PROVIDING EQUAL OPPORTUNITY IN LEARNING:
THE ROLE OF THE OUM DIGITAL LIBRARY IN DISTANCE LEARNING

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1.0   INTRODUCTION

The relevance of any library to its parent organization depends on the need for it. In the case of a university library, if the library is as described in the professional literature as being at the heart of teaching and learning – then the need for it must exist in the teaching and learning environment within which it operates.

The need to view the relevance of the library within the educational context is important in order to avoid an 'isolationist' approach to library development. It is easier to understand the role of the library seen against the background of the prevailing concept of education, aims and objectives of education, teaching-learning objectives and strategies, etc. In the case of the Digital Library, it is necessary to understand the democratisation process of higher education, the concept of the Open University and its core activities so that any discussion of its role can be done in the proper context and from a meaningful perspective.

2.0   DEMOCRATISATION OF HIGHER EDUCATION

The traditional concept of education was authoritarian and elitist. Knowledge was handed down from master-to-pupil accompanied by authoritarian and scholastic discipline. By and large the traditional system was characterised by an almost complete dependence on the teacher and the veneration of the textbook. The move towards a more democratic form of education in the 1960's and 1970's resulted in a shift in the concept of education from one that was authoritarian and elitist to one that advocated "equal opportunity in education"[1]. "Equal opportunity in education" was seen as the democratic right of all individuals ---- irrespective of race, status, age or ability but at the same time "equal opportunity" does not mean the same treatment for everyone. It means making certain that the individual has equal chance of success by getting the type of education that suits him, at a pace and through methods that cater to his learning needs. In other words, it means equalising the chances for achievement or equalising the chances of developing his full potential.

For equal opportunity to be meaningful, however, education must be extended on a continuous lifelong basis with opportunities for success provided at every stage of the continuum. Any attempt at early elimination would render the democratisation process ineffective and make a mockery of the principle of "equal opportunity". As stated by UNESCO in its classic 1972 blueprint.

> "Once education is continual, ideas to what constitute success and
> failure will change. An individual who fails at a given age and level
> in the course of his educational career will have other opportunities.
> He will no longer be obligated for life to the ghetto of his own failure"[2]

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[1]FAURE, Edgan et al. Learning to be: the world of today and tomorrow. Paris, UNESCO, 1972, p. 75

[2]Ibid., p. 77

Conceptualising education as a lifelong process was an effort at translating democratic principles into educational practice or " a new pedagogical concept … to combat social exclusion".[3]

Democratising education on the principles of equal opportunity meant a re-appraisal of traditional aims and methods. Unlike the traditional concept, the modern concept of education believes that education should produce a learning society, not a learning minority. In simple language, higher education should be catering to the masses. The aim of education is to produce individuals who could be useful, contributing members to society yet able to fend for himself. UNESCO calls this individual "the complete man".[4] The broad aim of education as advocated by UNESCO is the overall development of the individual.

The change in emphasis in educational aims and objectives has made it necessary for teaching and learning methods to be reviewed, giving rise to a productive learning environment with the focus on learning and the learner rather than teaching and the teachers, in greater emphasis given to differentiation in needs, abilities and personalities in the development of independent and active learning.

The traditional teacher-pupil relationship was authoritarian, with the teacher dominating classroom learning to the extent that reduced the pupil to "a position of inferiority and submissiveness".[5] It was not a coincidence that this relationship was termed the master-pupil relationship. In the effort to achieve equal opportunity, authoritarian attitudes and practices are being questioned. Equal opportunity in learning means that learners need to be considered as individuals, each with his own ability and learning potential, working at different paces and in different ways. This takes into account differences in the learners learning styles and approaches. Various research projects have been undertaken about learning which provide insights into how learners learn, particularly:

      i)   they learn as individuals
      ii)   they learn at various rates
      iii)   they learn according to different styles and patterns

Differences in learning needs and styles have highlighted the inadequacy of the traditional whole-class approach to learning. Expository classroom teaching with its emphasis on delivery and rote recall methods assumes that pupils are homogeneous, able to learn at the same pace. Modern education shows that there can be no single style of learning. The whole-class approach needs to be supplemented with other types of learning strategies. In taking into cognizance the different personalities and needs of learners, modern education has made learning an individualised and personalised experience. Variety and flexibility rather than rigidity and homogeneity are to be the characteristics of the modern concept of learning.

