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THE EVOLUTION OF EDUCATION IN L.I.S. IN PAKISTAN AND THE UNITED KINGDOM

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CONTENTS

Abstract

This dissertation undertakes a comparative study of formal education in the field of library and information science in Pakistan and Britain. The development of the higher education system of each country is described in order to give an historical context to the current situation, and different types of postgraduate courses and qualifications available to students in the field of librarianship are reviewed with particular reference to methods of assessment (whether by thesis or course-work), the changing emphases on different parts of the curricula (especially with regard to new information technologies), and the different types of qualifications available (B.A., B.Sc., Diploma, MA., M.Sc., M.Phil., PhD etc.). The relative strengths and weaknesses of each country's library education system are described. Methods of improving the status and system of library science in Pakistan are suggested, taking into account the different socio-economic and cultural constraints operating there.

Declaration

I declare that this dissertation is my own work, and has not previously been published or submitted in support of any degree or diploma.

Abdul Waheed

LIST OF APPENDICES

CHAPTER ONE

INTRODUCTION

1.1 Aims and Objectives

The aim of this study is to compare the present patterns of professional library and information science education in Pakistan and the UK. It includes only postgraduate courses which are offered in library schools in both the countries, and aims also to give recommendations for the improvement of library education in Pakistan.

To deal with the questions as fully as possible it is essential to become familiar with the national backgrounds, educational systems, and the structures of higher education in the UK and in Pakistan. It is also necessary to trace the evolution of professional education and to review recent developments.

Library education in developing countries such as Pakistan faces problems such as the lack of co-ordination between library schools and professional association, out of date curricula, non availability of computer technology and the lack of experienced staff. It can be seen that professional education presents a challenge to the faculty of library schools. Each of these factors may well have affected library and information science education. Therefore it is useful to study past and recent developments within the context of present levels of programmes and courses in both countries.

1.2 Research Methodology

Generally there are two main types of research strategy: quantitative and qualitative. The main deference between these two is that the former seeks objective explanations using a statistical approach; and the latter seeks an understanding of an event (Stone and Harris 1984).

In choosing the appropriate research strategy in a project, Bell states that

"each approach has its strengths and weakness... The approach adopted and the methods of data collection selected will depend on the nature of the inquiry and type of information required" (Bell, 1987 p.4).

1.2.1 Justification of qualitative approach

Qualitative research can be defined Wed in one of two ways. Firstly in positive terms of what it does include, Van Maanen defined the qualitative approach as follows:

"any array of interpretive methods which seek to describe. decode, translate and otherwise come to terms with the meaning not the frequency of certain more or less naturally occurring phenomena in the Social World" (Easterby-Smith et. al. 1991 p. 71).

Secondly if defined in terms of what it excludes, qualitative research can be viewed as: —

"that kind of research that produces findings not arrived at by means of statistical procedures or by other means of quantification" (Strauss and Corbin, 1990 p.17).

The choice of the qualitative approach for this research was primarily dictated by the nature of the topic. More precisely, the research did not begin life as a hypothesis or statement to be tested and verified. Rather it was a question, asking what has been the evolution of education in library and information science within the context of the levels of professional education and how have postgraduate courses developed? Thus I was beginning with what Strauss (1990) called an "area of study" instead of a hypothesis and was determined to let whatever was relevant to this area be a part of my study: So in the last analysis if1 did emerge with any kind of comments, these would be genuinely "grounded" in my findings and arise from them. Hence first of all I had to gain an overall feel for the area concerned by gaining an in-depth knowledge of it. This could be done by using this approach.

1.3 Research Methods

The present section will point out the research methods used in conjunction with the actual collection and analysis of the data.

As mentioned above, an interpretive approach as outlined by Strauss and Corbin (1990) and Haralambous (1990) was adopted in order to describe the evolution and recent developments in library and information science (in future referred to as LIS) education in the last five years in the case of the UK and over about last ten years in the case of Pakistan. Documentary research was deemed the most suitable method.

Research using Library and Information Science Abstracts (LISA), Journal Indexes, Prospectuses and course outlines of library schools were the main methods used to locate the relevant documents. The interview method (unstructured) was also used to supplement the documentary material related with Pakistan using a university teacher from Pakistan currently engaged in research in the Department of Library and Information Studies at Manchester Metropolitan University regarding recent developments and the present state of professional education, problems in courses and to discover airy further developments. The reason for selecting the interview method over the questionnaire are closely allied to those outlined by Stone and Harris (1984). In short, interview technique was considered more flexible and convenient.

1.4 The Structure of the Dissertation

Chapter One provides an introduction to the research topic. The methodology of this research is discussed with respect to the technique applied and a summary of data collection. Chapters Two and Three describe and introduce the backgrounds and educational systems and provide a summary of present developments in the field of library and information science education in the two countries being studied. The same pattern is adopted in Chapters Four and Five to provide details of the courses in Pakistan and the UK. Chapter Six summarizes main points of differences in the education system, levels of education (both general and professional), and

postgraduate courses in library and information science education of both the countries. Also gives recommendations for the improvement of library education in Pakistan from the experience of British library education.

Bibliography/references and appendices are included in the final part of the dissertation.

CHAPTER TWO

LIBRARY EDUCATION IN PAKISTAN

2.1 Brief Introduction About Pakistan

Pakistan', officially known as the Islamic Republic of Pakistan, is a Muslim country occupying a central position in South Asia, and is one of the ten most populous nations on earth. After a long struggle Pakistan was founded on August 14, 1947, when the territory which had been ruled by the British was partitioned. It originally had two pans, East Pakistan and West Pakistan, separated by 1,000 miles of Indian territory. Pakistan covers an area of 307,293 sq.miles (796,095 sq. km)[2]

The country comprises of the federal capital territory (Islamabad), the province of Punjab, the North West Frontier (NWFP), Sind and Baluchistan, and the areas of North West. Pakistan's total population in 1992 was estimated at 130, 129, O00.3 Racially, Pakistan belongs to the Indo-Afghan group. The large majority of Pakistanis are followers of Islam. The minority communities include Christians, Hindus, Parsees and Buddhists. For the Pakistani people Islam is not simply a religion, but a way of life.

Urdu is the national language of Pakistan, while English continues to be

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[1]The name Pakistan is a coinage representing Punjab, the Afghan border states, Kashmir, Sind and Baluchistan.

[2]The Statesman's Year—Book, 129th ed.. Macmillan. p.1058

[3]Britannica Book of Year (1993). p.688

used for official purposes and in trade and communication; it is also partly the medium of instruction in higher and professional education.

Pakistan is an agricultural country; but unfortunately, since the time of Independence, the country has faced marry economic problems. According to the World Bank estimates, Pakistan‘s gross national product, measured at the average 1989-91 price, was US $ (*) 46,725 million, equivalent to $ 400 per head. The total expenditure estimated at Rs. 616,000 million for the five year plan from 1988 to 1993 with a particular emphasis on creating a larger role for industry. Education, energy development and employment were also given priority.[4]

The political system of Pakistan has undergone several other far-reaching changes since Independence. Due to internal political problems the independent state of Bangladesh was proclaimed in East Pakistan in 1971. It is unfortunate that within the last forty-seven years, Pakistan has faced many political changes. These changes have affected its economic; financial and political stability. Because of these problems, education has been neglected by the government.

2.2 Educational System and Degree Structure

According to the constitution, a number of important matters in the

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[4]The Europa World Year Book (1993) 2. p.22O6

(*) September 1, 1994 1 US$= 30.25 (Pak. Rupee)

1 £= 46.48 (Pak. Rupee)

educational sphere have been placed on the Federal Parliament's legislative list, which gives the Parliament power to make laws relating to policy, planning, curricula, syllabi, standards of education and Islamic education. The University Grants Commission and the National Education Council assist the Federal Ministry of Education in this regard. However the ministry supervises education throughout Pakistan but each provincial Minister of Education is responsible for running the system.

The principle of free and compulsory primary education has accepted as the responsibility of the state. All institutions except missionary schools are nationalized. It is estimated that 26% of the population is able to read and write. The school system consists of primary school (ages 7 to 11), middle school (ages 12 to 14), and secondary school (ages 15 and 16). After secondary level student may go to the higher secondary level or intermediate colleges (ages 17 and 18), where they prepare for a degree college or university. The public examinations for these levels are conducted by the Boards of Intermediate and Secondary Education at the end of the tenth and twelfth class respectively.

A Bachelor's degree requires two years in a degree college. However Bachelors' degrees in Engineering and Medicines require four years in professional universities and medical colleges. The upper level of the education ladder is the postgraduate education offered in universities, requiring two years for a Master's degree and three to four years for doctoral degrees. The Master's degree in education (MED) requires one year's study beyond the Bachelors degree in education. At all stages of education particular emphasis is also placed on Islamic education and the development of national patriotism.

2.3 Universities Set up and Students

At the time of Independence, the country had two universities, twenty professional colleges and eighty-three colleges of arts and science with a total enrolment of 37102 students (Baluch, 1977 p.3130). In 1992-93 there were 22

universities (20 in public and 2 in the private sector), with 383 teaching departments, 40 constituent colleges and 400 affiliated colleges (Virk, 1994 p.1555).

During the above-mentioned period (1992-93) there were 160,108 students enrolled in the universities and their constituent colleges. The number of undergraduate and postgraduate students was 76,673 and 34,826 respectively. (Virk, 1994 p.1555). The total number of faculty members during 1991-92 in all the universities was 5627 (Virk, 1993 p.2123).

The academic year begins in early September and ends in June. Those universities which follow the semester system divide the academic year into two semesters, but other universities divide their sessions into three terms. Pakistani universities heavily emphasize examinations, and students who fail face a difficult future on the job market.

The Provincial Governors are the Chancellors of the universities, and the President of Pakistan, in case of the Federal University. The Vice Chancellors exercise administrative authority. Senate is considered to be the supreme authority of the university. It is responsible for the academic work and also for annual statement of accounts and budgets. Academic council and boards of studies lay down the policies of administration, prescribe courses of study and deal with other related academic matters subject to the approval by the Senate.

The total grant during 1991-92 for all 20 universities of Pakistan (excluding 2 private universities) was Rs. 1669.7 million. Out of the grant, recurring and development grant accounted for Rs. 1359.6 and Rs. 310.1 million respectively. On average 65-80% of the university budget is spent on salaries and allowances, while 3-4% is allocated to research, libraries, equipment and chemicals etc. Student fees cover only 3% of the unit cost (Virk, 1994 p. 1554). Development expenditure in science and technology, and education and training, in 1992-93 was projected at Rs. 736.4 million (1.5%) of government's total development spending[5].

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[5]The Europa World Year Book. (1993). 2. p.2207

Because of these financial circumstances, it is very difficult for the universities to play a significant role in the educational development of the country.

Federal and provincial governments provide scholarships for talented students and in addition, interest-free loan schemes are provided. Each recipient of a foreign scholarship must serve the country for at least three to five years upon returning from abroad.

2.4 Library Service

In order to understand library and information science education in a country, it is necessary to give an overview of its library and information services. Thus one must provide some details in this field in Pakistan during recent decades. Such information will be helpful in understanding the educational problems and needs of personnel at different levels; also programmes can be planned and developed in a more realistic and objective manner, to meet not only immediate needs hut also those of eight to ten years hence.

2.4.1 Back ground factors

At the time of independence very few notable libraries existed in Pakistan. Library development in Pakistan took place simultaneously with the progress of education. The libraries established in the process of educational reforms in British India are still today the leading and best-known libraries in the country. There are no available statistics for the exact number of the libraries in the country.

In 1957, the government of Pakistan established the Pakistan National Scientific and Technological Documentation Centre (PANSDOC) with the technical assistance of UNESCO. The Pakistan Science Foundation was founded in 1974 as the national agency for the financing and coordination of scientific and technological research. This centre was reorganized and became the Pakistan Scientific and Technological Information Centre (PASTIC). At present this centre has a modem library at its headquarters at Islamabad and at sub-centers in four

provincial cities, providing documentation and bibliographical services in the fields of science and technology (Qureshi, 1979).

2.4.2 The Picture today

The national library of Pakistan was completed in 1980's in the capital city Islamabad. The library occupies a new building with 80,000 volumes. The 22 university libraries are the most advanced in the country. According to Khurshid 's survey (Khurshid, 1993) these universities have more than 140 libraries with 2,900,000 volumes in all. The University of the Punjab library has 769,000 volumes; the University of Karachi has 255,000 volumes; and the University of Peshawar has 200,000 volumes. 680 college libraries in Pakistan hold more than 3,640,000 volumes.

Library development in Pakistan was encouraged by the establishment of the Directorate of Public Libraries. In 1951, there were just 21 libraries, and by 1989 this had increased to more than 300 libraries in the country. There were more than 330 special libraries holding 250,000 volumes. Many of these libraries are actually attached to universities or colleges and government departments (Khurshid, 1993). According to the unpublished sources there are two mobile libraries in the Punjab province. School libraries, like those in most Asian countries, however, still remain neglected. There is no overall coordination of library services in the country, and no unified organizational structure. There are no union catalogues of public library collections in any part of Pakistan.

There is no doubt that libraries exist in Pakistan at national, public, special and academic levels, but they are poor in respect of resources and modern development. This is particularly true of college libraries where staff conditions and services are really very poor. It is true to say that library services have not gained acceptance either from the government or the people of Pakistan.

As Samdani (1991) reports, there is no library legislation as such in the country and as a result the progress of library development is very slow, The only item of legislation directly relating to libraries is the Copyright Ordinance of 1962.

Samdani suggests that legislation is essential if proper library services are to be promoted and developed in the country.

2.5 Professional Associations

To advance the cause of the library movement in the country, the Pakistan Library Association was founded in 1967. ft is estimated there are 800 members throughout the country. The Association has no role in the accreditation of qualifications, as has the American Library Association and the Library Association. At present over a dozen local, regional, provincial associations exist in Pakistan. No doubt, these associations have contributed to the growth and improvement of library services in the country, but their contributions seem to result from random programmes rather than from setting objectives and long term targets. They have concentrated their activities on securing improvements in salaries and status for their members. It is important to note that there is no career progression for college librarians even they have the same qualifications as academic staff.

2.6 Development of Library Education

Library education started in Pakistan in 1915 with the introduction of a certificate course at the University of the Punjab, Lahore, then part of India. Qureshi (1979) claims with the reference of Labhu Ram[6] that this course was the first training class not only in South Asia, but in the en entire East. In this context it becomes all the more significant that this school was the among the first fifteen schools in the world; Melwil Dewey‘s Columbia School of Librarianship being the first. The person who started this course was Asa Don Dickinson, an American librarian. This certificate course as it was called, was initially introduced for graduates, undergraduates, matriculates and under matriculates. Dickinson included the following courses in the curriculum; classification, cataloguing, bibliography, book selection, library administration and viva voce (Khurshid, 1977).

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[6]Labhu Ram. (1934). Modern Librarian. 4, p.45

This same educational programme restarted as a completely graduate programme after the establishment of Pakistan in 1947. This postgraduate certificate course in librarianship continued till 1950. A year later the University of the Punjab renamed it the “postgraduate diploma in librarianship. The first-ever degree programme leading to an MA in library science was started by the University of the Karachi.

User education programmes have also started in the country at college level both at Intermediate and BA classes. It is unofficially reported that following the pattern of Karachi and Hyderabad Boards, the Lahore Board of Intermediate and Secondary Education is also planning to introduce library science at intermediate level. This will entail teaching of library science teaching and preparation of text books by the provincial Text Book Boards. If it is done, it will open a new chapter in library and information science education in Pakistan. It may however, be added here that this idea has already been criticized in some quarters because of the condition of college libraries. At many colleges the basic teaching tools are not available. This situation is not encouraging for librarian teachers also (Khalid, 1994).

2.7 Library Schools In Pakistan

Danish (1991) and Khurshid (1987) provide the recent details of postgraduate programmes and courses that the following universities are running in library and information science. These courses are modeled on various patterns, combining the best American and British library schools; though not updated.

