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### **The changing face of librarianship in Papua New Guinea: Libraries for life in the Papua New Guinea Information Society?**

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#### **Introduction**

“Libraries for life” in Papua New Guinea today is not an impossible goal to strive for to achieve with today’s new and old information and communication technologies. However, in order for this to happen, a number of questions will need to be asked in an attempt to find some answers.

There are three that need immediate attention. They are - 1. What is an “information society” and what is its significance for Papua New Guinea? 2. What is information literacy and its relevance for Papua New Guinea an information society? and, 3. What is the role of women as information professionals participating in a democratic Papua New Guinea society?

These three questions need to be answered to provide some understanding of whether or not libraries are used as a way of life in the Papua New Guinea society.

Student assignments from two of the courses, which I have developed and taught since 2000, will be used as the main data for this paper. These courses are Information Society and Information Literacy. Both these courses were originally developed as librarianship courses. Due to the rationalisation programme at the University of Papua New Guinea and the need by the Information and Communication Sciences Strand to attract student numbers, the content of both courses now cater for students in all disciplines within the main campus at Waigani.

**Table 1. Students in Information Society and Information Literacy from 2000-2002**

Course	Year 2000	Year 2001	Year 2002	Total
*37.1000/39.2254 Information Literacy	16/40	3/23	3/81	22/144
*37.2000/39.2251 Information Society	5/85	1/45	5/40	11/170
	21/125	4/68	8/121	33/314

**NB. The number of students in the librarianship major is in bold**

**Papua New Guinea as an “information society”?**

In the absence of any Papua New Guinea authorship in/on “information society”, the views of students taking the second year course 37.2000/39.2251 Information Society at the University of Papua New Guinea were sought through the use of course assignments over a period of three years from 2000-2002.

The purpose of these assignments was to encourage students to evaluate concepts and or definitions used by non-Papua New Guinean authors and to identify the relevancy of these concepts to the Papua New Guinea situation, in particular, as an information society.

To assist students’ understanding of the concept of “information society”, the writings of four authors - Cronin (1985), Martin (1985 &1995), Feather (1994) and Webster (1994) were presented through lectures, readings and class discussion. Whilst the material may be outdated, the concepts used by the above authors were adequate for our purposes.

Materials accessed through the Internet facility and conference papers collected from my attendance were used to update the discussion on “information society”.

A matrix was drawn up depicting the various criteria for an information society used by these authors. Students were then asked to use these criteria to test for whether or not the criteria used to identify a society as an “information society” in the “western” world could be the same criteria to determine Papua New Guinea as an information society. Solomon Island students were asked to do the same for their country.

**Table 2. Criteria for an Information Society**

Cronin(1985)	Martin(1985)	Feather(1994)	Webster(1994)	Martin(1995)
Technology	Technology		Technology	Technology
Socio-economic	Social			Social
	Economic	Economic	Economic	Economic
	Political	Political		Political
	Cultural		Cultural	Cultural
Info’n workforce		Info’n Professional	Occupational	
			Spatial	
		History		

Assignments similar to the ones for this year were given to the students in the previous years for this purpose. The first assignment asked, “Using the criteria of western authorship, discuss whether or not your village community is an information society”.

The results from the assignment suggested the following.

**Technology:**

Each student identified their village community as either their mother’s or their father’s village. The technologies used within this community varied depending on their geo-political location of each one.

For example, the Manus Island villages use the garamut to notify people of messages - public information they wanted communicated. They also used the canoe to travel from island to island. In the Highlands of Papua New Guinea, shouting from one hilltop to another was the mode for public information. On the coastal regions of the country, the conch shell was used for public information. For private and personal information, the human being was the best message carrier to ensure the confidentiality and privacy of the message. The types of technology found in these village communities were adequate to sustain a localised way of life.

Most students acknowledged that accepting and adapting to change in whatever form was necessary to sustain their village communities.

