

INFORMATION - REQUIREMENTS OF

SCIENTIFIC AND TECHNICAL PERSONNEL

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Science means knowledge and the function and objective of a scientist is to acquire knowledge. A young student also acquires knowledge on subjects where knowledge is already available but a scientist aspires to acquire knowledge on subjects hitherto unknown. He does this by a process of thinking or ~~contemplation~~ ~~concentration~~ his mental faculties on specific subjects on which new knowledge is required.

The need for knowledge generally arises because a particular practical problem needs a solution. After a scientist has acquired basic knowledge the technologist puts this knowledge into practice to solve a problem. The needs of technologists and scientists are common in that they both wish to resolve a problem. The scientist needs to elucidate basic phenomena whereas the technologist uses this elucidation in practice.

I shall not go into the question of the differing needs of scientists and technologists at this stage but shall concentrate on the needs of scientists keeping in mind that these needs can be applied in a slightly different way to technologists as well.

When a scientist is confronted with a problem he begins thinking about that problem. He needs to know everything that is already known about similar problems and he also needs to have all

the background information that might be available and which may be of relevance in achieving a solution to his specific problem. Library facilities must be in a position to provide such information. This information will come in various forms:

a) Text books

Text books introduce the reader to basic collated information on a particular subject. They are often simplified and omit many details. The collation itself takes a lot of time particularly in fields which are intensively researched into. Text books are therefore often somewhat outdated as they are published. They are behind the front line of information. They are, however, invaluable in providing the background required by scientists. A scientist beginning research into a new problem would need text books to provide him with the collated background material.

b) Periodicals

Another form in which information is required would be as periodicals. The frequency of appearance of periodicals is subject to much variation. The less frequent the appearance of the periodicals the more out of date they would generally be. (This is not a hard and fast rule). For example, the annual reviews on such subjects as Plant Physiology, Applied Entomology, Biochemistry etc. collate information on selected subjects considered to be of importance at a particular time. Other periodicals do not attempt collation but merely report recent research. A scientist attempting to resolve a problem cannot wait for all the required material to be collated and published. In the case of annual reviews although they are less outdated than text books, they are nevertheless at least 2 years old at the time of publication. First-hand information is therefore required in the form of periodicals ~~more frequently published than~~ ~~annually~~. Even in monthly periodicals the information may be about one year old at the time of publication and the thinking of an author of a paper to be published in a periodical may have advanced tremendously by the time a paper appears in print.

c) Reprints

Very often, merely reading articles is insufficient for a scientist. He cannot be expected to remember all the details which an article might contain and he may have to refer to these articles on many occasions. He therefore requires reprints of his own, of some articles which are of special interest so that he could refer to

them whenever he so desires. This is particularly true of articles where there are many experimental details or tables which cannot be remembered or easily copied. The acquisition of reprints is sometimes somewhat difficult as large numbers of reprints of any article, particularly of the older ones, are not always available. He therefore has to resort to photo copying, a service that is vitally necessary. When articles needed for continuous reference are voluminous photo copying may be prohibitively expensive. Here he would therefore need to resort to microfilming such articles.

d) Abstracts

In some fields of work particularly in subjects like Biochemistry a large number of papers may be published in various countries on particular topics. These papers would appear very frequently in the literature. In order to cater to scientists interested in such fields, there are many abstracting facilities such as the biological or chemical abstracts. These are expensive publications and are not within financial reach of many of our libraries. It is necessary therefore that these be made available to scientists should they be absent from their libraries.

e) Theses

A thesis differs from a normal research publication in that it represents a concentrated effort on the part of a young researcher working on a particular subject for up to 5 years.

Usually, extracts from theses are published in appropriate journals. Theses are voluminous and are not normally published in their entirety. They are usually available in the libraries of the University which awards the degree. As only a very few copies of a thesis are produced it is necessary to have a complete list of theses and where they are available so that scientists could have access to them.

f) Personal contact

Scientists require personal contact with other scientists in order to exchange information and in order to shortcircuit the delays which are necessarily encountered in the process of publication. A scientist would therefore need to know who is working on projects similar to what he is interested in. Directories of scientists which describe their work often provide such information.

g) Photographic and Publishing Services

Having obtained the background information from publications and other sources a scientist will now develop and consolidate his ideas. He will think about the problem in depth. He will need to test some of these ideas in experiments. He will need to fit his ideas into a hypothesis congenial with all the known facts. This is the objective of scientific experimentation. Let us assume that the experimentation has been successful and that positive results have been obtained. These results will have to be evaluated in the light of his own and other people's criticisms. Here again he has to recourse to the literature in order to present his results together with a logical discussion in the paper that he may be preparing for publication.

Finally he has to make his results available in a published form and will need to present his paper to publishers, or orally to learned societies, with appropriate photographs, drawings and graphs of his own and perhaps reproductions from other people's work. He may need photographic reproductions or photostat copies of material from elsewhere. He would also need to conform to the requirements of a specific journal in which he intends to publish his paper, and would need recourse to such documents as the World List of Periodicals.

So far I have been referring to scientific research and its application to technology in a general sense. The purpose of this work-shop is to concentrate our attention towards the needs of scientific and technical personnel within our country. In general it would be correct to say that the needs of scientists everywhere are common. Science recognizes no national barriers and science is independent of the variations inherent in different human societies.