University of the Punfab: This the oldest library science department in the country and provides Postgraduate Diploma and MA courses from 1959 and 1974 respectively.

University of Karachi: This school has provided Ph.D. M.Phil, MA and Diploma programmes since 1967, 1985 and 1962 respectively. It is very interesting to note that the first Ph.D programme started in 1967, but a Ph.D was awarded in 1980 to M.A.H. Chistis’ thesis on Islamic Libraries: from 799 AM. to 1258 A.D. (Haider, 1987). This school also introduced the first information science course in the country

in 1973. This was the only one school to establish a computer laboratory in any library school in Pakistan.

Jalibi (1988) has provided details of all events of computer laboratory. The success of this initiative developed by the school showed that this approach not only benefits students but also has developed cataloguing and serial control techniques.

University of Peshawar: This school pro vides a one year post-bachelor diploma course and a one year AM course. The department is working outside the university library.

University of Sind (Jamshoro): This University has seen many ups and downs in introducing educational courses. Initially it started a three months undergraduate certificate course and then upgraded it to a diploma, but this course lasted only for one year. At present this school provides courses for diploma, MA and M.Phil's degrees.

Islamia University of Bahawalpur: This school initially started evening classes for diploma and MA levels, as against the established traditions in the county. But now all programmes have been changed to the day-time. University of Baluchistan. Quetta: The tradition established by Islamia University is repeated in this university, when evening programmes were started.

Allama Iqbal Open University, Islamabad: This is the only university in the county, which provides library and information science courses as one subject for the BA level through correspondence (Hassan, 1985).

2.8 Recent Trends in Library Education

In recent years there has been a strong movement towards unification, as well as towards the introduction of courses within university institutions. This is largely due to information technology. During recent years some institutions like Karachi and Sind have succeeded in enhancing the competence of faculty by attracting high level, foreign qualified professionals (Khalid, 1994).

In universities the recent trend is to change the medium of instruction from English to Urdu. But there is not enough literature on Library and Information Science in Urdu, so it creates a big problem for students. There is a great demand for publications in Urdu language.

The tradition of librarianship has tended to put scholarship first and practical experience as something which can be learnt on the job; this emphasis on subject qualifications is intended to ensure that university librarians should be seen to have equivalent academic status with their other university colleagues.

Library education has also suffered during the last decade, because a large number of senior faculty members have left the country for better jobs in Saudi Arabia, Nigeria and Malaysia (Haider, 1983). At present most faculty members are unaware of many recent innovations and developments particularly in information science and information management and other fields of specialization. So it is evident that all postgraduate courses in Pakistan leave a lot to be desired and contain many shortfalls which need to be addressed.

2.9 Levels of Library and Information Science Education

As in the United States and even to some extent in the UK, librarianship in Pakistan is largely a postgraduate profession. It is generally agreed that in order to have well-qualified and competent library and information scientists at senior levels, the training programme should continue to be conducted at the Postgraduate level.

Briefly stated at present following four distinct levels of library education programmes are available in Pakistan:

1- Certificate courses offered by professional associations.

2- Library and information science as an elective subject at Intermediate and BA levels.

3- One year Bachelor degree/Postgraduate diploma leading to Master in library and information science.

4- M.Phil and Ph.D research programmes

2.9.1 Certificate Courses

Before the partition of Pakistan and the introduction of higher library education programmes in library and information science, these courses were the only professional qualifications held by professional working in libraries with the exception of very few who had got the title ALA and FLA.

These courses were primarily designed for sub-professional workers. At present the secondary school certificate is prerequisite qualification for getting to these courses.

The Punjab Library Association at Lahore, Bibliographical Working Group at Karachi, A llama Iqbal University and National Library of Pakistan at Islamabad offer these courses. Their durations vary from six to nine months. The classes are normally held in the evenings. Only Allama Iqbal University provides a distance learning facility. The subjects taught usually cover basic topics like classification, cataloguing, reference works, administration and introduction to library operations (Danish, 1991). The holders of Intermediate certificates and Bachelor's degrees with library science as an optional subject paper can apply for junior library positions (Usmani, 1987).

2.9.2 LIS as an Elective Subject at Degree Level

Several Boards of Intermediate and Secondary Education offer LIS as an elective subject for their examinations at Intermediate level and Open University also offers the same at BA level through its distance education system, This BA (degree) programme includes four core courses in library science, two additional elective subjects either in US or in allied fields along with three compulsory courses in English, Pakistan Studies and Islamic Studies.

2.9.3 Bachelor/Postgraduate Diploma

On the recommendations of the University Grants Commission, this one year postgraduate Diploma programme was changed to a degree course leading to the Bachelor's Degree in library science in two schools. The Bachelor/Diploma course is a self-contained course, but in the universities of Pakistan, it is also the first year of the two year Masters degree in Library and Information Science, for those who want to continue to that level.

Danish (1991) points out that at the University of Karachi, the Bachelor in Library and Information Science (BUS) consists of 6 papers of 500 marks but this same course at Peshawar school consists of 5 papers of 500 marks. The postgraduate Diplomas in four other universities also have a varying number of papers but there is no difference in aggregates marks.

2.9.4 Master Programmes

The Masters programmes are aimed to promote different types of libraries and specialized library services. To date six universities in Pakistan are running MA programmes. The overall pattern of a two year Master degree follows other subjects in the universities. However this programme is split into two categories i.e. the Bachelor/Diploma in Library and Information Science forms the first year of the Master's programme. Only one school (Karachi) has some courses on automation, whereas all other schools provide the traditional courses with one paper on information science based on some elementary concepts.

Chaudhty (1988) points out that some countries like Bangladesh, India and Pakistan do not have undergraduate programmes in the American sense but in the British pattern. The Bachelor of library science/Diploma in library science is offered actually as postgraduate level.

2.9.5 M.Phil/Ph.D Provrammes

As mentioned earlier the Sind University was probably the first university in the country to start an M. Phil **programme in** 1981. At present, Karachi, Sind and Islamia University, Bahawalpur offer these two programme?. The country‘s first Ph.D programme started in 1967 and one Ph.D came out in 1981. A Ph.D student generally has to work a minimum of three to four years (often rather more) before he/she submits a’ thesis, and may then have a long wait for the result.

2.10 Admission Requirements and Students in LIS

The basic entry requirement for a place on a Diploma course is to have passed a Bachelor’s degree with a second division with an age limit of 26 years. In Pakistan thee is no concept of “matures entry” as in the UK. Admission to professional colleges and Universities is by merit; based on performance in public examinations at **BA/BSc and BCom** level conducted by the universities. The same criteria is adopted in library and information science courses. There is no concept of prerequisite training programmes and the taking up of references for admission as in the UK. Despite the quantitative expansion, places for post graduate qualifications are not available to all who qualify and have a desire to enter. There is a “quota system” under which a number of seats are reserved for students from minorities and underdeveloped areas and for foreign students.

Candidates for admission to an MA must have a **Bachelor**

[7]Source: Personal information from Chairman, Department of Library Science, Punjab University, Lahore.

degree/Postgraduate Diploma in library and information science with at least a 'B' or second division (at least 45% marks).

There is no centralized system of admission at any level of education in Pakistan as there is in the UK for first degree courses; rather it is the responsibility of the individual university. Admission to the postgraduate stage is available to a very low percentage of the overall age group who obtain the highest marks at degree level. The narrow entry criterion fails to take into account the aptitudes and interests of the students, which results in unsatisfactory performance.

All courses require registration and regular attendance, and all students are full-time. The part-time student category in the field of Library and Information Science is unknown in the country, unlike the UK. It is estimated that every year more than 200 students qualify for the Diploma from all six universities in the country. The largest output of graduates is from the Universities of the Punjab and Karachi. At the MA level the number of students is between 180 and 200. The latter number largely includes those graduating at Bachelor/Diploma levels in the previous years (Khurshid, 1987).

Student enrolment in the first established library school of the country show the following statistics for the last five years:

Year	Diploma	MA
1988-89	46	41
1989-90	46	41
1990-91	61	47
1991-92	43	46
1992-93	33	33

Source: Information collected directly from school

The variation in the student enrolment is due to the seat allocation for the different sessions by the admissions committee of the University, which shows that there are no hard and fast rules observed for the number of seats.

2.11 The Examinations System

The system of education in Pakistan places emphasizes an unquestioning acceptance of professional authority, and that means that books have little part to play in the process. The lecture notes and some notes from text books are sufficient to see the students through most of his/her career. Since advancement is based solely on examinations, the system is designed to test the students' memory of the lectures rasher than his/her knowledge of the subject.

All library schools have an annual system of education. In this system, detailed course contents are approved by the Board of Studies and then followed rigidly by the concerned faculty member. There is less provision to change or modify these contents without the approval of the Board of Studies because students are evaluated on the announced curricula by external examiners. There is more emphasis on theoretical aspects; prescribed texts, lecture method, and structural examinations (assignments and projects like the UK system are minimal). Examinations are held annually by the Controller of Examinations, mostly independent of the faculty. Students' grades are determined by external evaluation.

Examinations are evaluated by outside examiners in all library schools. Often this is done in collaboration with those who actually do the teaching. In general course work done throughout the year does not count for much. The success of a student largely depends on his/her performance in the formal examination.

2.12 The Faculty

Faculty constitutes the vital resource of any academic program including library and information science. As Steig (1992, p.83) has stated that

"the faculty of a school of library and information science are, like their colleagues in other professional schools, predominantly those who have chosen to teach their profession rather than to practice them, although a few have no ties to any of the professions but are present because of their disciplinary expertise. Faculties in professional schools differ from the members of the traditional liberal arts departments in several crucial ways".

Until the 1970's the library science departments in four universities were fully integrated with the university libraries. The university librarian was also the head of library science department. In 1980 the Universities of Karachi and Punjab had independent chairmen for their departments (Qureshi, 1979). Now all the departments have their own chairmen.

The total number of full—time teachers in all six library schools in Pakistan is 37. All programmes are part of the faculties of arts; these are departments instead of "schools" which denotes the status of being an independent faculty. In order to evaluate the size of faculty in Pakistani library schools, IFLA standards of faculty ratios of 1:12 were used. Since the number of students in these schools ranges from 81 to 100, so it is clear that Pakistani library schools are not near the norm of an appropriate faculty size (Rehman, 1994).

All faculty members are on a par with their counterparts in other teaching departments with regard to their status, salaries, promotions, study leave and other terms and conditions of service. There are four teaching ranks: Lecturer, Assistant Professor, Associate Professor, and Professor. The faculties consist the three kinds of teachers, namely, full-time, part-time and cooperative. Part-time teachers are taken from the university library and paid an extra allowance, while cooperative teachers are from outside and payment is made on the basis of each lecture (Khalid, 1994).

The number of posts is provided in the annual budget and filled through open competition. The selection process only comes into operation when a post falls vacant or a new post is created. So it often happens that a qualified teacher is not eligible for promotion until a position becomes vacant (Khalid, 1994).

At present four out of the six schools, do not have a single doctor or holder of a foreign master's degree. According to a survey recently conducted by Rehman (1994), only 13 out of 37 (35.1%) teachers had some experience in technical

services. After applying the same questions to individual departments, it was discovered that two departments did not have any staff members who had worked in technical services. Almost the same position applies in research publications. Haider (1983) remarked that:—

“absence of in— service training programme for library school teachers has also affected the quality of teaching. Most of our existing faculty members, truly speaking, are unaware of recent innovations and developments in their respective fields of specialization”.

Although the above remarks were written a decade ago, the same problems remain. So it can be concluded that training facilities for teaching staff need improvement. According to the unpublished sources to date, no faculty member of any library school has a master’s degree in library and information science from abroad, although there are four, with Ph.Ds; two from the UK, one from USA and one from Pakistan.

CHAPTER THREE

LIBRARY EDUCATION IN THE UK

3.1 The UK Educational System

In the UK today the education system is organised into primary, secondary, further and higher levels. It is organised on a scale unthought-of even a century ago. It is organised by the State, where before 1870 it was largely left to private provision. Pupils transfer from primary to secondary schools at the age of 11 and all stay at school until the age of 16. The examination for the general certificate of education ordinary level (GCE 0 level) was taken mainly at the age of 16. Recently this and the certificate of secondary education (CSE) have been replaced by a new single system of examinations called the general certificate of secondary education (GCSE). The examination taken mainly at the age of 18 - the general certificate of education advanced level (GCE A level) and additional examinations called Advanced Supplementer (As). No tuition fees are payable in any publicly maintained school, but independent schools draw their income from fees, private funds and endowments.

3.2 Higher Education System

Higher education deals in a significant and organised way with research. It is the part of educational system which seeks to develop new knowledge and to teach the advanced knowledge and techniques which are required by a dynamic, constantly changing economy and society. On the other hand it has also opened the road to individual growth and the local culture. It has taught millions of local and overseas students about civilization and literature etc. (Mcllroy and Jones, 1993 p.4—5).

Higher education is the generic term used as to describe universities, Scottish central institutions and colleges of education, and other colleges and institutions of higher education offering degree level courses. Most colleges provide a range of academic and professional subjects at different levels and no two colleges are alike

in contrast to the uniform systems of colleges in Pakistan, where the same pattern of administration and courses is observed throughout the country.

In the UK, students can go on to further or higher education after school. Until the 1960's the higher education sector was mainly made up by the Universities. During the 1960's, the government established the Polytechnics, which were originally geared to vocational training rather than pure research. However, the distinctions along the lines of research between the polytechnics and universities became increasingly blurred until the 1992 Act of Parliament which allowed polytechnics to apply for university status.

In the UK, all universities are independent self-governing bodies. They helped by the state but not controlled by it. They derive their rights and privileges from Royal Charter or Act of Parliament. Apart from Buckingham University, all universities still receive substantial support from the government, through the Higher Education Funding Council (HEFC). Research funds are related to how departments perform in detailed research assessment exercises. According to Burnett (1994, p.1717) that some 27% of HEFC is spent on research. These universities do not come within the direct jurisdiction or control of any government department, unlike the universities in Pakistan.

The Queen or Queen in Council is the Visitor[8] of the majority of universities. The Visitorial authority is exercised through the Lord President of Privy Council or the Lord Chancellor. The second form of

[8]The concept of the Visitor comes originally from ancient ecclesiastical law through the college of Oxford and Cambridge. The Visitor's duty is to supervise the government and regulation of the foundation of which he [is] Visitor, on behalf of founder, to see that the private laws given in the form of status, ordinances, regulation etc. by the founder to his foundation [are] observed, and out of this supervisory role [has come] a jurisdiction to hear and determine any dispute within the foundation concerning the enforcement or interpretation of those private law (Becher, 1987 p.32—33).

external control inherent in a university's status is the membership of its executive governing body. The executive body entrusted with overall management of the university is the Council. Typically, one-third of the Court[9] and one—third academic staff and students. All academic issues like admission policy, curricula, examinations, research and the conduct of facilities of research, especially libraries, student progress and staff promotions are the responsibility of the Senate. The government does not have direct control over the actions of universities. Its principal means of influence lies in the provision of finance and influence exercised through intermediary bodies of which politicians are not members (Mcllroy and Jones 1993, p.53—60).

3.3 Development of Universities

Universities in the UK, came into being in medieval times, Oxford and Cambridge received full recognition in 1214 and 1318 respectively. London University was established in 1836 (46 years before the establishment of the Punjab University, the oldest university in the Pakistan) as an alternative to "Oxbridge" to counter the existing bars to Catholics, Non Conformists and Jews. The colleges of the Victoria

[9]Most universities, constitutions provide for a large, inert body which receive an annual report and elects honourary officers and usually called the court.

University established in the 1880's were gradually launched as independent universities in 1903—1904. These universities began to cater for a national rather than a local clientele. There was some expansion during the post—war period. In 1965, the then Labour party government announced the creation of the polytechnics. From 1969, these polytechnics came into being, their curricula primarily centered on science, technology, business studies and even on librarianship. The 36 new universities created in 1992 had a previous history as polytechnics and colleges of higher education. In 1992—93, there were 93 universities in the UK excluding the Open University and the independent University of Buckingham.