## **Social, cultural and political**

Students identified the social and political networks that each of their families created and maintained were to ensure that an amicable and harmonious relationship was enjoyed by all. For example, the maintenance of peace between warring clans in most cases would result in the marriage of children of the chiefs. This union strengthened social, political and cultural linkages. Indirectly, it created another linkage as trading partners. This is evidenced in the “hiri” between the Gulf and Central provinces, the “moka” in the Highlands regions and the “kula” in the Trobriand Islands of Papua New Guinea.

The economics of information, it was agreed by all students that the barter and exchange system ensured a continuous flow of “value of each item exchanged” information.

These exchanges were not only tangible goods such as a “bunch of banana” for a “basket of seashells”, but in non-tangible items such as “chants for chants” or “a song and dance” for a “song and dance”, a “method of fishing” that was not practiced in a certain area for a “gardening method”.

Feather’s history dimension posed a challenge for the students. Without a written language, their oral histories were used for this assignment. Carvings of totem poles, masks, canoes, etc. knots in ropes to keep count of days; using the sun to tell the time, weather patterns, seasonal growth of vegetation, the physical changes to the male and female body, etc. all communicated information that was interpreted and put into rituals, ceremonies for everyday living in the community.

The findings of this first assignment strongly indicate that the criteria used by Cronin, Feather, Martin and Webster can be used to identify a village community in Papua New Guinea as an information society. These criteria are integral components in defining an “information society”.

Students concluded that though their folk technologies may have a low level of impact and the information flow may be to the village pace of life, it was adequate and relevant to ensuring a village community’s way of life.

Two other criteria - language and change were also deemed necessary criteria to determine whether a society was an information society or not.

The reasons given by students were that language was and must be a pre-requisite for communicating information and that village communities must accept change to sustain itself. Change in the form of eg. for fishing villages, a different angle in the throwing of a spear, or making a smaller eyelet in the making of net to catch shrimp, or a different irrigation method in order for a better harvest and a better life.

Another interesting outcome of this assignment relates to Webster’s spatial criteria. Whilst Webster’s (1994, p.12) “major emphasis is on the information networks that connect locations and, and in consequence, have dramatic effects on the organisation of time and space”, students translated spatial as social, cultural and political positions to determine who the opinion leaders were and their hierarchical relationships within their village communities. These spatial relationships formalised information and communication linkages within families, clans and the village community.

Students used only their oral information and communication sources and networks to answer this question. Formalised sources of information such as the library, school or health centre were not considered and thus were not significant to answering this assignment.

The second assignment asked this year’s students to “Determine the type of non-cultural information (ie any information that is not from within Papua New Guinea and or the Solomon Islands) that was being used by these two countries”.

The same eight criteria ie technology, social, economic, political, cultural, occupational, history and spatial were used to identify information related to them that were being used in both countries.

For each criterion, students were able to identify information, not originally from within Papua New Guinea or the Solomon Islands was being used in and by both countries.

For **technology**: Students identified the computer - online for internet and email access and off-line for CD-ROM and word-processing use; satellite and cable communications, telephones, mobile phones, radio and television as being non-indigenous to both Papua New Guinea and the Solomon Islands.

Radio and television could not be used to communicate private ie-confidential information unless it was in coded format.

A minority of the students which includes librarianship students in the three years of the course being taught identified libraries as repositories, books, journals, etc in libraries; and newspapers as sources of information.

These information and communication technologies helped in communicating outside technological, social, economic, political, historical, cultural information into the two countries. This information helped to create new jobs as social workers, economists, politicians in non-traditional parliamentary system; computer workers, teachers, and librarians, doctors and lawyers.

The computer networks, television, newspapers and particularly narrowed the spatial divide in Papua New Guinea and the Solomon Islands. It however, widened the digital divide between those who had access to computer; telephone and television facilities and those did not.

Students agreed that despite the **geographical/spatial** locations of both Solomon Islands and Papua New Guinea, both countries were recipients of all types of information that was not originally from within the countries.

The evidence from both these assignments using the eight criteria very strongly suggest both Papua New Guinea and the Solomon Islands are information societies, whether it is within a community dealing with village issues or as a nation dealing with national and international issues.

### **Relevance of Information Literacy for a PNG Information Society?**

The significance of Papua New Guinea as an information society paves the way for question two - "What is information literacy and its relevance for a Papua New Guinea society?"