A Doctor in any country would like to know the cause of cancer and an engineer in any country would like to know the latest developments in solar heating. However, a doctor in Sweden may be less interested in Malaria control than a doctor in the tropics. There is therefore a difference in the type of research conducted in different countries and our country is no exception. For instance in agriculture our major research institutions work on rice, tea, rubber, coconut, etc. whereas agricultural scientists in many countries would do no research at all on these crops. I will briefly attempt to list the types of scientific research which are undertaken in our country although this is perhaps already well known to you.

a) Medical research

Substantial research is done in this country on preventive and curative medicine. As you are aware our doctors work under extremely difficult conditions where equipment, drugs and medical facilities particularly in research institutions are in short supply. There has been much interest in indigenous forms of medicine with great emphasis on medicinal plants which are locally available and for the use of which there appears to be great potential. Some of this work is of course in the field of chemistry.

b) Agriculture

Hundreds of crops are grown in this country but only a few are backed up with adequate scientific research. Research is at present in progress on our major agricultural import rice and our major exports tea, rubber and coconut. In addition there is substantial research on cereals, root crops, tree species, spices, beverages, etc. Considerable effort is being expended on essential oil crops, sugar cane, and medicinal plants.

c) Horticulture

In Sri Lanka we are able to grow over 50 different kinds of edible fruits and many vegetable species. Only a very few of them are backed up with adequate research. We have good possibilities of floriculture particularly in the export market. I need only mention the example of a small country like Singapore which exports orchids and other horticultural plants.

d) Veterinary research

Considerable research is being done on pasture and fodder grass production and the improvement of our breeds of livestock. This work is intimately connected with the nutrition of our people, and it is therefore extremely important. We have had a chronic shortage of milk foods over several years and unless we can improve livestock this shortage is likely to continue.

e) Physical and chemical sciences and industrial technology

The Ministry of Industries will have a complete catalogue of all the industrial ventures in the country. In order to improve our industries it is necessary that industrial ventures receive substantial backing from Government and the scientific community. Some of our industries are merely transplants of foreign technology. Sometimes an industrialist imports a machine and also imports raw

materials to be fed into this machine and out comes the finished product. Such industries which are heavily dependent on foreign exchange are the first ones to suffer when foreign resources become curtailed. Other industrialists utilize local raw material with only a small imported component. These industries need a lot of research in order to make the best use of our local raw materials. Very little information is available on the nature of many of our raw materials and their suitability in industry. Much attention is being focussed by many of our scientists on this subject and the more information we have on local raw materials the more viable and useful our industries are going to be.

Industrialists would naturally like to make their industries more efficient but they may not be able to do so without scientific and technical backing. They may however have accumulated a lot of technical information regarding their industries. This pool of information might well be tapped and brought within reach of scientists who might sift it further and find something new and thereby contribute much to this industry. There are other industries where our raw materials are being exported. Here again everybody is keen that our raw materials should be exported in a processed or semi-processed form and not directly as crude products. Information on these lines would be greatly helpful to our scientists.

In industrial research much of the science is known and it is largely a question of applying suitable technology. We are not a technologically advanced country compared with northern countries but it will be possible for us to develop our own technology further particularly where raw materials are locally available. In technologically advanced countries machines replace human beings but as human beings are one of our major resources we must develop a technology that utilizes them. What we require are technologies which could utilize our ample human resources rather than be dependent heavily on machinery.

f) Engineering

The engineering services in this country need a vast amount of technological information to support it. We have made vast progress in irrigation works and the construction of hydro electric power schemes etc. Basic knowledge is known but we need technological backing to make the best use of our engineers. All the various types of engineering like civil, mechanical, electrical, chemical, industrial etc. are essential to improve the quality of community life and to strengthen the country's economy.

g) Economic research

Economics abuts all branches of science and technology and it is necessary that information on economic factors be made available to scientists and technologists. Sometimes scientific innovations and technological achievements cannot be made use of because of economic or social factors. The social sciences and economics are important aspects of science and information in these branches of science is always useful to all the other branches of science.

h) Statistics

Statistical information is often required by our scientists and more so by our technologists. Some attempt at collation of the information contained in the numerous annual reports of various institutions in Sri Lanka with the objective of making the statistics contained in these reports easily traceable and assimilable by our scientists and technologists, will, I am sure, be of tremendous benefits to their work.

Research in other countries

It is very necessary that our scientists be aware of the research work going on in other countries. Some of this research is beyond the capacity of this country to indulge in, for example nuclear research. Nevertheless there are many branches of science in other countries where their research will be of use to us if it is suitably adapted to our conditions. The pure forms of research of a more academic or fundamental nature will normally have less relevance to us than the applied or more practical forms, because the benefits can be obtained quicker. Our scientists would like to know who is working in their fields in other countries and would like their research findings made available to them. It is useful to remember that research done in tropical countries is of great relevance to us, very much more so than the research, however advanced, that is done in the temperate countries. Our conditions are very similar to those in other tropical countries particularly in South and South East Asia and we should attempt to come closer to such countries. All of them are poor like ourselves. We can expect to benefit from their research and they from ours.

Translations

This brings us to an important consideration and that is the subject of language. Research done in Japan, China, Indonesia and other countries in our region are slow in coming to us because of the language barrier. Translation services are therefore an important need for all scientists in order to obtain information that is very vital to them. Traditionally our scientists have been studying French and German as foreign languages in addition to English. In order to benefit from research in tropical countries more languages may have to be studied, but as you can see this poses a problem in itself. If libraries can therefore obtain translations of scientific literature in foreign languages in an abstracted form and make these available to our scientists it would be extremely helpful.

In Sri Lanka there are extremely few scientists, the reasons are many but one of the most important is that we do not seem to produce enough scientists. This of course, is a matter for the educational authorities. When scientists are in short supply the best use must be made of them. This could be achieved by bringing them together wherever possible and providing them with their research needs so that they do not spend much of their time searching for these needs. As far as you are concerned these needs centre on information. If you were to know who our scientists are, where they work, what work they do, do, what their objectives are and what success they have achieved then you may be able to help a lot of people to save their time and not repeat work that has already been done or is being done elsewhere. Our small number of scientists must be in touch with all the others in the country. This is not too difficult to achieve if we were to have appropriate directories and if these directories are maintained upto date.

