ROLES OF LIBRARY INFORMATION PROFESSIONAL IN A HEALTHCARE MANAGEMENT FIELD

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ABSTRACT

Before conducting a healthcare research project (NEW4R) that has been accepted by the Ministry of Education in Taiwan, the library information professional plays a multiple supporting role, such as searching for literature and appraisal, proposing a Healthcare Management Model (hereafter referred as HM model), and designing a system for data analysis. Due to the experience of database management, the library information professional proposals the HM Model by imitating those modules in integrated library system (ILS) for collecting data, analyzing data, and for producing reports. The NEW4R project represents 7 factors of impacting seniors' health: nutrition, exercise, water, rest, respiration, recreation, and refreshment. The anticipated goals of NEW4R project are to promote healthy life of seniors, to reduce medical care spending, to help students learning practical knowledge, and to make a combination of the industry and academics. This proposal significantly appeals that library and information professional can be not needed in libraries but also helpful in healthcare and other fields.

INTRODUCTION

Several new needs and problems have been generated by the current rapidly aging society in Taiwan, such as disease and other medical problems, dependency, homelessness, the desire to commit suicide, elderly dementia, and so on. In response to the above situation, relative countermeasures have been raised and progressively discussed by the relevant government and healthcare agencies, as well as the public. Therefore, seniors' healthcare and self-management are important indicators for health promotion. Since the Meiho Institute of Technology (hereafter referred to as MIT) has been renowned for its Nursing Department for over 40 years, the information and collections related to nursing care and seniors' healthcare in its

library are a very rich source of information. The President started to assemble a research team for focusing upon this important issue, and working on a "NEW4R Project". The NEW4R involves 7 factors impacting seniors' health: nutrition, exercise, water, rest, respiration, recreation, and refreshment. The anticipated goals are: promote a healthy life, reduce care spending, help students to acquire practical knowledge, and create a synergy of industry and academia.

In this team, the library professionals play a multiple supporting role: searching for literature and appraisal, constructing a blueprint for the NEW4R project, developing modules of systematic data-analysis, and helping with the publication of relative research reports. Due to their experience in operating the integrated library system (hereafter referred as ILS) for collecting data, analyzing data and producing reports, the whole project is conducted by library professionals.

GOALS OF THE NEW4R PROJECT

According the NEW4R project, data have to be collected from 600-1000 seniors from nearby communities as samples, and the samples will then be separated into an experimental group and control group. After treating the NEW4R (7 factors), the researchers of this project will track the health indicators of the two groups every half year to construct a complete cycle for an information system of a highly functional healthcare management. The original values of the NEW4R project are not only expected to help seniors to manage their health by treating 7 factors, but are also adopted for different ages with different treatment for future needs. The NEW4R project has 4 goals:

1. To build a research resource database to integrate resources from different academic departments.

2. To design an experiment to collect the data obtained from completed questionnaires. There are 600-1000 seniors as samples from nearby communities, separated into an experimental group and a control group.

3. To treat the 7 factors in the experimental group, and analyze the interactive relationships among the 7 factors (that is NEW 4R). After that, an evaluation on the impact on people's daily life in relation to the seven factors will be examined in the HM Model.

4. To expand the cooperation and alliance with the health industry, in order to: develop a cooperative project based on the analyzed data, list various related suitable health industries, integrate the information into teaching and research, and help students enter into successful internships, as well as to achieve a 3-realm knowledge integration of inter-industry, academia and teaching.

After analyzing the NEW4R (7 factors), the researchers of this project will track the health indicators to construct a complete cycle of a research information system with a highly functional health management.

LOCOMOTIVE ROLES OF LIBRARY PROFESSIONALS IN NEW4R PROJECT

Role 1: Literature Search and Appraisal

In college, the librarian's responsibility is to help people doing research to find the information they need, through a structured conversation (called a reference interview) and establishing a searching strategy. This help may take the form of providing direction on the use of databases and other electronic information resources in regard to research on a specific question, obtaining specialized materials from other sources, or providing access to, and taking care of, delicate or expensive materials (McKinzie & Steve, 2002).

In order for this project to become workable, the first step was to consider relevant questions. What constitutes "good quality" research? What aspect of this issue has not been studied? How can these research results be combined to create a valid project?