3.4 Admissions Requirements and Students

According to Mcllroy and Jones (1993 p.78—80) around 75% of students qualify (for university entrance) with A levels. The minimum requirement for admission to higher education is two A levels and another three subjects at 0 or GCSE level. In recent years less than 20% of candidates with two A-levels were accepted by the older universities. A point system is often applied to A-level and AS level grades. The maximum applied is 30 points for three A-level grades. The average points scored by successful students who entered universities is currently about 21.1 points, whereas the average points scored by those who are unsuccessful is 13.6. The points system works as follows:

Grade	A level	As level
A	10	5
B	8	4
C	6	3
D	4	2
E	2	1

In the UK first degrees are awarded as honours degrees. The normal grading for an honours degree is first class, upper second class, lower second class, third

class. However, degrees which do not reach honours standards are known as “pass degrees”.

There is a unified admissions system for application procedures in the UK at first degree level, but the final decision on the application are taken by the institution concerned. In contrast there is no such system in Pakistan, so that students in Pakistan not only spend money applying to different universities but are quite often uncertain about the progress of their applications. Unlike their counterparts in Pakistan, most students in the UK expect to receive bursaries and grants towards living expenses, fees and books. There is no system of grants in Pakistan like the UK, although there are some scholarships available to very talented students.

In all 50 old universities of the UK, there were 482,250 students in 1992—93 (University Statistics, 1994 p.6). The number of graduates and higher degree graduates in 1992—93 were 87,073 and 41,616 respectively.

3.5 Academic Staff

As compared to Pakistan, British institutions with different traditions have different categories of academic staff. Oxford and Cambridge, as well as the older Scottish universities, tend to use distinctive terminology eg. Fellow. Usually Lecturers, Senior Lecturers, Principal Lecturers, Readers and Professors are the main categories of the staff. The latest figures available for the total number of full—time and part—time staff were 51,261 and 4,591 respectively. In the same period there were 4,973 (10%) were Academic Professors[10] and 10,010 (19.5%) were Readers[11] and Senior Lecturers (Burnett, 1993).

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[10]These are senior academics usually appointed to a “chair” a partly on their teaching record but primarily because of their eminence in research

[11]A Reader stands in seniority between a Senior Lecturer and a Professor.

3.6 Degree Structure

Degree courses are at the centre of activity in higher education. Those studying for a first degree are normally called undergraduates and those for a second degree, postgraduates. Most first degrees courses take three years although some courses, like Medicine and Veterinary Science, take five years. Almost all Engineering courses take four years. Part—time degrees can be taken over five to six years. There are many sandwich courses available which last four to five years and include work experience as part of the programme.

First degrees in the UK have the title of Bachelor as in Pakistan. At “Oxbridge” all first degrees are BA degrees, but the title of MA can be acquired after a number of years without further examination.

In Pakistan, Bachelors’ degrees in Engineering and Law take four and two years respectively. The only difference being that the law degree starts after a student has completed the two year BA and the engineering degree is four year from Intermediate (higher secondary examination). Although there is no concept of part—time courses (with some exceptions), those students who cannot join universities as regular students can get Bachelors and Masters degrees to appear as “external candidate” in the external examinations of universities held once in a year. But no one is entitled to a degree in any science subjects as an “external candidate”. At present only the Open University at Islamabad offers different degree level courses like the UK Open University.

A Master’s degree takes one to two years after the Bachelor’s degree. But in the case of a Postgraduate Diploma/ MA,MSc the degree takes nine months of study to the Diploma stage and other three months for a Masters. In the UK, the majority of the Master’s degrees involve course work plus some element of research.

Other qualifications in higher education are the Higher National Certificate (HNC), the Higher National Diploma (HND), and the Diploma of Higher Education. All these course lead to a variety of professional qualifications.

3.7 Evolution of Library Education

In order to achieve any meaningful basis for a comparison of courses and levels of professional education that now exist in the field of library education, some understanding of the process leading to the present pattern of education is needed. This is important because more often than not current writers on curriculum development seem to ignore the significant events of the past which have helped to shape the present pattern of courses in library schools. It is therefore proposed here to mention the major events in two countries: Pakistan and the UK. Pakistan has already been discussed in Chapter Two. Now we will trace developments in the UK in three stages: 1919—1946; 1946—1964; 1964—present day.

3.7.1 1919—1946

Professional education for librarians in the UK was introduced with the foundation of the Library Association (LA) in 1877. The first examination in librarianship was held eight years after the establishment of the LA. There were only three candidates, of whom two passed. The general subjects included in the syllabus were English literature (especially of the last hundred years) and some other European literature, classification, elements of bibliography including cataloguing (cataloguing knowledge of at least two languages other than English); library management and administration were included as technical subjects (Bramley, 1981 p.15- 16).

Bramley (1981 p.62) has provided the details of early library education with the reference of pattern and certification etc. as: —
“the development of a system of education, examination and certification for librarians had been modeled upon the pattern adopted by other professional groups in the UK. The apprentice system had been linked to an examination to test the competence of those who wished to enter the professional ranks... The introduction of a register of qualified practitioners in librarianship had given, therefore, the additional benefit of enabling those admitted to call themselves chartered librarians”.

Now the Library Association has the right to award the title “Chartered Librarian”. There is no legal requirement for librarians/information scientists to register with the Library Association or the Institute of Information Scientists.

The School of Librarianship (now the School of Archive and Information Studies) at University College, London had its origin in courses originally established before the First World War at the School of Economics, and was formally established at University College in 1919. This was actually first academic library school established in any university in the UK. Harrison (1963) pointed out one peculiar aspect of school’s foundation:

“for the first time in the history of British librarianship there were now to be found full—time students in a full—time professional school under a full—time director and all within the walls of an institution of university rank”.

3.7.2 1946 — 1964:

The universities were uncertain about their commitments when the Second World War ended and more importantly, universities did not like acting as teaching institutions if they could not examine as well, hence they would not accept teaching when the LA did the examining. The universities therefore turned down librarianship and the LA then turned to the Colleges of Further Education. Here they got positive responses and the first of these institutions was at Loughborough.

So the machinery for library schools was set in motion in 1946 immediately after the end of the War with schools opening in Glasgow, Loughborough, Leeds, Manchester and the City of London College. In 1947 further schools were opened at Brighton and Newcastle. All these schools were opened in Colleges of Further Education or in many cases Colleges of Commerce — later to become Polytechnics. Between 1960 and 1963 the schools had grown phenomenally (because the Library Association’s restructuring of its examinations made part—time study virtually impossible) and universal professional education for librarians was now a practical possibility.

The Council for National Academic Awards (CNAA) was founded in 1964, and invested with a Royal Charter which empowered it to award degrees through courses at non—university institutions. It had established a Librarianship Board which received and approved courses submitted for its degree, which were then the responsibility of the appropriate institution. The Library Association had also introduced a new syllabus in the same year.

Davinson (1976) traces the contents of the new syllabus and describes

"the courses which were eventually introduced, under CNAA auspices at undergraduate level for the most part, closely followed the LA syllabus introduced in 1964. The students were usually required to study the core subjects in their first year, covering library administration, cataloguing and classification and reference work. The students then be offered the chance to specialize in various branches of librarianship in their second and third years. In addition library schools one or more other subjects into their curriculum which would usually have relevance to the study and practice of librarianship".

In response to the introduction of new syllabi, all library schools have gradually increased their teaching staff. In 1960, there were 30 full—time teaching staff in ten library schools, and by 1964 the number had increased to 71 (Bramley, 1981 p.160). In 1993 there were 177 teaching staff in all sixteen library schools.[12]

The growth of full-time professional education for librarianship in the UK has taken place within the

[12]BAILER DATASHEET 1993/94

British Binary System of higher education. The 1960's decade witnessed the establishment of number of library schools including the very well-known College of Librarianship in Wales; the schools at Aberdeen and Liverpool; and the university departments of information science at Sheffield and Belfast.

3.7.3 Present Position:

There are sixteen library schools in the UK and Northern Ireland; one in Northern Ireland, one in Wales, two in Scotland and twelve in England (See Appendix 1). All these schools operate under a variety of names including department of library and information studies, department of information science, department of information studies. There are now three universities (City, Sheffield and University College, London) in the UK, which offer only Master's degrees in information science, information management, library and information studies. All other universities offer undergraduate as well as postgraduate courses (both postgraduate Diploma and MA).

All students taking the Master's courses in librarianship/LIS have first obtained a Bachelor's degree from a British university. Despite the diversity of course titles and of assessment/examination systems, a common standard has been achieved to a remarkable degree. This reflects the use of external examiners in every degree course. There has been rather less progress in doctoral qualifications in librarianship in the UK. The number of students proceeding to Ph.D standard in librarianship is small. No exact figures are available, but perhaps less than 5% of students graduating at any level of Bachelor's or Master's degree in LIS go on to Ph.D (McDougall and Brittain 1993, p.363).

3.8 Recent Developments in Library and Information Science Education

LIS education is now contained mainly in universities where it has maintained, on the whole, a strong separate identity despite being sometimes being amalgamated into departments of communication and information or into business schools.

The type of job secured by an LIS graduate appears to depend much more on work experience, preferences and personality than on academic qualifications, and it is not unusual to find senior librarians holding a lesser degree than other staff working beneath them.

In the early years, most undergraduates were required to show not only experience in the library sector but also a commitment to library and information services. There was also a strong gender bias, with sometimes only 10% male students. Until twenty years ago, it was unusual to find LIS graduates finding work in the information services outside traditional public, academic or specialist libraries, and most became chartered by the Library Association within a year's probation working under supervision (MacDougall and Britain 1993, p.364). Nowadays, recruitment policies are much broader, and LIS courses attract a higher percentage of male undergraduates. There are also many more ethnic minorities and overseas students, as well as a wider age—range. Robertson and Yates—Mercer (1988) show how the new M.Sc in Information Systems and Technology at City University attracted a wide spectrum of applicants from teachers to computer experts to systems analysts. It is no longer the case that shy, retiring bookworms should go into librarianship, but as Day (1989) says 'it will take a major, long-term public relations campaign by the profession at large to change the stereotype'.

Most LIS departments in the UK have survived through developing strong inter-departmental links within their institutions. Typically, this might involve staff teaching knowledge—based systems in the computer studies department and modules in the social studies department, as has happened in Loughborough University. In other cases, departments have had to merge, due to economic pressures.

Staff are generally very aware that concentrating too much on technology can damage other important parts of the curriculum, particularly customer care and service. As Day (1989) comments 'Technology is not an end in itself', and students

are recruited these days more for their communication and interpersonal skills than their computer-literacy. These skills become much more important in the shift towards more client—centered services, such as on—line searching (Burton, 1990 and Blackie, 1988).

Since the Second World War, the world has witnessed a revolution as great as the industrial revolution (according to Corbin, 1988), fuelled by information, computers and communications. These three things have combined to produce what MacDougall and Brittain (1993) describe as ‘an information—driven computerized infrastructure’, in which there is instant transmission of voice, text and image.

These have mirrored and necessitated major changes in LIS education. Moore (1987) and Day (1989) both describe the way that information itself has become a valuable asset, and that information technology (IT) has grown as an industry at an incredible speed.

The expansion of the term ‘librarianship’ to include information studies in the 1970’s reflected this changing world. Martin (1987) discusses this semantic shift alongside terms such as ‘library studies’, ‘documentation’ and ‘information science’.

Within the last ten years, many LIS departments have had to adapt to this changing market, and rethink their recruitment and training policies. Major reorganizations have taken place, for example, in Queen’s University of Belfast (Martin 1991), at Liverpool John Moores University, and at the University of Strathclyde. In some cases, the departments have merged with each other to form new entities: a School of Finance and Information, in the case of Queen’s University, or become part of a business school.

The restructuring of departments is only part of the story. The major shift in

education came ‘when information, began to be seen as a political and economic entity’ (McGarry 1987).

The shift in the curriculum can be broadly broken down into: information technology, communication and interpersonal skills, information management, increased specialization, and modularization.

The curriculum has moved away from classifying, cataloguing and bibliography into information technology (IT). In the early days, many US schools lacked the equipment and training to teach IT effectively. To tackle this deficiency, the Transbinary Working Group on Library and Information Studies was set up in 1985 to advise UK LIS courses. Their recommendations became influential and widely implemented, though many schools of library and information science (SLIS) were and are still hampered by lack of resources.

One of the most important recommendations, that SLIS should be funded for computing equipment on the same basis as computing departments, has greatly enhanced the funding of microcomputer labs, local area networks and associated software (Rowland and Tseng, 1991).

Another change in curriculum is that of information management. This has emerged as a separate discipline with LIS, dealing with the economics of information, information policy, areas of application and so on.

There is also ‘increased specialisation’ which enables the student to focus on one particular part of a much more diverse curriculum. This also enables students to train for a particular vocation in the job market, whether that be archive studies, or health care information.

Modularization, has taken off in the last few years, so that now courses in the UK are closer to their American counterparts using ‘credit accumulation and transfer’. This allows greater flexibility in course structure and can offer a range of ‘pathways’. It also enables professionals to attend part—time courses to top up their knowledge. This course structure is particularly popular in IT.

Since 1990 there has been a dramatic increase in the number of undergraduates going into SLIS. This increase has not been matched by resources, however and over the past few years staff-student ratios have deteriorated to between 1:15 and 1:23.

Current concerns in outlined by McDougall and Brittain (1993) include customer care, the transferability of LIS skills, developing new areas of the LIS curriculum, and developing more and better distance education courses. The greatest challenge is to increase output with fewer resources. Growth in student numbers in set to continue, but with the 16-19 year old population decreasing by about 40% the shortfall must be made up by attracting mature students and students from overseas. The key to this is successful marketing of courses — another area hampered by lack of funds.

3.9 Levels of Library Science Education

There are five types of professional courses in library education in the UK:

1- Certificate and Diploma courses for para-professional staff.

2- Bachelor’s degree (first degree) courses.

3- Taught postgraduate (higher degrees) courses leading to an initial LIS qualification.

4 Taught postgraduate post-qualification courses.

5 M.Phil/Ph.D programmes (higher degrees by research)

3.9.1 Certificate and Dinlomp Courses.

The role of library and informational assistants has been defined on a number of occasions. The official statement of the LA does provide official recognition and acceptance by the profession of both the value and need for such Para-professional (library assistants) staff. The rationale for introducing these courses and for establishing positions for these staff is twofold:

(a) it is wasteful of the time of professional staff if they are required to perform semi-professional duties, and (b) these courses provide a career structure (though not very bright in the UK) for non-professional staff.

At present four different types of courses are available in the country: —

(i) the City and Guilds of London 737 certificate in library and information science, (ii) the BETC national certificate/diploma programmes,

(iii) the SCOTVEC national certificate in library and information science, and (iv) the SCOTVEC higher national certificate in library and information science.

The courses, which are offered by the Business & Technician Education Council (BETC) and the Scottish Vocational Educational Council (SCOTVEC) can be studied full—time, as evening classes or through distance learning. The duration is normally one year. In purely academic terms the BEPC and SCOTVEC qualifications are considered to be at a higher level than the City and Guilds qualifications.

The City and Guilds certificate provides basic training and is recognized in this country and known even in Pakistan. Strictly speaking it is not a professional qualification and has no connection with the library schools. It is an open learning course and there is no need to join any institution. This certificate includes five units. They are selecting, stocking, storing and maintaining materials; providing routine customer services; assisting users in locating and retrieving information. These units also cover the qualities of personal presentation and communication, and organizational studies.

The National certificate course covers such areas as classification, cataloguing and indexing. It also covers the necessary skills and knowledge for a variety of organizations from local libraries to company resource and information centers. Information technology applications are also included in the course.

