

***PROVISION OF DIGITAL LIBRARIES IN ENHANCING
COMPETITIVE INTELLIGENCE CAPABILITIES IN OPEN
DISTANCE LEARNING (ODL) ENVIRONMENT***

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ABSTRACT

Competition has become a driving force for innovation and entrepreneurship. Competitive intelligence is a legitimate and necessary activity to increase institution's intelligence regardless of what industry it is in. In the academia industry the open distance learning (ODL) education has been developing rapidly with national characteristics in different parts of the world. To remain competitive in the light of challenging economic environment, open distance learning (ODL) institution needs to capitalize on information and communication technology as deployment technology. The purpose of this study is to investigate the areas of intelligence practices (such as awareness, planning, collection, process and analysis) of the various operations and support services units of one of the open distance learning (ODL) institution in Malaysia. Due to privacy reason and to avoid any possible conflict of interest, the name of the institution could not be disclosed. The researcher aims to identify, discuss and assess the relevant parameters to gauge the knowledge sharing culture and competitive needs of the institution. A primary survey was conducted using a semi-structured questionnaire administered to the senior and middle-level management group of the institution's various operations and support services units. The findings and implications of the study are discussed. In line with the explosion of information technology innovations, this study explored on the provision of digital libraries to facilitate the storage, organization and knowledge dissemination of diverse information as a productive way to assist the institution's competitive business. Few strategic ideas deemed as potential competitive capabilities are proposed as recommendations.

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ABSTRAK

Persaingan telah menjadi tenaga penggerak kepada inovasi dan keusahawanan. Perisikan dayasaing adalah satu aktiviti sah yang amat diperlukan untuk meningkatkan dayasaing sesebuah institusi tanpa mengira bidang yang diceburi. Di beberapa pelusuk negara, industri pendidikan khususnya bagi pendidikan jarak jauh, ia telah membangun dengan begitu pesatnya lengkap dengan ciri-cirinya yang tersendiri. Demi untuk terus bersaing di dalam persekitaran yang amat mencabar dewasa ini, institusi pendidikan jarak jauh haruslah memanfaatkan penggunaan teknologi komunikasi dan informasi sebagai teknologi penggerak. Tajuk utama kajian ini ialah “Peruntukan perpustakaan digital meninggikan kemampuan perisikan dayasaing pendidikan jarak jauh”. Kajian ini dilaksanakan bertujuan untuk mengkaji sejauh mana aktiviti dayasaing seperti perancangan, pengumpulan maklumat, kesedaran dan analisis mengenai pesaing-pesaing dan persekitarannya, dipraktikkan di dalam unit-unit sokongan pentadbiran salah sebuah insitutsi pendidikan jarak jauh di Malaysia. Nama institusi yang dipilih sebagai contoh kajian dirahsiakan atas sebab-sebab tertentu demi untuk mengelakkan sebarang konflik kelak. Objektif utama kajian ini adalah untuk mengenalpasti, membincang dan menilai parameter-parameter yang berkaitan dengan budaya perkongsian maklumat dan mengenalpasti keperluan utama dayasaing institusi tersebut. Satu kaji selidik telah dijalankan menggunakan kaedah temuduga ke atas kakitangan atasan dari pelbagai unit pentadbiran. Hasil penemuan dari analisis kajian dan implikasinya telah dibincangkan. Selaras dengan peledakan inovasi teknologi informasi, kajian ini telah menyarankan penggunaan perpustakaan digital sebagai satu strategi untuk menyelaraskan dan menyalurkan pengetahuan yang memberi nilai dayasaing kepada institusi. Beberapa ide yang dianggap strategik dan berpotensi telah dicadangkan.

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DECLARATION

Name : Chew Bee Leng

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I hereby declare that this project is the result of my own work, except for quotations and summaries which have been duly acknowledged.



Signature :

Date : 17 April 2011

PLAGIARISM STATEMENT

Recognising that students have an ethical and moral obligation to ensure that all work that they submit in their name is, indeed, their own and free of plagiarism, I have exercised caution throughout the writing process. Therefore, I have scanned my research report through a web-based plagiarism detection tool, Turnitin (<http://www.turnitin.com>). The Originality Report received from Turnitin indicated that the work was, indeed original and that I had not plagiarized any part of it. Thus, I am submitting this research report as my own original work.

