



User-Based Collection Development at Royal Hospital Library - Alert Service Approach

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Abstract:

Hospitals, as they recognize the strategic value of the qualified and professional health knowledge, become aware of the need to actively manage their collection development process so that they will be able to transform their mission from being only a health care treatment facilities into learning organization. Practically, the library takes the responsibility to build its collection based on searching and browsing the publishers' catalogues and the users' suggestions. Nearly, as with other libraries, only few users are concerned with collection development process and feed the library with frequent suggestions and involved themselves as being members of the selection committee. Simply, the reason is that each physician is occupied to see between 16-20 patients and has no time to read. Hence, it is the aim of the current study to explore the alert service:

- As a tool, how it can be applied to support the collection development process in comparison with traditional process, and
- As a user-oriented service, how it can be trusted to motivate physicians' health knowledge and to support the library selection policy and collection development.

To achieve these aims, a qualitative approach has been applied and data were collected through interviewing 12 physicians. From the data analysis three major themes (health knowledge updating, alerting services, and selection criteria) and seven issues (information resources, reading motivations, profile specifications, time management, publication selection, websites, and publications) were extracted. The results show an acceptable awareness of the alert services and online resources, but the problem lies on the lack of the Internet access and time availability for reading. Thus, this study recommends

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a user-based model for the health collection development. This model relies on motivating physicians to be more effective when supported with the in-house (intranet) and world wide (internet) connection to the health knowledge.

Introduction

Physicians acquire health information in different ways, including; practicing, sharing with colleagues, and by following up the health writings through various resources within their institutional library or through the Internet. Thus, libraries are considered places where information and knowledge is collected, organized and maintained to facilitate the local access and to nourish their needs. To fulfill such process, information professionals are interested in applying effective methods, working together with health users, pertaining information technologies and systems, and interacting with other libraries and professionals to build and access the current information so that a comprehensive development in the field of health knowledge is achieved. The whole process of acquiring information is professionally known as "collection development."

According to the Online Dictionary for Library and Information Science, collection development is defined as: "the process of planning and building a useful and balanced collection of library materials over a period of years, based on an ongoing assessment of the information needs of the library's clientele, analysis of usage statistics, and demographic projections, normally constrained by budgetary limitations" (ODLIS, 2007). The Trustees' Glossary of Oklahoma Department of Libraries emphasized much more on collection development as being a "term that covers the activities related to the building of a library collection: setting selection policy, assessing user needs, studying collection use, selecting materials, maintaining the collection, weeding, etc" (ODL, 2004). The two definitions put emphasis on librarians to consider critical and professional responsibilities and opportunities toward the increase of the information size, quality, access, cost, and users' satisfaction. It is much more an obligation and policy to follow than just a traditional collection development process. (Deborah and Blebic,1999) emphasized that because of the market

forces (specifically with serials), budgetary constraints, and growth in electronic sources, librarians require additional efforts for sound and expanded ways of collection development.

(Rashid, 1985) stated that information resources “availability is one of the recommended methods for measuring library effectiveness”. Within such trends, collection development activity forces a policy that the library should follow, a policy that can provide a point of reference for all library staff to consult. A “policy serves as a source of reinforcement when an item is challenged by a patron.” (CDT, 2007) To make it more practical, the starting point for developing a collection of any type and size of libraries is to formulate selection criteria that assess the “function of and need for an information collection and the audience it will serve.”(Kovacs and Alkordy, 2006)

Hospitals, as they recognize the strategic value of the qualified and professional health knowledge, become aware of the need to more actively managing their collection development process so that they will be able to transform their mission from being only health care treatment stations into learning organizations. On the digital era, and due to the emergence of e-resources (e-journals, e-books and other e-contents) and e-services, new challenges and responsibilities have been placed on:

- Librarians to possess new professional competencies for controlling, acquiring, selecting, financing, and disseminating the required e-contents,
- Users to acquire new searching behavioral skills to access that content and apply it for better health care, and
- Knowledge agents (publishers, authors, and even professional societies) to obtain new and sophisticated approaches for accessing their repositories, their services, or their publications. They have to take into account such developments within their programs, plans, productions, and all other professional activities.

For librarians, they seek to build an integrated interactive system that aims at producing, acquiring, alerting, and accessing knowledge. Thus, health libraries “must integrate faculty and students into the purchase process to make sure examination preparation resources of

the highest quality are purchased” (Hendrix and Hasman, 2008). Librarians, by their nature, always seek to survive through the services they offer, knowledge recipes they propose, and techniques they apply to communicate with knowledge providers, producers, creators, and users. They hunt for new models coming across the process they apply to manage knowledge or the level and type of services they present to the end users.