My grassroots definition of "information literacy" can be described as "when you hear, see, feel, touch and taste something and you react either negatively and or positively to these senses to meet a particular need". In an oral oriented society such as Papua New Guinea, this grassroots definition is adequate.

To define information literacy in Papua New Guinea today, this grassroots definition must be complemented with the most common definition used in the literature as "the ability to locate, process, and use information effectively and purposefully". (Doyle, 1994; Browne, 1986; Kirk, Poston-Anderson and Yerbury, 1990; Brevik, 1992 and Todd, 1995)

The significance of Papua New Guinea being an information society is dependent on it also being an information literate society. This means that Papua New Guinea must be literate in all forms of literacy whether it is oral, visual, computer, technological, and or functional. It also means that a person must have the skills to read and write and understand that particular language used for communication purposes.

Various models and standards for information literacy have been developed over the years.

For our purposes in the Information Literacy classes, the Big6Model by Eisenberg and Berkowitz and the January 18, 2000 ACRL Information Literacy Competency Standards for Higher Education were used.

Three ACRL standards were stressed - information literacy, independent learning and being socially responsible with information.

The Big6Model - task definition, identification, location, use, synthesis and evaluation - was used for its simplicity to help achieve these three standards.

As a pre-test to identify their information literacy skills, students in the first year course on Information Literacy were asked to locate “A code of ethics” for the profession which they hoped to enter after graduating.

Of the forty students in the class this year, at least five students used the library as their first port of call. The rest asked friends, lecturers, searched their rooms, and senior students in the same disciplines to assist them. The library search skills of this year’s students do not differ from the 2000 and 2001 students.

Students this year were given two assignments based on research using oral sources of information and on library based research using the Big6Model.

The aim of these assignments was to see whether or not the Big6Model could be used for oral based research as well as library based research.

In the oral based research, students were able to identify and locate information. It was how to use, synthesise and evaluate information that posed problems. The question asked, “Using oral based research, identify an area of cultural interest that you would like to know more about” eg. on brideprice, Land entitlement, fishing techniques, grass-skirt making etc.

The library-based research posed a few problems. Students were also able to identify and define their task. It was not being able to locate, use, synthesis and evaluate that created problems. Perhaps, this was due to the fact that students did not have adequate library use knowledge and skills to identify, locate and use library information sources. This included computer use, identifying the bibliographical details of a book and using them properly and use of reference sources.

I had assumed in my first year of teaching information literacy that students would have had this knowledge and skills before coming to the university.

I was proved wrong. To remedy this, major types and sources of information were included in the course outline for years 2001 and 2002 for Information Literacy.

Other problems also emerged ie in their English language reading and writing skills to enhance the standards of information literacy and independent learning skills, acknowledgment of the intellectual property of others and plagiarism for the standard of social responsibility.

As a linear model, following the Big6Model was not the problem. The problem however, lay in transferring this research model to other courses. This became evident when these same students taking the Information Society course in year two were not following any research method, let alone the Big6 Model!

Readings placed on Library reserve, as background information was not often referred to unless they were informed that these readings would be used in the examination.

Perhaps, a retrospective look at the background of information use, and perhaps information literacy in Papua New Guinea is necessary to understand the situation at the University.

In the 1998 Libri article, “LIS professionals as agents for Information literacy: a new perspective for Papua New Guinea”, I argued that for Papua New Guinea to be an information literate society, at least six factors “seem to influence the role of libraries and librarians as agents for information literacy in the country”.

These were:

1. The information knowledge base of the LIS professionals
2. The library systems and services
3. Government and non-government support
4. Communication and information infrastructure
5. The library and information professionals
6. The social, cultural and economic environment

Three of these - library systems and services and communication, information infrastructure and government and non-government support need some explanation to understand the inadequate information literacy skills as the University of Papua New Guinea.

Firstly, even after almost twenty seven years of national independence, library systems and services still cannot adequately meet the information needs in Papua New Guinea, even though we have found that there is an abundant supply of information within the country.

