

**Feasibility Study:
The development of
Graduate Programs in
INFORMATION MANAGEMENT
at
Zayed University, UAE.**



**FINAL REPORT
July, 2013**

What is an *Information Professional*? SLA 2003

(Abels, Jones, Latham, Magnoni, & Gard Marshall, 2003)

An Information Professional (“IP”) strategically uses information in his/her job to advance the mission of the organization. The IP accomplishes this through the development, deployment, and management of information resources and services. The IP harnesses technology as a critical tool to accomplish goals. IPs include, but are not limited to librarians, knowledge managers, chief information officers, web developers, information brokers, and consultants.

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EXECUTIVE SUMMARY

PROGRAM PROPOSAL

A Graduate Certificate program or Master's Degree in Information Management at Zayed University (ZU) would include professional qualification for work in libraries, archives and information services. The development of these programs should be based upon a clear understanding of the qualifications, knowledge, skills and experiences required by professionals working in this career in the UAE, and reflect international best practice. Curriculum development would vary according to identified interest areas by potential students, and likely employment options available in school, public, higher education, government or special libraries, as well as archival or information management positions in the UAE. There should be an initial concentration on career opportunities for Emirati students seeking to work in the UAE, to be expanded with demand.

DATA

Data collection and analysis was undertaken between February and July 2013, resulting in a sample of 699 completed survey responses from potential students in the UAE, and 28 completed survey responses from potential employers enhanced by 30 personal interviews with potential employers in the UAE. Specific requests addressed to ZU and seeking to initiate a Masters in Information Management were also received during this period from Ali Maihed Al Suwaidi, Undersecretary, Ministry of Education, and from Dr. Abdulla Reyes, Director General, National Center for Documentation and Research.

Student responses comprised 86% Emiratis, with 54% living closer to Abu Dhabi and 46% closer to Dubai. 45% of respondents were "interested" or "very interested" in a career in information management; 50% of respondents were interested in a Masters level of qualification; 66% of respondents were interested in starting this study within the next two years. Major areas of interest for students considering this career path were opportunities in higher education, government or company libraries, archives, and school library services.

Employers responses were largely from higher education, school, and archival services, and while some expressed reservations, a large majority were very supportive of the establishment of a good quality Information Management program at ZU. This was viewed as a new and important opportunity for Emirati employment. Employers emphasised the need for a successful program to be internationally recognised and accredited, with a partnership established with a creditable international library school.

MAJOR RECOMMENDATIONS (Full recommendations p.28)

1. Establishment of Graduate and/or undergraduate programs in Information Management

With wide support by employers involved in the surveys and meetings, as well as sufficient potential student numbers to be economically viable (more than a minimum 50 students per year), it is considered that establishment of either graduate and/or undergraduate programs of internationally recognised standards in the Information Management discipline is warranted in Zayed University.

2. Masters level programs in Information Management and Archival Studies

There is an identified demand for a Masters level program in more general library sciences, information management or archival studies which are likely to fill current employment requirements.

3. Maintenance of Graduate Certificate level programs

It is recommended that the Graduate Certificate level of qualification be maintained and promoted as the first stage of a Masters level qualification, to enable students' flexibility in their study commitments.

4. Establishment of Graduate and/or undergraduate programs in Teacher Librarianship

It is recommended that the College of Education be involved in development of a Bachelor of Science in Education and/or a Masters level program, with specialization in "school librarianship" or "learning resource management" (whichever terminology is deemed appropriate), based on the documented demand for qualified staff in this area.

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1. BACKGROUND

1.1 UAE imperative for the development of educational opportunities

This feasibility study evaluated the viability of establishing graduate programs in information management at Zayed University (ZU) in the near future. This study has documented the likelihood of students being interested in undertaking study towards this career path, as well as employment options for qualified graduates, should educational programs become established. As well as providing a career path for Emiratis not currently available, the establishment of graduate programs in this discipline will need to demonstrate financial viability for the university. This feasibility study involves evaluation of the establishment of graduate programs which would be open to both Emirati and expat students.

There is an increasing emphasis within the UAE government on the building of a *knowledge economy*, and concomitant increase in the development of a range of library, information and archival services within the last few years. A proactive Emiratisation of the workforce in the UAE is contrasted, in this case, with the lack of availability of appropriate educational opportunities for Emirati students who may wish to pursue this career path within the country.

There have been several attempts to initiate graduate programs for library, archival or information management qualifications at Zayed University since 2009. These initiatives have involved ZU library management, and what was then referred to as the *College of Information Technology*.

The proposed programs were:

October 2009: Graduate Certificate in Library and Archival Science

May 2010: Graduate Certificate in E-Archives and Information Management
(This program reached approval by the ZU Provost Council)

May 2010: Masters of Science in Information Management

These latter graduate programs appear to have been designed to suit the request for archival and information management qualifications by the UAE military, although these needs apparently changed. The course and curriculum designs suited the specific needs of the military, so were unable to be marketed successfully to the wider community.

This feasibility study has included:

- an online survey of potential students in ZU and in the wider UAE community,
- a general online survey of potential employers in the UAE,
- an online survey (disseminated in Arabic and English by the NCDR) targeted at archival services,
- personal interviews and communication with a range of employers, competitors, professionals in the field, and related educational, policy and government stakeholders.

Terminology in this multi-disciplinary educational field is extremely varied, including Library Studies, Archival Sciences, e-Archives, Information Management/ Studies/ Sciences/ Services, Informatics, or Knowledge Management. It is anticipated, should it be agreed to go ahead with graduate programs in this discipline, that terminology used should be internationally recognised rather than gimmicky, and should be based around the commonly used broad term of "Information Management". Specializations within this program name could include "Library and Information Science", "Archives and Record Management" or "School Librarianship", as demand is identified.

A proactive Emiratisation of the workforce in the UAE is contrasted, in this case, with the lack of availability of appropriate educational opportunities for Emirati students who may wish to pursue this career path within the country.

1.2 INTERNATIONAL Imperative for the development of educational opportunities

There is world-wide recognition that the traditional professions of librarianship, archivist, or teacher librarianship are undergoing transformation into broader and non-traditional roles, such as research analyst, data coordinator, web designers, and information brokers and creators. Substantial research in the US, UK, Canada and Europe documents a transition of the information professional impacted by technological and business model changes to include flexible and transferrable skills, often with the need for specialist discipline knowledge, ability to collaborate, and skills in project management and technology applications which can bring information resources remotely to wherever users are located (Abell, Chapman, Phillips, Stewart, & Ward, 2006; Abels et al., 2003; Ard et al., 2006; Choi & Rasmussen, 2009; Dalton & Levinson, 2000; Fisher, 2004; Gerolimos, 2009; Park & Lu, 2009; Saw & Todd, 2007; Smith, Hallam, & Ghosh, 2012).

There is a “need and importance of designing approaches to education that are responsive to the rapid and ongoing technological change of the evolving information age, and developing dynamic curricula that accommodate the demands of an increasingly broad and diverse employment landscape.” (Partridge et al., 2011, p. 4)

Recognition of changes in the information management profession is also evident in the Gulf region, with the title and content of the recent Special Libraries Association (Arabian Gulf Chapter) major MENA conference being: “The future of the profession: Break the no longer traditional profession and tune into the future of digital professional environment”. The keynote speaker, Ann Wolpert, Director of Libraries at MIT, spoke of the changes in job descriptions to reflect the need for a high degree of competence with new technologies. Recent research published from Oman reported on the competencies of information professionals there, and the direction taken by professional education in the country.

Conclusions reached in Oman reflect those recognised internationally:

“It is not enough to produce graduates with basic technical skills enabling them to identify, organize, process, and deliver timely information. It is necessary to produce knowledge workers capable of managing their information institutions effectively, assessing and synthesizing information, designing search strategies for better information retrieval, negotiating contracts and decision making, applying current techniques and tools to be more involved in knowledge economics of today.” (Jabr, 2010, p. 273)

The University College of London (UCL) in Qatar has just announced the launch of an “MA in Library and Information Studies”, acknowledging the increasing demand for well qualified information professionals in the country:

We expect graduates of the Library and Information Studies programme to be well-equipped to assume senior positions within the growing National Library, whilst Diploma candidates will be well-placed to go on to pursue further study at Master’s level. (Rehren, 2013, para 5)

In summary, there is international recognition, including within the MENA region, of the expanding role and importance of information professionals within new global and knowledge economies. Information professionals can be librarians, knowledge managers, information officers, information brokers, curators, archivists, consultants, or web developers. Pathways for employment will continue to broaden, and the need for graduates to be equipped with new transferrable skills will increase.

A summary of the names of roles for information management professionals, as identified in Australian, USA and UK literature is attached in *Appendix 1* (Taken from Partridge et al., 2011, pp. 119-121).

1.3 UAE Policies and Legislation

The UAE government has directed development towards a knowledge economy in the foreseeable future, included in policy and research documents such as *UAE Vision 2021* ("UAE Vision 2021," 2011), *The Abu Dhabi Economic Vision 2030* (Government of Abu Dhabi, 2008), *The UAE in the Global Knowledge Economy* (Emirates Competitiveness Council, 2011), and the *Arab Knowledge Report 2010/2011* ("Arab Knowledge Report 2010/2011: Preparing future generations for the knowledge society," 2010).