In accordance with their duties, professional librarians started a systematic literature review in an attempt to bring the rigor of primary research to the conducting of a workable project so that it becomes possible for others to repeat the work, check the results and apply the information thus gained into the seniors' daily life. Searching for systematic reviews can be very extension. As well as all relevant electronic databases, grey literature, studies in progress and hand searching of key journals can also be incorporated. Fortunately, the results of hand searching of research literature and foreign language articles are very well covered in the MIT Library, so there is less concern that this may pose a serious problem.

It is necessary for a thorough literature search to be conducted; this means that library professionals will play an integral role in this project: a search filter to include appraisal of the literature found. The systematic review collected by the library professional is helpful for consultation and for use by the research team. Through the searching strategy, the traditional academic librarians become healthcare librarians, and have expended their efforts to support and cooperate with clinical and academic research.

Role 2:   Constructing a Blueprint of the NEW4R Project

Since the library professionals undertook the literature search at the very beginning of this project, it stimulated them to conduct a managing healthcare model according to their experience, by operating the ILS. As more and more searching and filtering of literature have been done by the library professionals, the library professionals

derived the key concept of the NEW4R project. This key concept has been combined with the ILS operative concept by the library professionals, and they imitated the ILS modules to conduct the Healthcare Management Modules (hereafter referred as HM Modules) for this project.

According the NEW4R project, data need to be collected from 600-1000 seniors from nearby communities as samples, and the samples will be separated into an experimental group and control group. After treating the NEW4R (7 factors), the researchers of this project will track the health indicators of the two groups every half year to construct a complete cycle of an information system of a highly functional healthcare management. Therefore, as the locomotive, the library professionals conducted a whole blueprint of this project, which includes 4 modules.

1. The first module is the sub-project called Information Management System (yellow quadrant), the library professionals are in charge of this and focus on constructing the whole platform for storing and analyzing the data, and setting up a Healthcare Management Model.

2. The second module is the sub-project called Research Data Management (green quadrant); the nursing department is in charge of this, and focus on collecting experimental data, which include: health indicators, blood biochemical exam, Health Fitness measurement, and so on.

3. The third module is the sub-project called NEW4R Management (pink quadrant); the Department of Biological Science and Technology is in charge of this and focus on training Certified physical fitness instructors and treating the samples with the 7 factors.

4. The fourth module is the sub-project called Coordinative Management of the Academy and Industry (blue quadrant) and focuses on processing and enhancing the industrial product and academic research.
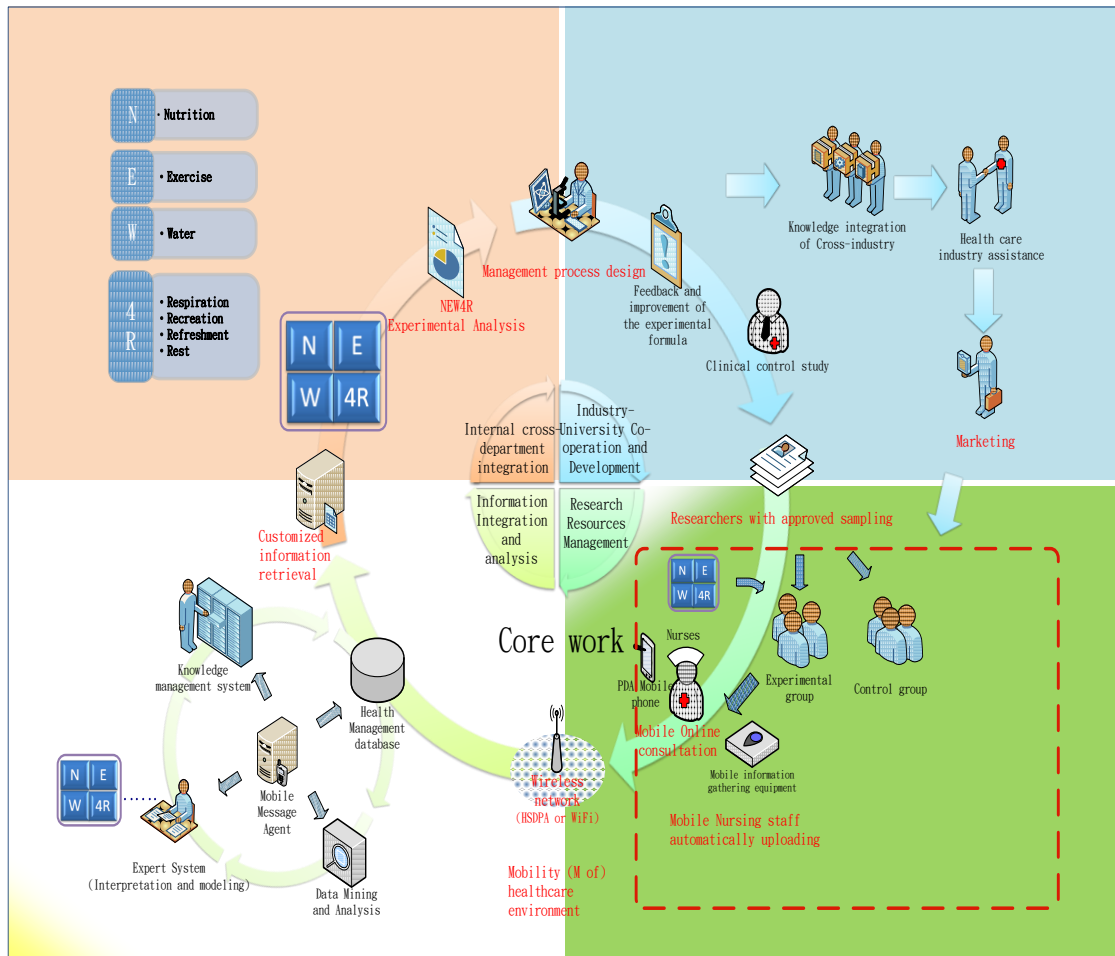
Figure 1: The Healthcare Management modules (HM modules)