For users, when the emphasis focuses on health information access, the first station to stop on is the library. Libraries have always directorially supported the continuing information needs’ objectives of their relevant institutions. Therefore, information professionals always seek to increase their understanding of the information building process, recognizing opportunities to communicate with users, and realizing the factors affecting the best and current awareness services to enhance their positions as key players in the overall society’s health field. Actually, on the health side, current knowledge is the most required to improve services, diagnosis, and treatment. In fact, physicians need information to feed their private knowledge and to educate their patients. Health information might be the patient’s basic prescription to remain healthy. “Doctors need to remember that patient education is a very worthwhile investment of their time - after all, the best patient is a well-informed one” (Malpani, 2011) keeping on mind that health knowledge is continuously developing and thus needs frequent updating on daily basis. Accordingly, González-González (2007) emphasized that “physicians cannot practice high-quality medicine without constantly updating their clinical knowledge to help them manage patients”.

For knowledge agents, they always seek e-contents, e marketing, and as a result e-access. To do so, they act to have their databases be more active, and their contents be more reachable and accessible. Consequently, more active information seeking approaches and more sophisticated filtering capabilities that facilitate the access to and use of the materials have been introduced as alternatives to many traditional tools and services. One of these is the alert service, the new alternative to selective dissemination of information, books in print, and publish-

ers' catalogs of new published materials. This service will be a current awareness tool for new additions to select from, and as a tool for users to follow up relevant knowledge to their specific needs without human intervention or continuous searching for the same request.

Statement of the Problem

Royal Hospital Library (RHL) is the oldest hospital library in the Sultanate of Oman. It "aims to be the heart of highest quality services and resources supporting the healthcare and biomedical information needs of Royal Hospital." (Royal Hospital, 2009) To fulfill this aim, in 2009 RHL moved towards a new phase in terms of providing new e-services that enrich the health knowledge and medical education. The library, then, subscribed to 4143 electronic resources including 5 databases, 2997 e-Books, and 1141 e-Journals. Practically, the library takes the responsibility to build the library collection based on searching and browsing the publishers' catalogues and the users' suggestions. As with other libraries, only few users concerned with collection development process and feeding the library with frequent suggestions involved themselves as being members of the selection committee. Simply, the reason is that each physician is busy to see between 16-20 patients and having no time to read. In health area there is no excuse, specifically with the existence and the subscription to e-resources and the accompanied alerting services that automatically will notify them with the new knowledge through their e-mails and on their offices.

E-mail alerts may contain a list of citations, table of contents, or even the abstracts and sometimes the full text. Such elements have two folds benefits; first, they motivate the receiver to read and explore the new developments within the previously defined information request. Second, they encourage them to communicate with librarians to support them with the full text. The second benefit can act as an active approach to the collection building in conjunction with the actual needs of the users and from the user.

The problem here still exists when the users stay unfamiliar with the service or having no access to the Internet for reading the e-resources and the combined alert services. Besides that, the busy

physicians' environment at Royal Hospital leaves them unaware of the concept and the procedures to apply the alert services. Within this context, (Bishop, 1999) confirmed that "users can easily be deterred from using libraries and that poor awareness of library coverage prevents a full understanding of their potential". Bishop then emphasized that the "reason for this is a need to have more comprehensive views of information within the context of related tasks and how that changes over time." It is then the aim of the current study to explore the alert service:

- As a tool, how it can be applied to support the collection development process in comparison with previous one, and
- As a user-oriented service, how it can be trusted to motivate physicians' health knowledge, and, indecently, to support the library selection policy and collection development.

Alert Service: Review of the Related Literature:

The concept of alerting, within the trends of the current study, refers to several names assigned to the insight of its meaning and purposes. Buchanan and Hinze mentioned the main names as being the traditional service of the selective dissemination of information "dressed in new digital techniques", or information filtering, or event notification system (Buchanan and Hinze, 2005).

(Belkin and Croft, 1992) have named the variety of processes involved in the delivery of information to people who need it as "information filtering". Within this concept, the information is sorted out and matched against the registered users' profiles via filtering models. Whenever an incoming stream of updated knowledge occurs, the filtering models remove the un-wanted data rather than finding data in the stream. In the first case, the users of the system see what is left after the data is removed, in the later case they see the data that is extracted.

(Hinze and Michel, 2004) affirmed that "an alerting service informs its users about changes they are interested in. Information about these changes is provided by publishers, e.g. digital libraries or

Electronic Health Records (EHRs)". For them, several steps are incorporated to the technical process of the alerting service. These are: (a) defining the users' interests' profiles, (b) registering the profiles within the publishers' alerting service, (c) filtering incoming change messages by the alerting service according to the user profiles, and (d) alerting the respective users by a notification whenever the alerting service identifies information that matches their profiles. See the following Figure 1.