Apparatus & Equipment

This applies not only to personnel themselves but also to apparatus and equipment, which is extremely hard to come by and if expensive very difficult to obtain. If our libraries in each research institution were to have lists of expensive equipment which is often maintained by trained personnel, then each institution may help another institution to get its work done quicker. The same is true of library facilities. If upto date inventories of library material are available, then scientists would have easy access to such information although it may be in another library. I therefore consider it important that Librarians in different institutions should get to know each other

well and develop a personal relationship between them. Librarians of scientific libraries after all are in quite short supply like scientists.

You would perhaps like to ask yourselves how best can we help scientists who are working in each of our research institutions. I would suggest that first of all you get to know them well. Find out what they are working on. Find out what journals they like to read. Learn as much as possible about their specific fields of interest. Discuss their work with them whenever you can. Try and learn something about their problems and difficulties and try and find out who else works on similar subjects in other institutions within the country. When you have done this you will be in a position to channel articles in recent journals to these scientists and quicken the pace of acquisition of knowledge on the part of our scientists. If you suspect that an article appearing in a recent journal might be of interest to a particular scientist in your institution, channel that article to him instead of waiting till he happens to see that journal. To do all this try to get to know what you have in your own library. Let a scientist feel that he could come to you and ask you questions like the following: Is there anything that you have received that might be of interest to me? Do you know whether anybody in this institution or in any other might be interested in my particular problem? Do you know whether I can get a certain journal that we do not have in our library? Do you know where I can obtain the use of an expensive piece of apparatus? Can you provide any information on this subject which I have got interested in within, say, one week? These and many similar questions might be posed by scientists. If you are able to encourage them to come to you and ask you such questions. It means that you have succeeded in gaining their confidence as a good librarian and that you will provide invaluable service to them and help them to conserve their valuable time and devote more of it towards their scientific work.

It would always help if you were to find out the meaning, the significance and the potential impact their work would have on the well being of the people of this country. This would encourage you to assist them further. This would perhaps inspire you to provide a better, more efficient and even more meaningful service to our scientists.

4000 YEAR OLD LIBRARY DISCOVERED

The recent discovery of the 4000 year old Royal Library in the kingdom of Ebla not far from Aleppo in Syria is an event that could revolutionize historical studies of the ancient near East. The remains of Ebla were brought to light by the Italian Archaeological Mission of the University of Rome.

Excavations carried out between 1964 & 1972 in Northern Syria revealed the existence of a major city flourished between 2000-1700 to 1600 BC during the time of Amorite dynasty of Mesopotamia to which the great king Hammurabi belonged.

The most astounding discovery was the palace archives inscribed with cuniform writings on clay tablets arranged in two small closed rooms in corners of the court of audience. The smaller rooms contained a collection of about 1,000 clay tablets or fragments of tablets. In the bigger rooms about 15,000 tablets or fragments of tablets were discovered. The tablets must have been stored on wooden shelves running along the walls and held by vertical wooden poles fixed to the floor.

Majority of documents discovered are book keeping accounts concerning an international trade in textiles and metals. The palace itself kept the files on what we would call registers of consignments. Tablets provide detailed information on trade in the Near East in the 3rd millenium BC and also much data on the historical geography of that period. They name many cities to which goods were sent. They show that this trade had very wide horizons extending from the Mediterranean Coast to the East of Mesopotamia and from Anatolia to Palestine.

The archives also contain many texts made up of lists of Sumerian words and phrases and of bilingual vocabularies with indications of the Sumerian pronunciation.

In addition to linguistic information the tablets also contain information on the organisation of education at that time. They show that all instruction was strictly controlled by the state. (as in Mesopotamia) and was designed to train students to become state administrators. The archives contain school excercises written by students whose names appear in later official documents as leading civil servants. The archives also contain administrative legal and diplomatic documents. Some deal with budgetary aspects of the administration and throw light on the internal organisation of the state

at the Ministerial level on the organisation and government of the provinces and on the financial structures of the state, including the collection of taxes.

There are also facts on the population of Ebla on administrative and juridical problems such as questions of inheritance or dividing up of the booty. Diplomatic documents include three international treaties one of them being a pact between Ebla and Assur of particular interest because of one complexity of its clauses and the political relationships it reveals.

A certain number of literary texts are of exceptional value. One seems to be an Eblaite version of a passage from the Mesopotamian saga of Gilgamesh, the great Assyrian Hero who according to legend was Uruk.

Other literary texts include myths hymns and exorcist spells and are most probably translations into the Eblaite tongue of Sumerian works whose originals have previously reached us only in relatively late Mesopotamian versions, written down about 1800 BC when Sumerian was no longer a spoken language.

With the findings at Ebla, Syria has rediscovered one of the most brilliant pages of its long history and thus takes its long history place alongside Mesopotamia and Egypt in the early progress of mankind towards civilization.

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EDUCATION FOR LIBRARIANSHIP IN THE PHILIPPINES.

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1. INTRODUCTION

Education for librarianship in the Philippines has been much discussed and written about in the last fifteen years. It was reported on at both the first and second Conference of Southeast Asian Librarians (CONSAL) held in Singapore and Manila, respectively, so that some of the participants are already familiar with it. For the benefit of most of the participants, however, I shall present the situation on library education at this time.

Some background information on the Philippines would be in order. The Philippines is a growing country of 42 million people. It has a highly centralized system of education, with both public and private schools at all levels administered and supervised by the Department of Education and Culture. The medium of instruction is English except for the first three years in elementary school where the vernacular is used as medium of instruction. Academic libraries are fairly well developed and special libraries have been rapidly growing in number and importance. School libraries are supposed to be found in all schools but the extent of their provision has been uneven, especially in the public school sector. The public library system is not as well developed as it should, with many provinces and municipalities still without public library service. The Extension Division of the National Library has been charged with the function of establishing and maintaining public libraries throughout the country. However, it has been hampered by financial as well as other constraints.