Designed by the researchers

In the HM modules, a website has been made by the library professionals, who also used the wireless and mobile network's convenience to realize ubiquitous medical service and management. The library professionals focus on cooperation with the team of the research data management to ensure the fullness of data as well as the conformity and analysis, and then will offer systematic analysis to the relative modules of the whole NEW4R project.

Role 3: Framing Modules of Systematic Report and Follow-up Concepts

Librarians often referred to the integrated library system (ILS) as *library automation systems* or *automated systems* in the 1970s and early 1980s. Normally, the modules of ILS and their functions are included:

1. Acquisitions module: for ordering, receiving, and invoicing materials.
2. Cataloging module: for classifying and indexing materials.
3. Circulation module: for lending materials to patrons and receiving them

back.

4. Serials module: for tracking magazine and newspaper holdings.
5. OPAC module: a public interface for users.

Therefore, following the normal process of thinking and working in the ILS, the library professionals framed 3 kinds of modules and 10 report types for the NEW4R project:

1. Biochemical Pharmacology Module

   (1).Report type: Diet control statements

   (2). Report type: Lipid control statements

2. Physical Fitness Module

   (1). Report type: Muscular endurance control statement

   (2). Report type: Cardiopulmonary function statement

   (3). Report type: Balance statement

   (4). Report type: Flexibility statement

3. Stress Management Module

   (1). Report type: Psychological analysis statement

   (2). Report type: Physiological analysis statement

   (3). Report type: Behavior statement

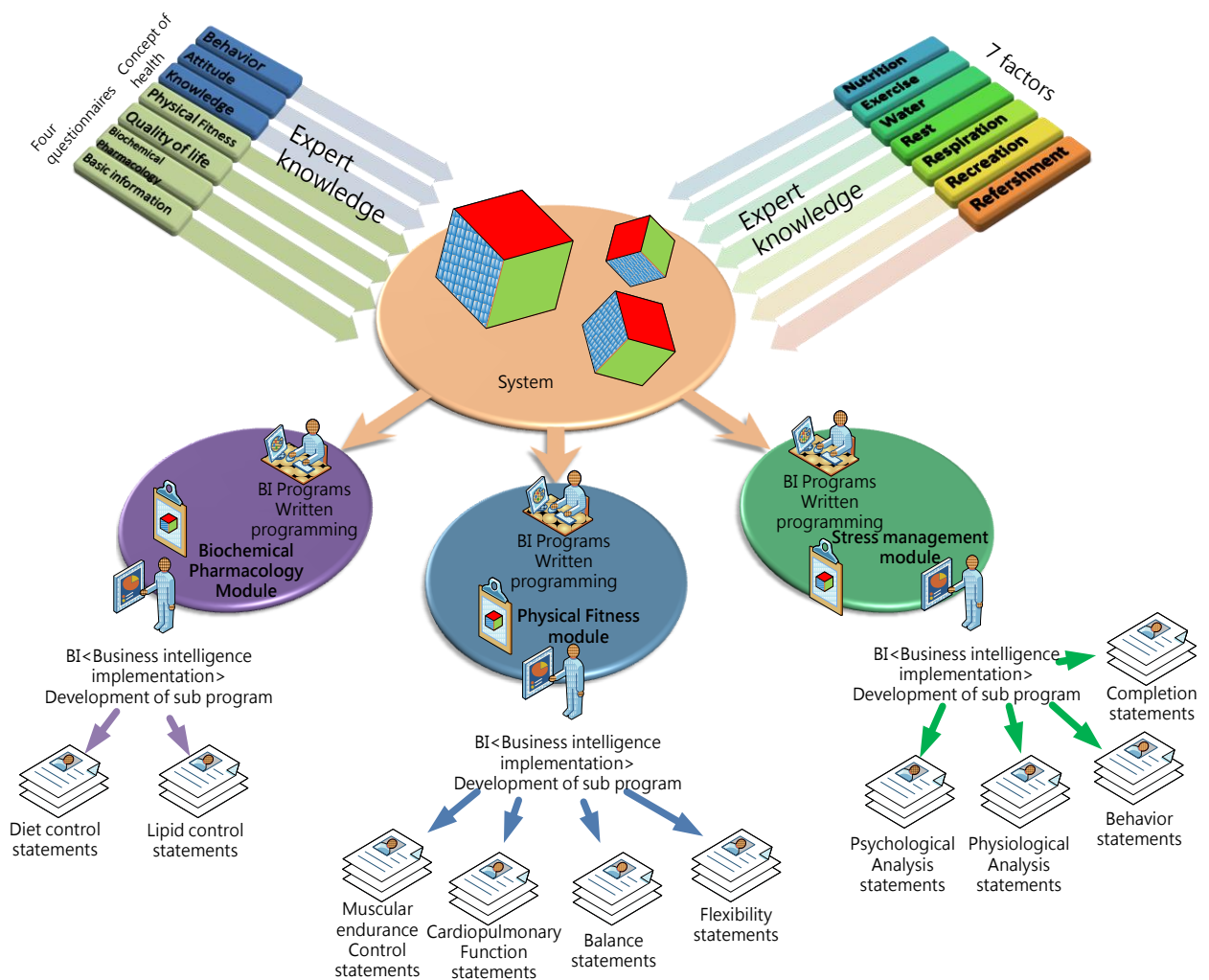   (4). Report type: Completion statement

Figure 2: Producing Systematic Data-analysis and Report Types

Designed by the researchers

Role 4: Leading the Publication

