

Note – the following is one of the papers from the Waigani Seminar

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Resource Development for the Information Infrastructure

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Introduction

Information Infrastructure is interpreted here as:

All activities that promote the flow of information to be exchanged, to accessed, evaluated, to be assessed and used for action and change. (Stone, 1995)

The components of the information infrastructure are:

- People
- Information content
- Physical components
 - Delivery platforms
 - Standard codes, regulation, policies
 - Financial resources

The people component of the information infrastructure is important not only from the perspective of information suppliers but from the users perspective. The proliferation of information, and the technology associated with information storage and dissemination are imposing a need for a new level of information literacy. The information and communications industry is now characterized by fluid boundaries between what used to be specialist fields. This has been enforced by Information and Communications Technology which have opened up the information super highway to many countries, some of whom do not yet have but have National Information Infrastructure policies in place.

Papua New Guinea has inevitably to succumb to the globalization “pull” imposed by the global information infrastructure in order to maintain economic, social and political ties with the rest of the world.

Resource Development

Resource development addressed here includes manpower development required for literacy in information and communications processes and technology skills requirements for the global

information infrastructure which must substantiate local and national use at all levels for Papua New Guinea.

The National Information Infrastructure may take Papua New Guinea into the Information Society. How it can prepare its manpower can determine whether or not it can sustain the system and vice versa or the system becomes an expensive utility for the minority.

Moving towards this Information Society can be done in stages and education and training either taken concurrently or in the stated order of priority should target the general public as well as those who will maintain this National Information Infrastructure.

Manpower resource development should address these suggested criteria for development towards an Information Society:-

1. Social Criteria - The value of information should be recognized as an enhancing contributing factor to the quality of life. Wide spread information consciousness and skills in information seeking should be promoted from the community schools level to the post graduate level. Skills development from a certain level up has to include the use of information and communications technology.
2. Economic Criteria - Information should be seen as a key economic factor as resource, service, commodity, and a source of added value and employment.
3. Cultural Criteria - The cultural values of information through the promotion of information values as in indigenous and local knowledge should be encouraged in the interest of individual and national development.
4. Political Criteria - Freedom of information and access to information will increase participation and consensus and sustain democracy
5. Technological Criteria - It should be seen as one of the enabling forces. The widespread diffusion in of IT in offices , homes and education requires skills training.
(Martin, 1988)

Need for curriculum changes in library schools

Curriculums in the traditional library schools will have to incorporate changes to meet demands for the Information Infrastructure. Libraries traditionally have been the hub of information and knowledge. In the history of libraries in Papua New Guinea this was recognized and acknowledged by 1965 by Sir Harold White, the Australian National and Parliamentary Librarian. In a report he made to the Secretary of the Australian Department of Territories on the needs of the House of Assembly Library there was also a brief generally on the library services for enhancing of development. He defined the scope for library services as:

Library services should serve the political, administrative, educational and cultural needs of the people of the Territory capable of using them. Above all they should contribute to the development of skilled manpower which the Territory's general present need. In particular they should provide for the formal education, from primary to the tertiary level; continuing education, the Parliament and the Executive departments, the law, private industry and commerce and the people as a whole for the enlightenment and enjoyment to be derived from books and reading. He especially amongst

other requests made a plea for reading materials for new literature.

This statement was made over thirty years ago when the library housed the popular form of printed information and knowledge. This situation has changed to include electronic forms.

To continue this role in the current information and communications environment it is of utmost importance that manpower resources for libraries and information centers be trained in the skills required in this information and communications environment in order to continue to perform their roles as mediators to information.

This set back has been taken advantage of. The commercialization of bibliographic databanks, virtual libraries and information brokers are now taking on what used to be the traditional roles of libraries and information centers. Librarianship may become a dead profession if librarians do not retrain themselves to handle information in electronic format.

Parallel to this globalization “pull” the trend being set in higher education also calls for changes in library schools curriculum. Rationalization for cost effective training is enforced by the economic environment. Job markets in the traditional library fields are decreasing. More and more graduates from the traditional library schools are finding it difficult to get jobs in the libraries. Pressure imposed by the economic environment has resulted a redirection in the planning of courses in the higher education sector towards more generalist education. In order to survive in higher education library schools not only had to redesign their curriculum to justify meeting the current job markets but also provide training for skills in information literacy required of almost all disciplines in the new inevitable Information Society. Information literacy is becoming a precedent for further education and for keeping abreast with the requirements to be informed in the work place.

The traditional curriculums in the areas of services to library users and user education have to incorporate these new demands. This may mean provision of courses for information skills and communications skills using information and communications technologies not only to librarians but to students in other disciplines.

History of Librarianship Education

Education in librarianship began as early as the 1887 as an institution focused apprenticeship training. As professional associations grew they provided not only standards for the type of training dispensed through examinations set by these professional associations but also provided venues for national and international input through publications (Davis, 1987). Although much of these still retain some nationalism, internationally accepted standards in library education were endorsed by bodies such as IFLA (International Federation of Library Associations) (ibid.).

The training of librarians in Papua New Guinea was based on some of these trends. On the job training was offered by some of the bigger institutions libraries. Formal training at the certificate level when it was offered catered more for those who had gone through the apprenticeship type training in libraries in PNG. At the graduate level the apprenticeship trend continued where graduates with first degrees in various disciplines underwent fellowship programs that required “on the job training” as a pre requisite to post graduate training in librarianship.