2. LIBRARY SCIENCE PROGRAMMES

Library science programmes which have always been attached to colleges and universities are now being offered in twenty colleges and universities in the Philippines. Eleven of these are in the Greater Manila area, one in Northern Luzon (Baguio City) one in Southern Luzon (Naga City), five in the Visayas (3 in Ilailo City and 2 in Cebu City), and two in Northern Mindanao (Cagayan de Oro City). Of these twenty

institutions, only two are state-supported, the University of the Philippines in Quezon City and the Philippines Normal College in Manila. All the rest are private colleges and universities, with six of them run by religious orders. For such a small country as the Philippines, one might wonder why so many schools offer library science programmes. As Miss Dayrit reported at CONSAL I, "the concepts of democratic and universal education and laissez faire have combined to cause the proliferation of private schools offering library science curricula". These institutions merely seek the recognition of their programmes by the Bureau of Private Schools (now Bureau of Higher Education) under the Department of Education and Culture. The requirements for getting government recognition, however, are not as high and are not strictly implemented so that the quality of the programmes are rather uneven. Sometimes it is only the demand for librarians in the area or region that prompts some schools to offer programmes, in spite of their limited resources and capabilities to do so.

All the twenty schools offer the undergraduate programme while seven of these also offer the graduate or master's degree programme. The four-year undergraduate programme leads to one of the following degrees :

- 1) Bachelor of Library Science (BLS) - U.P. Inst of Lib. Science
- 2) Bachelor of Science in Education (BSE), major or minor in Lib. Science - 19 schools
- 3) Bachelor of Science in Elem. Educ. (BSEEd), with concentration in Lib. Science - 3 schools
- 4) Bachelor of Arts (AB), major or minor in Lib. Science - 4 schools.

The graduate or master's programme leads to any one of these degrees :

- 1) Master of Lib. Science (MLS) - U.P. Inst of Lib. Science
- 2) Master of Science in Library Science (MSLS) - University of San Carlos
- 3) Master of Arts, major in Lib. Science (M.A.) - Philippines Normal College, Phil. Women's University, Univ of S. Thomas
- 4) Master of Arts in Educ., major or specialization in Lib. Science (M.A.-Ed.) - Manuel L. Quezon Univ, Philippine Women's Univ., Univ of the East
- 5) Master of Arts in Teaching, major in Library Science (MAT) - Univ of the East

Most of the undergraduate programmes are administratively under the College of Education, with three schools having separate departments of library science. The graduate programs are administered by the Graduate School. Only at the Univ. of the Philippines is there a separate unit offering the two programmes, the Institute of Library Science.

3. THE UNDERGRADUATE PROGRAMME

High school graduates who pass the National College Entrance Examination (NCEE) may be admitted into the library science programme which begins with a general education curriculum common to all undergraduate studies in the universities. Library science subjects are taken up starting with the second year. At the University of the Philippines students have to pass the College Admissions Test, in addition to the NCEE to qualify for enrolment. The first two years of BLS students are spent at the College of Arts and Science of the University, where they take the general education curriculum along with students going into other fields of study. They get into the Institute of Library Science after they have completed at least sixty units of general education courses.

The library science curricula of the schools are pretty much the same as to the courses offered and the number of units required. Most of the schools require 36 units of library science courses, whether the degree be a BLS, AB, or BSE, major in library science. Only one school requires 42 units for a library science major. From 15 to 21 units are required of library science minors. The basic or core courses which are commonly offered at all schools are: 1) reference and bibliography, 2) cataloguing and classification, 3) selection and acquisition of library materials, and 4) library administration. The contents of the courses however, differ from school to school. Library practice or field work is required of all library science majors. Aside from the basic courses, other courses in library science must be taken as required courses or electives; introduction to librarianship, history of books and libraries, school libraries, special libraries, literature for children and young adults, government publications, and special materials. The electives chosen depend on the students' degree programmes.

Realizing the need to standardize the circular offerings in library science in the various schools, the Curriculum Committee of the Philippine Association of Teachers of Library Science was charged with the task of doing this. After several months' work, the Committee presented a standardise library science curriculum on the undergraduate level. The number of units to be required, the course titles and numbers

and the course descriptions were agreed upon and approved for presentation to the Bureau of Higher Education.

4. THE GRADUATE (MASTER'S) PROGRAMME

To be admitted into the graduate programme in library science in the 7 schools offering such programmes, students must have a weighted average grade or rating of 85 per cent, 2, or B in their undergraduate studies. This is as prescribed by the Department of Education and Culture for admission to all graduate studies. While the U.P. Institute of Library Science accepts any bachelor's degree holder, even without any undergraduate library science units, the other six schools require from 12 to 18 undergraduate library science units for admission into the graduate programme. Further screening of students is done mainly through personal interviews and references.

For the master's degree the total number of units required range from 36 to 42, with the number of units in library science varying from 15 to 24. A thesis is required of all students in five universities and carry a 6-unit credit. At the Institute of Library Science, students may choose to write a thesis (6 units) or work on a special problem (4 units). The number of units in library science electives and cognate subjects range from 6 to 21 in the seven schools.

The core courses common to all the schools are:

- 1) libraries and librarianship, 2) reference and bibliography,
- 3) organisation of library materials, and 4) library administration.

Some other courses offered in all the schools are those on the literature or bibliography of broad subject fields as the humanities, the social sciences, and the sciences, services to readers, types of libraries, and types of materials. Research methodology is required in all the schools too. Only at the Institute of Library Science is an introductory course on information science being offered. It is through the choice of electives in library science and cognate subjects that some kind of specialisation is provided.

Six of the schools require the passing of a comprehensive examination before students write their theses. One school, the Institute of Library Science, does not have this requirement.

It must be noted that the American influence pervades in all the programmes. This is due to the fact that it was two Americans Alexander Robertson and Mary Pack, who started library education in the Philippines way back in 1914. And American educators and librarians have served in the Philippines and influenced the programmes.

