effective library and information services in academic libraries is highly recognized by the community. Yet, information is dispersed and scattered. People nowadays tend to access the information from anywhere and everywhere, in line with the rapid growth in Information Communication Technology (ICT) added with the enforcement of Government's policy, Multimedia Super Corridor (MSC) in Malaysia has made the information

professionals' task even more challenging. According to Parul, Mahesh and Pankaj (2009) "*the adoption of ICT should not be considered as a luxury, but as an added tool to provide the information services, effectively to fulfill the complex needs of the users.*" In other words, the role of information professional is totally different in this ICT's age. They must to equip themselves with updated and advanced information's skills and technology in order to deliver a much interesting service to users.

With regards to the rapid growth of electronic information system and connection together with the spread of information in electronic form, an information professional has multi dimensional responsibilities which are not limited to the Library's four walls. The role of Information professions is not only focused to gathering data, cataloging and categorizing but rather more to administration, specialization and global electronic information circulation.

Other than the large budget development, an academic library as a valuable knowledge and advanced asset to the country is viewed in terms of its infrastructure, collection and management. There are libraries with large development and developed specifically in faculty and university's branches all over the country. The libraries which developed in university branches and faculties are developed in order to fulfill the need for teaching activities, learning purposes and research. Academic library in higher learning institution is recognized as the back bone in providing source for information through various media, such as in print and electronic. As a matter of fact, this requires skilled information professionals especially in the field of ICT in order to ensure that the flow of the information is in top speed and precise to the users for it to become a reality.

INFORMATION PROFESSIONAL IN LIBRARY

Information profession is a career which specializes in tasks that involve selecting, organizing, storing, conserving and spreading information. They are required to have a certain academic qualification, ability and specific skills in order to be able to carry out the task and responsibilities. There are various names for the position of information professionals. Other than being known as information professional, information expert and information science expert are the names that are used to classify the position of the information professionals. While, in academic library, 'librarian' is the name of the position used to refer to the information professionals.

In order to be a librarian in an academic library, one must fulfill the requirements set by globally recognized organizations. In Malaysian context, the higher learning institutions are authorized organizations which are responsible to train professional

librarians. Institutions such as University of MARA Technology (UiTM), University of Malaya (UM), Malaysia National University (UKM) and International Islamic University (UIA) are among the institutions that have been actively carrying out the effort. Authorized qualification, given to those who have successfully finished the course in any recognized institutions, will be given either a Bachelor Degree with Honors in Information and Library Science or a Bachelor Degree in Information and Resource Center. Through the acquirement of these qualifications, one is already considered qualified to carry out the task or to position oneself as a professional librarian.

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SKIM PERKHIDMATAN PUSTAKAWAN

KLASIFIKASI	:	PERKHIDMATAN SOSIAL
KUMPULAN PERKHIDMATAN	:	PENGURUSAN DAN PROFESIONAL
TARIKH KUAT KUASA	:	1 JANUARI 2006

Gred		Jadual Gaji Matriks		
Gred S41	:	P1T1 RM1468.60	-	P1T27 RM4033.80
		P2T1 RM1550.88	-	P2T27 RM4275.80
		P3T1 RM1636.79	-	P3T27 RM4538.37
Gred S44	:	P1T1 RM2587.85	-	P1T14 RM4286.69
		P2T1 RM2864.94	-	P2T14 RM4705.35
Gred S48	:	P1T1 RM3780.91	-	P1T8 RM5017.53
		P2T1 RM4156.01	-	P2T8 RM5494.27
Gred S52	:	P1T1 RM4256.44	-	P1T8 RM5493.06
		P2T1 RM4660.58	-	P2T8 RM5998.84
Gred S54	:	P1T1 RM4486.34	-	P1T8 RM5839.12
		P2T1 RM4883.22	-	P2T8 RM6373.94

Figure 1: *Approved Scheme of Service*

Figure 1 shows the approved scheme of service by Public Service Council of Malaysia. It clearly stated the requirement to be as a qualified librarian. A candidate must hold a Bachelor's Degree (Hons) (specialisation in Library Science) recognised by the Government from any local institution of higher learning or equivalent ; OR

Bachelor's Degree (Hons) recognised by the Government from any local institution of higher learning or equivalent qualification **AND** Advanced Diploma in Library Science recognised by the Government from UiTM or equivalent qualification. It also shows the expected salary.