Constructing a knowledge-driven economy requires new skills from a highly trained workforce, and must include the ability to understand, manage, utilize, and be innovative with information resources.

According to the National Research Foundation (NRF), the development of research capacity within the UAE is one of nine major directions identified within the *Competitive Knowledge Economy Strategic Priority*: to "Promote and enhance innovation, research and development" (National Research Foundation, 2008).

Emiratization of the UAE workforce is also a priority direction of the Federal Authority for Government Human Resources. In the recent *Emiratization Plan in Federal Government Sector & Mechanism for Coordination and Follow-up (2010-2013)* (Federal Authority for Government Human Resources, 2011), a primary goal is to target Emirati recruitment in the UAE Federal Government to be at least 60% of this workforce by 2013. As will be documented, there is a lack of options for qualification in the information management discipline in the UAE, despite recent trends providing an opportunity for employment in a range of organization types, in virtually all locations within the UAE.

Federal Law No. (7) for 2008 on National Center for Documentation and Research (NCDR) established the need for all federal government departments and bodies to deposit documents with the NCDR within five years, and in Article 9, states that "in coordination with the Center, government bodies have to provide favorable conditions for the safety and preservation of documents throughout their holding thereof" (National Center for Documentation and Research, 2008).

The Commission for Academic Accreditation (CAA) licenses institutions of higher education within the UAE, based upon *Standards for Licensure and Accreditation, 2011* (Commission for Academic Accreditation, 2011). Standard 6 refers to learning resources, and mandates the provision of a library service in each campus location of an institution, as well as documentation that "the professional library staff is sufficient in number, has appropriate professional training and is able to serve the students and faculty through bibliographic instruction, access to collections, both print and electronic, and to other forms of information technology during all hours of operation."

In Dubai, the Knowledge and Human Development Authority (KHDA) "Inspection Handbook 2012-2013" includes general guidelines for a quality curriculum (Section 4) and appropriate school staffing and resourcing (Section 6.5), but makes no specific reference to the provision or staffing of school library services at all (Knowledge and Human Development Authority, 2012). The Abu Dhabi Education Council (ADEC) 10-year Strategic Plan seeks to transform public schools throughout the Emirate, including an active plan for improved library management and a library upgrade project. The ADEC library management plan "is developing and transforming traditional school libraries into 21st century Learning Resource Centers... a place where quality LRC programs and qualified LRC Specialists improve the reading fluency, general literacy, and overall academic performance of students." (Abu Dhabi Education Council, 2009)

2. RESEARCH

2.1 Potential UAE employers in the Information Management field

Library and archival development in the UAE has experienced a growth in value in recent years, based both on government policy directions and visionary organizations. The number of libraries, information centres, and archives in the UAE is difficult to determine, but totals at least 1050 service points, including:

Archives – 202 service points

According to Dr Abdulla Reyes, Director General of NCDR, there are now 202 government bodies with a requirement to collect and organize an archival service, few of whom currently have staff with the expertise to undertake this role.

Higher Education Institutions – 80 institutions (some have multiple branches, e.g. HCT, ZU)

The Commission for Academic Accreditation (CAA) has currently licensed 77 institutions of higher education within the UAE. The national higher education institutions of UAEU, ZU, and HCT are currently exempt from this accreditation process and together also represent multiple campuses in every major location in the UAE. According to Dr. Ian Cumbus, Commissioner at CAA, most institutions involved in accreditation have appointed a library manager/director having a Masters level qualification in Library Sciences, and that this is most appropriate.

School Libraries – 680 schools

K-12 schools in the UAE are administered variously in different Emirates. There are 79 public schools in Dubai and the northern Emirates administered by the Federal Ministry of Education (MOE), and 148 private schools annually inspected and evaluated by the Knowledge and Human Development Authority (KHDA). A library has traditionally been an important feature of many private schools in the UAE, including many with professional staff, depending on the curriculum and management of the school. Anecdotal evidence from students points to low standards of library services in public schools, administered by MOE, which have rarely employed professional staff. MOE executive has recently expressed a desire for ZU to establish appropriate qualification programs to enable Emirati school library staff to work towards a marked improvement in the standards of educational support currently provided by libraries.

In the Emirate of Abu Dhabi, the Abu Dhabi Education Council (ADEC) undertakes much of the funding and management of schools – there are currently 268 public schools and 185 private schools in three regions. As in Dubai, the private schools usually maintain a good quality library service and often employ professional staff, but public schools have not traditionally experienced reasonable facilities nor qualified staff. According to Badreya Al Rejaibi, Library Advisor in ADEC, there has already been a complete redevelopment of about 30 LRC facilities in Abu Dhabi public schools, including installation of computerized library management systems, but there remains a dearth of qualified or experienced library professionals to manage these centers. The minimum requirement qualification for employment in ADEC schools is Bachelor level. The ADEC Future Schools Project aims to build 100 new, high quality schools in the Abu Dhabi Emirate by 2020. <http://www.adec.ac.ae/en/Education/KeyInitiatives/Pages/Future-Schools-Project.aspx> The ADEC strategic plan aims for “a robust and multi-disciplined Emiratization strategy based on our long-term plans to recruit, train, develop and retain UAE nationals at all levels in our business and to help Emiratis become leading professionals in the Education sector, hence contributing positively to the welfare and development of the UAE.”

<http://www.adec.ac.ae/en/Education/KeyInitiatives/Pages/Emiratization.aspx>

Public/National Libraries – 45 libraries

Public library services in the UAE have historically been a low priority, but are currently being developed in both Dubai and Abu Dhabi. The Dubai Culture & Arts Authority (DCAA) as part of the Government of Dubai assumes responsibility for public libraries, and “aims to improve services and new initiatives... educational programs, book readings, book signings, trainings and cross-cultural exhibits”. There are currently 8 public libraries in Dubai, most with professional staff positions.

The Abu Dhabi Authority for Culture and Heritage (ADACH) has recently been renamed to the Tourism and Culture Authority (TCA), and assumes responsibility for both the National Library, and the development of new public libraries in the Emirate. Shaikha Al Mehairi, Library Services manager at TCA, stated that “we are expected to continue opening branches and currently we are short staffed and we do not have high level specialists (reference librarians, children librarians ..etc) The City of Abu Dhabi is expected to open not less than 30 branches of libraries in the wider city let alone Al Ain and Al Gharbia”. It is also a direction of ADEC libraries in Abu Dhabi Emirate to develop ‘*community centers*’ within school libraries in several locations, which will be open to the public after school hours. There are currently two such centers in Abu Dhabi, two in Al Ain, and one in Al Gharbia.

Government/ Military/ Medical/ Law/ Museums – ?

It has been difficult to determine the extent of government departments and government organizations within the UAE who currently support a library or information service, as personal contacts are limited in this area. The previous decision to undertake a library/archival graduate program at ZU on the request of the UAE military in 2009/10 however, suggests a reasonably large potential demand.

Private Research Facilities and Companies - ?

It has also been difficult to determine the extent of library and information services in private enterprise in the UAE within the scope of this feasibility study, although there are several significant research organizations with well established and professionally staffed library services, such as the Petroleum Institute, ECSSR and MASDAR. It is anticipated that major oil companies, banks and private hospitals support a quality library/information service. The development of national consortium projects such as the *Emirates National Catalog of Libraries*, and the *eFADA, Consortium of Academic and Research Libraries in UAE* (formed with the support of Ankabut) are an indication of a maturing information management profession in the UAE. The vision of the eFADA Consortium, for example, “is to advance the UAE knowledge economy through economic management and development of knowledge resources in higher education. Through shared resources, collaborations in purchasing, and collective publication of scholarly and research output, UAE’s education and research sector will make significant contributions in a global context.”

2.2 Data Collection: Potential Employer Interviews

Potential employers in the information management discipline were involved in personal interviews, including from:

National Center for Documentation and Research, Abu Dhabi
National Research Foundation, Dubai
Zayed University library staff, Dubai and Abu Dhabi
Zayed University Archivist, Dubai
Zayed University College Deans in Education and Technology Innovation, Dubai and Abu Dhabi
UAEU library staff, Al Ain
HCT library staff, Abu Dhabi
ADVETI library and Library diploma staff, Abu Dhabi
Tourism and Culture Authority, Abu Dhabi (National Library and public library development)
Abu Dhabi School Librarians Group
Dubai School Librarians Group
ADEC, Abu Dhabi
KHDA, Dubai
Emirates College of Advanced Education, Abu Dhabi
Petroleum Institute, Abu Dhabi

Library and archival facilities were also visited to better understand the state of information management services and staff in the UAE and Qatar (in addition to those above), including:

Al Bateen School, Abu Dhabi
Abu Dhabi Girls Applied Technology High School, Abu Dhabi
Dubai American Academy, Dubai
Al Mawaheb School, Abu Dhabi
Mubarak bin Mohamed School, Abu Dhabi
Canadian University, Dubai
Virginia Commonwealth University in Qatar
Northwestern University in Qatar
Carnegie Mellon University in Qatar

Almost without exception there was strong support within the library community for the development of an internationally recognised, good quality library program at ZU.