50 FACILITIES, RESOURCES, ETC.

51 Library Science Collection

The collection of books on library science in the schools with library science programmes is generally small, with only four having more than a thousand volumes in their holdings. The rest have from 110 to 620 titles in their collections. The number of serial titles in library science currently held by eight schools in Manila surveyed last week ranges from a miserable 2 to 321. The reference materials and almost all required readings in the collections are by American authors, with a few European authors. At the Institute of Library Science, materials produced in the Asian region are being acquired as much as possible.

Very few non-book materials for instructional purposes are available in the schools.

52 FACULTY

Most of the faculty members in the schools are on a ~~part-time~~ basis, they being on the library staff of the university itself or from different kinds of libraries outside the university. Only five universities have full time permanent faculty; four have only one each while one has five.

Nearly all these faculty members have been educated in the United States; only one or two pursued studies in England and Australia. Almost all have graduate degrees in library science or some other subject field. There are a few bachelor's degree holders who are teaching. All have had some experience in library work.

The faculty in the schools are given the same status and remuneration as other faculty members who have equal or similar qualifications and experience.

53 Students

The annual enrolment in the past few years shows that library science as an undergraduate course is not gaining in popularity. Only three schools showed an increase in enrolment. Among the eight schools in Greater Manila surveyed last week, three indicated enrolments of more than 100 students for both of their programmes. The range in enrolment for 1975-76 of these schools is from 26 to 132.

The graduate programme, on the other hand, has had an increase in enrolment in the last five years. The aggregate total enrolment for five of the schools offering graduate programmes last year ranges from 31 to 282. For the first semester of school-year 1976-77 the enrolment in three of the schools totalled 206. It must be pointed out that most of the graduate students are part-time students since they have full-time employment. They attend classes in evenings and Saturdays. Six units per semester is the maximum load they can carry so that it takes a long time for them to complete the course requirements.

54 Graduates

While the enrolments every year have been fairly large, the number of graduates has continued to be small, especially at the graduate level. In 1973, Mrs. Jami reported at CONSAL II that 1054 graduates on the bachelor's level and 26 on the master's level were produced in the previous five years. Last year, 1976-77, eight schools in the Greater Manila graduated 132 bachelor's degree holders and three of these graduated 13 master's degree holders. The Institute of Library Science graduated 9 out of the 13 master's degree holders.

A large percentage of the graduates go to college and University libraries and business and other special libraries. A smaller percentage goes to elementary and high school libraries. Very few graduates go into the public library field which is not very attractive in terms of remuneration and opportunities for advancement.

6 CONTINUING EDUCATION PROGRAMMES

With the library schools responsible for the pre-service education of librarians, the in-service and continuing education of librarians is mostly the responsibility of library associations, government agencies, and libraries in the country. The Philippine Library Association, Association of Special Libraries of the Philippines, and other associations have been most active in conducting seminar-workshops to upgrade the competence of librarians. Only last month the Philippine Association of Teachers of Library Science and the Association of Special Libraries of the Philippines jointly sponsored a seminar-workshop on changes in descriptive cataloguing in line with the ISBD.

The National Library has held several summer seminars on special topics as preservation of library materials, building Filipiniana collections, and others. The National Science Development Board sponsored a regional seminar for managers of information services last June.

The Institute of Library Science has been involved in many of these continuing education activities and has likewise conducted two summer institutes -- one on school librarianship and another on information science.

7. PROBLEMS IN LIBRARY EDUCATION

Library education in the Philippines is faced with a number of problems. Foremost is the large number of schools offering library science programmes, some of which are of doubtful quality. The undergraduate degree programmes especially need to be studied and perhaps those with very small enrolments. What is essential, however, is the formulation of standards or guidelines which should be followed by the schools. A system of accreditation of the schools is imperative if we are to ensure the quality of the programme and the kind of librarians that are produced.

The apucity or lack of library resources and instructional materials is another problem; for these determine to a great extent the kind and quality of instruction provided. Coupled with this is the nature of the faculty of most of the schools. It is to be questioned whether schools should be allowed to have only part-time faculty.

The small number of graduates produced every year on the master's level has given us cause for worry. The demand for such people has grown and yet the schools have not been able to meet this. The various factors contributing to this will have to be studied and means found to resolve the problems.

In the line with this is the need for adequately assessing the manpower needs in library and information service in the country. No manpower survey has been undertaken to find out not only the number but the kind of personnel which are needed and will likely to be needed in libraries and information systems in the future. This will certainly be useful in developing more relevant curricula and in recruiting the right number and kind of students for the profession.

Such is the situation of library education in the Philippines and although we have problems, we are hopeful that these will eventually be resolved and that the library and information service personnel needed in the country will be effectively and efficiently prepared.

From the Report of the Meeting of Supervisors
of Library and Documentation Schools in the
Asia Region (Bangalore) November, 1976.

TRADE INFORMATION SERVICE LIBRARY

By

Iyanthi Pestomjee

(LIBRARIAN)

The Trade Information Service was established to fill a long felt need for an integrated and comprehensive service, for the presentation of specialized commercial and economic information. Our clientele ranges from exporters and importers, the officials of the Department of Commerce and the Export Promotion Secretariat and other relevant State departments dealing with this subject area, institutions, trade promotional organizations to research workers interested in this field.

The broad objectives of Trade Information is Export Promotion. This falls in line with the economic policy of the government to give every encouragement to exports - traditional and non - traditional in order to obtain for the country vital foreign exchange necessary for the imports of Sri Lanka and the creation of new avenues of employment. The encouragement particularly of non - traditional items for export has led to a demand for specialized literature and services which the Trade Information Service makes every effort to cater to.

The three main areas of information specialization are product information, market information and information on firms. The Trade Information Service (T.I.S.) therefore maintains a current data bank relevant to the export trade of Sri Lanka, and other statistical, commercial and economic information pertaining to this sphere.