Moreover, Bachelor degree holders from other fields with a Post-graduate Diploma in Library Science would also have prospect to become a librarian in academic library. Therefore, with the required qualifications mentioned above it is understood that these information professionals are equipped with required knowledge and are expected to be committed in providing effective services to the users. Table 1 below shows the number of information professionals in academic libraries in Malaysia

Table 1: *Number of Librarian in Public Universities and University Colleges*

Institutions	Number of Information Professionals
University of Malaya (UM)	49
Malaysia National University (UKM)	49
Malaysia Science University (USM)	54
University of MARA Technology (UiTM)	126
University Putra Malaysia (UPM)	59
Malaysia Northern University (UUM)	24
International Islamic University Malaysia (IIUM)	53
Malaysia Sabah University (UMS)	20
Malaysia Sarawak University (UNIMAS)	15
Sultan Idris Education University (UPSI)	20
University of MARA Technology(Shah Alam only)	70
University Malaysia Kelantan (UMK)	7
Universiti Teknologi Malaysia (UTM)	44
Universiti Malaysia Pahang (UMP)	13
Universiti Malaysia Perlis (UniMAP)	15
Universiti Malaysia Terengganu (UMT)	17
Universiti Pertahanan Nasional Malaysia (UPNM)	6
Universiti Sains Islam Malaysia (USIM)	15
Universiti Sultan Zainal Abidin (UniSZA)	11
Universiti Teknikal Malaysia Melaka (UTEM)	18

Table 2: *Number of Librarian in Private Universities*

Institutions	Number of Information Professionals
Universiti Teknologi Petronas (UTP)	6
Universiti Tenaga Nasional (UNITEN)	7
Open University Malaysia (OUM)	8
Universiti Kuala Lumpur (UNIKL)	2
Multimedia University (MMU)	10

Source: As listed in http://perpun.upm.edu.my/myTO/

The above table shows the number of Information Professionals reported to be officiate in Public Universities' libraries as in January 2000. From the information gathered, shown that among the universities which have been established more than 2 decades such University of MARA Technology (UiTM), University of Malaya (UM), University of Northern Malaysia (UUM), National University of Malaysia (UKM) and University of Technology Malaysia (UTM) employed much higher number of information professionals rather than those universities established later such as Malaysia Sabah University (UMS) and Malaysia Sarawak University (UniMas) which exist not more than 16 years. This figure is related to the number of collections provided by the academic library. As for example, Tun Abdul Razak Library, UiTM consist of 600 thousands collections of various sources with 68 information professionals.