The Higher National certificate covers such topics as user needs, literature searching and staff finance. So far these courses are not approved for National Vocational Qualification ratings.

3.9.2 Bachelor's (first degree) Courses

At present twelve out of sixteen library schools offer these courses. The title vary: e.g. BA/BSc(Hons) librarianship and information science; information science; information management; applied social science; information and computing; information and library management. The objective of the majority of these courses is to provide a range of knowledge and skills in the principles of librarianship both in the traditional and emerging information markets. These programmes also have educational objectives.

Most of these courses are three years in duration and are modular. In modular

courses students study either a single subject, or a small group of subjects with one as the main focus. The modular degree offers a variety of choices of equal weight. A student chooses, within this framework, the modules of study which are of most interest or are required for entry into a particular career. As McGarry (1988) remarks "we feel that the modular structure will give us sufficient flexibility to cope with the manifold and imminent unknowns of the nineteen nineties".

These can be delivered either within a semester or a trimester framework and can be studied full—time or part—time. The courses consist of a series of subjects, which are assigned a credit value. All subjects studied are divided into core (compulsory), core (options) and elective. Some schools give a stage award after the completion of each year of study. For example the Manchester school awards a certificate and diploma of higher education to students leaving after completing the first and second year respectively. In Pakistan a first degree is completed after two years and there is no concept of giving any lower or interim award. It means that if a student fails or leaves the course, nothing is awarded.

In the UK students can obtain BA/BSc (Hons) or BA/BSc in information and library science/library and information management depending on the orientation of the course and the subjects that they select. Traditional university BA's are given to students with an arts orientation in the terms of course content and BSc's to science and technology oriented courses.

3.9.3 Taught Postgraduate (higher degree) Courses Leading to an initial LIS Qualification

All sixteen library schools offer many types of full-time and part-time programmes of guided study leading to the award of a Master's degree (See Appendix 3).

Master's programmes are usually split into two stages: Postgraduate Diploma and MA/MSc. The duration of these courses is normally twelve consecutive months. Students follow instructional Diploma elements, which usually comprises of six to ten courses, for nine consecutive months. The Diploma course consists of lectures, group—work, tutorials and seminars, demonstrations and visits to libraries and other professional and commercial organizations.

Subject to achieving an appropriate standard students are then transferred to the Master's stage. In the remaining three months, MA/MSc candidates are required to produce a dissertation showing evidence of independent and innovative work. A few schools have long offered, as an alternative, a Master's degree award after 12 months' study and including a dissertation (which the Diploma does not include). This new trend shows that in the near future the Master's degree will oust the Diploma course as the first level postgraduate qualification.

3.9.4 Taught Postgraduate Courses - Post—aualification Courses

Higher education opportunities for qualified librarians offer a type of "continuing education" programme which leads to additional qualifications. At present eight library schools (See Appendix 4) offer the specialist post experience Master's course at second level.

The students joining these courses are usually mature and experienced librarian/information specialists. The reasons advanced by those library schools which have held, or are holding specialist courses are remarkably varied. They include the following:

(a) They give mature librarians/information specialists the opportunity to specialize beyond the Master's degree.
(b) They are a means whereby individuals may update their professional knowledge

or improve their professional skills.
(c) They provide a management development progress that enables librarians and related professionals to introduce the changes in information technology and also in social, political and economic circumstances.
(d) They provide advanced training for those who are on the top or middle management level.

The majority of these courses encompass the fields of library and information management, information system and information technology. The duration of these courses varies from one year full—time to two years full—time. The pre—entry requirements for these courses are normally a postgraduate degree in library and information science or any other qualification such as Fellowship (FLA) of the LA.

Courses mostly provide curricula based on the theoretical aspects of the course and then relate these aspects to practical applications using “case studies” methods, which later extend to become the major project of the course concerned.

3.9.5 M.Phil/Ph.D Programmes (degrees by research

Library education in the UK has been, for the past eighty years predominantly a non-graduate profession. For those who wish to continue their studies, the LA has since 1964, made it possible to obtain the Fellowship qualification by thesis. The value of this highest degree had been enhanced two decades before by the advent of research degrees in the library and information science. These research programmes had been introduced by university library schools and then polytechnics after the approval of the CNAA. The first Ph.D student in library and information science at University College, London graduated’ in 1974 (Ward, 1990 p.295).

The introduction of research degrees has led to the growth of a considerable amount of original work and investigation in the whole field. At present research has not been confined to librarianship, but includes related fields such as documentation,

information science, information management, archives and the book trade. All research programmes can be taken on either a full-time or a part-time basis. The period of study for an M.Phil is usually 18 months. For a doctoral degree (Ph.D), the minimum period is three years full-time or five years part-time.

During 1993—94, the total number of research students (both full-time and part-time) in all library schools in the UK was 196[13].

3.10 The Library Association's Qualifications

The Library Association no longer conducts its own examinations but has accredited those university courses which meet the academic requirements for its professional qualifications of 'Associate' (ALA) and 'Fellow' (FLA) for librarians and information professionals working in the UK and abroad (See Appendix 5).

3.11 Admission Requirements in Library Education

3.11.1 Postgraduate Courses

For the diploma level a universal prerequisite is the Bachelor's (first degree) in a recognized subject from an approved institution. All schools in the UK follow the same pattern. They require a higher degree standard but do not stipulate a specific grade of degree. An aptitude for and interest in the field are recognized as of vital importance.

As mentioned higher degree (postgraduate) programmes are divided into Diploma and MA levels. To move through from the Diploma to the MA/MSc, a high standard of performance in all parts of the Diploma is

[13]BAILER DATASHEET (British Association for Information and Library Education and Research) 1993—94.

required. The Diploma and MA/MSc stage together take twelve months ranging from nine and three months respectively.

All applicants are normally interviewed before acceptance. Government financial help is available in the shape of bursaries awarded on a competitive basis. The quota of bursaries for all schools is fixed. Usually a student applies to more than one school for both a bursary and a place. In Pakistan there are bursaries but some scholarships are available only to very high caliber students. Usually students pay their fees themselves.

As in Pakistan the rates of admission are very high. It is a rare school that has fewer qualified applicants than it can accept; some schools have a large pool of applicants. According to a survey the total number of places in all the UK schools in 1993 was 684 and 2861 applications were received (Maher 1994). This means only 23.9% of applicants were successful. It is interesting to note that in 1992, 3242 applications were received against 781 places (Evans, 1992) indicating a decrease in the ratio of successful candidates. At this point it is important to keep in mind that students usually apply for admission in several schools at any one time, so one can assume that the admissions ratio may be slightly better.

As Cronin (1982a, p.20) states

“that prerequisite experience in theory, allows a degree of exposure to the actuality of librarianship and should ensure that students are familiar with basis of the profession. Pre-course practical experience may help weed out potentially unsuitable candidates, thereby saving both the students and the school as wasted investment of time and money”.

In the UK library schools pre-course experience is usually required. The requirements for the duration of pre-course experience vary from course to course

but usually library schools require six months to one year's experience. Many organizations provide trainee schemes for graduates and all are systematically planned.

3.11.2 M.Phil and Ph.D Programmes

These degrees are awarded for approved work presented for examination in thesis form, supplemented when required by examination. For both the degrees the minimum qualification is almost same in all library schools.

The students should possess either a first degree in librarianship or in library and information studies. Students with first degree in other subjects are eligible for admission but they must have approved qualification in librarianship. Non-graduate, qualified librarians (e.g. ALA) are eligible for higher degree admissions, but for this level only those holding the FLA are eligible. The only difference between Pakistan and the UK is that in Pakistan without a Master's degree in Library and Information Science no one is allowed admission to this level, but there is no such situation in the UK. No course work is involved in these programmes (e.g. Karachi school in Pakistan for M.Phil) and they are purely based on research.

3.12 The Assessment System

In the majority of library schools, the courses are assessed by a mixture of examination and assessed course work. Some universities assessed academic work accounts for 75% of the formal result and the examination for 25%. Assessed course work includes both individual and group work (in small and selected groups). Other universities do not conduct any examinations and all students are assessed by course work. Assessment follows the university's own regulations. Different schools assess their students at different standards. For example Loughborough school assessment follows:—

distinction (70 - 100%),

pass (50 - 69%),

minimum performance (40 - 49%) and

fail (0 - 39%).

In Manchester school, the assessment criteria are as follows:
A (85+)

B (75—84)

C (65 — 74)

D (55 — 64)

E (40 — 54)

F (0 — 39)

A distinction is awarded if any candidate gets at least 6 “A”s and no more than 4 “B”s in all ten required modules of the course.

As mentioned earlier despite a diversity of examination systems, a common standard is achieved using external examiners in any formal examination result.

The examinations the students face in Pakistan consist only of written papers but in the UK, the majority of library schools assess students by means of course work. In some circumstances students are allowed to resubmit their work, but in Pakistan due to the annual system of examination, no student is allowed under any circumstances - to change or to reappear in an examination in which he or she had previously failed. The marked scripts are not available to students for scrutiny, unlike the UK, where this system exists to help offset any unhealthy practices on the part of

faculty. So it can be said that the British system of examination is to some extent realistic, elastic and rather better than that in Pakistan in the context: of both standard and professional education.

CHAPTER FOUR

LIBRARY EDUCATION COURSES IN PAKISTAN

In Chapter Two there was a brief discussion of the education system in Pakistan and of the historical forces which contributed to the growth of library education and library schools.

I t is commonly agreed that curriculum development and the reform of curriculum content are a continuous process which has to be followed by universities worldwide. This is also true of library and information education which has to consider changes in the working methods and environments of libraries and information centers. As mentioned in Chapter Three there have been many changes in this field in the UK. Over the years the syllabus for the postgraduate level has been altered considerably. Unfortunately the library schools in Pakistan have not reacted positively to the information explosion, the computer revolution and knowledge industry, and as a consequence the standard of library and information science education is relatively low by Western standards.

4.1 Introduction of the Postgraduate Courses

In all six library schools the contents of courses largely reflect the uniform courses recommended by the University Grants Commission (UGC) in 1980 (Appendix 7 and 8). There are 12 courses of 3—credit hours each are offered in one academic year. The non-semester universities contain a number of composite courses by combining 2 related courses of 3-credit hours each at Diploma and MA level. Khurshid (1980) remarks that

“the revised courses makes an attempt to increase one additional course over and above the normal course load, prescribed normally for university courses at Master’s level in Faculty of Arts of which library science is a part. Even this augmented course

does not help to catch up sufficiently with minimum growing knowledge that is necessary for learning library science".

There is no doubt that the recommended courses by UGC was a good effort in bringing visible uniformity across courses, but much was included which could not be implemented by the universities.

4.2 Contents of Diploma Course.

At present almost all library schools in Pakistan prescribe the traditional subjects in their respective syllabi, of course with minor variations in nomenclature of some of the papers. Haider (1987) provides details of the objectives of Diploma level qualification in Karachi school: "The objective of this program is to produce professionals with a thorough grounding in operational works common to all types of libraries". This reflects the view that librarianship is practical rather than a theoretical field aimed primarily at proficiency in the application of library techniques for the efficient organization of libraries.

As mentioned earlier the Diploma course covers one academic year. Generally, the instruction is centered around: three groups of subjects at this level:

*Library organization and management

* Classification and cataloguing –

* Reference works

The one year Bachelor/Diploma in library and information science at the Karachi school consists of twelve papers, equally distributed over two semesters. The courses offered in the first semester are:-

History of books and libraries;

Building a library collection;

Bibliographical control and organization;

Introduction to classification;

Introduction to cataloguing;

Principles of management.

In the second semester the following papers are offered:-

Library and society;

Reference resources and services; and

Bibliographic methods and procedures.

4.2.1 Analysis of the Diploma Courses

Classification and cataloguing figure prominently in curricula. There is a great emphasis upon theory with a corresponding determination that theory and practice should be seen as one. The practical paper consists of a series of transcripts of books which have been carefully selected for the complexity of their subject matter and unusual problems which their bibliographical details presented. Normally, in the classification (only DDC) paper, the same procedure is adopted as in the undergraduate courses in the UK but the references to the theory of classification are usually confined to the findings of Laymark to the classification of books. Sear's list of subject headings is also used.

Reference courses require that students learn as many reference titles as possible; they are expected to memorize much of the contents and arrangement of those works. In contrast in the UK, the students are required to compile bibliographies on selected topics. This technique gives the student greater familiarity with reference material in specific areas; provides the opportunity to practice search techniques (both through online and traditional access methods); enables the

students to exercise their initiative, and finally gives them the satisfaction of producing a piece of work.

Management and bibliographic courses only cover the theoretical aspects and there is no use of “case study” methods as used in the UK.

4.3 Contents of Masters Degree Course

The MA in library and information science is a two year course (the Bachelor/Diploma in library and information science forms the first year of Master’s programme). The majority of these courses emphasizes administration and advanced studies. As Haider (1987) says:

“The Master’s degree aimed at producing administrators, library supervisors, etc. by imparting advanced and specialized courses not covered in the first year of professional study, to provide the students an opportunity for advanced Study in the special field of library science, and finally, to provide training in the methods of investigating problems by using scientific methods”.

At present almost all the library schools in Pakistan prescribe the following courses in their respective syllabi at MA level, of course with minor variations in nomenclature of some of the courses.

* Comparative classification;

* Advanced cataloguing;

* Information science;

* Advanced and specialized courses.

The contents of the universities' courses however, tends to vary from University to university. The recent curricula of a first postgraduate library school of the country is given below:

Paper I

Comparative Classification Part A

Principles underlying the construction of classification and subject indexing systems. Comparative study of selected classification and subject indexing system with particular reference to the UDC and LC schemes. The Sears List and LC subject headings are also used only in theoretical terms ignoring the practical aspects.

Advanced Cataloguing Part B

Basic principles used in the construction of cataloguing codes. Comparative study of the major cataloguing codes, with particular emphasis on AACR-2. There are major differences between English and Urdu works, so the study of problems in cataloguing of works published in Pakistan is also considered.

Paper II

Information Science Part A

Introduction to the theory and practice of information storage, retrieval and dissemination. This includes methods of information handling, indexing and indexes, abstracting and abstracts and current awareness. Survey of documentation programmes and information system.

Serials Librarianship Part B

Issues in acquisition, organization, preservation and storage of serials collection.

Paper III

Research Methods:

An introduction to research methods and their application in library science. This includes the meaning and value of research; selection of research problems; hypothesis; research methodology; collection and evaluation of data; report writing; and evaluating research reports.

Paper IV

OPTION 1

Management of College and Universities Libraries

Development and objectives of higher education; foundations of institutions of higher education and their libraries; administrative relationships and organization; personnel administration; budgeting and financial administration; selection, organization and use of materials; building planning; standards of library services; library evaluation; problems in academic development in Pakistan.

OPTION 2

Public Libraries

An introduction to the history of the origins of the public library; the philosophy, principles and practices of librarianship as envisaged by the UNESCO Manifesto for public libraries in 1972; public library services; current trends, issues and evaluation; problems peculiar to the organization and administration of the public

library, including legal and financial issues; a comparative study of the provision of the public library services in selected countries.

OPTION 3 (Part A)

Management of School Libraries

Educational role of the school library; study of operational procedures and management of school programmes supportive to the educational programmes.

OPTION 3 (Part B)

Library Services to Children

Philosophy and history of library service to children according to the needs of the children in their physical, mental, social and emotional development; analysis and evaluation of library materials for children; story-telling and other programmes.

OPTION 4

Special Libraries and Documentation Centres

Role of the special libraries and documentation centers in meeting the information needs of corporations, institutions, government agencies and other organizations; planning the services of special libraries and documentation centers; impact of newer technological developments on these services; comparative study of the provision of special library services in the UK, USA and Pakistan.

Paper V

OPTION .1 (Part A)

Literature of Islam

Nature and scope of Islamic literature: general materials, reference books, serials and audio video materials.