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[3]ROWLAND, Fytton & Iris Rubbert. An evaluation of the information needs and practices of part-time and distance-learning students in the context of educational and social change through lifelong learning. Journal of Documentation, vol. 57 no. 6, November 2001; pp. 743

[4]Op. cit., p. 156

[5]Op. cit., p. 77

The shift in emphasis to the learner in the teaching-learning process has reduced dependency on the teacher and the textbook. Individualised, independent, lifelong learning that has been the hallmark of modern education has made it necessary for teachers to use a variety of teaching strategies and materials to cater for learners with different needs, abilities and personalities.

In the aim to produce independent learners, possessed of both the cognitive and affective skills, schools and universities must concentrate on enabling the learner to build up techniques of effective enquiry and gain skills and confidence in tacking new learning problems.

The democratization of higher education has given the concept "equal opportunity" a new meaning, encompassing a wider scope of educational aims and objectives. It has given modern education certain characteristics, as summarised below:

1. Greater and freer (read more flexible) access to higher education

    Greater access does not mean mainly increasing the number of people enrolled in mainstream university programmes but also to provide opportunities for those previously "excluded" for various reasons. Propagating lifelong education would ensure that any one who wishes to acquire qualifications at any stage of his life would be able to do so because there are alternative means by which the opportunity is provided.

2. Learner-centred approach to learning

    The importance given to the learner in the modern approach to education ensures that learner needs are given priority. In lifelong learning, the focus is on teaching the learner **how** to learn, not **what** to learn. In modern terms, it would mean "empowering" the learner such that he can be independent and resourceful throughout his lifetime of learning experiences. This also means that the learner is given the opportunity to learn at his own pace and according to his own style. He can undertake his learning anywhere, anytime, anyhow. Learning therefore becomes flexible, at a pace dictated by the learner and in accordance with negotiated objectives.

3. Variety of teaching strategies

    With the learner's interest at the heart of the teaching-learning process, the method and strategy of instruction need to adapt. Instruction has now to be skills-based, not subject-based, consistent with the need to prepare learners for lifelong learning, so as to teach them **how** to learn rather than **what** to learn. Instruction is individualised to cater to individual differences of the learners making it necessary for small-group teaching rather than the whole-class approach which assumes that learners learn at the same pace. A greater variety of teaching strategies have been devised in recent years to cope with the learner-centric pedagogy such as interdisciplinary team-teaching, project work, problem-based teaching and with greater ICT capability, web-based teaching, e-teaching, etc.

3.0 THE CONCEPT OF THE OPEN UNIVERSITY

The democratisation of higher education has changed the way education is conducted but the greatest agent of democratisation is the ICT. There can be no denying that the ICT has revolutionised learning by providing choices and opportunities that learners never had before. It has given prospective learners various options for further studies using non-traditional and non-conventional delivery systems. ICT has provided new learning environments that reach out to learners despite physical, geographical and political obstacles. It facilities communication and

makes distance learning less intimidating. The Open University represents all that is new and revolutionary in modern learning.

Open University is an innovative approach to higher education, providing open and distance learning opportunities to those who have been "excluded" from the mainstream university intakes for various reasons or who choose to study at their own pace, their own time and in their own style.

Open and distance learning has been defined in various ways. The term distance learning is not new. In the 1950's and 1960's – it was know as adult education, correspondence education, off-campus education, extension studies, external studies, further education, continuing education etc. In recent years, with greater ICT capability, it is known as distance learning, open learning, e-learning, web-based learning, etc. The real definition lies somewhere in between depending on the institution's objectives, academic programmes and mode of delivery.