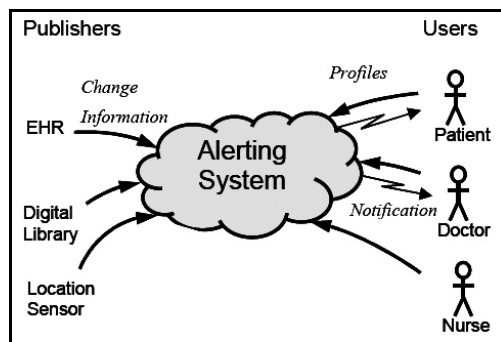


Figure-1: Source: Hinze, A. and Michel (2004)

Besides staying alerted with what is new in the area of interest, ten Chileans Universities applied the alert service as a tool for co-operative periodical acquisition. They have established a center called "knowledge alert" which intended to house a centralized management of negotiations and the purchase of periodical publications subscribed by the ten universities. This has been operating since 1990 and has been proved to save over five percent of the subscription cost previously paid by each university. When receiving new periodicals issue, the tables of contents are faxed to a central computer, which automatically transfers them to users. Users, in turn, are motivated to ask for a fax of an abstract or full text article (Del Sol and others, 1994).

(Faensen and others, 2001) list the type of alerting services, each associated with samples of providers and the type of restrictions they put on. These alerting services may be limited to include:

- A list of citations or tables of contents, but not the full text. Most providers of such service are publishing houses such as Elsevier Content Direct and Springer Link Alert.
- Abstracting and citation services, which are restricted to the materials offered only by the hosting service. Among the providers are the ISI services, Catchword, and the UnCover Reveal.
- Particular types of publications alerts such as Technical Reports Servers where the focus of the notification is limited to the definition of the particular type.
- Materials offered by the library that may cover several publishing houses and deferent types of materials.

Actually, alert services are notifications sent to the user based on previously defined search for information reflecting the user's interest, thus they "allow (the user) to save a database search and automatically run the search at designated time intervals. The searches results are sent to (the user's) email address, helping (him/her) stay up-to-date with new publications in (their) field." (CSUL, 2007) The e-mail alerts may contain a list of citations, table of contents, or even the full text alerts.

Collection development librarian (CDL) can use the current alert service to keep library users informed about new publications (Fourie, 2003). Although it looks more efficient and takes less time to gain updates on the publications, it also has negative aspects. It can cause information overload, which needs time to work through, organize and manage. In their study to investigate the personal and professional opinions regarding the availability of information about alternative medicine, (Curry and Smith, 1998) found that physicians supported the idea that library users, not the CDL must assume the primary responsibility of assessing the medical efficiency of information.

Sampling:

The study sample covered constitutes of 12 physicians four junior and eight consultants from the group of users who are the most frequently visiting the library.

Since the journals subscription instability shows the most obvious

fluctuation of the library user's selection, we have depended on the percentage covered by the department's journal list to select the sample of our study. Based on the Royal Hospital's library holding list, the division of medical journals found to cover the largest percentage of the total collection. Therefore, we have selected physicians from the mentioned department. 12 physicians were selected and most of them refused to be recorded via tape recorder, so to give them some confidence we did not use the tape recorder, but we made sure that we write every single word they mentioned.

Data collection and methodology* :

The current study is structured as follow: first, describing the currently applied acquisition strategy at the Royal Hospital Library, second, exploring the physicians behavior in selecting the materials to be acquired by the library, third, drawing up an alternative user-based strategy for collection development in a way that merge electronic services and users needs. The qualitative methodology was applied as being the suitable method for collecting the required data from a focused group. Moreover, the inductive nature of the mentioned methodology allows us to examine the data generated from the interviews and build an understanding of the philosophy behind the collection development process. In order to summarize the basic elements related to the study's statement of the problem and its research questions, data have been extracted from three sources: work observations (primary data), previous literature (secondary data), and interviews (primary data).

Observations:

The first source of data and the first motivator for this study was what has been observed from the physicians when asked to nominate new titles to be acquired by the Royal Hospital library. They are giving the option to use the catalogues received by the library from the

* Data were collected with the assistance of Eiman Al-Harathi, Dept. of Inf. Studies, SQV.

publishers or to search by their own means to select and prioritize the nominated titles. What have been noticed through the passed years is that most of them make shortcut by general searching through the Internet using general search tools or booksellers. The submitted publication lists reflected the random selection and the lack of selection criteria.

Previous Literature analysis:

From the user side, (Faensen et al, 2001) emphasized that the traditional approach of using the electronic publications depends upon searching and browsing. To reach the needed information within such approach, users must acquire the required searching skills and knowledge. Therefore, the precession of searching becomes the user's responsibility. According to librarians, they suppose to always look for the users' needs in order to build their collection. Based on that, they routinely shift the lists of new publications received from publishers or venders to physicians to select from as new suggestions. Now, it is also the user's responsibility to respond, otherwise the librarians either not acquire the new or related publications or have to randomly select as per sum criteria mostly related to financial issues.