DATA SUMMARY from Employer Interviews

A diversity of library staff and potential employers were interviewed, but the majority were expat qualified librarians or archivists. There was some diversity of opinion as to the appropriate level of library qualifications needed in the UAE, but agreement that bilingual staff members who were qualified and experienced would be a great asset. Some employers involved with school library services considered that a Bachelor or certificate level qualification was most appropriate, although many viewed a Masters qualification as appropriate for all professional positions.

ZU is recognised as an ideal institution to develop such a program, with campuses in both Abu Dhabi and Dubai, and established administration and international partnership arrangements within many of the graduate programs already offered there.

Existing library and archival Masters programs within the UAE and the MENA region were not regarded by professionals interviewed as serious competition to the establishment of a new program at ZU.

More important were the repeatedly expressed opinions that Emirati students:

- (a) Had little experience or perception of what a good quality library service was, based upon a poor role model often experienced by Emirati students during their school years. As a result, it was generally felt that the role of the “librarian” in the UAE carried a low status amongst Emiratis, and professional functions were not understood; and
- (b) Relatively low pay and harder working conditions than that often expected in government departments could be a potential dissuasion for Emirati students to undertake this career path.

It was clear that many Emiratis and expatriate staff currently employed within libraries and archival services, or Emiratis who had recently completed the ADVETI Diploma course, had a far greater understanding of the modern role and challenges of the profession, and were very keen to undertake further studies, should they become available.

2.3 Data Collection: Potential Employer Surveys

Employers in information management organizations throughout the UAE were sent a short online survey during March and April 2013. Ethical clearance at ZU predicated this survey (ZU13-016-E).

28 completed surveys

7 individual private school libraries plus ADVETI and ADEC

18 higher education libraries (2 in Qatar; 6 branches of HCT; 11/18 responses from national universities or branches (including UAEU, ZU and HCT) and 7/18 responses from private universities)

1 National Library (Abu Dhabi)

Geographical coverage of institutional location included Dubai, Abu Dhabi, Sharjah, Al Ain, Doha.

SCHOOLS

7 individual private school libraries plus ADVETI and ADEC

- 1. Does this information service purchase, catalog and end-process its own resources, or rely on a centralized or commercial organization for these services? Brief details:*
8/9 services undertake at least some in-house purchasing, processing and cataloguing of materials. This is more common for Arabic resources. 1/9 missing response.
Summary: 100% of respondents undertake at least some in-house cataloguing and processing of materials
- 2. Does this information service utilize a computerized library management system?*
2/9 services use Follett *Destiny*
2/9 services use Softlink *Oliver*
1/9 services use SirsiDynix *Symphony*
1/9 services use Innovative *Millennium*
3/9 missing response.
Summary: 100% of respondents use a computerised library management system
- 3. How many professional staff are employed? Please include the current salary range and the qualification required for professional staff in this information service:*
7/7 private schools have a qualified librarian or teacher-librarian, often with library assistant. Salaries range from 8,000 AED to 24,000 AED per month, some with full overseas hire with benefits. Acceptable qualifications meet international standards i.e. Bachelor or MLIS equivalent.
- 4. How many para-professional staff are employed (e.g. technicians)? Please include the current salary range and the qualification required for para-professional staff in this information service:*
4/7 services employ at least one para-professional staff. 1/7 has no para-professionals
2/7 missing response.
- 5. How many Emirati staff are employed? Please include the current salary range and the qualification level of Emirati staff in this information service:*
0/9 school services report employment of Emirati staff.
- 6. Please indicate your staff expectations for hours of work, shift work, weeks of annual leave, and whether staff are likely to encounter members of both genders in this information service:*
5/7 services report working 5-day week, 8-9 hours per day, usually with academic leave breaks. Shift work not required. Usually mixed gender environment – one respondent was a female only school.
- 7. Please indicate your perceived recruitment needs in the near future for (a) professional or para-professional staff, and (b) Emirati staff, in this information service:*
2/7 services do not foresee recruitment in the near future.
1/7 services do foresee recruitment:
“Ideally, an Arabic-speaking librarian, preferably Emirati, will take over the role of librarian.”

8. *Please indicate your view on any recruitment problems you have encountered for particular skills/positions in this information service, or suggested gaps you see in currently available training or qualifications available for these careers in the UAE.*

Several comments made:

Perceived problems with recruitment of ADVETI graduates: "ADVETI library certificate program graduates are qualified to work as library assistants here, but there are many hiring delays and obstacles from within our organization."

Need for "degree of library and info science"

"Also a need for library technicians trained in reference work and customer service. We train our Library Assistants in-house but would like an ONLINE course. A 6 week course was formerly available from Rutgers university but this has been discontinued."

9. *Is your organization likely to be able to offer work experience placement or internships for graduate Certificate or Master's students? Would you support library tours by students, or would existing library staff be interested in participating in teaching, or having input into course or curriculum design?*

4/7 services would like to give course support, and internships, including 1x in Qatar. 1/7 not interested.

2/7 Missing response.

HIGHER EDUCATION Libraries plus the NATIONAL LIBRARY

18 higher education libraries (10/18 responses from UAE national universities or branches (including UAEU, ZU and HCT), 8/18 responses from private universities, including 3 in Qatar)

1 National Library (Abu Dhabi)

1. *Does this information service purchase, catalog and end-process its own resources, or rely on a centralized or commercial organization for these services? Brief details:*

19/19 services undertake at least some in-house purchasing, processing and cataloguing of materials. This is more common for Arabic resources. HCT Central Services undertakes this role on behalf of all branch services.

Summary: 100% of respondents undertake at least some in-house cataloguing and processing of materials

2. *Does this information service utilize a computerized library management system?*

5/19 services use an unspecified computerized system

11/19 services use Innovative Millennium

2/19 services use SirsiDynix Symphony

1/19 services use Aleph by Ex Libris

Summary: 100% of respondents use a computerised library management system

3. *How many professional staff are employed? Please include the current salary range and the qualification required for professional staff in this information service:*

5/19 missing responses

14/19 respondents hired professional librarians with MLIS or equivalent qualifications.

Numbers of staff depended on size of institution. Professional salaries ranged from 14,000 AED to 40,000 AED, though an average monthly salary was in the region of 16,000 AED, and Emirati staff were paid 2-4,000 AED more per month at the equivalent level.

4. *How many para-professional staff are employed (e.g. technicians)? Please include the current salary range and the qualification required for para-professional staff in this information service:*

5/19 missing responses

14/19 hire at least one para-professional staff or library assistant – title "library technicians".

Qualification levels very inconsistent – some required Bachelor in LIS or IT, some 2-year diploma, some nothing. Salary levels also varied from 7,000 AED to 30,000 AED per month, with Emirati staff often much higher paid. Average salary around 10,000 AED per month.

5. *How many Emirati staff are employed? Please include the current salary range and the qualification level of Emirati staff in this information service:*
- 5/19 missing responses
 5/19 services do not employ Emirati staff currently.
 9/19 services employ Emirati or Qatari staff. Qualifications vary – some a general Bachelor degree, diploma from ADVETI. Salaries vary from 8,000 AED to 28,000 AED, with an average around 15,000 AED per month. Qatari libraries do employ Qatari nationals - “Librarianship is considered a suitable profession”.
6. *Please indicate your staff expectations for hours of work, shift work, weeks of annual leave, and whether staff are likely to encounter members of both genders in this information service:*
- 7/19 missing responses
 10/19 services expect 8-9 hours work shift per day
 7 /19 services expect shift work
 7/19 services encounter both genders in the workplace
 Annual leave varies; some services require leave to be taken during academic breaks.
 “Emirati staff have different expectations for working conditions”
7. *Please indicate your perceived recruitment needs in the near future for (a) professional or para-professional staff, and (b) Emirati staff, in this information service:*
- 8/19 missing responses
 1/19 services do not envisage an increase in staff recruitment
 10/19 services do envisage recruitment of professional and library technician positions in the foreseeable future, in both Qatar and the UAE.
 Several comments (UAE libraries unless indicated):
 “We would be happy to recruit Emiratis for any of these positions.”
 “We will add a professional librarian with every new degree program, maybe one each year over the next 5 years” (Qatar)
 “We will maintain our staffing levels, always requiring Qatari/Arabic speaking staff. The huge new Qatar National Library on Education City will require a very large number of qualified staff, estimated to be in the region of 100 librarians.” (Qatar)
 “Professional need is greater than paraprofessional need, mainly due to accreditation requirements, but as a perceived real need re expertise levels to develop the library into a more academic support unit. This means we would need to hire an additional 25-30 MLS professionals (w/ALA accreditation) over the next 8 years. Another 10 Paraprofessionals would suffice to fill existing gaps created by lost positions and attrition.”
 “We are expected to continue opening branches and currently we are short staffed and we do not have high level specialists (reference librarians, children librarians ..etc) The City of Abu Dhabi is expected to open not less than 30 branches of libraries in the wider city let alone Al Ain and Al Gharbia”.
8. *Please indicate your view on any recruitment problems you have encountered for particular skills/positions in this information service, or suggested gaps you see in currently available training or qualifications available for these careers in the UAE.*
- 9/19 missing responses
 Several comments made:
 “We lack librarians with technical skills and rounded experience. “
 “The library has been seen as a place to shift people rather than as a place to have properly skilled people.”
 “We are expected to fill vacancies with Emiratis. However, currently it is a challenge to recruit an Emirati with an information management qualification.”
 “We have trouble recruiting bilingual MLS staff”
 “Particular skills needed: teaching experience (understanding educational pedagogy/rubrics, learning strategies/styles), search strategies, ed tech/IT skills w/ teaching, advanced cataloguing & metadata skills, IT skills w/library applications. Also needed is true expertise in

Archives, Manuscripts, Special Collections (including issues preservation, conservation, digitization, copyright, etc.) This also involves broader areas of creative and critical work, such as the ability to initiate, innovate, problem-solve, expedite and follow up on tasks and major projects with high-end quality control, excellent work ethic/attitude/energy level and scientifically assess/evaluate services, usage, collections, etc.”