It is not easy to provide a clear-cut definition of open and distance learning because one can always question "how open", "how flexible", "how distant is distance?", etc. Dr. Mansor[6] Fadzil from OUM attempted a definition along the following constructs:

	Distance Learning	**Open Learning**
Who	Specific in terms of age, qualifications and sometimes geographical setting	More flexible on age, qualifications and geographical setting
What	Content and assessment methods are predetermined, learner is led to achievement of learning objectives in a step-by-step manner	Apart from being led to achievement of certain learning objectives (institutional curriculum) the learner is given the option to achieve his/her curriculum
How	Number of credits a learner may take are predetermined and peer-to-peer and learner-to-listructor collaborations are limited to those of face-to-face or by telephone	Learner may choose the number of credits, learning is self-paced and there are more options for peer-to-peer and learner-to instructor collaborations with the use of Information Communication Technologies

Whatever definition it is given, there are certain characteristics that describe open and distance learning:

i) teacher and learner need not be at the same place, at the same time
ii) heavy reliance on multimedia and ICT delivery systems
iii) teacher-learner interaction can be conducted in various modes, via face-to-face tutorials, teleconferencing, e-mail, interactive portals, e-learning platforms, audio-video, telephone, CD-ROM, mobile learning platforms (PDA), etc.
iv) provision of pre-tested and validated courseware
v) provision of support services that are also heavily dependent on ICT for delivery
vi) guided and facilitated learning but encourages greater independence of learners
vii) learner-centred approach to education

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[6]Mansor Fadzil. Open University Malaysia: leading the way to flexible lifelong learning, paper presented at the AAOU Conference, New Delhi, February 2002, p. 2

Open and distance learning provides an alternative route for those who wish to acquire a university degree at any stage of his life, consistent with the democratisation process of higher education.

4.0 ICT AND OPEN DISTANCE LEARNING AT THE OPEN UNIVERSITY MALAYSIA

Rapid advances in ICT and easy access to Internet and the Web are reshaping education at OUM. The major challenge for OUM is to effectively integrate technology and the appropriate pedagogy. ICT is considered a tool in catering for the various learning styles and needs and in enhancing the learning methodology and usage. A few related issues are worthy of mention:

- OD Learners needs are different from the traditional in-campus students
- For the academic staff, there had to be a paradigm shift in relation to teaching and learning methods
- ICT support by organization critical
- Learner expectations are also different because of different learning experiences
- Incurrence of cost in providing the technology platform for learning
- Commitment of management must be total

The learning concept practised at OUM is based on the 'self-managed learning', where learners take responsibility for decisions about what, when, where and why they learn. Learners have freedom to learn at their own pace and time. This SML method allows a lot of flexibility to the learners.

There are three modes of learning, as shown below:

i) Self-managed learning (by print modules)
ii) Face-to-face tutorials; and
iii) Internet-based **e-learning**

At OUM the three delivery modes offer continuous interaction between learners and the faculty. The challenge for OUM is achieving the objectives of the delivery modes in an interactive learning environment.

The Learner Management System (LMS) or the **e-learning system** is an application that allows students, instructors and administrators to input information for the purpose of learning, support and keeping track of the learning process. OUM's own LMS developments are still in process with a few factors to consider before implementation;

a) Access to e-materials for its learners, instructors as well as institutions
b) Learners should be able to upload course content, tests, quizzes and other support materials with a click of a mouse
c) OUM to track the progress of both instructors and learners
d) OUM to manage courses such as updating courses outline, posting important announcements, allowing students to register online and capturing learner profiles

Fortnightly, learners will be attending **'Face-to-face'** tutorials, which are held at all learning centres. OUM has currently 18 learning centres, five owned by the university and the rest on contract basis with selected institutions or colleges or public universities. Tutors will be conducting tutorials using the printed modules already distributed for self-learning, and at this session tutors will discuss with the learners study topics, assignments, problems related to their studies and to help them with topics they have covered.

5.0   THE DIGITAL LIBRARY IN OPEN AND DISTANCE LEARNING (ODL)

Definition of the Digital Library (DL)

"Digital library are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities" (Digital Library Federation, 1999)

The OUM Digital Library

The OUM is a non-traditional and non-conventional university so the role of the library and librarian must also be non-traditional and non-conventional. At OUM, the library and librarian are facilitators of learning. They not only provide support in terms of collection and services, they are also actively involved in facilitating learning because they work together **with** the tutors and 'subject experts' to develop the learners' information skills via formal user education programmes. In this way, they are actively involved in the teaching-learning process at OUM. Although they do not conduct lectures and tutorials, because learning is self-managed and library users must be independent users, the library has to assume a more involved role in the learner's learning activities.