The problem perhaps is in the inadequate funding, logistical and sustainable support, moral and attitudinal support for library systems and services in the country by all concerned ie the library and information workers and government and non-government decision makers in library services.

Schools at all levels from primary to secondary and national high, with the exception of private schools do not have adequate library and information resources. In most cases, schools are without librarians and or library resources. The worst hit schools are the elementary and community/primary schools where independent literacy should be established.

The lack of good systematic or systemic library and information services is a challenge to all students in Papua New Guinea. Students who go through the Papua New Guinea education system, entering University education come with insufficient library and research skills, not through any fault of theirs.

The government of the day has not provided for an adequate library and information services infrastructure for them to utilise. Most of these students would have depended on class texts and teachers' lectures and notes to see them through to the university education level.

Students in both the Information Society and Information Literacy classes are fluent in the information literacy skills with oral based research skills using the first two and perhaps to some extent, the third step, locating of sources using the Eisenberg and Berkowitz's Big6Model. Using, synthesising and evaluating and writing of information correctly is still a challenge.

Students in both these courses have tried to sustain these new knowledges through difficult circumstances. This also places a strain on them when they graduate from the University because they will still be exposed to inadequate public library services.

However, they will have been exposed to a good library system and service at the University level and they would have been exposed to a wider knowledge base of information sources and how to access these sources either nationally or internationally.

Being information literate is relevant and necessary to perpetuate a Papua New Guinea information society. These new graduates are the information professionals who will perpetuate this new society. Among them are women information professionals.

What is the role of women as information professionals participating in a democratic Papua New Guinea society?

Though female students numbers in Table 3 are low, they are significant in that they reveal that they are now exposed to how to identify and use and their role as information professionals in an information society.

In both the Information Society and Information Literacy courses, I did not differentiate between male and female roles as I saw them all as potential information professionals.

As part of their final assessment in exams, students were asked, "What do you see your role as an information professional in the information society" for the Information Society and for Information Literacy "What do you see your role as an information professional in enhancing information literacy".

The purpose of these questions was to assess for knowledge acquired within classes about the role of an information professional and whether or not each student saw himself or herself as a potential information professional.

Most students wrote that they did not know that they would become information professionals. They identified librarians and journalists as information professionals but not social workers, geologists, microbiologists and chemists.

For each of these courses, two directive principles in the Constitution of Papua New Guinea were emphasised - integral human development and equal participation. Issues relating to women as information professionals were presented and discussed in class.

For example, there were mothers and married women in both courses for the three years. Women mothers had babysitting and or spouse problems but none of them hindered the studies. Student fathers almost always did not face “housekeeping” duties compared to student mothers.

Of the 110 female students within the three years of both these courses, the husbands of 2 women would constantly telephone or write to say that his wife could not attend classes. One female student always reported that her husband had to do “babysitting” instead of going to work so that she could attend classes.

Because their role was addressed within the integral human development and the equal participation constitutional context, the issue of gender bias was given cursory attention.

**Table 3. UPNG Students in Information Literacy and Information Society from 2000-2002.**

Course	Year 2000	Year 2001	Year 2002	Total
*37.1000/39.2254 Information Literacy	<b>16/40</b>	<b>4/23</b>	<b>33/81</b>	<b>63/144</b>
*37.2000/39.2251 Information Society	<b>21/85</b>	<b>21/45</b>	<b>15/40</b>	<b>57/170</b>
	<b>37/125</b>	<b>25/68</b>	<b>48/121</b>	<b>110/314</b>

**\*NB. Number of female student numbers is in bold**

Most of the women did see their role as a facilitatory, mediatory and as an educator.

Of these, women students stressed the educator role especially for the subject areas they were going into. The biochemistry, microbiology and environment studies female students felt that because they were venturing into male dominated areas, they felt very strongly that awareness was a priority area for their work.

Whatever role women play in whatever profession they take up, women are all information professionals as mothers, microbiologists, librarians, journalists, geologists, etc.

Each and every role that they play is vital to the enhancing either Papua New Guinea or the Solomon Islands as an information society. Integral to this is the maintenance of an information literacy environment.