“Commitment to Emiratisation ... in my opinion, is very slight. Budget issues, however, are real, and library staffing budgets are being slashed. The issue is not that trained staff (professional and support) are not available, but that the library is not seen as an important enough space and dept ... and is being down-sized.”

9. *Is your organization likely to be able to offer work experience placement or internships for graduate Certificate or Master's students? Would you support library tours by students, or would existing library staff be interested in participating in teaching, or having input into course or curriculum design?*

8/19 missing responses.

10/19 services would like to give course support, and internships, including 3x in Qatar. Several service staff indicated strong interest in assisting with course curriculum and/or teaching in a MLIS course.

Typical comments made:

“Very much interested in course and curriculum design and whatever support needed for creating professionals for Library and Information Science field”

“If students during their internship come to get some training but also contribute to the improvement of information services or cataloguing services, we will be happy to provide internships”

DATA SUMMARY from Employer Surveys (Quotes from survey and interview responses)

Interview and survey data from potential employers confirmed the widespread support for the establishment of creditable library/ archival qualifications at ZU:

“As for filling the librarian position with an Arabic-speaking librarian, preferably Emirati, I don't perceived that there are yet qualified professionals in the field. I hope a library program will be created at ZU to remedy this.”

“The lack of an accredited MLS program in the UAE is a real problem as we would like to recruit well-trained, well-educated Emiratis for library positions.”

“Lack of Emiratis with necessary library qualifications. Non Emirati staff are studying MLIS outside the country as there are no degrees here.”

“There is a strong need for Bilingual Arabic/English speakers and Library professionals who can catalog Arabic books.”

“Emirati staff definitely needed with library qualifications at library assistant and library technology level.”

“Professional staff with MLIS needed in future. High level of IT competency also needed.”

“Emirati staff would currently only be qualified for paraprofessional positions, but could ideally be hired for professional positions if a viable MLS/MILS program were available locally.”

“Professional training prior to employment is preferable. Hiring a trained Emirati staff person in this position would also be preferable since speaking Arabic would be an asset.”

“I don't think you would get a large enough number of librarians across Abu Dhabi who would be taking a masters level of librarianship... You might get some students from surrounding Gulf countries like Qatar and Oman if the government would pay for their degree.”

Interview and survey data highlighted the need for qualified staff in the public schools of the UAE:

“I think a bachelors degree in librarianship is a more realistic approach to start the process of getting Emiratis into this most important field.”

“Most of the female TLs do have degrees. Some in the outer regions, close to the Saudi border, might not but I would think most do... The women are all Emirati that I encountered.”

Interview and survey data from potential employers also confirmed the lack of understanding of the modern role and potential of information management services:

“The Librarianship profession is not well understood even within the organization ... We cannot find people who understand information services provision, and even if we have qualified people, their experience level is extremely limited.”

“Libraries in government schools are often locked, poorly resourced, and lucky to have any staff at all. Staff are often failed teachers, or teachers who are looking for an easy option. There is usually no teaching, and no computers or internet in these libraries. They are just a baby-sitting service when used at all.”

A major concern of potential employers was with the work and pay expectations of Emirati staff, when compared to anecdotal evidence of work conditions within government departments:

“Time and money may be the wrench in the works! Money from the government shouldn’t be. Whether students or teachers would want to do the work when required would be the question.”

“One of the biggest problems we face is that the staff we have are often absent/late. Training in basic expectations of the workplace is needed as well as consideration for fellow employees who then have to pick up the slack for absenteeism.”

“Emirati females were employed in this location as library assistants. However, due to perceived low pay, too long working hours, and lack of child care facilities, staff resigned in favour of better paying govt jobs.”

“Problems recruiting Emiratis due to expectations of salary and working hours.”

“We can’t find suitable people who will be committed to working the hours and do the public services requirements.”

“Staffing levels at the libraries at ... have been slashed in the last three years. The short of this is that unless the profile of the library ... can be raised so that the libraries are adequately staffed, and that Emirati library assistants and technicians are paid on par with other government departments, there is no need to train librarian and library tech grads. There simply will not be jobs for them.”

“I think non-Emirati expats and children of expats might be interested in these kinds of training programs – and more willing to work for lower wages, on weekends and evenings, and in the presence of male employees and borrowers – but if library education programs to provide employment accreditation for Emiratis solely is the focus of your study, I can honestly say I’m not sure the demand for graduates (and graduate satisfaction with types of employment available) warrant such a program.”

“There seems to be a reluctance among Emirati government employers to offer part-time employment to Emiratis. This is unfortunate, because child care issues for many Emirati women is a real concern.”

“The few nationals that have applied & been interviewed for library positions lack the passion required to succeed in the profession and tend to figure that out themselves when you describe the work in any detail. Rather, they believe they should be given management level positions without any experience or training or willingness to obtain an advanced degree or training.”

2.4 Data Collection: Potential Student Surveys

Three surveys were applied between March and July 2013. Ethical clearance at ZU predicated these surveys (ZU13-015-E and ZU13-016-E).

One survey was designed and completed by ZU students only, and a separate survey was designed and completed by UAE people interested in information management as a career option. The UAE career survey was disseminated through existing institutions offering established information management services, such as in higher education libraries, major research and private enterprise organizations. Dissemination of the student survey to UAEU and HCT students which appeared likely unfortunately did not eventuate in the time available.

The National Center for Documentation and Research (NCDR), in coordination with this feasibility study, initiated an online survey of UAE government departments which are mandated by *Federal Law No. (7) for 2008* to deposit documents with the NCDR within five years, and to safely organize and preserve these government records in the interim. The NCDR has perceived a paucity of qualified and experienced archival staff within the UAE government, and is taking proactive steps to address this shortfall which is likely to impact on their ability to fulfil the requirements of the 2008 legislation. The NCDR survey (in Arabic and English) sought to determine the level of interest of potential students in undertaking studies towards archival qualifications, and if so, what the language, location, and education profile of these potential students would be.

There was a total of 699 completed responses received; 255 from ZU students; 202 from students or staff in the wider UAE population; 242 from students within government departments surveyed by NCDR.

ZU Student Survey (n=255):

96% Emirati

35% live nearest to Abu Dhabi

65% live nearest to Dubai

Interested in a career in information management/ libraries/ archives?

5% Very interested (25% Interested or Very Interested)

20% Interested

33% A little interested

42% Not interested

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x LEVEL (mutually exclusive answers)

41% Masters

27% Graduate Certificate

23% Undergraduate

9% Diploma or Certificate

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x WHEN (mutually exclusive answers)

28% interested in starting 2013 or 2014 (44% starting within 2 years)

16% interested in starting 2015

21% interested in starting in 2016

35% interested in starting later than 2016

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x
TYPE of SERVICE (ability to select multiple options)

- 47% A company or research organization, such as MASDAR or the Petroleum Institute
- 42% A government department library or information center
- 31% A university or college library
- 31% A military, law, or medical library
- 20% Abu Dhabi Authority for Culture & Heritage (National Library)
- 19% An archive or document management organization
- 13% A primary or high school library
- 13% Municipality or public library

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x
TYPE of WORK (ability to select multiple options)

- 39% Archival organization and indexing of information
- 36% Information technology support for library databases, management systems and websites
- 31% Customer service or reference work
- 30% Cataloguing and organization of resources
- 30% Information literacy teaching
- 30% Storytelling, children's literature and resource development to support school literacy programs
- 20% Purchasing and processing of new materials

UAE Student/Staff Survey (n=202):

85% Emirati

75% live nearest to Abu Dhabi

25% live nearest to Dubai

Have you worked in libraries/ archives/ information management?

65% No

36% Yes

Interested in a career in libraries/ archives/ information management?

28% Very interested (51% Interested or Very Interested)

23% Interested

31% A little interested

18% Not interested

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x
LEVEL (mutually exclusive answers)

53% Masters

13% Graduate Certificate

25% Undergraduate

9% Diploma or Certificate

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x
WHEN (mutually exclusive answers)

64% interested in starting 2013 or 2014 (79% starting within 2 years)

15% interested in starting 2015

15% interested in starting in 2016

6% interested in starting later than 2016

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x
TYPE of SERVICE (ability to select multiple options)

- 66% A university or college library
- 49% Abu Dhabi Authority for Culture & Heritage (National Library)
- 42% A government department library or information center
- 42% A company or research organization, such as MASDAR or the Petroleum Institute
- 31% A primary or high school library
- 30% A military, law, or medical library
- 27% An archive or document management organization
- 19% Municipality or public library

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x
TYPE of WORK (ability to select multiple options)

- 55% Information technology support for library databases, management systems and websites
- 51% Cataloguing and organization of resources
- 45% Customer service or reference work
- 39% Purchasing and processing of new materials
- 38% Archival organization and indexing of information
- 38% Storytelling, children's literature and resource development to support school literacy programs
- 34% Information literacy teaching

NCDR Student/Staff Survey (n=242):

There have been 242 completed survey responses, covering 45 UAE government departments.