OPTION 1 (Part B')

Literature of Pakistan

Nature of the literature of Pakistan: problems of bibliographic control in Pakistan; reference materials relating to Pakistan; literature on Pakistan study, Quaid-e-Azam and Allama Iqbal (Founder and National Poet of Pakistan); periodical literature in Pakistan.

OPTION 2

Resources in the Humanities, Social Science and Technology

Survey and evaluation of information sources in the Humanities, the Social Sciences and the Sciences and Technology; historical background, development, scope of each area; structure of the literature of each area and its relationship to the literature of other areas; problems in bibliographical control in each are; information needs of the persons working in each area.

OPTION 3

Comparative and International Librarianship

Trends and issues in library development in selected countries of the world; impact of the information explosion and technological advances; international library organizations and their role in developing library services with special reference to the developing countries.

Paper VI

OPTION 1

Management of Library Operation

Study of the philosophies and techniques of scientific management and their application to library operations such as acquisition, cataloguing and circulation routines; analysis of routines where necessary, design improved methods for library operations.

OPTION 2

Thesis

This category is not a compulsory part of the MA in Pakistan as in the UK. However students are allowed to undertake theses on a topic, in lieu of one paper. Usually students are required to use relevant methods for the collection and analysis of data. Bibliographical studies are not normally accepted as topics for theses unless these fill in gaps in the literature. It is a common practice for students to be encouraged to write their theses in Urdu. It is a common trend that students prefer to opt for the examinations rather to write a thesis.

4.3.1 Analysis of Masters Degree Courses

The actual syllabus contains three compulsory papers and nine optional ones from which three must be chosen. Qureshi (1979) states that an information science course was introduced in the Master's program of the Karachi school in 1973 as a compulsory paper. Now all schools offer information science in their courses. However, there are no courses specifically designed to lead to an information science qualification. After an analysis of the courses and outlines of library schools in Pakistan, the essential elements of information science courses can be summarized as follows:-

(a) Information Storage and Retrieval

This is the leading category in all library schools in Pakistan in terms of the number of courses offered. This category can be further subdivided into two types of courses such as indexing and abstracting, information retrieval and documentation.

(b) Information Systems and Programmes

This category includes a survey of information systems and descriptive documentation programmes. Only one school offers an optional paper on information networks and data banks.

(c) Library Automation

This category of courses discusses the use of modern technology, particularly computers applications to facilitate traditional library operations. These courses are typically based on the theoretical aspects.

Courses like systems analysis are not found in any library school of Pakistan. There are no courses in programming and inter-active computer system and online retrieval services such as DIALOG available in Pakistan. One of the reasons is that computer facilities are not commonly provided in the schools with some exceptions like the Karachi school. Likewise there is no access to interactive and online systems, as are available very usually and commonly in the UK library schools.

In the context of classification, model provided by Cronin (1992b) for information science programmes, it can be said that information science courses in Pakistan falls in the category of “tree hugger”.

A closer look at courses showed that both, course titles and contents vary from one school to another school as in the UK. After excluding advanced cataloguing and comparative classification from the courses it is evident that all schools have only one course in the area of information science. Mostly schools use an “umbrella technique” (more than one course in a subject) in their courses and

consequently, courses are so crowded that the topics are treated in a survey fashion as is clear in the course outlines of the syllabus mentioned above.

CHAPTER FIVE

LIBRARY EDUCATION COURSES IN THE UK

5.1 The Nature of Postgraduate Courses

In the last Chapter details and an analysis of the courses offered at postgraduate level in Pakistan were discussed. In the present Chapter the same will be repeated with reference to the UK.

As mentioned earlier, in the UK students choosing the postgraduate route complete an academic degree program before proceeding to post—Bachelor or second degree level in LIS, which provides a vocational qualification. As compared to Pakistan, library schools in the UK have complete autonomy in planning their courses subject to institutional requirements and professional accreditation. Experience with such courses certainly contributes to exploring the frontiers of professional knowledge and helps academic and professional practice. All these courses are accredited by the Library Association (LA). The LA does not control the courses or the syllabus.

The pattern of LIS education in the UX has differed from that of most other countries including Pakistan in some important aspects such as the level, duration and nature of the courses. In the past few years, all Postgraduate Diploma courses have been upgraded to higher degrees. All courses are accredited and approved by either the LA or the Institute of Information Scientists (IIS) or both. All graduates of these courses are granted maximum exemption for the experience in information work required for membership of the IIS. The details of the LA qualifications and criteria for courses in information science and membership rules of the IIS are provided in Appendices 5 and 9.

All library schools in the UK operate under a variety of programmes with different titles (See Appendix 3 and 4). Broadly speaking three main categories of courses are offered:

* Library and information science (LIS)

* Information science (IS)

* Information management (IM)

5.1.1 Library and information science

Library science has a long and proven history going back many decades, devoted to organization, preservation, and use of human graphic records. Information science is a much more recent development, only beginning to explore issues and possibilities. In recent years the curriculum has been deeply affected, with a strong emphasis on information technology. A description of what constitutes library and information studies courses is necessary before any analysis of courses in this field can be attempted.

Harrod's Librarians' Glossary (1990) defines library science as

> "a generic term for the study of libraries and information units, the role they play in society, their various component routines and processes, and their history and future development. Used in the USA in preference to British term Librarianship".

Harrod's describes Information Science as

> "the study of the use of information, its sources and development; usually taken to refer to the role of scientific, industrial and specialized, libraries and information units into handling and dissemination of information".

The discussion about the nature of information science is described by Borko (1968):

> "information science is that discipline that investigates the properties of behaviour of information, the force governing the flow of information, and the means of processing information accessibility and usability. It has both a pure science component which inquires into the subject without regard to its application and an applied science component, which develops service and products."

Information science is the study of the nature of information itself, the processes that successively transfer the information to the human mind, and concepts and methodologies that lead to the effective utilization of information. This field is largely concerned with the development of effective systems with scientific applications.

The common ground between library science and information science, which is strong one, is in the sharing of their social role and their general concern with the problems of effective utilization of graphic records.

5.1.2 Information and library studies

Strathclyde University's, library school prospectus remarks that Information studies deals with the many ways in which information is created, manipulated, retrieved and disseminated in organizations and in society at large. Libraries have always played a significant (paramount) role in the organization; control and transfer of recorded information, but in today's information society a much wider mix of agencies, mechanisms and specialists are actively involved in the information transfer process. In Large's opinion: "information and library studies are inherently interdisciplinary in context and methodology" (Large 1990 p.48). Martin (1987) provides a significant discussion on the topics such as documentation, library studies, and information science.

Concluding the above discussion with the context of library schools in the UK, it can be said that schools cover LIS courses with a more vocational thrust, and prepares students for library positions giving them the requisite skills as well as for filling non-traditional information-handling roles.

5.2. Postgraduate Courses in Library and Intonation Studies.

It is a common practice in all library schools in the UK that the Diploma stage of the course is full- time for three terms (or two semesters). Students who successfully complete this part of the course and who do not wish to proceed to a Master's degree are awarded the postgraduate diploma and all others who proceed

to a Master's degree continue on a full-time basis for three to four months or on a part-time basis for a further year.

Some schools divide their academic sessions into two parts. In part one, students attend academic lectures and tutorials; during the second part, students undertake research for their dissertations. The Diploma course may consist of five to seven compulsory courses plus two to three optional courses. In addition to these courses in some schools all students undertake three to four weeks fieldwork, despite the fact they have already undergone a training programme of one year before admission. In Pakistan there is no concept of such training programmes as in the UK.

The published descriptions of the course outlines collected from different library schools make it clear that commonly all schools include the traditional subjects but not in such depth as in Pakistan. Basically all courses introduce librarianship and introduce students to handling, storage and retrieval of information.

The oldest library school (University College, London) in the country describes the aims and objectives of its Diploma/ MA in LIS as follows:

"The course aims to provide an understanding of the full range of professional knowledge and an appreciation of the skills and techniques relevant to library and information work. The overall objective is that students should leave the schools possessing a strong sense of motivation to serve the varying demands of different kinds of repositories for books, printed material…with basic skills in cataloguing and indexing; aware of the developing technologies for the transfer of information from one medium to another and handling of information in electronic form; with a basic understanding of bibliographical databases and retrieval software; aware of the need for management skills (interpersonal, financial and administrative) in organizations of varying size and complexity; and having a commitment of the needs of users of all kinds".

It is a common practice that all programmes and courses initiate students into the theory and practice of research as it is applied in the field of LIS.

There is no concept of uniform courses in the UK as in Pakistan. Reference has already been made to the fact that all schools in the UK have complete autonomy
in planning their courses. But generally all courses have the same focus. The following courses are considered integral for postgraduate level (with variation in nomenclature):

* Information technology and systems

* Studies of management

* Information and society

* Information access and retrieval

* Research methods

Additionally there may be a selection of optional courses from which students select one to two. The details of the courses at the Loughborough school serve as a model and are provided in Appendix 9.

5.2.1 Contents and analysis of courses

The summary of course contents and an analysis of the courses in LIS can be elaborated as follows:

(a) Information technology and systems

Information technology covers the essentials of automation and operating systems. It provides an introduction to computers and emphasizes the use of industry standard software. It includes basic word processing, spread sheets and

document production. The design and creation of databases is a common feature of this course. Another significant part of this course is the introduction of networks and networks tools.

Information systems courses cover topics such as system features, information systems methodology and evolution of systems. They also include design, systems analysis and flow charting techniques of information systems. For practical purposes students are commonly asked to develop users' requirements specifications for a system.

Some schools offer courses consisting of, the elements of an automated library house-keeping system with aim of setting up, maintaining and controlling a library collection. This category also includes practical work in the use of an automated library house-keeping system for different library operations such as acquisitions, cataloguing and circulation control.

(b) Studies of management

This course covers a general introduction to different aspects of management. It includes principles and organizational theory in management terms regarding provision and effectiveness of libraries and information services. Topics such as staff appraisal, financial management and interpersonal skills both between staff members and between staff and users are also included in the course. It also includes topics such as recruitment, time management and stress management. Often a "case study" method is adopted in order to analyze and evaluate specific problems and situations and to originate objectives, strategies and solutions.

(c) Information and society

With a few exceptions, this course is offered very commonly in library schools.

It describes and analyzes the cultural, economic, political, social and technological changes and their effects on libraries and information units. Some schools include topics such as the role of the information professions and occupations and information organizations. International perspectives and European policy are also taken into consideration.

Additionally it is common for most library schools to offer courses with a strong user focus and to include topics which describe the information needs of different kinds of groups (the business community, young people etc.) served by libraries and information services.

(d) Information access and retrieval

It is a common practice for students to use different ways of accessing information using both manual and automated techniques including all primary and secondary sources. Courses like classification and cataloguing are also offered, with the emphasis on practical application. However, the levels of study for the same courses in Pakistan are comprehensive and these two are offered as compulsory subjects.

Information retrieval is an integral part of LIS courses in all library schools in the UK and also in Pakistan. However the coverage of topics in the UK is very comprehensive compared to Pakistan. This category includes topics such as abstracting, semantics, thesaurus construction and their use, pre-coordinate indexes, use of controlled and natural language for subject description. Techniques of writing of abstracts and reports are also included in the courses.

The courses in information retrieval give an account of search strategies and introduce user interfaces and their evaluation. Compilation of client-interest profiles are prepared by students using different online databases.

Practical exercises both for access to information and information retrieval using traditional and computerized techniques are part and parcel of this category.

(e) Research methods

Primarily this course deals both with theoretical and practical approaches to research in the context of LIS. The topics that are covered in this category are models and methods of research, presentation and analysis of data. Both inferential and descriptive statistics are included. However some schools include in-depth applications of statistical techniques such as correlation and regression analysis and design of experiment. For the analysis of statistical data students commonly use industry software.

(f) Optional courses.

Most library schools in the UK offer a variety of optional courses. All optional courses reflect the various faculty structures in which library schools are situated. A brief list of common courses is given below:

* Business information,

* Manuscript studies,

* Information sources and services for media,

* Records management,

* Public and academic libraries,

* Marketing and information,

* International librarianship and information work,

* Local studies,

* Information services,

* Community librarianship,

* Publishing

* Information resources and services for young people,

* Information services of science and technology,

* Individual study in an appropriate topic.

It is clear that where new courses have been developed with new disciplines particularly in mind, they have tended to abandon large parts of the traditional curricula, or even start totally new courses. This applies especially, of course, to the areas involved with information technology.

5.3 Postgraduate Courses in Information Science

Information Science (IS) was originally defined a set of theories related to communication of information, but as an academic discipline it has evolved largely as a link between librarianship and computer science. Auld (1990) remarks that the perception of information science's development as a separate discipline is based largely on application of computing changes. The main theme of information science courses has been that information scientists are concerned with information and not with an institution such as a library.

Bottle (1978) describes as:-

> "information science, like librarianship, has borrowed heavily from other areas, for example Mathematics, Computer Science.., and worse still, it has even borrowed from librarianship".

It is therefore not surprising that librarianship and information science curricula can be regarded as two sets of overlapping structures.

At present four out of sixteen library schools in the country offer postgraduate courses in IS. The tendency is to style of these courses differently such as “information science”, “information studies” or “information systems” depending on differing emphasese in structure.

5.3.1 Analysis of information spience courses.

The first library school for information science education founded in the country was established at City University, London. For a general overview the one year MSc course in information science of the university is presented as a model.

The course consists of seven core and thirteen optional modules, from which two must be chosen. The recent syllabus is provided in Appendix 11 as an example and the outline is given here.

1- Information industry and information resources,

2- computers and communication technology,

3- Corporate structure and information management,

4- Information retrieval,

5- Communication skills,

6- Legal and policy aspects of information work,

7- Research methods.

The analysis of the courses shows that with the exception of three modules, all courses have similar themes as the LIS courses. The first core module provides basic information about information industry and covers all types of resources with the context of information industry. In other words “information and society” and “access to information” courses included in LIS have the same pattern both with LIS and IS. The second module introduces all those topics which are usually provided in information technology courses in LIS but at an advanced level. However some topics such as programming languages, hard copy techniques etc. are unknown in LIS courses and these are provided with an emphasis on information science. The third module basically covers the field of management with reference to Information technology applications. The basic difference between management studies courses in LIS and information science courses is that management studies in LIS concentrate on library and information units, whereas the coverage of management on IS courses is focused on the scientific approach towards organizations. The module also covers topics of information management and the use of information in organization. The fourth and seventh modules are same in contents as on the LIS courses. However the fifth and sixth modules are so far less well-recognized in the field of LIS.

Some other optional modules may be found on IS courses but are largely are unknown in LIS:

* Patents information

* Programming

* Pharmaceutical information

* Information for science based industries

* Business and financial information

* Medical information

A closer look at the optional modules shows that majority of modules are of a specialized nature and particularly understandable only for those students with strong backgrounds in Medicine, Law and Accounting etc.

The contents of the courses show that IS courses are interested in all aspects of the production, flow and use of information in all its forms, since most information services are embedded in superior organizations such as industrial firms or a research establishments, and do not exist as separate entities (for example, public libraries)

5.4 Postgraduate Courses in Information Management

IM has developed over the past decade as a new subject. As Wilson (1989) explains, IM is a relatively new term: its origins lie not in the traditional world of librarianship, nor even in the less traditional world of information science, but in the world of the management of Paper Reduction Act, 1984 in the USA Federal Government.

Broadly speaking IM is concerned with planning, budgeting, control and exploitation of information resources in organizations. The term covers both information itself, and other related aspects such as personnel, finance and technology.

Wilson (1989) provides a synopsis in the context of relationships among IM, librarianship and information science and gives an account of IM as a distinct field. The rough classification includes:

* Area of application (e.g. Government, banking, health services) artificial intelligence;
* Economics of information;

* Education for information management;

* IM (including computer—based records, corporate information, information mapping, manpower, online systems, and strategic monitoring);

* Information policy

* Information system and system theory;

* Information technology; and

* Information use and users

* System theory

At present five: out of sixteen schools in the UK offer postgraduate courses in IM. The number of courses varies from school to school. Usually these courses are modular and emphasize their practical and applied elements as well as their academic content. The details of the courses of Manchester school are provided in Appendix 12.