Declaration made by :



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Signature

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LIST OF ABBREVIATIONS

API	Application Programme Interface
ARI	Accounting Research Institute
BIDE	Bangladesh Institute of Distance Education
CC	Creative Commons
CDR	Centre for Drug Research
CEO	Chief Executive Officer
CI	Competitive intelligence
COL	Commonwealth of Learning
HiCoE	Higher Institutions' Centres of Excellent
HKOU	Hong Kong Open University
IBS	Institute of Bioscience
ICT	Information and communication technology
IGNOU	Indira Gandhi Open University
IT	Information technology
KIT	Key Intelligence Topics
KNOU	Korea National Open University
MDG	Millennium Development Goal
MOHE	Malaysia Ministry of Higher Education
OCW	OpenCourseWare
ODL	Open distance learning
OER	Open Educational Resources
OUM	Open University Malaysia
RSS	Really Simple Syndication / Rich Site Summary
RTVU	Radio and TV University, China
SCIP	Society of Competitive Intelligence Professionals
SDI	Selective Dissemination Information
SPSS	Statistical Package for Social Sciences
STOU	Sukhothai Thammathirat Open University
SWOT	Strengths, Weaknesses, Opportunities, Threats
UIA	Univesity of the Air, Japan
UiTM	Universiti Teknologi MARA
UKM	Universiti Kebangsaan Malaysia
UMBI	UKM Medical Biology Institute
UMPEDAC	UM Centre of Research for Power Electronics, Drives, Automation & Control
UPLB	University of the Philippines Los Banos
USM	University Science Malaysia
VUSSC	The Virtual University for Small States of the Commonwealth

CHAPTER 1.0 INTRODUCTION

1.1 Background to the study

Over the past two decades, distance education has been developing rapidly with national characteristics in different parts of the world. The emergence of new educational technologies has triggered a revolutionary process (Reddy, 1988). There are over seventy open universities and large numbers of other distance education providers are located in Asia, which is a cultural pot of diversity. This proves the success of distance education as a concept amongst the governments and the public in general in the region (Latchem & Jung, 2010). The emergence of open distance learning institutions is due to lack of places in public institutions. Open distance learning is a very idealistic concept which in reality is difficult to implement (Belawati & Baggaley, 2010).

Open distance learning (ODL) is a promising and practical strategy to address the challenge of widening access thus increasing participation in higher education. It is increasingly being seen as an educational delivery model which is cost-effective without sacrificing quality (Pityana, 2009). Distance education learning is technology driven. Technology means not just bandwidth but hardware platforms, software, processes and applications including mobile telephony, necessary for effective student and academic management and learner support.

According to Davis (1996) open learning is regarded as something relatively new, usually related to “distance learning”, therefore limited in-depth analysis was conducted in management development of open distance learning. Information professionals can act as knowledge management centers to provide competitive intelligence services in business (Parker, 2005). Distance learning has been made possible by technological breakthroughs such as the development of the web, and universities have promoted it because distance learning programs have increasingly played an important role in the financial success of the university (Lukasiewicz, 2007).

This research study has outlined the range of typical operations and support services units of an ODL institution and attempted to identify the key intelligence practices of the institution. In line with the explosion of information technology (IT) innovations, the provision of digital libraries was suggested to facilitate the storage, organization of diverse information gathered to assist the institution’s business. Based on the research findings, the researcher has recommended few competitive intelligence capabilities for the digital libraries as the content. This research study has generally looked on the operation of an ODL institution which covers a wide range of operations and support services units’ activities which are considered as the backbone and knowledge provider to the business of the institution. Traditionally, such activities involve and require a large number of staff to manage the activities. ODL institution will always find ways to “do more with less” (Wong, Lee & Wu, 2006). In general practice, ODL institutions at tertiary level must in one form or another provide a combination of the following services to support learners in order to sustain and be competitive in its business:

- a. marketing management
- b. learning support system
- c. student admission and registration
- d. financial management
- e. human resources management
- f. learning and library services
- g. student record management

The above operational systems are needed to support the continuous cycle of services to users. Therefore continuous adjustment to new and increasing operational demands and innovation are necessary. ODL requires sound management and leadership with clever strategist. As the environment for ODL changes, there will be mounting pressure on institution to respond to those changes in order to remain competitive at a rapid rate (Dhanarajan, 2009).

Digital libraries are selected as the focus of the study mainly because digital libraries can create a new searching environment which the researcher believed it is still lacking in the provision of competitive intelligence information via digital libraries. This study will hopefully provide insight of what are the competitive intelligence capabilities that can serve as part of the intelligence deliverables. With such a provision, it is hope that digital libraries can support the operations of the ODL institution.