There is no doubt that the library professional is good at gathering information and publishing knowledge; therefore, the library professional naturally leads in the publication of the research results. Moreover, the systematic literature review is done by the library professionals, so there is no way for the library professionals to escape the responsibility for publishing during or after the process of the NEW4R projects.

IMPLICATIONS FOR LIS EDUCATION AND TRAINING

The purpose of this article is to address the notion of a collaborator as a virtual locomotive force for establishing a new age of librarianship. According to Houghton (1998), in the late 1990's there was a blurring among the worlds of the traditional librarian, the information scientist and the information technologist; this phenomenon

was caused by the rapid growth in new technologies, such as the Internet, networked PCs and software products.

This phenomenon consequently led to a wide gap between library professional applicators and Library and Information Sciences (hereafter referred as LIS) researchers. Although traditional librarianship qualifications, for example, are still recognized, there is a real need growing for the librarians to be trained in all aspects of information properties, information transfer, information management, and the environments and policies in their real workplaces (Houghton, 1998). However, knowledge teaching and collaboration between the two groups is still limited. The different interests and commitments of practitioners and researchers have hindered the realization of a common research agenda driven by specific problems (identified by librarians and library administrators), and LIS researchers' interests (Ponti, 2008). Recently, libraries are emphasizing collaboration with other campus stakeholders and encourage interdisciplinary thinking to create the library of the future. Therefore, LIS researchers should engage in simultaneous activities and relish a variety of stimuli; librarians can do many different things, all of which support, in some way, sustained engagement with academic work, and lead LIS education in this direction.

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