The OUM Digital Library was launched in August 2002, with a mission to 'support the teaching, learning, instructional and research requirements in digital format as well as in print, to provide virtual learning support and to encourage the use of digital collections, anytime and anywhere'.

In short, the library was established to provide its learners with the information they require for learning through the knowledge databases and resources via online, accessible anywhere, anytime i.e. in the virtual learning environment.

The OUM students' enrolment has increased tremendously to the present population of 12,000 and is expected to increase to 17,000 by the end of 2003. Many of them are working adults and not necessarily based in campus. They are geographically distributed all over the country. They have the option of learning from where they choose to be at any time according to their own pace. Although widely dispersed the student population still requires information and information services for their learning and research activities.

The open and distance learning concept is relatively new in Malaysia, but it is becoming very popular and gaining wider acceptance. The ODL method of delivery however relies on the rapid advances in ICT and easy access to the Internet, thus greater acceptance of the virtual or digital library.
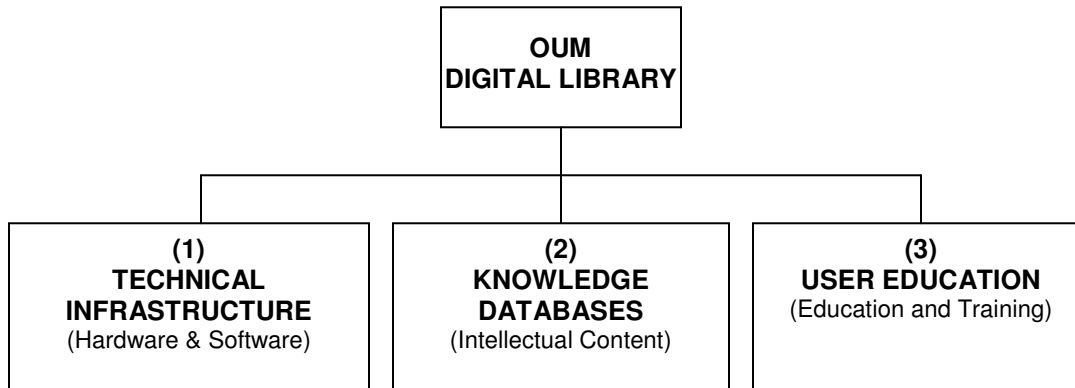
The basic library and information needs of ODL learners can be identified as:

- Access to information resources
- Knowing how to find the information they need
- Developing skills to apply the information to their assignments, studies, exam. etc.

Components of the OUM Digital Library

An effective digital library should comprise the following:

i)   Technical infrastructure consisting of the hardware and software
ii) Knowledge databases consisting of commercial and in-house databases
iii) User education

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                    │        OUM          │
                    │  DIGITAL LIBRARY    │
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┌──────────────────┐ ┌──────────────────┐ ┌──────────────────┐
│       (1)        │ │       (2)        │ │       (3)        │
│    TECHNICAL     │ │    KNOWLEDGE     │ │  USER EDUCATION  │
│  INFRASTRUCTURE  │ │    DATABASES     │ │(Education and    │
│(Hardware &       │ │(Intellectual     │ │ Training)        │
│ Software)        │ │ Content)         │ │                  │
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i. Hardware
   HP server for database
   HP server for I-Portal

ii. Software – VIRTUA
   • acquisition module
   • cataloguing module
   • serials module
   • circulation module
   • OPAC (Chameleon)
   • Reports module

i.   Commercial Databases
       e-books (24 x 7, ebrary)
       e-journals (EBSCO Host,
       Emerald, Eiv2, Proquest
       Education, SpringerLink)

ii.   In-house Databases
       Course material
       Examination questions
       Academic exercise
iii. Monograph collection