- 77% Emirati
- 53% live nearest to Abu Dhabi
- 47% live nearest to Dubai

Have you worked in libraries/ archives/ information management?

- 42% No
- 58% Yes

Interested in a career in libraries/ archives/ information management?

- 26% Very interested (58% Interested or Very Interested)**
- 32% Interested**
- 26% A little interested
- 16% Not interested

WHEN would you think about starting any further studies?

- 31% 2013 (76% starting within 2 years)**
- 45% 2014**
- 9% 2015
- 2% 2016
- 13% Later/Not interested

Do you think that your workplace would sponsor or provide you a scholarship to be able to undertake further studies? (Asked in the Arabic language survey only: n=211)

- 30% No
- 70% Yes**

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x LEVEL (mutually exclusive answers)

- 56% Masters
- 12% Graduate Certificate
- 17% Undergraduate
- 15% Diploma or Certificate

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x TYPE of SERVICE (ability to select multiple options)

- 12% A university or college library
- 31% A federal or local government department library
- 51% A company or research organization, such as MASDAR or the Petroleum Institute
- 15% A military, law, or medical library
- 42% An archive or document management organization

Of those INTERESTED or VERY INTERESTED in studying information management/ libraries/ archives x TYPE of WORK (ability to select multiple options)

- 55% Information technology support for library databases, management systems and websites
- 24% Cataloguing and organization of resources
- 32% Customer service or reference work
- 38% Archival organization and indexing of information
- 14% Information literacy teaching

DATA SUMMARY from Potential Student Surveys

The sample of potential students who returned completed online surveys (n=699) included students from Zayed University, students surveyed from within existing UAE information management organizations (excluding ZU), and potential students from UAE government organizations who were surveyed by the NCDR on behalf of this feasibility study. Every effort was made to gain a cross-section of opinions, in a range of geographical locations, and representation from different organizations.

A summary of responses from ALL student surveys:

- 86% of respondents were Emirati,
- 54% lived closer to Abu Dhabi than Dubai,
- 45% of respondents were “interested” or “very interested” in undertaking further studies in the information management profession,
- 50% of those are interested in a Masters level program, and
- 66% would like to begin these studies within the next two years.

It was interesting to note that of the 211 potential students surveyed in Arabic by NCDR, 70% reported that it was likely that their current employer would sponsor or provide a scholarship to be able to undertake further studies. This is a very encouraging statistic for the potential of ZU to achieve financially viable student numbers willing and able to undertake studies in the information management profession.

2.5 Competitors and partners in the UAE and Qatar

Abu Dhabi Vocational Education & Training Institute (ADVETI) - UAE, Abu Dhabi

Diploma of Library & Information Services

The Diploma of Library and Information Services is designed to meet the needs of a growing industry within the UAE. Students will develop the skills and knowledge needed to become capable *library technicians* in either public or private enterprises in the UAE.

ADVETI is not offering diploma next semester (Fall 2013) – too few students. This program may be offered again in the future as demand dictates. Graduates are not currently accepted by ADEC for employment in schools, as the minimum level qualification for schools is a Bachelor degree.

Currently about 40 graduates – estimated by ADVETI that 50% may be interested in further studies.

Discussion extended to the Emirates Qualification Framework (EQF) with the view to possible credit being granted to ADVETI students for the diploma completed, if they wished to undertake a Bachelor in Education. The EQF is under development, but the formalization of program levels and possibility of course recognition and credit transfers was considered by ADVETI staff to be realistically 3-5 years away.

American University of the Emirates (AUE) – Dubai, UAE

Master in Library and Information Science

The course will enable learners to obtain a professionally accredited graduate level qualification. The course also focuses on the digital transition of recent years, coupled with high level skills in organizing, managing and retrieving information using modern tools and techniques.

AUE is apparently struggling for students, and while the institution is accredited by the CAA in the UAE, it does not hold any other regional or international accreditation. MLIS is currently offered in Dubai only, and cohort numbers are apparently low – between 10 and 15 per semester. This Masters course is taught completely internally by Gulf Arabs, some in Arabic. There is no international library school partnership in place. This Masters attracts a higher student cost than that projected at ZU. The longevity of the program is far from assured.

University College London (UCL) – Doha, Qatar

Proposed Masters program in Library and Information Studies (2013 or 2014)

University College London, in partnership with Qatar Foundation and Qatar Museums Authority, has created UCL Qatar, and has just advertised the establishment of an “MA in Library and Information Studies”, with a first student intake proposed for October 2013. This is planned to be an internationally accredited and high quality program, similar to that proposed for ZU, but it is unlikely to attract students from the UAE due to the travel component, especially if a comparable program can be established in ZU. Curriculum and teaching staff are planned to be drawn from the UCL existing programs in London:

Library and Information Studies MA

The Library and Information Studies MA provide the ideal foundation for career progression in library or information work. The programme is recognised by the Chartered Institute of Library and Information Professionals (CILIP) as a qualification for entry into the profession.

Library, Archive and Information Studies MRes

The MRes is a mid-career cross-domain qualification for librarians, archivists, records managers, museum curators and other information and cultural professionals who wish to develop their leadership, management and professional skills. It is also a research skills qualification for information and cultural professionals preparing for a higher research degree.

Higher Colleges of Technology – UAE

Proposed development of a Archival Studies and Management Information Sciences (2013 or 2014)

The NCDR has approached HCT to suggest their development of an undergraduate “Archival Studies and Management Information Sciences” degree. It is hoped that this degree course could be offered at HCT as early as September 2013. At this point in time, the proposed course is yet to be advertised on the HCT website.

2.6 Competitors in the MENA region

There are a variety of library and information science programs offered across the MENA region. Most programs are not internationally accredited, do not include an international or US library school partner, and many offer instruction only in Arabic. Some anecdotal evidence from western trained professionals in the UAE was not positive about existing MENA courses. One telling comment made was typical of this perspective: "A few men do as they got their bachelors in librarianship, mostly from Egypt, so is not an up-to-date librarianship, especially for schools where teaching, not book watching, is the key". Many western trained professionals in the UAE warmly welcome the introduction of a good quality, internationally recognised training program in this field.

Courses specifically in the library/ archival/ information management disciplines (as opposed to general information systems) include the following:

Kuwait

Kuwait University: Master Degree in Library and Information Science Program

Saudi Arabia

King Abdul Aziz University Department of Library and Information Science:

BA in Library and Information Science

MA in Library and Information Science (Arabic only)

Lebanon

Beirut Arab University: Department of Knowledge Management and Informatics

B.A in Knowledge Management and Informatics

M.A. in Knowledge Management and Informatics

Doctorate in Knowledge Management and Informatics

University of Balamand: Department of Library & Information Science

BA in Library and Information Science

Egypt

Cairo University: Library, Archives & information technology Department (Arabic only)

Oman

Sultan Qaboos University: Department of Library and Information Science (DLIS)

2.7 Potential US Library School Partners

An annual ranking in the US of Graduate Schools in higher education is considered reliable and valuable. It is recommended that ZU choice of a US partner university be listed within the Top 10 ranked Graduate Schools of Library and Information Studies within the current year:

<http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-library-information-science-programs/library-information-science-rankings?int=53fcad>

Extensive advice has been sought from US library managers currently working in the UAE and Qatar, and a recommended list of FOUR of the current Top 10 Graduate Schools should be considered as partner universities/courses in Information Management for ZU. It is also considered that as employment opportunities in this career field in the UAE currently are stronger in archival work and school library work, that both of these concentrations should be successfully offered by the US partner institution.

Opportunity for continuing education programs, certificate courses, and online options should also be considered for all prospective library school partners. Opportunity may exist for partnership with different universities for the concentrations of school library services, and archives and preservation.

Rank #2 in 2013: University of North Carolina – Chapel Hill

<http://sils.unc.edu/>

The School of Information and Library Science (SILS) is widely regarded as one of the best in the world, although past history with ZU may mean that they are reluctant to engage in a partnership at this time. UNC Chapel Hill offers an undergraduate “Bachelor of Science in Information Science (BSIS)”, and graduate level programs in “Master's of Science in Library Science (MSLS)”, “Master's of Science in Information Science (MSIS)”, and “Ph.D. in Information and Library Science”.

Rank #1 in 2013 in speciality of “Archives and Preservation”

Rank #10 in 2013 in speciality of “School Library Media”

Rank #8 in 2013 in speciality of “Services for Children and Youth”

Rank #3 in 2013: University of Washington in Seattle

<http://ischool.uw.edu/>

Continuously accredited by the American Library Association since 1926, the program is one of the most extensive ALA-accredited degree programs in the country. Member of the iSchools organization. The “Master of Education (M.Ed.) Educational Leadership and Administration” at ZU is currently offered in partnership with the University of Washington in Seattle. UW offers an undergraduate “Bachelor of Science in Informatics”, and graduate level programs in “Master of Library and Information Science”, “Master of Science in Information Management”, and “Ph.D. in Information Science”.