INFORMATION PROFESSIONAL AND CHALLENGES

As information professionals in this information age, there are many challenges that have to be faced. Information professional is not a person who works to identify, organize, process, evaluate or deliver the information anymore, but they perform the task aggressively. As Campbell (1993) suggested, *library and information science faculties must press the frontiers of the field to prepare the librarians of the future. A smattering of computer courses is simply not sufficient. Increasingly, librarians need deep technical proficiency. Without it, we are a step removed from being able to conceptualize, design and re-engineer the information and knowledge delivery systems of the near future. We must rethink library education."* Here, it is clear that an information professional must be technologically literate in order to 'survive' this information age.
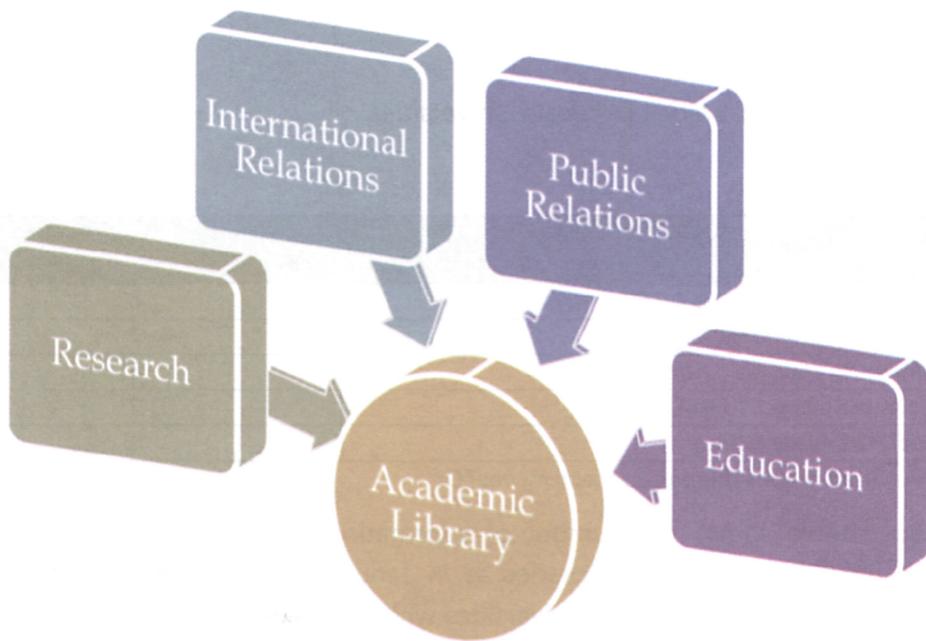
Figure 2 : *The Roles of Academic Library*

In academic library, the importance of information professionals in providing an effective service to students, lecturers, faculty, administrators, staffs and researches is apparent. The major role of these professionals is to ensure that information is organized in a proper manner and keep the users frequently updated on services offered. Other than that, they also ought to be actively using the updated technologies and to diversify the sources in order to fulfill users' maximum satisfaction.

Considered themselves as professionals, the information professionals must ensure that their level of service offered satisfy every party that uses the academic library. According to Knox (1989):

"People outside each profession also have an interest in the quality of professional performance, because they are greatly affected by the decision made by professionals. Such decisions reflect, among other things, traditions, state-of-the-art, guidelines for practice within each nation, and the interest some people have in influencing the quality and distribution of professionals practice" (p.373)

One of the major challenges faced by the information professionals is the rapid changes and revolutions in the aspect of technology. Holmes D. (1990) stated that information technology is a matter that explains about the technology which allows us to record, store, process and to gain back and send the information. It also

explains about modern technology such as computer, fax machine, transmission, micrographic, telecommunication and microelectronic.

The wide and rapid expand of Information Technology (IT) became part of our life. A massive use of information technology on academic library in higher learning institutions have proven that the number of academicians and students are expanding. Therefore, information technology is crucial as a source for information and cannot be taken vaguely as we shall be equipped with the required skills and use them in an effective way.

Graduates of library schools are expected to possess professional and technical skills, interpersonal skills, computer technology skills, and so forth. To ensure that these graduates meet the demands of the job market, they must be equipped with the relevant IT competency.

Figure 3 : *The Roles of Librarian*

As librarians and information professionals in academic libraries, skills in using information technology to understand the students or users to access materials quickly and accurately as desired are needed. Therefore, in the need to understand the students or users through information technology, there are some issues identified in regard of the matter that are needed to be resolve are as follows:

a. The need for sophisticated technology and information should be emphasized.

b. Level of difficulty and complexity of information technology.

c. The need to redesign the information system by using new technology in the library.

d. Professional duty to monitor information on the increasingly sophisticated information network.

e. Legal implications of the activities of information exchange among the network will have an impact and awareness among information professionals and users of information scientists.

f. The roles of information professionals are to instruct and shape users to master the use of the information technology.

In regards of the identified issues, programs such as providing library's guideline tutor for users, orientation of the library or library information skills courses found to be an accurate method. Other than that, the use of optical-fiber, the digital networks' development and utilization also play an additional part in overcoming the stated issues as well as to support the above efforts.