The course under discussion has no much common with programmes in LIS. However some courses such as records management and information resources have similar contents with IS courses. There is some overlapping of some topics in these courses which can be seen in some library schools (See Appendix 10 Loughborough School). The aim of most courses is to train information managers, so they exclude the LIS focus and include much more material relevant on the integrated co—ordination of an organization rather of libraries.

CHAPTER SIX

SUMMARY AND RECOMMENDATIONS

6.1 Summary

It has been established in this study that there are a number of different elements which make up various programmes that are available in both Pakistani and British Schools of Librarianship. The postgraduate courses themselves are run in British universities and the Schools are attached to different faculties: Business Management, Computing, Social Sciences and Arts etc., whereas in Pakistan they are all located within Faculties of Arts, With this background structure, we have been able to elucidate the comparative elements as follows:-

6.1.1- Country background and economic consideration mentioned earlier shows that the education system, the organization of the University system and the infrastructure of library development in Pakistan is quite different to the UK.

6.1.2- Although in Pakistan universities are autonomous, they are influenced by the Government. Only 3—4% is spent on research, libraries, equipment etc and 65—80% is spent on salaries in Pakistan, whereas in the UK some 27% of Higher Educational Funding Council funding is spent on research. The UK is fortunate in having a long educational tradition and as a developed country in having advanced educational institutions and library services with advanced resources and facilities.

6.1.3- The concept of higher education is different in the UK compared to Pakistan. In the UK most higher education is provided in universities whereas in Pakistan universities provide only postgraduate programmes.

6.1.4- There are different admissions requirements for postgraduate courses in the

two countries. In the UK pre-training, references and interviews are held before admission, but in Pakistan the only criterion for admission is the mark awarded to students for their Bachelor's degrees.

6.1.5- The duration of postgraduate courses is also different; in the UK, the PgDip/MA is completed in one year and in Pakistan the same programme is completed in two years.

6.1.6- Different course requirements counting substantially towards Degree award as regards submitting a dissertation:

In the UK- dissertation is compulsory and is normally is for three months full-time or for one year part- time. In Pakistan-dissertation is an optional in lieu of a paper.

6.1.7- Levels of library education vary:-

In the UK- there are five levels of education (certificate and diploma courses for para- professionals, Bachelor's courses, postgraduate courses as an initial LIS qualification, postgraduate post-qualification courses, and higher degrees by research).

In Pakistan- there are basically three levels (certificate courses, PgDip/MA, and higher degrees such as Ph. Ds only available in three schools).

6.1.8- Fieldwork is compulsory in most LIS departments in the UK with some exceptions, but in Pakistan there is no such requirement.

6.1.9- In the UK the nature of the courses is very different. Mostly courses are advanced and there is a strong emphasis on the use of technology. In Pakistan the

basic focus is on the traditional subjects such as cataloguing, classification and management.

6.1.10- Only one degree programme in LIS is offered in two Pakistani library schools, but in the UK different programmes are offered in LIS, IS and IM.

6.1.11- The unique features of IS and IM have been discussed and analyzed in the light of present programmes running at City University and Manchester Metropolitan University Library school.

6.1.12- The international application of courses has been found and area studies have been identified as a special element in postgraduate courses in both the countries.

6.1.13- Optional courses are present in the library schools of both countries, but there is no user focus in the Pakistani courses as in the UK.

6.1.14- Pakistani schools are not near the norm of an appropriate faculty size and in the absence of in- service training programmes, this has also affected the quality of teaching. There is also a shortage of teachers who are trained in LIS.

6.1.15- There are different types of examinations and systems of assessment in the both countries. In Pakistan students are evaluated by written examinations and general work done throughout the year does not count. In the UK, usually students are entirely or partly assessed by course work in the majority of library schools. There is less emphasis on students' examinations at postgraduate level.

6.1.16- There are increasing pressure on UK Schools to widen the range of subjects taught, in response to changes from the profession at large. All Schools are also under-increasing pressure to compete for research funding from the Government. Schools are having to adapt to widespread modularization and semesterisation. The

rapidly changing job market is also forcing the pace of change in Library Schools. Whereas previously graduates went on to work specifically in libraries, they can now choose from a range of options working for industry, organizations or in libraries.

By contrast, in Pakistan there is very little contact between the profession and the faculty. There is no necessity to compete for funding with other departments, as in the UK. The job opportunities for graduates are almost all within the traditional library sector, and therefore there is very little pressure on Schools to adapt or change their traditional courses.

6.1.17- Although the LA does not have direct control of the courses, it does accredit them. In Pakistan, the Library Association (Pakistan) has no such role towards courses.

On the whole, it has been proved that there is a “big gap” in the educational system of both the countries and a “rich diversity” in postgraduate courses in LIS in the UK. It is hoped that this study has reasonably elucidated some important elements which are crucial to shaping future developments both in library education and the curricula of Library Schools.

6.2 Recommendations

Education for LIS in Pakistan, when looked at more closely, now needs to be developed further along clear lines, consisting fourteen elements:
6.2.1- As in all professions, there needs to be adequate interaction between the professional body and professional educators. Unfortunately, the Pakistan Library Association (PLA) does not participate in determining standards of professional education in the country. The non-recognition of the PLA by the Government of Pakistan as a professional body and its lack of legal status have prevented the Association from exercising any influence on the education system and from regulating the professional practice of its members.

The PLA should be legally recognized to enable it to exercise nation-wide control over library education, and it should also be properly constituted as a professional body. The PLA should follow the LA pattern towards accreditation of courses. Another advantage of the system is that the universities are forced to make necessary provisions for their library schools in terms of staff, physical facilities, financial support, and instructional and research materials to prevent the possible denial of professional recognition by the accreditation body.

Although much of the responsibility for improving the service lies with the Government and the PLA, librarians themselves must take the initiative in improving the status of the profession and the standard of education for LIS. Librarians must continue to work within the profession to define their changing role. They should also get more involved in the political process to make them a part of economic strategy, because this is the way through which understanding of the wider role of the profession can be built.

6.2.2- There is a need to formulate a body to coordinate all library schools which may consist of the UGC, all heads of library schools and the PLA.
6.2.3- The Government of Pakistan should appoint a Commission to conduct a general survey of library facilities in the country. On the basis of this survey an estimate should be made for manpower needs in the library profession.

6.2.4- Students are admitted to Library Schools without undergoing any training, so there is a need for a training body to arrange pre-training programmes. Meanwhile if LIS was introduced at the Bachelor's level, then the students would enter in Library Schools with some knowledge of librarianship. This will be better for the Schools and also for students with the context they know some thing about libraries and their routines.

6.2.5- The professional qualification for library work should be started at Bachelor's level as in the UK. The undergraduate programmes in LIS offer the students more time to assimilate what they are studying at Schools, and for actual internalization of professional values.

6.2.6- The issue of practical training needs to be taken seriously. But firstly must decide as to the form, the place and the timing of training to be offered to students and also specify who should be responsible for this training. Obviously, practical training can possibly be undertaken at the university library concerned and the existing libraries. As regards time, it could be given before the courses starts by making it a pre-requisite for admission; simultaneously with formal education; or at the end of the formal education as internship/apprenticeship. The responsibility for this training could be that of the Departments of LIS, or the libraries themselves.

6.2.7- Postgraduate courses are spread over two years in Pakistan, so interdisciplinary study is strongly recommended. If this option is followed, the students may be put into special groups within the interdisciplinary framework. Library Schools might offer courses for other departments of the university on the UK Library Schools pattern.

6.2.8- It is necessary to include some formal project study at postgraduate level and to modify the courses offered in information science. Some courses may be introduced with the context of the UK courses such as access to information and management studies. In the context of optional courses, it is suggested that only those courses which have some practical application. (e.g. Business Information) be included or offered.

6.2.9- There is also an immediate need to recruit at least half-a-dozen (i.e. one for each School) fresh MSc in Mathematics/Statistics and educate them in LIS/IS/IM by sending them abroad.

6.2.10- More opportunities should be provided to existing teachers for visits abroad of short duration, enabling them to observe the application of information technology on the LIS courses.

6.2.11- In view of the economic conditions of Pakistan if it is not practically possible to implement the recommendations made in sections 9 and 10, sponsoring institutions like British Council may arrange the visits of library teachers from the UK Library Schools to provide their expertise.

6.2.12- Several highly educated librarians are working in other countries. To stem the brain drain, better job opportunities and satisfying service conditions should be provided to highly educated librarians.

6.2.13- Library education in Pakistan must recognize the practical implications of the information explosion, and the development of computer and media technology. An alternative to providing courses in information technology themselves is for Library Schools to allow and encourage their students to take these courses in other departments in the university, such as computer science. Otherwise the use of microcomputers can also be taught through specially arranged short courses.

6.2.14- An attitudinal change is required on the part of many LIS educators, who are often not as quick as the emerging work force to see the necessity of radical changes in the LIS curriculum.

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APPENDIX 1

The UK Library Schools

NO.	School/Department	Location
01	School of Librarianship and Information Studies, The Robert Gordon University, 352 King Street.	ABERDEEN AB9 2TQ
02	Department of Information and Library Studies, University of Wales, Llanbadarn Fawr.	ABERYSTWYTH DYFED SY23 3AS
03	Division of Information Management, School of Finance and Information, The Queen's University of Belfast.	BELFAST BT7 1NN
04	School of Information Studies, University of Central England in Birmingham, Perry Barr,	BIRMINGHAM B42 2SU
05	Department of Library and Information Studies, University of Brighton, Falmer	BRIGHTON BN1 9PH
06	Department of Information Science, The University of Strarhclyde, Livingstone Tower, Richmond Street	GLASGOW G1 1XH
07	Information and Library Studies Group, Faculty of Information and Engineering Systems, Leeds Metropolitan University, Beckett Park Campus	LEEDS LS6 3QS
08	Information and Library Studies, Liverpool Business School, Liverpool John Moores University, 98 Mount Pleasant	LIVERPOOL L3 5UZ
9	Department of Information Science, The City University, Northampton Square	LONDON EC1V 0HB
10	School of Technology and Information Studies, Thames Valley University, Ealing Campus, St. Mary's Road, Ealing	LONDON W5 5RF
11	School of Library, Archive, and Information Studies, University College London, Gower Street,	LONDON WC1E 6BT
12	School of Information and Communication, University of North London, Ladbroke House,	LONDON N5 2AD
13	Department of Information and Library Studies, Loughborough University	LOUGHBOROUGH LEICS. LE11 3TU
14	Department of Library and Information Studies, Manchester Metropolitan University, All Saints, Oxford Road,	MANCHESTER M15 6BH
15	Department of Information and Library Management, University of Northumbria at Newcastle, Lipman Building,	NEWCASTLE UPON TYNE NE1 8ST
16	Department of Information Studies, The University of Sheffield, Western Bank,	SHEFFIELD S10 2TN

APPENDIX 2

Library Schools in Pakistan

NO	DEPARTMENT	LOCATION
01	Department of Library Science, University of Baluchistan	QUETTA
02	Department of Library and Information Science, Islamia University	BAHAWALPUR
03	Department of Library and Information Science, University of Karachi	KARACHI-32
04	Department of Library Science, Punjab University	LAHORE
05	Information not available	PESHAWAR
06	Department of Library and Information Science, Sind University	JAMSHORO (Hyderabad)

SOURCE: Commonwealth Universities Year Book. (1994).

APPENDIX 3

Postgraduate Courses (Ist level) Offered in the UK Library Schools

Award	Title of the course	School
MA	Information Studies	12
MA	Librarianship	16
MA	Library and Information Studies	01,04(*),08,11,13 (*), 14
MA	Information and Library Management*	15
MA	Information Management*	10
MA	Information and Record Management*	15
MA/MSc	Information Management	06
MSc	Information Management	03, 06, 14, 16
MSc	Information and Library Studies	06
MSc	Information Management	06, 14, 16
MSc	Information Studies	07, 13
MSc	Information Science	09
MSc	Information Science (computerised system)	11
MLib	Librarianship	02
PgDip	Library and Information Studies	01,04, 06, 08, 11,14
PgDip	Information Analysis	01
PgDip	Information Management	06, 10, 14
PgDip	Information Science	09
PgDip	Information Studies	12
PgDip	Librarianship	02
PgDip	Information and Record Management	15
PgDip	Information and Library Management	15

*** MA/MSc option**

APPENDIX 4
Postgraduate Courses (IInd level)

Offered in the UK Library Schools

Award	Title of the Courses	School
MA	Information and Library Management (career development)*	15
MA	Learning Resource Centre Management *	15
MA	Librarianship and Arts Administration	09
MA	Library and Information Management	16
MA	Library and Information Studies	05
MA	Strategic Library Management	14
MSc	Information Management	04
MSC	Information Science	09
MSc	Information Science (computerised system)	11
MSc	Information System and Technology	09
MSc	Information System and Services for Health Care	02
MLib	Management of Library and information Services	02
MLib	School and young people's Librarianship	02
PgDip	Learning Resource Centre Management	15
PgDip	Information and Library Management (career development)	15
PgDip	Information System and Technology	09
PgDip	Strategic Library Management	14

* MA/MSc option

APPENDIX 5

The Library Association's Professional Qualifications

The Library Association is the chartered professional body of librarians and other professional workers. The Association maintains a professional register of Chartered Members in two categories:-

Associate (ALA)

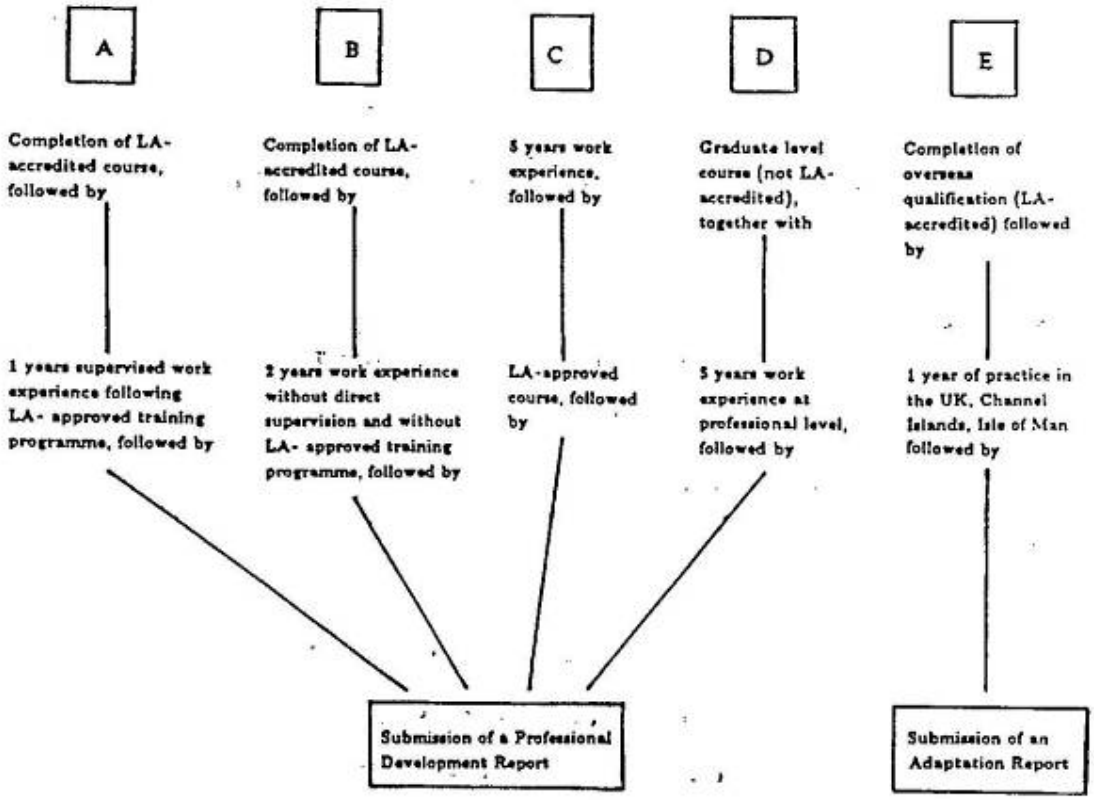
Fellow (FLA)

All those entering the profession are required to be graduates.In order to qualify for Chartered status a member of the Association has to provide a successful completion of an accredited programme of education (See Appendix 3 & 4) and then by submitting a report which is a personal assessment of the applicant's own professional development since entering the profession.