## Conclusion

Whilst libraries have not played an important role in the education and social of life of the students in Information Society and Information Literacy, these students now have been exposed through both these courses. As information professionals, men and women, they now have the knowledge, skills and the attitudes to be responsible citizens in using information effectively and purposefully in the Papua New Guinea or the Solomon Island Information societies.

Thank you,

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#### Appendix 1.

### **39.2254/37.1000 INFORMATION LITERACY 2 points Year 1/Term 1, 2002**

#### Course Description

Having information and knowing how to use it profitably to your advantage and to help others is empowerment. Hence Information literacy empowers and enhances the search and research ability of each student to interpret and understand course outlines, lectures, etc. to perform satisfactorily and successfully in the under-graduate studies and beyond.

This is an introductory course on the key issue of developing the skills needed to identify, evaluate and use information sources both cultural, traditional and non-traditional to meet user information needs at any level of need.

Students will be introduced to the Eisenberg and Berkowitz Big6Little12 Model as a basis for a practical model for information usage. Other models such as Neary's model will be introduced. Students will be asked to produce their own working models for their own research purposes.

These models will show that they have the advantage of being adapted and replicated in any number of situations and as such contribute to and enhance the "Learning How To Learn" or "Reading To Learn" process.

In using these models, students are not limited to using only the Michael Somare Library but to make use of all information institutions such as government and non-government, and cultural information institutions.

Models will be used in association with instruction on the sources relevant to the curriculum areas covered in this subject and other subjects taken by students in their course of study here at the University. The models also ensure that the skills are practised beyond the University education.

#### Objective:

By the end of this course, students will be able to:

- Conduct Research using the Big 6, Little 12 model
- Present a customised information package using
  - a) literature based information search
  - b) oral based information search

c) computer based information search

Course Outline:

Week 1: Concept, Definition, Issues; Models and practice  
Week 2: The Information Professional and Advocacy  
Week 3: Types of literacy programmes; Research Proposals  
Week 4: the Information sources: oral and literature  
Week 5: Information sources: electronic  
Week 6: Information and communication infrastructure  
Week 7: Review and Mid Term Test  
Week 8: Producing an Information Literacy Model  
Week 9: Presenting and evaluating an information literacy package  
Week 10: Revision

Assessment:

Continuous assessment: 60%

30%: Three Information Packages (10% each)

20%: Mid term test

10%: Attendance and Participation (5% for attendance and 5% for participation)

Final Exam: 40%

Readings to be announced in class

mo/Term 1-2002

Appendix 2.

**39.2251/37.2000 INFORMATION SOCIETY 2 points Year2/Term 2, 2002**

Course Description

“Commentators increasingly talk about information as a defining feature of the modern world. Much attention is now devoted to the informatization of social life. We are told that we are entering an information age, that a new mode of information predominates, that we have moved into a global information economy” (Webster, 1994:1)

How true is this of the PNG society?

As a result, the underlying questions to consider are: “What is this ‘information society?’” and ‘Are developing countries such as Papua New Guinea information societies?’ “How do we know when we are in an information society?”

As this is an introductory course, students will be introduced to the concept/s and definition/s of an Information Society. Issues that may impact on or enhance the information society such as social, cultural, economic, legal and political will be identified to enable a student’s understanding and awareness of an Information Society/Information Societies.

Objective:

By the end of this course, students will be able to

- Determine whether or not a society is an information society
- Identify the indicators of an information society
- Establish whether or not developing countries such as Papua New Guinea are information societies

Course Outline:

Week 1: The Information society: concept/s and definition/s  
Week 2: Intellectual Property: oral, print and electronic  
Week 3: Information Industry: national borders  
Week 4: Information Industry: international borders  
Week 5: Political aspects: power centres, opinion leaders  
Week 6: Legal aspects  
Week 7: Economic aspects: the cost of information

Week 8: Social and cultural aspects  
Week 9: The Information Professional: Ethics and Advocacy  
Week 10: Revision

Assessment:  
Continuous Assessment: 60%  
30%: Two information packages (15% each)  
25%: Mid Term Test  
5%: Attendance and participation  
Final Exam: 40%

Readings will be given in class

mo/Term 2- 2002