Steven J. Bell and John Shank (2004) defined academic librarian as a "blended librarian" who combines the traditional skill set of librarianship with the information technologist's hardware/software skills, and the instructional or educational designer's ability to apply technology appropriately in the teaching-learning process. Basically, "blended librarian" is a concept which encourages academic librarians to grasp the significance of technology and has the strategies and techniques to deliver and capable to support the teaching-learning process. Steven J. Bell and John Shank stated 6 principles of blended librarianship:

1. Taking leadership positions as campus innovators and change agents is critical to the success of delivering library services in today's information society

2. Committing to developing campus-wide information literacy initiatives on our campuses in order to facilitate our ongoing involvement in the teaching and learning process is necessary

3. Designing instructional and educational programs and classes to assist users in using library services and learning information literacy is absolutely essential to gaining the necessary skills (trade) and knowledge (profession) for lifelong success

4. Collaborating and engaging in dialogue with instructional technologist and designers is vital to the development of programs, services and resources needed to facilitate the instructional mission of academic libraries

5. Implementing adaptive, creative, proactive, and innovative change in library instructional can be enhanced by communicating and collaborating with newly created instructional technology/design librarians and existing instructional designers and technologist

6. Transforming our relationship with faculty requires that we concentrate our efforts to assist them in integrating technology and library resources into courses. Add traditional role a new capacity for collaboration to improve student learning and outcome assessment in the areas of information access, retrieval, and integration.

Reference and information services are a very important service to help users in seeking information for specific purposes such as research and learning. Users will be assisted and taught how to obtain or seek information, use catalogs, indexes, abstracts and guideline to do research. Through this, it enables the users to optimize the use of resources, directly maximizing the access to information checkers.

Wahyudin Sumpeno (1994) stated that the reference and information services are the services which provide instructions or guidance. While **William A. Katz,** clarified that the reference and information services as a service to answer questions in an effective and efficient manner.

Reference and information service is a service that has the element of providing direct assistance and professionalism. Services provided have some specific purpose, namely:

- To assist consumers in gaining the information

- To ensure that users capable to exploit resources

- To customize the atmosphere in the library for much conducive environment for users

- To demonstrate the proper ways to make use of the library

Therefore, reference and information services can be clarified as services which provide assistant for users in information gathering process whether for learning or research purposes. It is a service that requires the professionals to deal and communicate directly with users to ensure the required information is able to be accessed quickly and accurately. This service covers any assistance to users in searching and retrieving access for information. This process includes assistance for information gathering where users will be given an intensive guidelines to address; 'catalog', 'bibliography', 'indexes and abstracts' , 'how to execute research in the library' and 'material gathering from external sources' in order to give maximum exposure to the users to optimize the use of resources in the library.

This assistance can be categorized into 2 types; direct assistance and personal assistance. These references and information services are designed to assist users in obtaining information; ensure that users are able to exploit sources of information available in the library by; customizing the library's atmosphere and to educate the right way to use the library and the resources therein.

In order to encounter the above matter, several important aspects need to be addressed. These aspects involve the users' understanding in 'answering question', 'gathering strategy and searching process', 'the personal qualities' as well as 'the ability to communicate well'.

- Material Gathering
- Compiling of Bibliographies
- Indexing and Abstract Material
- Time Information Services
- Reader Advisory Services
- Community Information Services
- Educational Programs Such as Library Orientation

Figure 4: *Types of Reference and Information Services*

The approach for information librarian in fulfilling users' needs may vary in regard of users' background. **Kluegel K.** pointed a theory that the need to create a user

friendly system in meeting the expectations of users is crucial. Kluegel later mentioned that:

"In an era when business enterprise are increasing their marketing efforts to sell information directly to users over the World Wide Web and the Internet, libraries that do not meet users' expectations of ease of use may step in ensuring a dynamic and vital future for librarians, libraries, and the users who rely on them."

Wilson T. suggested that some form of assistance should be given to consumers. He said:

"I suspect that the book and journals will play a lesser role and the role of the librarians will be to provide a learning support system for the complex computer-mediated interactions that will take place among scholars and between teachers and learners."