Rank #3 in 2013 in “School Library Media”

Rank #2 in 2013 in “Services for Children and Youth”

UW does not appear to offer the speciality of “Archives and Preservation”, and is not ranked for this subject area in 2013.

Rank #4 in 2013: Syracuse University in New York

<http://ischool.syr.edu/>

Syracuse is a member of the iSchools organization, and concentrates on programs with a technology orientation. SU offers an undergraduate “Bachelor of Science in Information Management and Technology” and “Bachelor of Science in Systems and Information Science”, graduate Masters courses in “Library and Information Science”, Library and Information Science School Media”, Information Management”, Information Management for Executives”, and “Telecommunications and Network Management”, as well as “Ph.D. in information science and technology” and “Doctorate of Professional Studies in information management”.

Rank #3 in 2013 in “School Library Media”

SU does not appear to offer the speciality of “Archives and Preservation”, and is not ranked for this subject area in 2013

Rank #9 in 2013: Simmons College in Massachusetts

<http://www.simmons.edu/gslis/>

Simmons Graduate School of Library and Information Science offers the following Master's programs: “Library & Information Science General (MS)”, “Online Library and Information Science (MS)/Archives Concentration”, “Library & Information Science (MS)/Archives Concentration”, and “Library & Information Science (MS)/School Library Teacher Program”. SC also offers “Ph.D. in Library and Information Science”, and “Ph.D. in Managerial Leadership in the Information Professions (PhD/MLIP)”. The archives concentration in a Masters program, as above, is offered fully online. As Simmons College is a private rather than a state institution, the costs of partnership may be higher than for state institutions.

Rank #1 in 2013 in “Archives and Preservation”

Rank #3 in 2013 in “Services for Children and Youth”

Rank #10 in 2013 in “School Library Media”

3. CONCLUSIONS

3.1 DATA SUMMARY from Employer Surveys and Interviews

Clearly there are a great range of professional positions available in both schools and higher education libraries and information centres in the UAE, with pay and conditions varying considerably. Expected recruitment to new professional positions appears higher in Qatar than in the UAE, but UAEU (Al Ain) and TCA (Abu Dhabi) each expecting to require around 30 new positions in the foreseeable future. Both higher education libraries and research/ private company information services are likely to provide reasonable levels of employment in the near future. Over 100 new professional library positions are anticipated in Qatar in the near future.

It is unfortunate that introduction of the researcher to UAE government departments did not eventuate, and that while employment options in this area appear optimistic, they are not documented. As indicated from employer surveys, there is an identified need for bilingual Arabic/English speakers and library professionals who can catalog Arabic books, as well as an emphasis on IT skills in this employment field.

School libraries have historically suffered from poor resourcing, status and value in the UAE public schools, although this is now changing. There appears to be almost no qualified professional staff currently in the approximately 350 public schools in the UAE, although ADEC in particular have plans for extensive modernization and upgrading of library services, including professional staffing. A specific request has also been received from Ali Maihed Al Suwaidi, Undersecretary, Ministry of Education, asking ZU to provide an opinion about establishment of a masters or higher diploma certificate in the field of school libraries, initially for a cohort of 30 students. There is obviously a commitment to improve Ministry school library services, and to facilitate the development of faculty members. Discussions with MOE to clarify their requirements are ongoing.

Private school libraries in the UAE are currently unlikely to seek recruitment of Emirati staff, though some existing expat staff showed interest in improving their own qualifications.

The NCDR has identified over 200 archival positions within the UAE, in both the NCDR and government departments. A request has been received from Dr Abdulla Reyes, Director General of NCDR, seeking the agreement of ZU to offer Masters level archival qualifications in the near future, which would be supported by NCDR. As archival documents and current staff working with these documents in the UAE government are mostly Arabic, there is imperative for this course to be taught in Arabic. The NCDR also note that their previous attempted recruitment of Gulf archival staff who speak Arabic to teach in this subject area have not been successful with UAE security clearances. There appear to be few, if any, appropriately qualified and experienced Arabic-speaking teachers for archival services currently within the UAE, so training options will necessitate team-teaching with both English and Arabic speakers present, the translation of curriculum materials into Arabic, and/or the option to begin archival training with a cohort of students who are bilingual, and who then will be in a position to work in Arabic to assist with training and sharing of their expertise within the UAE into the future.

Existing professional information service expats were generally very enthusiastic about the training and recruitment of Emirati professional staff, though there were reservations expressed about the expected conditions of work in libraries, when compared to the perceived higher pay and easier conditions of work in UAE government departments.

A minimum qualification for entry to school libraries is Bachelor degree, with a Masters qualification required or expected for library, archives and information management positions elsewhere.

3.2 DATA SUMMARY from Student Surveys

The ZU survey resulted in 255 completed responses – 65% living nearest to Dubai. 25% of students reported being “very interested” or “interested” in following a career in information management, and of these students wishing to follow this career, 40% are interested in a Masters qualification, and 44% are interested in undertaking this study within the next two years. 96% of these respondents were Emirati.

The UAE career survey returned 202 completed responses – 75% living nearest to Abu Dhabi. 35% of respondents reported having worked in libraries/information services, and over 50% are “very interested” or “interested” in following a career in information management. Of these students wishing to follow this career, 50% are interested in a Masters qualification, and 79% are interested in undertaking this study within the next two years. It is very likely that this survey was completed by existing staff in many higher education, company and government organizations, and there is an expressed desire to improve their current qualifications. 85% of these respondents were Emirati.

The NCDR survey resulted in 242 completed responses from 45 government departments – 53% living nearest to Abu Dhabi. 58% are “very interested” or “interested” in following a career in archives or information management. Of these students wishing to follow this career, 56% are interested in a Masters qualification, and 76% are interested in undertaking this study within the next two years. 77% of these respondents were Emirati.

It should be noted that a total of 831 potential students in the ZU and UAE career surveys opened the online surveys, but 173/428 people at ZU did not complete any or many of the questions, and 201/403 people in the UAE outside ZU did not complete any or many of the questions. These large percentages of non-completed surveys could potentially be added to the percentages of students who completed the surveys, but stated that they were only “a little interested” or “not interested” in a career in information management. If this assumption is made, then it could be interpreted that 15% (rather than 25% as above) were “very interested” or “interested” in following a career in information management from the ZU survey, and 25% (rather than 50% as above) were “very interested” or “interested” in following a career in information management from the UAE survey.

Based on information available on the websites of ZU, HCT and UAEU (representing around 60% of Emirati higher education students in the UAE), there are approximately 7,500 graduates from the national universities and colleges annually. These students would be potential candidates for any graduate programs at ZU. Based on survey respondents who indicated that they were “very interested” or “interested” in undertaking information management studies, 15% (the lowest assumed sample result) means that 1,125 p.a. students could be potential candidates for graduate studies in the information management field. Potential students more interested in archival studies programs identified in the NCDR survey would be added to this estimate.

The range of interest in types of organizations and types of work to undertake varied, with interest in the general areas of higher education, archives, and government or company employers ranking the highest. These library and information services would best be served by a general Masters program. School library services are likely to best be served by a Bachelor level of program, with the option to also undertake Masters level if desired.

It is important for the information management industry in the UAE to see that there was a very high interest by all three potential student groups in the career area of information technology support for library databases, management systems and websites.

3.3 FACTORS influencing the establishment of a graduate program in Information Management at Zayed University

“Location” of the program within the academic structure of ZU

As information management studies is a multi-disciplinary and specialist field, it is often difficult to “position” within the academic structure of universities. Masters of Library Sciences (MLIS) courses internationally are often located in IT or Business colleges, but can be within a humanities or a science college. Less often they are established as an independent institute or department, or located within a graduate studies office. In all cases, much of the curriculum necessitates teaching by specialist library/ archival/ data management faculty.

In ZU, the *College of Technology Innovation* Dean has expressed interest in a graduate program in information management being located within CTI, as part of the existing Masters of Science and Information Technology. This Masters program currently has existing or planned specializations in “Information Systems” and “Cyber Security”, and a specialization called “Information Management” could be added, with all students undertaking a range of “core” CTI courses before specializing.

Interest has also been expressed by the *College of Education* Interim Dean, to establish a specialisation of “School Librarianship” or “Learning Resource Management” within the Bachelor of Science in Education program. Work would need to include delineation between how much students could cover within the Education program to also possibly be qualified as a teacher in the UAE, and whether students completing this school library specialization would have library/ information management qualifications which were also recognized by higher education or other employers. All students completing this Bachelor program would then have the option of continuing their studies with a Masters of Information Management, should that option become available.

To maximise the quality of the program and the likelihood of success, all options for the location of either undergraduate or graduate programs in Information Management at ZU need to be reviewed objectively and cautiously, in coordination with the US library partner institution selected. In all cases, evaluation of the “core” courses planned to be offered in any College program should be undertaken to determine synergy and relevance to the core subjects currently offered by a partnering US library/ information management school .