Further, it makes every effort to motivate advice and guide potential exporters. It assists and services the Export Promotion Secretariat in its consultancy research and training activities.

Historical background.

I shall give you a brief resume of the history of the T.I.S. in order to enable you to grasp the founding of one of Sri Lanka's most important documentation centres. In October, 1972, the T.I.S. was established with a skeleton staff and started functioning in January 1973. The Export Promotion Secretariat/Ministry of Planning and Economic Affairs in collaboration with the Department of Commerce/Ministry of Trade and with the assistance of the International Trade Centre (ITC) Swedish International Development Authority (SIDA) Scheme for export promotion for the Republic of Sri Lanka, set up the Trade Information Service. Housed in Flat 31, Galle Face Court 2, Colombo 3 and situated in close proximity to the Department of Commerce, the T.I.S. started functioning with Mrs. Soma Goonetilleka as its first Director. The T.I.S. owes a great deal to her zeal, foresight and meticulous planning and she spared no pains nor expense to build up the nucleus of the library collection. Within a short space of time she streamlined the T.I.S. and library and succeeded in giving it an air of brisk efficiency. The layout of the T.I.S., equipment, furnishing and decor including its publications was entirely planned by her about which I shall elaborate in greater detail later on.

Under her direction with the minimum of red tape, quick and efficient service in Trade Information became the forte of the personnel attached to the Documentation Centre.

Objectives.

Up to now, I have for the purpose of convenience and necessity treated the Documentation Centre as a whole unit of which the Library is a very necessary and important part. The T.I.S. consists of the Information Unit and the Library. No clear cut demarcation physically or otherwise can be made between the two as the Library is spread over two flats in which all officers and staff belonging to the T.I.S. work. The objectives of the Library would be geared to the objectives of the T.I.S. and the Library functions as a complement to it. The functions of the Library would be to provide the necessary literature for the information and research work of the T.I.S., maintain a balanced collection of literature, provide information, specialised indexing and abstracting services for its clientele. In addition to the objectives of the T.I.S. enumerated earlier, the Library caters for research, maintains contact with other libraries in Sri Lanka, trade promotional organizations, Chambers of Commerce, Embassies, etc., in order to maintain a flow of information and an exchange of publications

Building and layout.

The Library is spread over an area of 4653 Sq. feet. Being conveniently located in a building along Galle Road,

it is easily accessible. The layout of the library is pleasing to the eye and its furniture is comfortable and attractive. Periodical display racks dominate the main section of the Library. The basic reference and economic collections, country data and directories are in the main - hall. The product reports filed in vertical files form a separate collection. The statistics and tariff collections are in the adjoining flat. A special room with pigeon - hole racks houses the Bank Reports, Reviews, Newsletters and Economic bulletins. The back numbers of periodicals are bound and stored on steel racks away from the main hall. Pamphlets on economic country data are maintained in boxes.

Budget.

The T.I.S. has a fair sized budget composed of Government funds and foreign funds of the ITC/SIDA integrated scheme channelled through the Export Promotion Secretariat. At the start of the project 30,000 dollars as a block grant was given for equipment and literature and in addition every year a suitable sum is allocated for the extension of this project. At least 85% of the budget is spent on periodical literature.

Staff.

The TIS has on its cadre eleven qualified personnel of which the Library staff consists of two professionally

qualified librarians, one clerk and one peon. It is sad to note that the salaries of the librarians have not kept pace with the specialized services rendered by the Library.

BOOKSTOCK.

Periodicals.

These constitute the main source of information and comprise the main portion of the budget and number approximately 545. They consist of Product, Trade and Marketing, and General Economic Journals. Received regularly in this Section too are reviews, economic and trade bulletins, statistical publications covering various aspects of Trade and Commerce.

Reports.

Product Reports form a very important source of current information and often include unpublished material. The Library obtains reports from organizations, such as ITC, TPI (Tropical Products Institute), U.N. organizations, International and Sri Lanka sources, etc.

Books.

The bookstock numbers close upon 4,000 volumes covering Economics, Trade, Commerce, Industry and Agriculture. It is the policy of the present Director, Mr. K. S. Kulatunga to expand and give adequate coverage to this basic reference and research collection and emphasize the marketing aspects of exportable commodities. On account of this policy a balanced

Collection of books has been built up. Thus the Library's contribution towards research and its services would be thus greatly enhanced. Moreover, the gradual acquisition of a small local collection of Sri Lanka publication relevant to the library has proved a valuable and interesting source of information.

Standards

They are mostly local ones published by the Bureau of Ceylon Standards with the addition of a few international standards.

Pamphlets

This collection is estimated at 1,500 and stored in boxes for easy reference.

Newsletters, & Bank Bulletines.

Total number is about 75, covering Trade and Economic data.

Trade Catalogues.

Trade Catalogues of different countries are received regularly.

Newspaper Clippings.

Cover current information and are maintained in folders.

International Abstracting and Indexing Services.

The Library receives these published services regularly.

All F.A.O., U.N., publications, Sri Lanka Government publications and Departmental Literature are received regularly and shelved as separate collections.

Acquisitions.

Both foreign and local material is ordered by the Librarian with the approval of the Director, T.I.S. A fair percentage of literature is received on a complimentary basis or in exchange for publications of the T.I.S.

Classification:

The classification of literature in the Library presents a problem as about three classification systems are involved and sometimes inter - linked one with the other. Briefly the old collection of the Department of Commerce numbering about 1,760 volumes are classified according to the Dewey Decimal System. The basic reference and research collection of books are done according to the Universal Decimal Classification System. The product literature has the Standard International Trade Classification System (SITC). The newly published International Trade Classification System in 1975 for the functional aspects of trade and country by the ITC/UNCTAD GATT has been introduced to the trade literature and directories and integrated with the SITC for products in order to touch on the three aspects of trade literature under the groupings of product, country and function. The U.D.C. system not being very detailed enough for trade literature was not quite adequate to meet the challenge.