From the information providers' side (venders, publishing houses, professional societies, ect) marketing their production depends on librarians as being the first customers in their account and not the users. Then if users are not active and librarians lack the subject knowledge, collection building will be established and responded poorly to information markets and user's priorities.

As a result of the dramatic increase in specifically digital publication and the development of the open access resources as well as the required software, new sophisticated information filtering capabilities have developed to act as:

- a facilitator that follows up the user's need continuously,
- a preventer that stop the user from drowning in a flood of semi relevant or irrelevant information

Based on the above, the acquisition process can be figured as following:

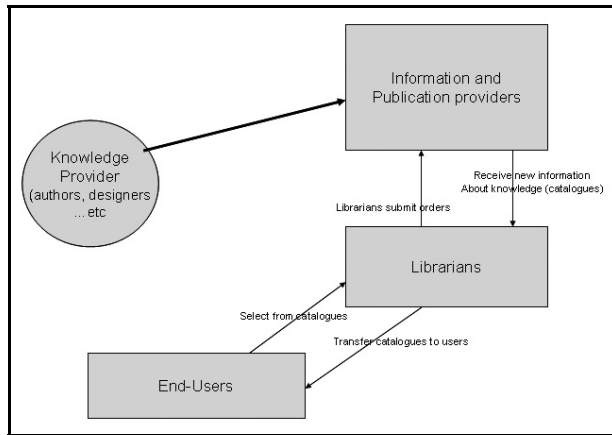


Figure -2: collection development-cut circle procedure

We can summarize from figure -2- the following:

- 1 - There is a lost bridge between knowledge and users, they follow up news from their libraries - current awareness, new publications, covers of new arrivals, and so on.
- 2 - Librarians are playing many roles. They are collection builders, knowledge facilitator, information consultants, and searching mediator. The question, which always can be arising, is how far they are prepared to act in all these roles, whether from the subject matter or the technical and technological skills.
- 3 - Information providers reach to the end user through librarians. They send their catalogues and alerts to the librarian. The end users are not aware of the major information providers in their field.

Being collection builder, the CDL should adapt a practical method to evaluate the end users' needs. (Hurd et al, 1999) have conducted a bibliometric study of the articles published by the molecular biology faculty during four years to understand their need. Although it sounds practical, the sample covered in such study should be selected very carefully to obtain the representation of the whole users' population.

In their study to investigate the personal and professional opinions regarding the availability of information about alternative medicine,

Curry and Smith found that the physicians were supporting the idea that library users and not the CDL must assume the primary responsibility of assessing the medical efficacy of information (Curry and Smith, 1998). To this study, CDL at Royal Hospital and other medical libraries in Oman up to 2005 can apply many selection criteria, such as the date of publication, author popularity, publisher popularity and the quality of the materials. When it comes to the medical efficacy of the content, the CDL lacks the medical knowledge base to do so. Such a situation adds more challenges to medical libraries and to the Ministry of Health to develop specialized medical librarianship program to satisfy their needs. The program then considers the medical background (bachelor degree in biology, microbiology, medical laborites, and health sciences) as being the main condition for acceptance. The first batch of graduates in 2005 encouraged both the Department of Library and Information Science and the Ministry of Health to go further with this program and to open it for others in the region. This solution somehow elevates the problem. To cover the subjects is the first priority to the CDL, but the huge body of publications and the limited budget have restricted this to be achieved. This has created a need for specifying the aspects to cover within each subject. According to figure-2, the end users “physicians” must follow up the updates provided through CDL to decide which are the up to date concerns and aspects in their specialties and evaluate the medical efficacy.

Interview:

The interview questions have been derived from the observations and the previous literature analysis. It is intended to figure out:

- How do physicians update their daily health knowledge, and how frequently do they feel that they should update their knowledge?
- Are physicians aware of the alert service available through e-journals and databases? If yes, how do they get to it?
- If they are alerted with new developments and aspects in their area of specialty, will this motivate them to read? How?
- As part of updating their knowledge, do they pay attention to the

new or the most important publications, which if became part of library holding will add more value to it?

- If yes, what are the selection criteria they depend on?