Identification of appropriately qualified and experienced faculty, either within the UAE or to be specifically recruited, will be essential to program planning in this specialized field. It is understood that there are very few qualified faculty in the discipline of library/ archival/ information management with a PhD in the UAE, though this is a common requirement in international library schools, especially for teaching Masters level programs. Certainly in the UAE there are many experienced and Masters qualified library/ archival staff who would be suitable and experienced teachers, and would be essential to the practical integration of this program within the reality of the UAE work place.

US library/ information management partner options

Several options for international partnership for this program exist, needing exploration of potential costs, appropriateness for the UAE, quality of the US programs offered, opportunity for online components, synergy with the subject area and level of program considered most relevant for the UAE and ZU, and willingness of the partnership. There may be cause to consider different international partner institutions for different programs, for example, one institution for archival or general library/ information management studies at a Masters level, and a different institution for teacher librarianship at an undergraduate level. While this strategy may create other problems, all options should be considered at the planning stage.

Potentially confounding factors

While there is great enthusiasm for the development of good quality qualifications in the information field in the UAE, there are also many who express reservations based upon:

- (a) The current poor experience of many Emirati students with library services, and an attendant low status and misunderstanding about the potential of this career option, and
- (b) The perception that many Emiratis would be unwilling to work in library and information management organizations where the working conditions are unlikely to be equivalent to those in government departments.

It is considered however, that both of these factors can be mitigated:

1. There is evidence that there is a lack of understanding about the information profession is worldwide, and not just within the UAE, though perhaps stronger in the UAE because of lack of prior experience with widespread and effective library services. For example, it is concluded that among Australian students there is a lack of solid understanding concerning the nature of the field and professional opportunities open to them as graduates of an LIS program (Partridge et al., 2011), and in the US an admission that the profession is not perceived as glamorous in comparison to other professions (Ard et al., 2006).
It is considered that the development of *model* and *future* schools by ADEC, with exemplary school library facilities which are being visited by others, as well as the engagement of more Emirati students with good quality higher education facilities, will gradually change these perceptions.
A long-term marketing plan, as outlined in recommendation (5) below is also recommended.
2. There are currently specific requests from both school and archival government bodies in the UAE to develop higher education options for information professionals, a career option which has not been widely available to Emiratis at all. Together with support for the Emiratisation of positions, incentives by the government to ensure that Emiratis are attracted and retained in professions which will be essential and valued for the development of the country as a knowledge economy are likely to develop.
It should also be noted that many employment opportunities in libraries and information management will be available to Emiratis in higher education institutions, and in schools. This is likely to be a popular employment option especially for females, as they will have the opportunity to select single-gender workplaces, as well as places of employment in almost all locations within the UAE.

4. RECOMMENDATIONS

1. Establishment of Graduate and/or undergraduate programs in Information Management

With wide support by employers involved in the surveys and meetings, as well as sufficient potential student numbers to be economically viable (more than 50 students per year), it is considered that establishment of either graduate and/or undergraduate programs of internationally recognised standards in the Information Management discipline is warranted in Zayed University. The average program cost of Graduate Certificate programs at ZU range from 32-40,000 AED; for Master's Degree programs the cost is likely to be in the region of 96,000 AED. Graduate scholarships will be available for application to male and female students of all nationalities admitted to a ZU graduate program.

Opportunity exists to market such courses to non-Emirati students within the UAE, and to the MENA region, with the establishment of residential facilities for graduate programs at ZU, as well as the fact that the Office of Graduate Studies is able to offer a pre-admission guarantee of placement upon completion of a one year English language program at ZU, should that be needed.

It is recommended that the development of information management programs consider online and flexible options to cater for both remote students and working students.

2. Masters level programs in Information Management and Archival Studies

There appears to be demand for a Masters level program in more general library sciences, information management or archival studies which are likely to fill the employment requirements, as documented in Sections 2.1, 2.2 and 3.1.

A specific government request for the establishment of an Archival graduate program at ZU has been received. Responses to the Arabic survey received through NCDR (n=211) indicate that a high percentage (70%) of Emirati employees in government departments expect that their employer would be likely to sponsor or offer scholarship for potential students to undertake professional studies in information management. Recent correspondence within the MENA region also indicates a need for archival training as the formal organization of information resources becomes more widespread, for example in Lebanon. It is recommended that an archival specialization be offered for bilingual students in the first instance only, to enable the generation of a cohort of qualified archivists who can then assist with future teaching and mentoring in this career path.

There is a need for further research to determine the extent of interest of government, military, medical, legal and private companies in information management educational programs, as this appears to be an area of substantial opportunity which is yet to be documented. It is clear that there are many expats currently working in library and information centers in the UAE who would welcome the opportunity to undertake further studies in this career path within the UAE, and opportunity within the MENA region for attracting students to a good quality program with reputable US partnership and international recognition.

The "location" of a Masters program within the academic structure of ZU should be considered and carefully evaluated.

3. Maintenance of Graduate Certificate level programs

Student survey responses indicated that an average of 17% of students would be interested in the development of a Graduate Certificate program in Information Management in ZU; most of the US library schools offer this level of qualification. There was some reservation expressed by employers that Emirati students would be uninterested in this level of qualification. It is recommended however, that the Graduate Certificate level of qualification be maintained and promoted as the first stage of a Masters level qualification, to enable students' flexibility in their study commitments.

4. Establishment of Graduate and/or undergraduate programs in Teacher Librarianship

It is recommended that the College of Education be involved in development of a Bachelor of Science in Education, with specialization in “school librarianship” or “learning resource management” (whichever terminology is deemed appropriate), based on the documented demand for qualified staff in this area in Sections 2.1, 2.2 and 3.1. *A specific government request for the establishment of a graduate program to provide suitable qualifications for school librarians at ZU has been received.*

It is recommended that both ADEC and MOE be involved in the design of this program, considering the current dearth of qualified school librarians in public schools in the UAE, the apparent desire to improve school and library resources by the UAE government, and the appropriateness of providing a career opportunity where females (in particular) have the opportunity to work within a single-gender organization, and in a location which can be geographically diverse within the country.

It is recommended that inquiry should be made about existing recognition by ZU of external courses seeking a transfer of credits, to enable the possible participation of ADVETI students who have completed the *Diploma of Library & Information Services* in a Bachelor-level program at ZU designed to meet the needs of teacher librarians in MOE schools in the UAE. There would also be significant professional development opportunities for ZU faculty to undertake within school libraries to assist those unable or uninterested in pursuing formal education.

5. Marketing of the Information Management profession as a career path for Emiratis

It is recommended that consideration be given to marketing and information dissemination to potential Emirati students, in particular, to begin to break down misinformation relating to the role of modern libraries and information management (largely based on poor past experiences). This could include involvement in career fairs, and/or tours to existing good quality library/ information services throughout the UAE within different types of organizations, perhaps as part of colloquy career introductions. This general education is important if interest is to be generated in developing professionals who have the capacity to lead the UAE to an effective knowledge economy.

6. UAE government sponsorship and support of Information Management education

It is recommended that research be undertaken into the possibility of government sponsorship of cohorts of Emirati students in this new career option. This direction should be investigated within the context of the government Emiratisation strategy.

7. International Partnerships

It is recommended that UNC Chapel Hill be approached as an ideal US international library school partner, in development of bachelor or graduate programs, but that other possible partnerships as listed above be also considered if UNC Chapel Hill are unable to participate.

8. Executive Committee of Stakeholders

It is recommended, should an Information Management educational program be undertaken at ZU, that an executive committee be formed in the early stages of program planning to ensure that the development of quality programs in this discipline are less reliant on particular individuals or particular employer groups, in this transient society. Such a group should include stakeholders both within and outside Zayed University, and include representation from organizations such as the National Library, NCDR, NRF, ADEC, MOE, eFADA, the international library school which forms an academic partnership with ZU, and key individuals within the library/archival/information management profession who have an interest in the successful delivery of this program.