Associate is the first level of qualification and it is open to any member who fulfils the following requirements:-

(a) holding a degree or diploma approved by the Association;

(b) having been in membership of the Association for at least one year and having either studied or worked in the UK (or elsewhere in the European Community). There are five possible routes to Associateship, including one for graduates in subjects other than library and information studies. Candidates from overseas qualifications are also eligible for the Associateship. The following diagram provides the available routes and their requirements:



Fellowship is the highest professional qualification awarded by the Association. Application for Fellowship is normally made after a minimum of five years of professional experience as an Associate. Applicants for this such qualification are almost invariably in senior posts, or are independent consultants. At this level the selection of material for submission is of considering significance.

Source: Chartered membership of the Library Association Associate and Fellowship (1993). The Library Association.

APPENDIX 6

List of Library Schools for Course Outlines Consulted

The UK

1- University of Wales, Aberystwyth.

2- University of Central England, Birmingham.

3- The University of Strathclyde, Glasgow.

4- Leeds Metropolitan University, Leeds.

5- The City University, London.

6- University College, London.

7- Thames Valley University, London.

8- Loughborough University, Loughborough.

9- Manchester Metropolitan University, Manchester.

10- University of Northumbria at Newcastle, Newcastle.

Pakistan

1- University of the Punjab, Lahore.

2- Islamia University, Bahawalpur.

APPENDIX 7

University Grants Commission (Pakistan) Recommended Curricula for Bachelor /Diploma Qualification

Bachelor/Diploma of Library Science

(Present title Bachelor/Diploma in LIS)

FIRST SEMESTER

1. History of books and libraries
2. Building library collection
3. Bibliographical control and organization
4. Introduction to classification
5. Introduction to cataloguing
6. Principles of administration and management

SECOND SEMESTER

7. Library and society
* 8. Reference resources and services
* 9. Bibliographical methods and procedures
*10. Applied classification
*11. Applied cataloguing
*12. Library operations

*** See Appendix 8**

APPENDIX 8

University Grants Commission (Pakistan) Recommended Curricula for MA in Library and Information Studies

FIRST SEMESTER

1. Literature of social science OR
   Literature of pure science
2. Library resources
3. Comparative Classification
4. Public libraries OR
   Library services to children OR
   Library services to business & industry OR
   Academic libraries OR
   Special libraries and documentation centres OR
   Comparative and international librarianship OR
   Oriental librarianship
5. Information storage and retrieval
6. Research methods

SECOND SEMESTER

*7. Literature of humanities OR
   Literature of applied sciences
8. Public documents OR
   Communication, mass media & libraries OR
   Audiovisual materials & services in libraries OR
   Rare books, manuscripts and special collection
*9. Cataloguing of special materials

10 Library legislation and public library systems OR

School libraries OR

Indexing and abstracting OR

Library automation

11. Data processing in libraries OR

Information networks, data banks & systems

12. Planning of library, documentation and information-services OR

Library buildings and equipments

SOURCE: Khurshid (1980)

* Students in theses courses will be divided in groups of 8 to 15. Each group will work under the supervision of the class instructor and submit 12 practices carrying 2 marks each in lieu of one assignment/ assignments of 20 marks.

APPENDIX 9

Criteria for Courses in Information Science and for Corporate Membership of the Institute of Information Scientists.

INTRODUCTION

Information science is concerned with the principles and practice of the production, organisation and provision of information. To this end, it includes the study of information from its generation to its exploitation, and its transmission in a variety of forms through a variety of channels.

The Institute of Information Scientists, established in 1958, is the main body in the British Isles representing and bringing together individuals concerned with information science. There are large areas of knowledge relevant to the subject, for which a variety of programmes of study and examinations have been developed. The Institute, as an organisation concerned with recognising the breadth and depth of this knowledge, and of the professional experience and competence to be expected of its members, has therefore described "Information Science" in terms of the following Criteria.

Information Science has developed particularly rapidly in recent years and the Institute now recognises not only the traditional connotation of the term which is outlined in Section 1 (Core Area: Information Science) but also the significance of Information Management (Section 2) and Information Technology (Section 3). Whilst for convenience and clarity the whole subject has been subdivided into Sections and Sub-Sections, it is not intended that these divisions should be self-contained. There are many interrelationships between Sections and Sub-Sections.

The Sections have been formed so as to reflect different principal areas of academic study and experience. The Criteria are used by the Institute to determine, by a process of comparison, whether an individual applicant for membership has gained relevant experience. They are also used in the approval of courses of study offered by academic institutions. For a course to be approved by the Institute it would be expected to cover:

EITHER a large proportion of the topics covered in Section 1 with some degree of coverage of Section 2 and/or Section 3.

OR a large proportion of the topics covered in Section 2 with some degree of coverage of Section 1 and/or Section 3.

OR a large proportion of the topics covered in Section 3 with some degree of coverage of Section 1 and/or Section 2

Where a course is approved by the Institute, individuals who successfully complete that course will be granted a partial exemption from the standard requirement for five years' experience in information science. The period of exemption is set when the course is approved, and will be longer where a course's primary focus is in the core area. The maximum period of exemption is three years.

Section 4 sets out Ancillary Skills which may be of value to an Information Scientist and which therefore may usefully be included in any course of study.

There may be other topics which educational institutions might wish to see incorporated. There will certainly be developments in information science which at present are unforeseen. Therefore the Criteria, as set out below, will be modified from time to time to reflect the Institute's appreciation of changes of emphasis or the widening scope of the subject. The current description simply represents the latest version of the Criteria to be formulated.

The following Criteria were approved by the Council of the Institute of Information Scientists on 20 January 1988.

CRITERIA FOR INFORMATION SCIENCE

Section 1 CORE AREA: INFORMATION SCIENCE

The theory and practice of creating, acquiring, assessing and validating, organising, storing, transmitting, retrieving and disseminating information.

1. Information: its characteristics, providers and users

Nature, properties and characteristics of knowledge and information flows. Generation, transfer and use of information. Elements in the information chain. The information industry and its history. Information needs and information seeking and user behaviour. Communications systems theory, design and evaluation. Human communication and communication in the organisational environment. User types. Finding and analysing user needs. Intellectual property and copyright. Roles of the public and private sectors.

2. Information sources

Sources of recorded information (eg, textual material, computer files, online machine-readable databases and databanks, audio-visual and other records) and their information content. Individuals and organisations (local, national and international) which collect, extract and/or disseminate information (eg, information brokers and consultants, expert individuals, libraries, information centres, documentation centres). Information sources in general and special subject fields. Major information services. Secondary sources of information (eg, abstracts and indexes, publicly-available computer files, library catalogues).

3. Information storage and retrieval

Media for information storage and choice and organisation of those media for various information types (eg, full text, abstracts, numeric and tabular data and audio-visual material, and combinations of these). The theory of classification and indexing of information content. Thesaurus construction. Search strategies for retrieving references, data, full text or combinations of these. The reference interview. Use of manual, automated and mixed systems (eg, paper files, card indexes, microform systems, word processing, computerised systems). Use of human and technical networks for retrieval. Expert systems. Internal and external systems, services and networks. Input, indexing and output for successful retrieval. Evaluation of retrieval systems and secondary sources of information.

4. Analysis of information

The use of appropriate information sources for regular and systematic collection of information. The evaluation, interpretation and validation of that information, including the preparation of abstracts. The building of specialist files for storage and retrieval of evaluated information. Quantitative and qualitative analysis for the purpose of discovering novelty, trends, patterns, etc., and for the purpose of making hypotheses, trend projections, forecasts, etc. The preparation of state of the art reports, reviews, overviews and scenarios.

5. Dissemination of information

Preparation of bibliographies and evaluated information reports. Effective presentation of information, including oral and written presentation skills. Proof reading, editing and presentation.

APPENDIX 9

Reprography and publishing, including desk-top publishing. Selective dissemination of information and other methods of current awareness.

6. Theory of information science

Theoretical studies of information: its nature, definition, content and significance. Development of theoretical models of information systems and processes. Research into information science.

Section 2 INFORMATION MANAGEMENT

The management of the total information resources of organisations.

1. Planning

Needs of organisations for information. Information requirements analysis. Impact of information on organisational performance. Organisational structures and operations. Information units within the organisation. Integrating the information system with corporate strategy. Organisation and methods. Techniques for work measurement. Operational research. Impact of computing and communications technologies.

2. Communications

Theories and models of communication and their applications to information systems. Communications audits. Information flow. Value added networks. Interpersonal communication. Intergroup communication. Voice communications. Data communications. Man-machine interaction.

3. Management information and control systems.

The decision-making process and the role of management information. Data collection and analysis. Systems analysis, design and specification. Applications of computers, including office automation. Documentation management. Information provision for management control and business analysis. Application of system design to the organisation of administrative units through data-flow analysis. Expert systems.

4. Human resource management

Job analysis, design and description. Job evaluation. Recruitment. Selection. Assessment. Training. Industrial relations. Staff management, motivation and interpersonal relations.

5. Financial management

Accounting. Cost analysis and control. Decision support. Programming, planning and budgeting, including the estimation of expenditure. Performance assessment - objectives, cost-effectiveness and cost-benefit analysis. Financial forecasting, policy making, planning.

6. Promotion, economics and marketing

Publicity and public relations. Production of newsletters, bulletins, etc. Economic factors. Marketing techniques and strategies, including market research.

7. Political, ethical, social and legal factors.

Political climate. Role of Government and Government agencies. Ethical and legal factors including privacy, secrecy, freedom of information, health and safety, data protection, transborder flow. Social factors.

Section 3 INFORMATION TECHNOLOGY

Technology which may be used in Information Science or Information Management.

1. Computer systems: hardware and software

Corporate and departmental computer hardware and personal work stations. Input and output devices. Storage devices and systems. Principles of operating systems and applications programs; software packages, especially for information storage and retrieval; programming. File design; record layout; file searching; file update. Database systems and database management. Feasibility studies; specifications; design; package appraisal; implementation; evaluation; documentation.

2. Telecommunications

Standards, protocols, interfaces. Types of equipment, eg, modems; electronic and optical communication devices. Telecommunication networks (including local area networks, wide area networks).

3. Information technology applications

Information retrieval, videotex, teletext, computer typesetting, computer output microform (COM), speech synthesis and voice recognition, automation of library functions, office automation, compact disc technologies, video scanning and digitising, satellite and cable TV, other methods of electronic publishing and document delivery, including telefacsimile. Machine translation.

4. Environment

Health and safety, ergonomics, data protection, copyright, piracy, encryption, etc.

Section 4 ANCILLARY SKILLS

The following are examples of important ancillary skills, but this section is not intended to be a comprehensive list.

1. Research procedures

Research proposals. Investigation, data collection and sampling. Statistical significance analysis. Evaluation of results. Report writing.

2. Linguistics

Natural and formal languages, linguistic classification. Semantics, syntactics, pragmatics. Relations of semantics and linguistics, psychology, logic and philosophy.

3. Foreign languages

Use of foreign language information sources. Translating and abstracting from foreign languages.

APPENDIX 10

Loughborough Library School Course outline for PgDip/MA in Information and Library Studies.

3. Programme details

Three awards are available to successful students: the MA or MSc in Information and Library Studies, or the Diploma of Loughborough University (DLUT). Full time candidates for the MA or MSc degree undertake the programme for twelve months; full time candidates for the DLUT undertake the programme for nine months.

The first part of the programme (taught course) runs from October to March and consists of five core modules and an optional module.

The core modules are:

- information management
- information sources, use and searching
- information handling
- collections and services
- foundation course

The option is chosen from the following:

- archive administration
- business information
- childhood and children's literature
- human factors in information systems design
- information management for healthcare services
- international librarianship and information work
- legal and professional issues
- local studies librarianship
- mass media and audiovisual communication
- preservation in libraries and archives
- publishing and the book trade
- records management

The second part of the programme consists of individual research leading to the submission of either a 20,000 word dissertation (for the Master's degrees) or a 10,000 word project report (for the DLUT). Research work normally begins during the Easter vacation. The project report must be submitted by the last day of the appropriate summer term; the dissertation must be submitted by 15 September in the appropriate year. Assistance is given in choosing a suitable topic at an early stage in the Spring term and an individual supervisor is assigned to each student.

3.1 Information management

This module is divided into a number of separate units which aim to provide students with the skills and knowledge to enable them to manage a library or information service within a range of both profit and non-profit organisations.

3.1.1 **Organisations, communication and information.** This unit aims to develop an understanding of the structure of organisations and the role of information within them. It also seeks to explore patterns of communication within and between organisations and the influence of organisational structure on these. Firstly, there is an introduction to theories of organisational structure, the role of organisations in the economy, and management and organisational structures within industry, commerce and the public sector. Secondly, the theory and practice of communication, formal and informal, and information seeking behaviour and needs within and between organisations are examined. Finally, the relevance of information and the role of the library and information manager in an organisational setting are examined alongside corporate information policies. A systems approach is used to analyse information needs for corporate decision-making. Students are given the opportunity to undertake case studies of specific library and information services, using selected theoretical approaches as a basis for the analysis of organisational structure.

3.1.2 **Management of information services.** This topic is subdivided into three separate units. In each one, general theories and management techniques are related to the practice of library and information services management.

Resource management. Students look widely at the management of materials and information services, including aspects of collection management and the management of office technology. Case studies are incorporated with visits and visiting speakers. Financial implications are explored in some depth, including allocation planning and forecasting, costing and cost efficiency, cost benefit and cost effectiveness of information and services. The unit includes a basic introduction to accountancy and book-keeping for the library and information manager and practical work using computer software as appropriate.

Human resource management. The unit includes: manpower and staff selection; team groups in the library and information service; motivation; training — particularly in the use of information technology; appraisal; outline of employment law, including contracts of employment, unfair dismissal, redundancy; outline of the law of the workplace.

Marketing and the information service. Following on from unit 3.1.1, the marketing function within the parent organisation and its information needs are examined, as are the design of a market research programme, survey methodology and survey analysis. Students then consider the marketing of the library or information service itself, including appraisal of user needs, product design and promotion of services, products and databases.

3.1.3 **Intellectual property law.** This unit surveys the legal framework within which the information provider must work, discussing the legal constraints and controls on the free dissemination of information and the legal rights given to the author or owner of intellectual property.

3.2 Information sources, use and searching

This module aims to give students a sound knowledge of information sources in special subject areas, a competence in information retrieval and an understanding of the fundamental principles of information searching. Special consideration is given to techniques of online information retrieval and all students are expected to undertake

practical online searching in laboratory sessions, as well as search exercises in the University Library.

The course commences by discussing types of printed information source, their structure and techniques of searching. In the second half of the first term students study online searching. Special problems and uses of particular types of information source are also discussed. Later in the course students opt to continue their study of information sources in one of a range of specialist areas which normally include: science and technology, education, history, social sciences and the mass media.

Later in the module, professional and theoretical issues relating to the use and development of information sources are discussed, including: client contact, evaluation of searches and of sources, development of the information industry and the costs and costing of searches.

3.3 Information handling

This module considers the handling of bibliographical information to prepare it for use by librarians and information workers and their clients. It also teaches the practical skills involved in such work and provides opportunities for the exercise of such skills.