Data Analysis and Discussion:

The following three major themes and eight issues have been extracted from the data:

1- Health Knowledge Updating:

This theme covers two issues:

a- Information Resources:

Most of the respondents (11 out of 12) emphasized their reliance upon the Internet as a major source of information and this instantly, reflects their awareness of the online access to current and updated health knowledge. Only one respondent pointed out that he “use the library journals which [he] knew about through [his] colleagues and, thus, to [his] understanding, [he is] a subscriber to the latest knowledge.” Within this respect in 1999, Rusch-Feja and Siebeky surveyed researchers at the Max Planck Institute and revealed a high acceptance of electronic journals and a reluctance to return to print journals only. However, regardless of the importance of the printed journals, in health care area users cannot wait to read out-of date knowledge while they are waiting for the shipment delay or late subscription. Moreover, all respondents stated that their use to online collection will be increased as a result of possessing desk-top or lab-top access to online catalogs, bibliographic databases, and full-text journals. The Librarians at the Royal Hospital library also affirmed that the number of the library patrons entering the library for in-house use is gradually decreased simply because they are in the clinical practices and treatments. This situation was the basic reason for the library to move towards online subscription over the printed form so that knowledge can be accessed internally within their offices.

b- Reading Motivations:

Reading in health sciences can be of three categories; first “problem based reading” that focuses on daily clinical questions.

The knowledge of this type of reading is usually retrospective and can be found in the evidence based medicine database type of literature. Second, the traditional type of reading which is sometimes referred to as background reading and it is more related to disease oriented evidence. The topic of such reading might be related to a patient the doctor saw during the working day or week. The source of reading for this type might be a textbook or a handbook. Third, current awareness reading that covers new developments in the healthcare, new treatments, current health affairs. Research projects, conference proceedings, magazines, and alerts are types of this type of readings.

According to the study's respondents, they mostly expressed their continuous suffering from being busy and mostly exhausted by their daily lifestyle. Thus, they express their need to have quick access to the first and second types of reading while following up the second type at home. For them, and as one of the respondents affirmed that the "Internet motivates me and has saved my time" and another preferred that the "Internet should be in my department". Two of the consultants agreed that the alert service provided by some websites can facilitate the process of health knowledge updating and save time. They declared: "If I'm alerted, that will motivate me", "Yes, it motivates me, you just have to open your e-mail daily." Delivering the knowledge on the tip of the finger to busy readers will -without suspect- be a great reading motivator. Still, the lack of information and the rare patient case found to serve will have a greater constraint in such motivation as expressed by all of the respondents. Other motivations, from the respondents' view can be summarized as following: One of them stated: "Usually, [motivation] depends on the case, if I have a rare case and my experience will not help, so I need to read and know about it." Other junior physicians pointed out that they read as per requested by seniors." One of them announced that "as a junior I don't have to update my knowledge, since my responsibilities do not depend on knowledge, [usually] I take the updates from senior. Moreover, I expect, as my resignation goes up, I know I will be responsible to update my knowledge, but at the moment, I take my directions and I should not dig on the information world from now but later on, my

responsibility will give me more time to update myself, because lots of things will depend on me."

To make it clear, two perspectives can be derived from interviewing the sample physicians; one is the juniors' perspective. They in fact merge between designation upgrading and knowledge updating, the higher health position the more to read. Why? One answered: "Because the workload becomes less and the responsibilities will be changed, from treating to teaching and training." That means, the type of motivation is much related to the type of duties. Other juniors respond that: "as we are in contact with the patients more than the consultants, we suppose to learn and update more, and so that we will make a major contribution to the understanding and diagnosis of the cases." According to the seniors' and consultants' perspectives, mostly, they did not express the necessity for knowledge updating as one of their major responsibilities but rather as being an interest in the field.

2- Alerting Service:

Three issues were covered within this theme. Let us start with the following sentence: "I'm aware of alert service, using it basically through the journals' websites." This passage, in fact, verifies that respondents are aware of the online current awareness services and have already involved in using them. Most of them consider such services as a tool that keeps them updated in the field of interest via their e-mails. As a conclusion of the interviews within this theme, three issues are extracted from the responses.

a- Profile Specifications:

In addition to their awareness of the service, respondents showed their awareness of the filtering system applied by the alert service provider too, but it was clear to them that they lack the technique of specifying the fields they would like to stay alerted with. While they are using e-sources to get clinical information, the searching techniques they apply indicate that they are still not taking full benefit of information technology. "But this service sometimes annoys me because it sends me anything related to internal medicine, while I need respiratory only," explained one of the respondents, yet this

happens because "I tick so many broad specialties that I might not require."

b- Time Management:

All respondents were found to have a common problem in following up the alert service e-mails. They articulated that this happened because of the irregular checking of their e-mails, so they are becoming increasingly overloaded with information. A junior respondent announced that "when [he] opens [his e-mail he] felt that it was too much to keep and [he] became overloaded, so [he] started deleting without reading." This finding can be traced back to two reasons:

- Ignoring the importance of knowledge updating to their daily duties, and
- Lacking the possible time management skills.

c- Publication Selection:

When respondents asked whether they go for publications in the up-to-date aspects they came across in their specialty, most of them answered that their library is doing the right process of acquiring up-to-date publications, and so they need not to go deeper and search for detailed information and publications. This response was ascertained by a respondent when declared that he "rarely looks for new publications". "It is enough for me to know it, but if feasible I will search for publications and suggest" another responded. In fact, it is true that the feasibility and applicability of the updates within the existed environment and provided facilities sounds to be an important factor in deciding whether to go deeper or not. For instance, since there is no facility or at least a plan to implement liver transportation at Royal Hospital in the near future, there is no need to learn more about such procedures. So they point out that it is necessary to go through the updates and select which one to go deeper. Moreover, and as concerning with the search of the new publications, one of the respondents stated that he "goes to Amazon to find books within his specialty". In fact, he could have saved his time by registering in one of the medical publishers' websites to stay alerted with the same and get results that are more precise.

3- Selection criteria:

Two issues were covered within this theme.

a- Websites:

The respondents were found to use the popularity of the websites among their local colleagues as the core criteria in the website selection. Although it is an important criterion, there are other websites which are internationally recognized, but not yet known by their local colleagues. One of them said "my selection criteria of the reliable website is the way of presentation of the information, how neat it is and understandable, provide explanation and easy to read", which sounds reasonable, but still other crucial criteria like authority and last date of modification should also be encountered. Another respondent mentioned the content evaluation as a criterion, and he confirmed that he "selects the website based on the content evaluation."

b- Publications:

As mentioned previously, most of the respondents are very busy and not interested in going deeper into the knowledge and selecting publications for any new aspects in their specialties. This has led to the instability in the Royal Hospital Library's collection building. The active section in the library reclined behind active readers who share and recommend items to be added to the library, or at least be members in the collection development committee and tickle publications from the publishers catalogues received by the library. To know what criteria the respondents follow in selecting the publications if asked to do so, several expressions have been added to constitute random criteria:

1 - Practicable and Feasible Publication:

"I select based on the feasibility and practice" "Practical information is my priority."

2 - Comprehensiveness and the Version:

"I select the book that gives me comprehensive information, but not to update my knowledge." "I think that the complicated and comprehensive [criteria] are for the academic." "I evaluate

medical efficacy based on my experience or may be I read that specific book at one of the libraries I visited outside Oman and I know how much it will add to me.” “I don’t like the comprehensive book.”

Despite the above quotes and expressions, Royal Hospital is a teaching hospital too and thus both practical and comprehensive materials are required to be added to the collection as also being suggested by other respondents below.

3 - Information Organization:

“For the books, I usually evaluate the organization of the book chapters and see if it contains diagnosis or stepwise to how to manage knowledge. In other words, a practical book is my interest”

4 - Bibliographic Information:

“I’m looking at date of publication, author (well-known of course), illustrations, related to my aspect, and I prefer the comprehensive books.”

According to serial collection, only few have mentioned their criteria to select journals as they said: “If asked to select a journal, I would rather prefer the one which provides CME. I prefer it in both versions: printed and electronic.” Moreover: “In fact I like the hard copy, since I can’t carry the Internet wherever I go and I need feasible place to sit and read, I can read the hard copy for three hours but the electronic I can’t do that for more than 30 minutes, adding to that it really costs me a lot to print out.” Others expressed their preference to online collection rather than printed. “I wish the library has e-journals.” According to selection criteria: “I see which journal is well known by our colleagues and most used”

In summary, it shows that the respondents mostly considered the format, the content, and the popularity as being their criteria in selecting the journals to be subscribed. When asked whether the librarian can select for them or they should be fully responsible for the selection of the publications to be acquired by the library, they felt that they should take the responsibility as one respondent said: “I feel I

should select the books and not the librarians.” And another said “Librarians can’t evaluate this”. When asked whether they contribute and cooperate with their colleagues to the selection of publications for the library collection development, one of the consultants said, “I’m not aware of that.”

Conclusion and Suggestion:

From previous analyzed data we may conclude that, as our study revealed, the physicians’ busy life advocates the need for the Internet to be the main up to date information supplier and its presence associated with the alert service motivates the physicians’ reading habits. Although one of the junior physicians claimed that her duties do not allow her to seek the latest knowledge and that as soon as she becomes senior she will start updating, as her work load will be less, the seniors and consultants’ replies to our interview questions did not show that they do so. The rare patient’s case and the lack of information also constitute another considerable source of reading motivation. Out of these findings, we would like to suggest the following:

- Providing Internet access to all physicians (junior and senior) on their work place (in the wards) in order to save their time and to facilitate their reach directly to reading and e-mail alerts.
- Whenever any rare case is found all members in medical team should be requested to look for the information that is not covered by his experience before discussing, so that all of them will be exposed to the updates in the knowledge and fill the gaps in their knowledge network.