Programmes
i. Basic Information Skills
   Programme

ii. Advanced
    Information Skills
    Programme

Outcomes
i. Information Retrieval Skills
ii. ICT Skills

6.0   ROLE OF DIGITAL LIBRARY IN OPEN AND DISTANCE LEARNING

1.   The Digital Library's relevance to OUM lies in its ability to facilitate learning in 3 aspects:

        i)   Bridging the 'Equal Opportunity' Divide
        ii)   Bridging the Information Divide
        iii)   Bridging the Digital Divide

i)   Bridging the 'equal opportunity' divide

The students of OUM are of 2 categories

        i)   mature working adults with minimum qualifications but with invaluable and relevant working experience
        ii)   secondary-school leavers who for various reasons have been 'excluded' from mainstream university enrolment. To many, it is a second chance at getting a formal qualification. OUM then presents an alternative route. These students are distributed all over Malaysia and are often physically and geographically disadvantaged. These students comprise women, housewives, senior citizens, adult learners from remote areas, etc.

              To all of them, the DL must provide support via appropriate services and technological infrastructure so that barriers and obstacles to self-managed learning can be overcome.

              The main issue is – how does the DL guarantee the 'democratic' rights to learning of students registered at OUM? This will affect collection development, quality and mode of delivery of services, technical infrastructure, attitude of staff, etc. It will be difficult to ensure equal opportunity for all so policies must be formulated bearing in mind the learning needs of the users.

ii)   Bridging the information divide

It cannot be denied that students of OUM who live in the urban areas, especially in the Klang Valley have better chance at getting current information from universities, national and public libraries as well as from other information sources such as ASTRO TV, newspapers, mainstream TV and radio stations, museums, galleries, etc. than those in remote areas. Bearing in mind that the quality of information used in exams., assignments and lectures will produce better results, those who do not have access to information, especially current information, will be disadvantaged with regard to the quality of their learning.

How then can the Digital Library ensure that OUM students can get the benefits of the DL in order to be equipped with the right information needed for their learning activities. One way is to ensure that collection development is comprehensive and that materials are relevant, accessible and deliverable to all students. Loans policies must be flexible and user-friendly and the technical infrastructure capable of delivering information to where the learner is – at home, at office, at the learning centre or anywhere convenient. The role of ICT is critical in ensuring that information can be delivered or accessed any time, anywhere, anyhow. The important thing is to ensure that no one student is disadvantaged or deprived of information he needs for his learning.

iii)   Bridging the Digital Divide

a)   Via Digital Collection

The digital collection at the DL serves as the nerve centre for all types of learning at OUM --- self-managed learning, on-line learning or face-to-face tutorials. Although students are given printed learning modules and have access to audio-video tapes and CD-ROM, access to the DL's e-books and e-journals would help in raising the quality of their learning because they contain current information and represent the world's best. Exposure to the electronic databases would help OUM students to be 'global' in exposure and orientation.

b)   Via Information Skills Programme

The IS programme can be said to be the great leveller because in acquiring 2 types of basic skills (a) Information retrieval skills (b) ICT skills, OUM learners can develop as independent learners throughout life.

2.   How does the OUM Digital Library facilitate learning at OUM?

i)   By providing the type of collection suitable for open and distance learning
ii)   By providing non-traditional and non-conventional services e.g. postal, personalised web-based information delivery systems, monitoring mechanism for usage (too easy to adopt an 'out of sight out of mind' attitude)
iii) By ensuring that OUM learners are equipped with the necessary information retrieval and handling skills as well as ICT skills to access the e-collection and e-systems at the DL

i)   COLLECTION

a)   Digital Collection

The Digital Library houses a total of seven databases, two are the in the form of e-books and the remaining 5 are in the form of e-journals. The details of the databases are given below:

E-books
- EBRARY – contains more than 20,000 titles of digital books
- BOOKS 24 x 7 – contains more than 3,527 title of digital books on ICT

E-journals
- EBSCO HOST – more than 6,000 titles
- Emerald Intelligence – 100 journals
- PROQUEST EDUCATION COMPLETE – 800 journals
- SPRINGER LINK – 484 journals
- EIVILLAGE2 – 5000 journals articles

b)   Benefits

Learners have to access MyOUM web page to benefit from the digital library collection. The portal houses all services provided to patrons using single-on access. The online public access catalogue (OPAC), in *MyLibrary* portal, enables learners to search for library materials. The user-friendly system is easy to used and has many self-service features including loan renewals, reservation of items on loan to other learners, checking out items. This is because OUM uses the latest technology for the library system. Learners may search for information via enhanced methods including thesaurus selective dissemination of information (SDI) and extended bibliographic services.