The consideration of bibliographic information handling begins with the methods of identifying documents in retrieval systems using national and international standards. Students then undertake both theoretical study and practical work in descriptive cataloguing, classification and subject indexing, with a strong emphasis on the subject-based approach. The latter includes: subject analysis, the use of controlled and natural languages for subject description, the construction and use of thesauri, and automatic indexing.

3.4 Collections and services

This module covers all aspects of setting up, maintaining and controlling a library collection as well as exploiting it for lending, question-answering and pro-active dissemination of information. There is a separate unit on library automation, which includes practical work in the use of an automated library housekeeping system for different applications such as acquisitions, cataloguing and stock control.

Dissemination and presentation of information considers provision of current awareness services and the development of skills involved in providing such services, including: compilation of client-interest profiles, scanning and selection of primary literature, use of secondary sources and writing of abstracts and reports.

There are three afternoon seminars on: serials management, bookbinding, and acquisitions. These seminars are run by experts from outside the Department.

3.5 Foundation course

The module is subdivided into two units:

- — introduction to information technology
- — research methodology

3.5.1 **Introduction to information technology.** The objective of this unit is to give a grounding in the use of computers for information management. It provides an introduction to the computers and software that students will be using throughout the programme, including basic word processing, spreadsheets, document production and the means of transmitting these documents via electronic mail. The design and creation of databases is an important component, which is undertaken at the end of the first term.

A different approach is taken at the beginning of the second term, when students are taught the elements of automated library housekeeping systems in connection with the Collections and services module. In the second half of this term there is an opportunity for students to select one of a series of five-week options to enable study of one further practical topic in some depth. Some examples of the topics offered are: desk top publishing, advanced online retrieval and online public access catalogues.

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3.5.2 **Research methodology.** The overall aim of this unit is to teach the basics of research methodology as applied to library and information work. The objectives are: (1) to prepare students for their research work in the third term, (2) to equip them with the basic skills to interpret other people's research results and (3) to give them a grounding in and a general appreciation of the range of research methodologies.

The unit builds upon the data acquisition techniques and survey methodologies presented in the Information Management core module. It is divided into two parts: analysis/presentation of data and dissertation/project report preparation. The topics that are covered in the first part include sampling techniques, translation of data into tables and charts, use of simple descriptive statistics, use of statistical tests and an introduction to correlation and regression. The second part is mainly concerned with choosing and planning a research project, bibliographic citation and scientific report writing.

3.6 Options

A number of optional modules are offered to enable students to develop their studies in a topic of their choice. Students choose one of the options listed previously in Para. 3 — Programme Details.

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The City University Library School course outline for PgDip/MA in Information Science

Figures in parentheses indicate the approximate duration in hours (excluding practicals, visits, tutorials, etc.)

Core modules

taken by all students.

① Information industry and information resources (45)

The information society and the information industry, the production and distribution of information, and user needs. Information sources both printed and electronic, in government, businesses, the professions, academic institutions and voluntary organisations. Scientific research and scientific information, research and trade associations. General reference works and specialised sources of information covering a range of applications. Growth and change within the information industry.

② Computers and communications technology (60)

Information systems and technology, an introduction to computers, hardware, software, operating systems, programming languages, software packages, databases, word processing, spreadsheets. Terminology and basic concepts of telecommunications. Telecommunications based systems, including telex, fax, electronic mail, teleconferencing, videotex, electronic journals, document delivery systems, office automation. Hard copy techniques, including copying, duplicating, printing, graphic design and composition, desktop publishing. Microforms and their applications. Introduction to systems analysis. Demonstrations and practical work on a range of systems and packages.

③ Corporate structures and information management (30)

Management concepts and their application to information services. Topics covered are principles of and approaches to management; management of change. Principles of organisation. Formal and informal communications, leadership and groups; influence of IT on structures. Functional management, including marketing, production, personnel and finance. Information management and the use of information in organisations. Management of information services, marketing and publicity, personnel and financial management, project planning, ad-

ministrative procedures, health and safety, and library management.

④

Information retrieval (60)

The structure and organisation of IR systems and services. Hosts and databases. File and database structures for retrieval. The retrieval process considered as a total system. Theories of information retrieval; mechanisms of retrieval (eg. boolean, probabilistic). Knowledge structures and organisation for indexing and retrieval, classification, thesauri. Online retrieval, search strategies, the use of databases, searching aids, expert systems, user interfaces. Demonstrations of operational IR systems are given. Students carry out a group project involving the setting up and use of a database, using Headfast software.

⑤

Communication skills (30)

The development of communication skills, both written and oral, including general principles of effective writing, purpose and audience, report structure, planning and preparation, summarising, writing manuals and instructions. Layout and design of information (paper and screens), readability and parameters of style, electronic office and text processing. Students are required to write a report. General principles of public speaking, verbal and nonverbal communication, effective meetings, interviewing, negotiating, and reference interviewing, the use of audiovisual aids. Practical assessment using videocameras.

⑥

Legal and policy aspects of information work (30)

The legal environment in which information services are provided, UK, EEC, and international law and practice, and the information made available as a result of particular laws, the regulation of libraries, telecommunications and broadcasting, publishing laws, controls on software, data protection and intellectual property, supported by practical searching. The emphasis is not on the law but on the consequences for information provision.

⑦

Research methods (30)

An introduction to research in information science, includes relevant methods from the social sciences and behavioural sciences. Managing a research project, designing an investigation, gathering and analysing data, experimental methods, statistical packages, survey methods, questionnaire design, personal and telephone interviews, structured, semi-structured and in-depth interviewing, qualitative methods (observational and ethnographic research), and specific methods applied to computerised information systems. Practical exercises in some of the above methods are given. Appropriate methods are applied to the research in the dissertation project.

Options

The options build on and take further some of the subjects covered in the core modules. Each student takes two options; full-time students may take more than two.

The range of options offered may differ from year to year, and will depend upon student demand

①

Patents information (30)

Gives students an insight into the nature of patents and patent law, patent documentation systems, retrieval and use of patent information. Suitable both for those with an interest in the specialised, intensive use of patent information, and those needing an awareness for occasional use. The nature, and legal status of patents, and the historical development of patent systems; different national patent systems; methods of searching patents for both technical and market or commercial information; specialised databases; the use of patent information.

②

Systems analysis and design (30)

An introduction to the theory and practice of systems analysis and design in the context of information services. General concepts and methods of systems analysis, the specification and implementation of computer-based systems, and user-related aspects.

③

Programming software and hardware (30)

Extends further the student's knowledge of computers and programming. Covers programming languages (one studied in detail), operating systems and developments in peripheral devices. About half of the option is devoted to practical programming exercises.

④

Current research topics in information science (30)

Current research in information science is explored more deeply than is possible in the core course. Consists of seminars by currently active researchers within and outside the department, presenting the latest work in various aspects of information science.

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(5) Legal information (30)

Traces the history and organisation of law, both English and Continental, the organisation of materials; searching including computerised online, supported by practical work. Several legal systems are examined and linked to the sources of law, both documentary and computerised. The potential of legal expert systems and litigation support systems is explored. EEC law, its linkage to UK laws and the effects of the removal of trade barriers are emphasised. Specific knowledge of law is not assumed for this option.

(6) Business and financial information (30)

Gives an insight into current practice in the handling of business and financial information. An introduction to the nature of business information; sources and methods of acquiring it; use of business information; online and hardcopy sources, business libraries, information brokers; the City, financial institutions, markets and trading; evaluation and analysis of company accounts, and other business information; company, market and ststistical information; competitor intelligence; visits and case studies.

(7) Social science information (30)

Gives an overview of the Social Sciences both academic and applied, their literature, information services and applications: the organisation of social science research, the production of data and archiving. Local authorities, their responsibilities and information needs, role of information professionals in local authority departments, housing, planning, etc. Information needs and uses in the social services education and voluntary organisations.

(8) Community information and advice services (30)

Gives an overview of the development of Community Information, including the role of public libraries and the relationship with legal information and advice services. Sources of law and access to the law by the citizen; legal aid and law centres. Neighbourhood advice centres, Citizens Advice Bureaux, Welfare Rights Units. Advice services for housing, employment, the elderly, etc. Role of the media in advice work and social action broadcasting. Computer applications in advice work.

(9) Medical information (30)

The delivery of health care, comparative systems and developments within the EEC; the structure of the Health Service and information requirements within that framework. The implications of changes within NHS for information systems development. Resource management, performance indicators, information at national, regional and district and hospital levels; the patient administration system. Information in general practice, the role of Family Practitioner Committees, computerised systems in general practice. Coding systems for specific applications, classification. Expert systems, decision support systems. Database implementation. Organisations; sources, printed and electronic; information for patients.

(10) Pharmaceutical information (30)

The structure of the industry and information needs. The process of drug development. Legislation and registration procedures. Information handling at all stages of drug development. Marketing and commercial information. Chemical structures and computerised techniques. Dissemination of information, medical information, in-house databases. Information systems within companies, integration of systems. Expert systems, online retrieval, databases and sources.

(11) Information for science based industries (30)

An overview of the information resources and services provided by and for a range of science based industries. Organisation of scientific and technical information sources in the oil and gas, chemical and agricultural industries. Sources concerning the environment and pollution. Review of pertinent databases and databanks. Business aspects of scientific and technical information. Searching of relevant online databases.

(12) Marketing and public relations (30)

An introduction to the concepts of marketing, including market research, products, distribution, price and marketing strategy and control. Promotion methods and publicity materials, including press relations, exhibitions, conferences, advertising, and organising public relations. Research and evaluation for marketing and public relations.

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(13) Records Management (30)

Records management - an emerging discipline. Records management and information management. Records management and archiving. The records management life cycle. Information auditing and mapping. Policies for records management; security, privacy etc. Physical storage. Indexing and retrieval; applications of IT.

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Manchester Library School course outline for PgDip/MA in Information Management

ensure that the 'practitioner research' meets both the standards of academic rigour and the needs of the employing organisation. In certain circumstances, students may submit a more theoretical dissertation in place of the organisation focussed Major Project

MSc programme

The course is offered on a structured modular basis. There are ten taught modules and the final integrating element, either a Major Project or Review and Evaluation.

Each module consists of one three-hour session per week for ten weeks. The three-hour block allows the use of a variety of teaching inputs, lectures, discussion periods, practical sessions, visiting speakers and individual and group work. Formal class contact is supplemented by private study, both individually determined and formally directed.

The learning environment comprises: experienced tutors; a first-class University library; the Department's Information Technology Unit, three networked computer teaching laboratories ; and the Department's Learning Resources Unit, a collection of print and audiovisual materials for class use.

The programme is structured as shown on the following curriculum plan:

Curriculum plan

Term		
1	Information resources (Module M1)	Organisations as information processing systems (M2)
2	Records management (M3)	Systems investigation and development (M4)
3	Investigating systems (M5)	The organisation and its environment (M6)
4	Systems monitoring (M7)	Enabling technologies (M8)
5	Study areas (M9)	Management of change (M10)

Course components

M1 Information Resources

Information Resources are the information sources, services and systems under the control of, or available to, an organisation. These resources constitute a significant support element in enabling an organisation to fulfil its mission or achieve its goals and objectives.

This module identifies and evaluates the nature of information resources - external and internal, formal and informal, overt and hidden - within a theoretical framework and in relation to public and private sector organisations. Information mapping techniques are explored as one example of the potential strategies for the control of information and dissemination to the appropriate users. Criteria of information values are identified and considered in the context of the students' own organisational experience.

M2 Organisations as Information Processing Systems

The aim of this module is to establish a model of the organisation as an information system, and to examine the implications of this model for information policy and practice within the organisation. The information model underpins and pervades other established organisational models, which are therefore reviewed and re-assessed from the information perspective. Special attention is paid to decision models, which have the closest relationship with information needs and uses. Real organisations are used as case studies to explicate and develop the model. Students will be expected to map the model on their own organisations, in order to (a) develop a critique of the model, and (b) understand their organisations as information systems.

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M3 Records Management

The Records Management module is concerned with the systematic control, organisation, retrieval and protection of an organisation's information. The record life-cycle will be examined in the context of record creation, utilisation, storage, retrieval, and retention and destruction policies. Students will be introduced to the fundamental concepts embedded in indexing languages and systems, vocabulary control, coding and classification schemes. Manual and computerised search and retrieval techniques will be investigated via a 'hands-on' approach in the design and evaluation of information storage and retrieval systems. Consideration will be given to formulating policies for security and data protection.

M4 Systems Investigation and Development

The generation of an effective and comprehensive strategic planning framework requires the integration of organisational and information systems planning. The formulation of effective information systems strategies requires an armoury of skills. These encompass those used in the investigation of the strategic requirements of a systems solution, through to managing and evaluating the information system once implemented.

This module will examine concepts of 'systems investigation', including some of the techniques available to take a systems project from initiation to implementation, and the maintenance of on-going effectiveness.

M5 Investigating Systems

This module is concerned with the techniques which information managers can use to investigate how information is used and accessed in their organisations. At a more general level it will enhance students' understanding of how information is generated through market and other research practices.

The module will concentrate on the research skills that managers require. As such it provides a knowledge and skills support for elements of the Systems investigation and development module and the research components of the Major Project.

M6 The Organisation and its Environment

Organisations are considered in terms of their relationships with the environment and of the information implications of such relationships. The treatment of the subject matter begins with a reconsideration of different sectors of the environment, such as the social, political, economic and legal, and moves to the consideration of an information theory of the organisational environment. The development of theory will be based on (a) a case study of a real organisation undergoing a changing relationship with its environment, and (b) an examination by the students of their own organisational environments in the light of the theory.

M7 Systems Monitoring

This module will focus on the problems of making sense of data generated from both normal organisational operations and from investigative projects. It will treat such analysis and interpretation from both qualitative and quantitative perspectives. The latter focus will include forms of presentation for statistical data, analysis and interpretation, projective techniques and the use of computer applications pack-

M8 Enabling Technologies

The rapid development of information technologies has led to an expanding "technology gap". Many managers have little awareness of, or experience in managing, emergent technologies. The Enabling technologies module focuses on current technology and advanced information system developments which are envisaged to have particular pertinence to information managers.

The module will introduce the topics of hardware, software, firmware, telecommunications and networking. This will provide a foundation of understanding of a range of technologies and systems architectures, with a view to the examination of the benefits and implications of such technologies.

M9 Study Areas

The coverage of this module has not been defined since it is intended to develop specific content to reflect the backgrounds and interest of the particular group of students on the course.

What is defined, is the teaching and learning methods. These consist of two or three case studies. Each case study takes the theme from some organisational

element where information management is practised. Typical case studies would focus on information management in the Health Service, Local Government and Higher Education. The case studies serve as an integrating mechanism for the course drawing together the strands of information resources, management, technology and investigatory techniques. The choice of case studies will partly be determined by the experience and background of course members.

M10 Management of Change

The ability of an organisation to manage change, both internally and within its environment, is a crucial issue, the more so when change is driven or enabled by information technology. This module addresses the issues by a reconsideration of the known theories and methodologies of change from the perspective of information. In this context, information has a multiple role; (a) as the impetus for change; (b) as the arena in which change takes place, for example in the introduction of information technology; (c) in supporting the analysis of the problem; (d) as a change agent, through communication processes and the like; (e) in the ability to influence change; (f) in the evaluation of change, where the module is able to draw on all earlier modules in addressing the key variables.

Review and Evaluation

The Review and Evaluation is intended to provide a formal mechanism for integration of, and reflection on, the learning experience of the student during the course. It will consist of two elements, a review of learning achievements and an evaluative integrative essay. The Review and Evaluation is the summative assessed work for students intending to complete at Diploma level. It is not required of MSc candidates.

Major Project

The Major Project is intended to allow the student to focus on a 'live' information management problem within their own organisation. The problem may be one which is sufficiently circumscribed to be potentially hospitable to resolution within the requirements of a Master's course, or some segment of such a problem. It may be that students start the MSc programme with some problem already in mind.