In 1989 library education was given a university course status to include a bachelor’s degree

course at the University of Papua New Guinea. The training of professional librarians from Papua New Guinea and from the Asia Pacific region in some of the renowned international library schools was possible through various scholarships that were offered by international bodies and various governments.

The trend in training of these librarians in the library schools abroad has shifted to accommodate more internalization aspects including information technology. Most librarians returning with such education often find themselves in situations where their library has not acquired the information technology they have been trained to use. This creates a situation for continuous retraining of these librarians in the use of information technology applications and in the new expectations particularly of reference librarians in meeting new user needs.

Additionally library development in Papua New Guinea has been uneven - particularly with information technology applications. A situation developing that may cause outcry from the librarians in the traditional type libraries is the move away from the traditional library schools curriculum. In Papua New Guinea this may not be an unsubstantiated outcry however, the reforms in higher education have directed training of most other areas of profession towards the same end. The implications are that specific skills training may have to be learnt on the job or through special courses or workshops. Education in librarianship may well see a re emergence of apprenticeship type training for specific skills particularly in countries where there is unequal library development.

Curriculum Changes at UPNG

Explicit so far in what has been stated is the need for education in general information and communications studies and communications and information technology applications. The communications strand and technology strands are contested grounds for the traditional disciplines of Language and Literature and Mathematics here at the University of Papua New Guinea. However, the holistic approach to information and communications studies taken by SPCenCIID have been approved by the University Council and courses designed take on this holistic approach.

Courses that were planned have not been done in isolation. In order to validate the courses offered the department sought views not only from the employers and prospective employers but from a wider sector of the community. In a Provincial Information Services Workshop held in Rabaul East New Britain Province in 1991 a set of recommendations came out of this workshop addressing information infrastructure at the provincial level. While this may have nationalized or localized the information infrastructure requirements, it at the same time highlighted the following issues which validates the “technology pull” and higher education expectations that are now pressing for curriculum reforms in our library and information courses. These are the need to have better access to information at all levels and hence the requirement for better information infrastructure for effective information flow.

The recommendations particularly for Human Resources Development and for Information Technology indicated the need for qualified people for the efficient management and operation of information resources and services; that any developments in this field would be limited by the abilities of the people running these services. Issues to be addressed in training are listed in appendix 1.

The merged journalism unit and the library and information unit in the South Pacific Center for Information and Communication In Development (SPCenCIID) is appropriately teaching and developing courses promoting this holistic approach.

With the restructuring at the University of Papua New Guinea and the introduction of the schools System in 1999 SPCenCIID will be part of the School of Social Science and Development. The courses designed in the IPICS (Integrated Program In Communications and Information Studies) address the suggested criteria required for an Information Society. The finalised document on the curriculum may be obtained from Dr. John Evans (SPCenCIID, UPNG) who is also the author of the IPICS paper [which is based on recommendations by Professor Neelamegan].

Training Equipment for Resource Development

Although appropriately staffed SPCenCIID also must have an up to date information technology laboratory to cater for the training and retraining of information and communications personnel.

The acquisition of most of the type of equipment in the department has been through the generous support of outside organizations. The National Information Infrastructure in Papua New Guinea can only be effective if requirements for training are provided including the a well equipped laboratory.

It is unfortunate that policies promoting NII may be well supported at seminars such as the Waigani Seminar. However, if that support cannot be backed by special funding this generally is given lesser priority over other priority areas of the government in its budget.

Conclusion

What has been developed so far in curriculum design for the information and communications personnel and for students in other disciplines has taken futuristic role in determining the type of training required to support a National Information Infrastructure. This has been difficult for those involved as a lot of sensitizing and convincing had to take place at various levels. Acknowledgement must be given to Dr John Evans who developed the IPICS concept and to Ms Obi and myself in the administrative roles we took on in the various UPNG committees to push these through to the UPNG Council . As pointed earlier there is unequal library development in PNG and therefore those who may get nominated on the Libraries Advisories Board should appreciate the reasons behind the curriculum changes and not hinder the progress of the IPICS programme.

APPENDIX 1

- content should include data processing, records management, oral history, village and field level work, analysis and dissemination of information at the provincial level;
- encourage holistic approach to training in information and communications to enable graduates to contribute in any field ;
- Workshops and short courses should be conducted on financial information, information for decision makers, interpretation of statements and drawing up of budgets;
- more attention should be given to the existing programmes at UPNG with respect to information work and other fields;
- attention should be given to existing short course modules and to training opportunities;
- liaison between institutions is required for optimum training programmes.
- new approaches at UPNG such as the Certificate in Information Studies model and Extension Studies which involve less time for release of staff are to be considered..

A suggested curriculum, for further discussion, is :-

1. Understanding the rural society
 - social organization
 - economic pursuits
 - culture
 - music, dance and drama
 - oral tradition
 - demography.
2. Provincial, local and traditional government
3. NGO's; role of churches
4. Language and literacy; non formal education
5. Techniques of information dissemination to literate and semi – literate communities
6. Assessing rural information needs/basic research methods
7. Sources of information / information material and resources
8. Appropriate information services/ setting up small libraries and information centres
9. Budgeting/ project development/ basic management

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