Cataloguing.

This is done according to the A.L.A. Code with a short abstract, when necessary. An attempt has been made to start

cataloguing under the new system. The Catalogue is divided into 3 sections, viz., Product, Country and Function.

Clientele.

The clientele of the Library is wide and varied comprising of the officers of the Export Promotion Secretariat and the Department of Commerce, the Business Community, the Market Research Worker, and Officers belonging to many relevant Government Departments, Corporations and Institutions.

Lending & Reference Services.

The Library is open to its clientele and accredited persons for reference. Lending facilities too are extended to its clientele. Loan period of 1 week is allowed or more depending on the demand for the item requested. I believe we share with the C.I.S.I.R. the distinction of being Research and Special Libraries open to the public in this fashion.

Equipment.

In keeping with the trends of a special library, the equipment of the T.I.S. library is modern. There is a printing press, microfilm reader, photo - copier, binding unit equipment - special spiral binding machine and stapler, guillotine, etc. Also, a Card Duplicator and an Adresseograph. A telex service is operated for the Documentation Centre and open to the business community.

Services.

(a) The photocopying services enables copies of documents to be obtained in a very short time on the payment of a nominal amount.

(b) Bibliographical searches are conducted on request and information channelled to the inquirer by post, telephone or appointment.

(c) Selective Dissemination of Information is made available to the officers engaged in research.

(d) Indexing of incoming literature and circulating lists of titles.

(e) Articles in over 350 periodicals are abstracted and circulated, to the library's clientele.

(f) Bibliographies are compiled periodically and circulated to those engaged in research.

Publications.

The T.I.S. as a complete unit issues a number of publications.

"A Guide to Exporters" is a monograph and a handbook covering the export procedure of Sri Lanka, containing information to exporters entering this field. The "Exponews" covering Trade and Economic Data, spotlighting markets for Sri Lanka's exports is a monthly journal. The Library's contribution to this is a

list of acquisitions and it assists in providing material for research articles.

The Bibliographies compiled and distributed by the Library on product reports, market surveys, and standards are published annually. The "Trade Index" which is the quarterly publication is an abstracting service covering current articles in periodicals. The latter two publications are library publications and are distributed to other libraries, research officers, the clientele of the library and others on request.

Hours of Opening.

The Library is open to the public for reference on weekdays from 8.00 a.m. to 4.15 p.m.

Distribution of Public Libraries in relation to Population
of Sri Lanka, 1977

The following is a statistical abstract of a survey conducted by the Ceylon National Library Services Board to ascertain the quantum of library facilities available to the general public of Sri Lanka on a District basis. The demographic figures are based on 1971 census.

PROVINCE	DISTRICT	POPULATION CENSUS 1971	NUMBER OF LIBRARIES 1977	POPULATION PER LIBRARY
Western	Colombo	2,672,520	57	46,886
	Kalutara	731,780	20	36,589
Southern	Galle	737,410	36	20,484
	Matara	588,220	16	36,764
	Hambantota	340,990	16	21,312
Central	Kandy	1,010,780	46	21,973
	Matale	316,330	25	12,653
	Nuwara-Eliya	629,550	17	37,032
North- Western	Kurunegala	1,028,050	54	19,038
	Chilaw- Puttalam	379,770	23	16,512
Sabara- gamuwa	Ratnapura	673,080	24	28,045
	Kegalle	640,650	25	25,626
Uva	Badulla	616,300	21	29,348
	Moneragala	174,060	13	13,389
North- Central	Anuradhapura	389,180	33	11,793
	Polonnaruwa	163,840	9	18,204
	Mannar	72,610	10	7,261
	Vavuniya	105,740	18	5,874
Eastern	Batticaloa	258,100	19	13,584
	Trincomalee	191,990	18	10,666
Northern	Jaffna	699,410	31	22,562

Ceylon National Library Services Board.

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THREE - DAY TRAINING COURSE FOR TEACHER
LIBRARIANS AT BATTICALOA PUBLIC LIBRARY
13th - 15th May, 1977

The three - day training course on Librarianship held under the aegis of the Batticaloa District library committee and organised by the Rotary - Club of Batticaloa was inaugurated by the Public Librarian, Batticaloa on Friday the 13th May, 1977 by the Acting President of the Rotary Club, Rtn Dr. R.P.Selliah.

Thirty two participants - teachers from various schools in the Batticaloa and Kalmunai Districts and few others from Valacchenai paper Factory and the Public Librarian of Trincomalee attended this course.

Associated with the inauguration were Mr. T. Manickavasagar, Director of Education, Mr.A.Nugapitiya Special Commissioner of the town, Mr. N Pathmanathan AGA, Batticaloa, Vidwan F.X.C. Nadarajah, Mr. N. Amarasinghe Director National Library Services

Mr. S. Rubasingham, Librarian of Katubedda Campus of the University of Sri Lanka and Mr. Geo. N.Ratne, Public Librarian, Batticaloa.

Rtn. Dr. Selliah whilst welcoming the officials and the participants of the training course said that he was glad to see many teachers have decided to follow the course and that he expressed the hope that the trainees will find this course beneficial for their work in school libraries. He outlined the activities of the club and the action taken hitherto by the club for the common good of the Batticaloa Town and its suburbs. He said that this training course is part of the club's programme of career projects. During the course of the talk he expressed in lighter vein that Mr.Manickavasagar, the Director of Education, though a prominent personality of the town has so far not given thought of becoming a member of the Rotary Club and that he hoped that he would do so in course of time and called upon him to deliver the inaugural address. Mr. Manickagasagar thanked Rtn. Doctor Selliah and quipped that he thought the Rotary Club was an institution associated mostly with doctors, since majority of the

medical professional people of Batticaloa are members of the club. (Laughter followed)

He outlined the aims and the objectives of the course and said that a library should be a reservoir where organised knowledge is available so that the users of a library may obtain the required information easily and readily. He emphasised that dissemination of knowledge is an important function of a library and that the librarian should accumulate such knowledge and impart same to the readers. He should be a good salesman of knowledge and stressed that reading maketh a full man. Finally he advised the participants -- teachers specially -- to give assiduous attention to the training and to make use of the knowledge they gained for use at their schools.