REFERENCES

- Abell, A., Chapman, D., Phillips, P., Stewart, H., & Ward, S. (2006). Roles in the e-landscape : Who is managing information? *Business Information Review*, 23(4), 241–251. doi: 10.1177/0266382106072249
- Abels, E., Jones, R., Latham, J., Magnoni, D., & Gard Marshall, J. (2003). Competencies for information professionals of the 21st century: Revised edition, June 2003 (pp. 1-17). Virginia, USA: Special Libraries Association.
- Abu Dhabi Education Council. (2009). Strategic Plan. Retrieved 29 May, 2013, from <http://www.adec.ac.ae/en/Education/P12Education/Pages/Strategic-Plan.aspx>
- . Arab Knowledge Report 2010/2011. (2010). Dubai, UAE: Mohammed Bin Rashid Al Maktoum Foundation (MBRF) and The United Nations Development Programme / Regional Bureau for Arab States (UNDP/RBAS).
- Ard, A., Clemmons, S., Morgan, N., Sessions, P., Spencer, B., Tidwell, T., & West, P. (2006). Why Library and Information Science? The Results of a career survey of MLIS students along with implications for reference librarians and recruitment. *Reference & User Services Quarterly*, 45(3), 236-248.
- Choi, Y., & Rasmussen, E. (2009). What qualifications and skills are important for digital librarian positions in academic libraries? A job advertisement analysis. *The Journal of Academic Librarianship*, 35(5), 457–467.
- Commission for Academic Accreditation. (2011). Standards for licensure and accreditation, 2011 (pp. 1-63). Abu Dhabi, UAE: Ministry of Higher Education and Scientific Research.
- Dalton, P., & Levinson, K. (2000). *An investigation of LIS qualifications throughout the world*. Paper presented at the 66th IFLA Council and General Conference, Jerusalem, Israel. http://archive.ifla.org/IV/ifla73/papers/151-Saw_Todd-en.pdf
- Emirates Competitiveness Council. (2011). The UAE in the global knowledge economy: Fast-forwarding the nation *Policy in Action* (Vol. 1, pp. 1-12). Dubai, UAE.
- Federal Authority for Government Human Resources. (2011). Emiratization plan in Federal Government sector & mechanism for coordination and follow-up (2010-2013) (pp. 1-62). Abu Dhabi, UAE: The Federal Authority for Government Human Resources.
- Fisher, B. (2004). *Workforce skills development: The professional imperative for information services in the United Kingdom*. Paper presented at the ALIA 2004 Biennial Conference: Challenging Ideas, Gold Coast, Australia.
- Gerolimos, M. (2009). Skills developed through library and information science education. *Library Review*, 58(7), 527-540. doi: 10.1108/00242530910978217
- Government of Abu Dhabi. (2008). Abu Dhabi Economic Vision 2030 (pp. 1-146). Abu Dhabi: Executive Council of the UAE.
- Jabr, N. (2010). Measuring Omani information professionals' competencies: From the professionals' perspectives. *The Electronic Library*, 28(2), 263-275.
- Knowledge and Human Development Authority. (2012). Inspection handbook 2012-13: Dubai Schools Inspection Bureau (pp. 1-86). Dubai, UAE: Government of Dubai.
- National Center for Documentation and Research. (2008). Federal Law No. (7) for 2008 On National Center for Documentation and Research Abu Dhabi, UAE: Ministry of Presidential Affairs, UAE.
- National Research Foundation. (2008). NRF at a glance. Retrieved May 29, 2013, from <http://www.nrf.ae/>
- Park, J., & Lu, C. (2009). Metadata professionals: Roles and competencies as reflected in job announcements, 2003–2006. *Cataloging & Classification Quarterly*, 47(2), 145-160. doi: 10.1080/01639370802575575
- Partridge, H., Hanisch, J., Hughes, H., Henninger, M., Carroll, M., Combes, B., . . . Yates, C. (2011). Re-conceptualising and re-positioning Australian library and information science education for the 21st century (pp. 161). Sydney: Australian Learning & Teaching Council.

- Rehren, T. (2013). Two new programmes launched at UCL Qatar. Retrieved 31 July, 2013, from <http://www.ucl.ac.uk/qatar/qatar-news/2013-07-29>
- Saw, G., & Todd, H. (2007). *Library 3.0: Where art our skills?* Paper presented at the World Library and Information Congress: 73rd IFLA General Conference and Council, Durban, South Africa. http://archive.ifla.org/IV/ifla73/papers/151-Saw_Todd-en.pdf
- Smith, K., Hallam, G., & Ghosh, S. B. (2012). Guidelines for professional library/information educational programs: 2012. The Hague, Netherlands: IFLA.
- UAE Vision 2021. (2011). Retrieved 9 October, 2012, from <http://www.vision2021.ae/home-page.html>

APPENDIX 1

A summary of the names of roles for information management professionals, as identified in Australian, USA and UK literature (Taken from Partridge et al., 2011, pp. 119-121).

ABS and ALIA Suggested Roles	Australian Literature	USA Literature	UK Literature
Archivist, Curator (ABS 2009)	Archivist (Prowse 2008) Custodianship Manager (Prowse 2008)	Institutional repository manager (Gordon 2009)	Archivist (Broady Preston 2009) Digital records preservationist (Hall and Abell 2006a)
Records Manager (ABS 2009)	Records Manager, Records Officer, Recordkeeper (Prowse 2008)	Archivist (Reeves and Hahn 2010)	Records/Document Manage, Freedom of Information officer (Hall and Abell 2006a)
	EDRMS analyst (Pember 2003, Prowse 2008)		EDRMS analyst (Stephens & Hamblin 2006, Hall & Abell 2006)
Librarian (ABS 2009, ALIA 2010) incl. library technician, teacher librarian, corporate librarian, national librarian, state librarian and parliamentary librarian, circulation officer (ALIA 2010)	Librarian (Myburgh 2003, Kennan et 2006a, Sanders 2008, Hallam 2008 etc)	Librarian (Abels et al. 2003, Gordon 2009, Ashcroft 2004, Gutsche 2009 etc) Emerging technology specialist (Gordon 2009) Digital Librarian (Choi & Rasmussen 2009)	Librarian (Hall and Abell 2006a, Stephens & Hamblin 2006, Fisher 2004)
Organisation analyst (ABS 2009)	User/Business Analyst (Middleton 2004)		Business Analyst, Change Analyst (Hall and Abell 2006a),
	Process Analyst Change Analyst (AS5037)		Impact analyst (Fisher 2004)
Policy manager (ALIA 2010)	Information Management Policy manager (Prowse 2008)		Compliance officer, Data steward (Hall and Abell 2006a)
Intelligence analyst (ABS 2009), Data researcher (ALIA 2010)		Competitive intelligence analyst (Ashcroft 2004, Gordon 2009)	Competitive intelligence officer, (Hall and Abell 2006a)
		Data mining (Gordon 2009)	

ABS and ALIA Suggested Roles	Australian Literature	USA Literature	UK Literature
Policy Analyst (ABS 2009), Research officer (ALIA 2010)	Researcher (Sanders 2008, Prowse 2008, AS5037)	Researcher (Gordon 2009, Abels et al. 2003)	Researcher (Hall and Abell 2006a)
Other Information professionals (ABS 2009); including information consultant, community information/customer service officer (ALIA 2010)	Information professional (Hallam 2008)		Community and network facilitator, Information officer (Hall and Abell 2006a)
Information or knowledge broker (ALIA 2010)	Knowledge Manager (Pember 2003, Prowse 2008, AS5037 2005, IBSA 2010)	Knowledge manager (Abels et al. 2003, Gordon 2009, Ashcroft 2004), Information brokers (Abels et al. 2003)	Knowledge manager (Stephens & Hamblin 2006, Fisher 2004, Hall and Abell 2006a),
Library educator, Lecturer (ALIA 2010)	Teacher Librarian (Hallam 2008)	Trainer (Gordon 2009), Curriculum developer, Teacher Librarian (Stephens & Hamblin 2006)	E-learning facilitator, Trainer (Hall and Abell 2006a)
Web manager (ALIA 2010)	Content Manager (Prowse 2008, Kennan 2006a), Intranet Manager, Content developer (Kennan et al. 2006a), Enterprise Content Manager (AS5037)	Content manager, Intranet manager (Ashcroft 2004),	Portal manager, Intranet editor (Hall and Abell 2006a), Content Manager (Stephens & Hamblin 2006, Hall and Abell 2006a) Enterprise Content Manager (Hall and Abell 2006a)
	Web designer /developer (Kennan 2006a, Sanders 2008)	Web developer/designer, Webmaster (Abels et al. 2003, Ashcroft 2004, Gutsche 2009, Choi & Rasmussen, Reeves & Hahn 2010)	Web designer / developer (Fisher 2004, Stephens & Hamblin 2006)

ABS and ALIA Suggested Roles	Australian Literature	USA Literature	UK Literature
Program manager, team leader, managing director (ALIA 2010)	Information Manager (Sanders 2008)	CIO (Abels et al. 2003), Information Manager (Gutsche 2009)	Information Manager (Gutsche 2009, Stephens & Hamblin 2006, Hall and Abell 2006a), Digital Project manager (Hall and Abell 2006a),
	People and team development (Hallam 2008, Sanders 2008)	People and team development (Gutsche 2009)	People and team development (Hall and Abell 2006a)
	Library manager (Prowse 2008, Hallam 2008)	Library Manager (Gutsche 2009)	
	Project Manager (Sanders 2008, Hallam 2008, Pember 2003)	Project Manager (Choi & Rasmussen 2009, Gutsche 2009)	Project Manager (Hall & Abell 2006a, Fisher 2004)
Roles unlisted by ABS or ALIA, but receiving good coverage in the literature	Information Architect (Kennan 2006a, Prowse 2008)	Information Architect (Choi & Rasmussen 2009)	Information architect (Fisher 2004, Hall & Abell 2006a), Taxonomist (Hall and Abell 2006a)
	Metadata professional (Prowse 2008)	Metadata Manager (Gutsche 2009)	Metadata professional (Park & Lu)
	Data/Dataset Manager (Sanders 2008, Prowse 2008, McCarthy 2005)	Data Manager, Data Analyst (Gutsche 2009)	Data Manager (Hall and Abell 2006a), Data analyst (Stephens & Hamblin 2006)
	Usability Analyst (Middleton 1994)	User interface designer (Choi & Rasmussen 2009)	Usability expert (Hall and Abell 2006a)
	Systems Librarian (Hallam 2008)	Systems Librarian (Gutsche 2009), Library vendor support (Gordon 2009)	