According to alert service/profile specifications/ time management/ publication selection, the results indicate that there is an awareness of the alert service, but it is misused due to the following:

- The improper profile specifications
- Lack of follow up via e-mail, which can be reasoned by the lack of time management.

Knowing about the existence of the updates seems to be sufficient for the physicians in our study sample and most of them did not show the interest of going deeper into the knowledge and they lack the

awareness of the publishers in their specialties. Henceforth, seeking updates in details should be one of the physician's responsibilities. Moreover, it is the librarian's responsibility to guide the physicians on the best websites providing medical updates and publications and to train them on how to register and aware them about the importance of specifying their profiles and the frequency of receiving the e-mail updates. It seems also that time management skills is really demanded, so it is advised that time management courses should be taught to the physicians.

Finally, and what is really inevitable to us, is what is relevant to selection criteria, website, and publications. The results show that popularity among local colleagues found to be the main selection criteria for the selection of websites used by the physicians in our sample. Although two of them mentioned the necessity for collection assessment, yet the criteria they use are not sufficient. Therefore, some training is needed in this subject. Regarding the suggestion and selection of publications, the feasibility and practicability criteria was clear and encouraged by all of the respondents. Yet some agree with the comprehensiveness, which is really needed along with the practicability to make some balance in the library collection and to satisfy all sorts of demands, academic or practical, since Royal Hospital is also considered as a teaching hospital. Our study revealed that the desire to have electronic versions and benefit from their advantages is banned by the lack of Internet access in the wards. As suggested previously, Internet access provision will help in linking the physicians with the needed information and knowledge whenever and wherever it is demanded. Mentioning the information structure and organization within the publications and the bibliographic evaluation by two of the respondents furnished us with some hope that some of the physicians are aware from where they have to start, yet it means also that it is the librarian responsibility to guide and teach the selection criteria. Moreover, generally speaking, few respondents focused on the journal selection and impact factor as well as on the content as being required criteria to avoid the sudden discontinuity and the noise in the subscription. Another point is that all of the medical

team members should be involved in the selection of the items to be acquired by the library, as anybody might have come across a new update which really would be of great benefit to all.

As a conclusion of our study and from the final results that shows positive use of modern awareness services (online searching and alert services), we encourage and are optimistic to suggest the following chart as an alternative to the currently applied collection building procedure:

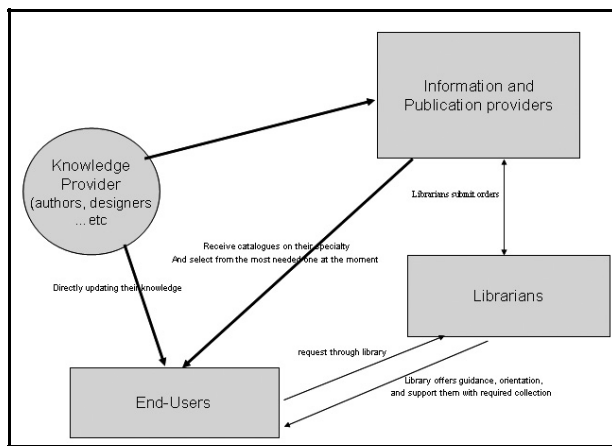


Figure -3: collection development-close circle procedure

As it is noticed from the Figure-3, there is a link to the lost bridge between the publisher and knowledge providers and the end user, also there are changing roles to each of the parties that constitute the needed committee for better collection building and development as following:

- 1 - End-users: they must be in a direct contact with the knowledge body as this will enrich their experience of the latest aspects in their specialty and provide them the opportunity to share in the collection development process. As a result, they will be able to select and prioritize what is really related to their field without any fluctuation.
- 2 - Librarians: they have to play the role of the trainer to the

Internet services, selection criteria, and seeking of the major and most important knowledge provider websites.

- 3 - Information provider: they should provide more facilities that alert the end-users on the latest knowledge or publication in their specified specialties. In other words they should apply an advanced filtering system to filter out the end-user profiles on more specific base to save the end-users' time and send them the updates of the needed information on reasonably frequent base.
- 4 - Collection building and development process: where the direction of selection is directly shifted from knowledge providers to users who from their side will cooperate with the library by providing librarians with the most relevant suggested materials. Then librarians will get the most appropriate and significant suggestion, check them with the already existing collection and with the publishers' website to ensure the correct information, and then to assess the collection balance among different users and departments. By this new processing cycle, librarians will save time and efforts in stead of continuously and sometimes insignificantly following up new suggestions.

For more in depth study, it is recommended that another study is conducted with a wider range of respondents to cover more departments and larger number of medical staff, which may provide more solutions and suggestions.