New roles and responsibilities can be summarized as follows:

1. Proactive in providing 'reference materials and information' and 'quality of services' to users. Reference librarian does not have to wait for someone else to give orders whenever the users asking for help.

2. Enquiries or suggestions must be put forward to the administration's top level of libraries and information centers in meeting the needs of the users in consideration for budget and development of collection policy reference materials in the form of electronics.

3. Educational and training programs for various levels to ensure that individuals acquire skills needed. "Modern Information Professional" helps people to work intelligently.

4. Librarians need to acknowledge who their users are, whether their information needs changes and how they make use of the information.

5. Develop and use new assessment methods for electronic materials and digital. The evaluation methods currently available may no longer be suitable in the future due to the massive information which is rapidly expanding in a variety of packages.

6. Reference librarian as mediator or facilitator and not the "intermediary" as today. Personal assistance provided is not only in direct manner but rather expanding for distance through communications networks as Internet via Web pages (World Wide Web).

7. Provide information to help the settlement of consumer problems and not just answer to consumers' questions.

Kaba Abdoulaye and Shaheen Majid (2000) conducted a survey among academic libraries in Malaysia and they concluded in the article entitled "Use of Internet for reference services in Malaysian academic libraries". In this study, a large percentage of respondents agreed that reference librarian with better computing and internet skills were likely to perform better than those lacking such skills. This was probably because a skillful librarian often needs less time and effort in providing internet-based services compared to unskilled staff. In fact, the internet skills are becoming very important for all library professionals as more and more library operations can be performed more effectively by using the internet.

Reference librarian should be prepared with the information in the form of electronic. This matter ought to be made on hand either at 'pre-service stage' or 'in-service stage' as a result of the shifting forms of information to electronic.

Konrad (1998) wrote that librarians need to be equipped with the necessary computer competencies in order to make intelligent decisions about what library users need to know, and with effective strategies for teaching those skills.

In academic libraries, the role of professionals in providing effective information services to students, lecturers and all users is vital. With the provided education and training, information professionals play major part not only as information managers but also as information provider for those who need it.

Hence, information professionals need to first make an assessment in all aspects of planning before the implementation of integrates information systems and technology-based services materials and information gathering. These aspects include;

a)   Environmental and related information in it.

b)   Strategic Planning

c)   Marketing / promotion

d)   Economic information

e)   Community Analysis

f)   To conduct research in the library (library research)

Subsequently, higher learning institutions that offer programs related to information management should play an important role in providing skilled graduates in the field of information management.

On the other hand, the organizations management must also come out with an initiative to provide training for using and managing resources and information technology equipment to staffs. For example, training should be made available for information professionals and staff retention as well as library assistants and clerks by the employer. This is important for the users as in case if the information technology professionals are out for other task.

Demonstrations on the use of information technology should be arranged so that every party either from management or information professionals are able to assess as well as to learn the skill to handle the latest technology. Through this, information professionals have the advantage to make inferences and will be provided with the general idea about the benefits of information technology equipment and software before services are rendered to the user. This is because information professionals are key agent in these areas of services. Therefore, their comments and feedback should be taken seriously and followed by immediate action by the library management.

Training facility in the use of information technology for all information professionals should be well planned, not only from the vendor of information technology systems and equipment, but also by the information professionals and library management systems and equipment so that the information technology is proficient to be used to the maximum extent.

Training is focused by a set of specific outcomes or objectives established prior to the training. It focuses on a specific set of skills or knowledge...the trainer designs a tightly structured sequential set of learning experiences to direct participants to achieve the outcomes in the timeframe prescribed (Killion and Simmons, 1992, pp.2-3)

Apart from that, the use of information technology in academic libraries requires the adjustment of work culture which needed to be adapted by the staffs in any circumstances. On the other hand, the management should take charge in reviewing the work sheets and look upon relational matter.