1.2 Problem statement

In view of the diversities in the open distance learning (ODL) mode of operations, the workforce broken down to units can no longer be homogeneous as they are in a conventional institution (Ojo & Olakulein, 2006). To remain competitive in the light of challenging economic environment, open distance learning (ODL) institution needs to implement learner-centred approach in teaching and learning and capitalize on information and communication technology as deployment technology. Open distance learning (ODL) institution regardless of size and performance must have the means to assess the external environment to maintain competitive edge. Competitive intelligence represents one of the most important pieces in strategic management of organizations in order to sustain and enhance competitive advantage over competitors. Ferguson & Wooldridge (1997) argued that we are currently witnessing a crossover from the development of prototypical system to a widespread commercial use of advanced digital libraries. The most difficulties encountered by users on searching for content from the World Wide Web is the well known “information overload” problem. People are frequently overwhelmed by the sheer amount of information available, making it hard for them to filter out junk and irrelevancies and focus on what is important. According to Belawati & Baggaley (2010) many educational institutions in Asia lack the facilities and human resources to utilize the Internet to its fullest content. These gaps lead to an attempt of the researcher to answer the following research question:

What are the competitive intelligence capabilities that can be provided through digital libraries that can support the open distance learning business?

1.3 Objectives of the study

This research study plans to address the following objectives:

- (i) To identify the management key intelligence needs in order to sustain competitive edge
- (ii) To analyze the information on the internal/external environment which engage in competitor intelligence activities
- (iii) To propose strategic ideas that can address opportunities and threats via the provision of the intelligence resources through digital libraries

1.4 Research question

This study attempts to answer the following research question:

What are the competitive intelligence capabilities that can be provided through digital libraries that can support the open distance learning business?

1.5 Research hypothesis

Based from the research objectives and research question, the researcher develops the following hypothesis to this research.

H1 : Digital libraries can be a consistent source to engage, gather and analyze competitor intelligence information

1.6 Significance of the study

This research study can contribute to the field of ODL institution and competitive intelligence. It can provide the following values:

- a. Ability to gather information on key intelligence needs and perform analysis and feedback to decision-makers on various aspects
- b. Assist institution in competing more effectively with competitors
- c. Provide opportunity to introduce new services to an open distance learning (ODL) institution
- d. React to the challenge that open distance learning (ODL) information professionals can embrace opportunities to expand its services

1.7 Assumption and limitations of the study

This research study is conducted with an assumption that respondent will answer only what is required from the questionnaire, with comments to be provided on the final open-ended question of the questionnaire. The name of the research site could not be disclosed due to privacy reasons and to avoid any possible conflict of interest that may exist. The research site does not hold any merits towards the researcher's academic contribution. The opinion and conclusions expressed in this report are purely of the researcher and do not represent the views of the research site and the staff. The research findings are for educational purpose only.

Like any other piece of research, shortcomings do exist in this research study. The limitations that researcher encountered are as follows:

- i. The sample size of the research might be small as it depends on how positive participants are willing to provide their feedback.

- ii. The focus group respondents are limited to staff from the Headquarters of the research site. It does not extend to the Regional Offices of the research site. The Regional Offices basically act as learning, counseling and registration centres - an interface between the research site and students.
- iii. Respondents may not have the basic understanding of what is competitive intelligence as a process to obtain competitive advantage and enhancing organization ability. The layman might not understand some of the issues asked in the survey.
- iv. Respondents might not be very honest in their answers.
- v. Researcher was unable able to make comparison with other ODLs in Malaysia on their key intelligence needs due to lack of contact and information.
- vi. The collection of data took place on a certain period of research study time – mid-December 2010 to 15 January 2011.
- vii. Being a first timer, researcher lacked of the experience in conducting research and analysis and evaluation of data collected. The analysis information might not be comprehensive.

1.8 Possible outcomes and contributions

The researcher has identified the following possible benefits from recommending the provision of digital libraries at the research site:

- As digital libraries play the intermediary services, it can increase the range of possible services that are crucial to the institution.

- It enhanced the institution's competitiveness by maximizing the efficiency of using internal and external linkages through new found information.
- It enabled the sharing of ideas and knowledge inside the institution in order to develop new ideas/knowledge or to integrate existing knowledge into the institution.
- It provided a better support system for strategic decision making process.
- It revealed opportunities and threats by the early warning signals identified.