Through the library portal, learners will also be able to search and navigate various online databases, which the latest periodicals from web-based resources to enable learners to keep

abreast with the latest developments in the borderless world of information. Learners will benefit from the information-rich knowledge databases available at a click of a button.
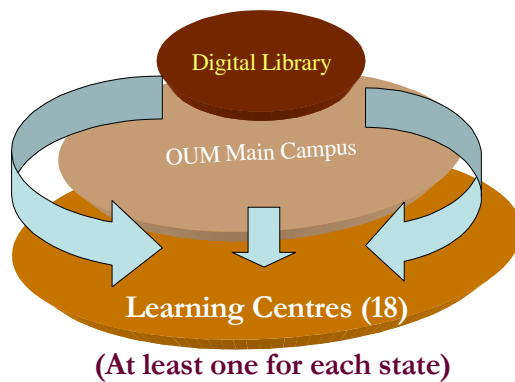
c)   Guides to collection

Brochures, face-to-face orientation sessions, IS learning modules in print, CD and on-line formats provide guidance. The on-line programme hopes to begin in August 2003.

ii)   Services

Services are provided for on-campus and off-campus students. For off-campus students, prescribed textbooks are available at all Learning Centres. Communication between learner and librarian is web-based. These students have access to collections from other libraries that have arrangements with OUM. OUM students are also allowed to be members of other university and colleges libraries so that they can benefit from the collections and services available at their host libraries.
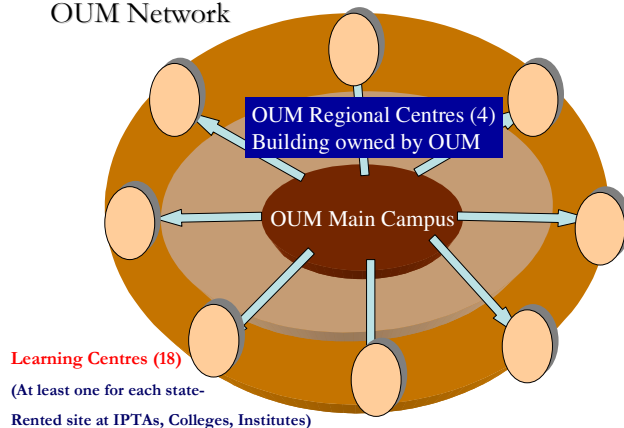
OUM Digital Library Services to ODL Learners

Digital Library
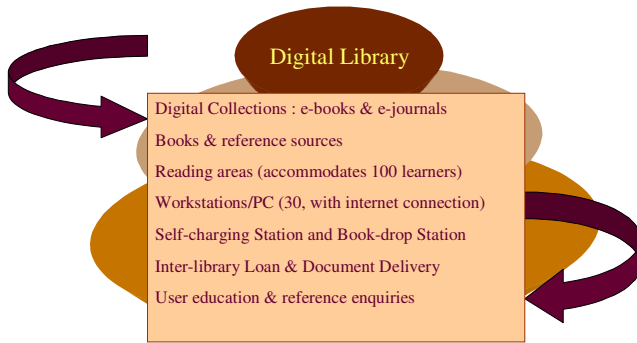
OUM Main Campus

Learning Centres (18)

(At least one for each state)

OUM LIBRARY   1

OUM Network

OUM Regional Centres (4)
Building owned by OUM

OUM Main Campus

Learning Centres (18)

(At least one for each state-

Rented site at IPTAs, Colleges, Institutes)

OUM LIBRARY   2

10

OUM Digital Library Services to ODL Learners

Digital Library

Digital Collections : e-books & e-journals

Books & reference sources

Reading areas (accommodates 100 learners)

Workstations/PC (30, with internet connection)

Self-charging Station and Book-drop Station

Inter-library Loan & Document Delivery

User education & reference enquiries

OUM Digital Library Services to ODL Learners

Digital Library

OUM Main Campus

Learning Centres (18)