Mr. N. Amerasinghe, Director Ceylon National Library Services Board, delivering the key note address said " Knowledge is a common resource of all mankind; every single individual has a claim to make use of it. In a state of fast

growth and but restricted availability it can be a dangerous element which creates inequality among men, creating a society of 'haves' and 'have - nots', which is inimical to social well - being. Where knowledge is power and ignorance leads to slavery, democracy is doomed. A well informed society is in itself wealth. People need a variety of information at different levels and in different magnitudes both in day - to - day life and in planning for tomorrow. The very basis of civilization is dependant upon information. As the world is shrinking due to faster and more efficient communication and the horizons are expanding from global to intra - terrestrial proportions nations need to know more intimately about their fellow beings as if they all belonged to one community. This need is growing all the time. A little bit of information produced in one corner is likely to be useful in many other corners of the earth. This is the context in which librarians are responsible for, The management and supply of information.

Librarians are a special kind of social workers a special kind of public servants if you like, who need to live a special way of life which we call 'professional' for which they need a philosophy and a training... International organisations like the Unesco is striving to build up a framework in which this professional

community will work. Within the next 25 years we will find ourselves built into a system of global information processing and retrieval. We have to prepare ourselves for this task. Our image as librarians will depend on how efficiently we deliver the goods. We begin at home, at your school library, at your village library, at your University Library and other units like the Departmental libraries, industrial libraries. We will work in a team with our fellow librarians, we will intergrate our resources and services to develop a national information network with a coordinating centre called the National Library, which is precisely the function of the National Library Services Board."

Mr. Amarasinghe ended his talk by pointing out to the participants of the service provided by the Batticaloa Public Library, which he said is the only one of its type in the Eastern Province and one of the few well organised libraries in Sri Lanka and congratulated the

Public Librarian and his staff for the manner in which the library is being administered.

Mr. A.B. Nugapitiya, Special Commissioner of the town who was the next speaker outlined the history of public libraries in Sri Lanka with emphasis on the public library movement and the role of the local authority in public library service. He touched on the important functions of a public library and stressed on the importance of the organisation of knowledge so as to serve the people in respect of education, information, culture and recreation. The librarian, he continued is the key officer in a library who can liberally supply such knowledge in answer to the numerous querries of readers. He said that a librarian has to be an enthusiastic person dedicated to his profession whose returns are the satisfaction of service. He detailed out the objectives of a public library and its commitments to the society and to the community as a whole. He elaborated on the roll played by local authorities in the establishment of public libraries and touched upon the legal and budgetry aspects and staffing thereof.

At the end of the course on the 15th, a discussion among the

participants was organised on the course of training that was conducted for three days. Mr. N. Pathmanathan, A.G.A., and Director, Vocational Service of the Rotary Club presided. Associated with Mr. Pathmanathan were Mr. M. Satkunarajah, the Chief Education Officer and Mr. Geo. N. Ratne, the Public Librarian. Many of the participants spoke in appreciation of the interest the officials have taken in organising this three day training course and said that although the course of training was very interesting it was not long enough for one to grasp properly the essential technical know - how in library work.

Finally a resolution was passed that another work - shop should be organised in the near future which will run for at least one week.

Mr. N. Pathmanathan and Mr. M. Satkunarajah who gave consideration to the resolution have agreed

after consultation with the Public Librarian, that a week's course of training on librarianship could be made available.

(Geo. N. Ratne)
Librarian,
Public Library,
Batticaloa.

BIBLIOGRAPHY ON HEALTH RESEARCH

A bibliography on research into health and diseases in Sri Lanka from 1850 to 1976 is now under compilation. This is being done on a grant made to the Ceylon Library Services by the National Science Council for the purpose by Mrs. K. S. Jayakuru (Assistant Director Library Services Board). She expects to complete it by the end of the year.

WORKSHOP ON SCIENCE AND TECHNICAL INFORMATION FOR
MID - LEVEL LIBRARY PERSONNEL 20 - 21 May 1977

The auditorium of the Sri Lanka Association for the Advancement of Science was the venue of a Workshop on Scientific and Technical Information, organised by the National Science Council. Mid - level library personnel attached to Sri Lanka's main S & T Institutes including the Universities participated in the Workshop which was the first of its kind to be held by the Information Centre of NSC as part of its training programme.

The Workshop was designed to introduce participants to new developments and practices in storage, retrieval and dissemination of information. The principal aim of the Workshop was to create an awareness of the information requirements of S & T personnel and also to help participants re - orient their approach to information work. Programmes of this nature are considered necessary as there is presently a definite dearth of facilities for training of mid - level personnel.

The Workshop was conducted by means of lectures and discussions followed by practical work. The programme comprised lectures on:

**Information requirements of S & T Personnel (Dr RL de Silva, Pathologist, Tea Research Institute) who considered it essential to keep the scientist informed of on - going research in individual and allied fields of interest. He also emphasised the need for efficient abstracting Services, Translation Services with more emphasis being given to publications of the Asian Region where conditions and technology are similar to those in Sri Lanka.

**Information for Management (Malkanthi Nanayakkara, Librarian, Marga Institute) was aimed at broadening the participant's view of the importance of feeding information to management/ decision making persons and gauging their response to the information supplied. The communication link that exists, between the library's management and the overall management for the efficient working of the organisation was also discussed.

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