1.9 Definition of terms

The following are definitions to the primary terms used in this research study to ensure common understanding of the research:

Open distance learning (ODL) reflects the fact that all or most of the teaching is conducted by someone removed in time and space from the learner, and that the mission aims to include greater dimensions of openness and flexibility, whether in term of access, curriculum or other elements of structure (Moore & Tait, 2002). Sir John Daniel (2004) the President and CEO of Commonwealth of Learning (COL)¹ described *open learning* as policies and practices that permit entry to learning with no or minimal barriers of age, gender or time while recognizing prior learning. He mentioned that *distance learning* is the delivery of learning or training to learners who are separated mostly by time and space, from those who are teaching and training. In the following text of this report, the abbreviation ODL will be used to represent *open distance learning*.

¹ COL is the world's only inter-governmental organization created in 1989 by Commonwealth Heads of Government to encourage the development and sharing of distance education knowledge, resources and technologies. COL is financially supported by Commonwealth governments on a voluntary basis (Belawati & Baggaley, 2010, p.27).

Competitive intelligence (CI) as defined by the Society of Competitive Intelligence Professionals (SCIP) is a systematic and ethical process for gathering and analyzing information about the competition's activities and general business trends to further a business' own goals (Groom & David, 2001). According to Brody (2008), "CI is a systematic and ethical program for gathering, analyzing and managing information that can affect a company's plans decisions and operations."

There are two definitions of *digital libraries* where one focus on the access and retrieval of digital content and the other focuses on the collection, organization and services aspects of digital libraries. As Brogman (1999) states, a digital library is a combination of a service, an architecture, a set of information resources, databases of text, numbers, graphics, sound, videos, etc and a set of tools and capabilities to locate, retrieve and utilize the information resources available. In this research study, the term *digital libraries* refer to a provision of collection and access of competitive information to help the key players to use the information to increase their competitive edge in their daily operation work. In the provision of the digital libraries, the provision of online databases, e-journals, e-books and other digitized collection was not considered. These were categorized as resources.

Key intelligence topics (KIT) refers an organization's intelligence needs which can be generally assigned to one of the three functional categories which are strategic decisions and action, early-warning topics and description of the key players in the marketplace

(Herring, 1999). KIT usually include relationships, driving forces, objectives and intentions, strategies and tactics (Myburgh, 2004).

The term *provision* as defined by *Oxford English Dictionary Online* refers to the action or an action of providing, preparing or arranging in advance the fact or condition of being prepared or made ready beforehand.

The term *capabilities* as defined by *TheFreeDictionary* refers to the quality of being capable, a characteristic that may be developed.

1.10 Conclusion

This research study has focused on the provision of digital libraries based on providing competitive intelligence capabilities which can serve users and the information needs of the target community of the research site in order to enhance institution's competitive intelligence. The next chapter presented the literature reviewed for this research study.

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APPENDIX A

Table 2.2.1 List of 20 largest universities in Asia by enrollment

Rank	Institution	Location	Founded	Affiliation	Enrollment
1	Allama Iqbal Open University	Islamabad, Pakistan	1974	Public	1,806,214
2	Indira Gandhi National Open University	New Delhi, India	1985	Public	1,800,000
3	Islamic Azad University	Tehran, Iran	1982	Private	1,500,000
4	Anadolu University	Eskisehir, Turkey	1958	Public	884,081
5	Bangladesh National University	Gazipur, Bangladesh	1992	Public	800,000
6	Universitas Terbuka	Jakarta, Indonesia	1984	Public	646,467
7	Bangladesh Open University	Gazipur, Bangladesh	1992	Public	600,000
8	Ramkhamhaeng University	Bangkok, Thailand	1971	Public	525,000
9	University of Pune	Pune, India	1948	Public	496,531
10	University of the Punjab	Lahore, Pakistan	1882	Public	450,000
11	Dr. B. R. Ambedkar Open University	Andhra Pradesh, India	1982	Public	450,000
12	University of Delhi	New Delhi, India	1922	Public	400,000
13	Osmania University	Hyderabad, India	1918	Public	300,000
14	Yashwantrao Chavan Maharashtra Open University	Nashik, India	1989	Public	300,000
15	Tribhuvan University	Kirtipur, Nepal	1959	Public	290,833
16	Gujarat University	Ahmedabad, Gujarat, India	1949	Public	215,000
17	Korea National Open University	South Korea	1982	Public	210,978
18	Sukhothai Thammathirat Open University	Bangkok, Thailand	1978	Public	181,372
19	University of Karachi	Karachi, Pakistan	1951	Public	174,000
20	Cairo University	Giza, Egypt	1933	Public	155,000

(Source: Extracted from Wikipedia, assessed 15 November 2010)