Resource Centre
- ✓ Basic Textbooks
- ✓ References
- ✓ Modules/Learning Materials
- ✓ Exam. Question
- ✓ Brochures/guidebooks

ILL/DD

Delivery Modes OUM - ODL Learners

Digital Library

OUM Main Campus

Learning Centres (18)

➢ **Self managed learning (printed modules)**

➢ **Face-face tutorials**

➢ **E-learning**
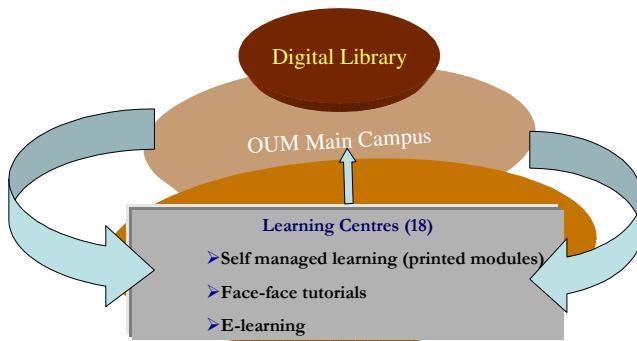
iii) Information Skills programme

No matter how excellent the collection and systems are, without the skills to access them, the Digital Library will be rendered ineffective. Users must be taught two basic skills in order for them to use the Digital Library competently:

1) Information Retrieval Skills (IRS)
2) ICT Skills

Both skills are indispensable in the effort to:

1) fully exploit the library collection and systems for the purpose of learning, teaching and research in OUM
2) develop independent lifelong learning skills among OUM students and staff

The library is therefore committed to run the Information Skills program for those reasons and based on the following objectives:

a) To develop ICT knowledge and skills through regular use and hands-on experience. Computer literacy will be enhanced through the frequent and interactive on-line communication between user and the Cybrarian (cyber librarian) for information and digital library needs

b) To teach users to understand the information retrieval processes, identify suitable search strategies and locate information that meet their needs, evaluate the output and finally use information appropriately

c) To enable learners to work independently, apply information retrieval skills and use information effectively

d) To encourage the use of English language (in line with the current policy) as most databases and digital resources are available in English

An Information Skills Programme is therefore critical in order to ensure that the students and staff of OUM have a head start in acquiring competencies that would make them more efficient independent learners and teachers.

7.0   CHALLENGES FACING THE DIGITAL LIBRARY

The ODL environment requires OUM learners to be proactive, self-motivated, collaborative, interactive, independent and self-reliant. Learners should be able to be active agents of their own learning, i.e. in the construction of their own knowledge. They are exposed to various methods of learning, working together in small groups, develop critical thinking and be interactive. With minimal guidance from an instructor, the learners study at their own pace using self-study printed materials, audio and video tapes, CD-ROM and online learning (e-learning). All of these provide challenges to the library entrusted with the task of helping to provide OD learners with the learning resources.

The challenges can be categorized into the following perspective:

Learners' perspective:

- Not aware of library services
- Need to maximize usage of digital materials
- Problems of accessibility at some sites (network problems)
- Need to be equipped with information retrieval and ICT skills

- Working adults have less time to access DigLib
- Some learning modules do not require learners to use library resources

Library Staff perspective

- Need to encourage awareness and usage
- Lack of in-house online resources, dependent on commercial database providers
- Need to increase effectiveness of library services
- Need to have right attitude towards users
- Need to be multiskilled for learners on-campus and especially off-campus

Technology Perspective

- Connectivity problem
- Access (infrastructure and network capacity) must ensure access capability
- Development of in-house databases

All of these requirements need to be addressed by OUM DL to ensure that learners have access to quality services. Satisfaction on the part of the user is testimony to the effectiveness of the DL.

8.0   CONCLUSION

In providing an alternative route to obtaining a higher degree qualification via open and distance learning programmes that cater to the students' individualised learning needs and style, OUM has not only set the pace for independent lifelong learning but also provides an opportunity for those who have been excluded from the mainstream university courses to have another chance in life.

The need to understand the reason why OUM exist is important to the OUM Digital Library because only then will it be able to formulate policies, develop facilities and undertake services that would help to ensure that learning in OUM can be self-managed and managed well.

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