The adjustment requires revision and the organizational restructuring. For an academic library, the restructuring of the organizational structure is based on a

concept model which consists of three components as follows: -

a)   Information management
    b)   Designing an access system

    c)   Assess the needs of users and service

a)   *Information management*

The first component manages a variety of collection and handling of information in several formats, while most activities focused on printed materials, information also conducted by using on-line, microfiche, CD-ROM, on-line databases and multimedia.

b)   *Designing an access system*

This second component is designed to provide access to the system which focuses on the files related to the carrier of information, including electronic information file and the design of electronic networking to facilitate user access to reference materials and others.

c)   *Assess Needs and Provide Consumer Services*

These components are associated with the use of the technology and user information as the main focus. For example, this component is built with user profile and it will be incorporated into the system to retrieve information. Most information professionals and librarians need to be located in this section.

In general, information professionals are involved in the handling of forming a decentralized information and access system. Information professionals who deal with the process of providing and evaluating services would often land in a big mess. By working in the form of service group with respective user group, it will make things in a much systematic way.
Information professionals who are sensitive to their user group will produce a better quality of service because they are dedicated to a specific user. For example Tun Abdul Razak library (PTAR) UiTM, the Automation Division focuses on the flow of information systems while Information Services Division gives its attention on the preparation and retrieval of information.

Users of information technology in academic libraries require information professionals to deal with computers in relatively long period during services. Therefore, to ensure the health of the employees, ergonomic aspects of care and safety hazards at work (occupational safety and skin and eyes) should be taken into

account. They should also be given a special time to relax the eyes while in the course or use of a computer.

In terms of the necessity of information technology equipment, it is proposed that each information professional is given a micro-computer with on-line access system in every workstation to be used for local job. For example, the connection with the local university networks systems, SIRIMLINK, and others. At local level, the workstations are connected to CD-ROM networking and operate as a terminal to the library computer system. From the workstation, it can create a connection within the campus and nationwide. Information professionals can also access external data library and data exchange as well as to communicate through electronic mail (e-mail) within and outside country. Therefore, information professionals will be able to enhance creativity and their work quality through fast access to business data and information. However, the autonomy given should be used wisely by the academic information professionals. Abusive manner should be overlooked as it will present a bad personality as a professional. Massive surveillance at the workstation could avoid this abusive manner to happen.

Information professionals need to ensure that the appropriate position in placing the terminals such as OPAC (Online Public Access Catalogue). Similarly, the position of Internet, multimedia, databases such as GPO (General Periodicals On-Disc) and BPO (Business Periodicals on Disc) are placed in a suitable location or angle. Additional channels in the library are supposed to enable the cables to attach the use of information technology. Installation of additional cable outside the building should be added as to function for networking process with rural areas. Information professionals must also provide a back-up generator during power failure. UPS system should be made available as to function in avoiding data loss.

Important issues that often arise in the academic library involve the capability of the students to use the information technology equipment. This causes problems to the students, other users and the information professionals themselves as it could cause damage to the equipments.

As a matter of fact, there are users who may find material or information gathering using information technology equipment practical. Since they are not equipped with the skill, the tendency of incomplete data gathering may happen. Other than that, it will also cause damage towards the computer software. Therefore, professionals' guidance by the information professionals is required. However, large amount of unskillful users at the same time, will burden the officers in charge to solve their problems. Therefore the duty officer in charge should seek for information professionals' helps or guidance in dealing with the users.

Apart from the factors discussed, there are some more additional factors which can lead to unavailability of information as follows: -

i)   Immoral users tend to modify or use configuration to access pornographic material. This could cause damage and access failure to computer systems and information.

ii)   The lack of ability to use on-line services

iii) The lack of skill in identifying the precise keyword, method, index search or Boolean search.

iv)   The lack of ability in using Multimedia which could also cause inaccessibility to the information and system failure.

CONCLUSION

In conclusion, the role of information professionals in academic libraries is essential in line with the status of the higher learning institution itself as a center of excellence for various areas of knowledge. Information professionals, particularly librarians must equip themselves with enough skills and knowledge in order to come out with excellent services.

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