References

- Belkin, N.J. and Croft, W. B. (1992), Information Filtering and Information Retrieval: two sides of same coin?. Communications of the ACM, p.29-38.
- Bishop, A. P. (1999), Making digital libraries go: Comparing use across genres. In Procs of ACM International Conference on Digital Libraries (ACM DL '99) (Berkeley, USA, August 9-14, 1999). ACM Press, 94-103. Cited in Hinze, A., Buchanan <http://jhi.sagepub.com/search?author1=George+Buchanan&sort-spec=date&submit=Submit>, G. Jung, D. and Adams, A. (2006) Retrieved in January 28th 2011. <http://oro.open.ac.uk/13071/1/AlertingGBDJAHAHA.pdf>.
- Buchanan, George and Annika Hinze. (2005), A Generic Alerting Service for Digital Libraries,JCDL.,June,7-11. http://portal.acm.org/fg_gateway.cfm?id=1065414&pdf&coll=GUIDE&dl=GYIDE&CFID=41460723&CFTOKEN=26389639
- CDT- Collection Development Training. (2007), Collection Development Policies Arizona State Library, Archives and Public Records. <http://www.lib.az.us/cdt.colldev.htm>
- CSUL- **Colorado State University libraries**. (2007), Research Guides. <http://lib.volostate.edu/research/alerts/>
- Curry, A. and Smith, T. (1998), Information on alternative medicine: A collection management issue. Bull. Med. Libr Assoc., p95.
- Deborah D. Bleicic, M.L.S. (1999), Collection development and outsourcing in academic health sciences libraries: a survey of current practices. *Bull Med Libr Assoc* 87(2) April. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC226556/pdf.mlab00087-0048.pdf>
- Del Sol, P....et al. (1994), Knowledge Alert: Management and Technology for the Co-operative Acquisition and use of periodical publications in Chile. *Interlending & Document Supply*, p 12-18.

- Faensen, D. and others. (2001), Hermes - A Notification Service for Digital Libraries. JCDL. June 24-28, 2001.
- Fourie I. (2003), **How can current awareness services (CAS) be used in the world of library acquisitions?**. Online Information Review <http://www.ingentaconnect.com/content/mcb/264>, pp. 183-195.
- González-González, A. I. and others (2007). **Information needs and information-seeking behavior of primary care physicians**. Annals of Family Medicine 5:345-352.
<http://www.annfammed.org/cgi/content/full/5/4/345>
- Hendrix D Hasman L. (2008), A survey of collection development for United States Medical Licensing Examination (USMLE) and National Board Dental Examination (NBDE) preparation material. **Med Libe Assoc**. Jul;96(3):207-16.
- Hinze, A., Buchanan, G. Jung, D. and Adams, A. (2006), HDLalert - a healthcare DL alerting system: from user needs to implementation. Health Informatics Journal. 12(2), pp. 121-135.
<http://oro.open.ac.uk/13071/1/AlertingGBDJAHAHA.pdf>
- Hinze, A. and Michel, Y. (2004), ApproXFILTER - an approximate, XML-based event filter. Technical Report 08/2004. University of Waikato, Hamilton, NZ. Cited in Hinze, A., Buchanan, G. Jung, D. and Adams, A. (2006) HDLalert - a healthcare DL alerting system: from user needs to implementation. Health Informatics Journal. 12(2), pp. 121-135.
<http://oro.open.ac.uk.13071/1/AlertingGBDJAHAHA.pdf>
- Hurd, J. M., Blečić, D. D. and Vishwanatham, R. (1999), Information Use by Molecular Biologists: Implications for Library Collections and Services, p.31.
- Kovacs, Diane K. And Angela Elkordy. (2006), Collection Development in Cyberspace: Building an electronic library collection. Library Hi Tech. vol.18, No.4
- Malpani, Aniruddha. (2011), Why doctors need to prescribe information. *General practitioners' section*. Retrieved on 26/1/2011. http://www.bhj.org/journal/1999_4103_july99/gps_554.htm
- ODL- The Oklahoma Department of Libraries. (2004), Trustees' Glossary. <http://www.odl.state.ok.us/servlibs/a-files/glossc.htm>

- ODLIS, Online Dictionary of Library and Information Science. (2007). http://lu.com/odlis/odlis/oslis_c.cfm
- Rashid, H. F. (1985), Factors affecting user satisfaction in a medical library and a comparison with other types of libraries (performance measures, services, collection development policy. Dissertation. Case Western Reserve University.
<http://proquest.umi.com/pqdweb?index=1&did=740533981&SrchMode=2&sid=4&Fmt=2&VInst=PROD&VType=PQT=309 & VName=PQD& TS=1296030002 &clientId=23704>
- Royal Hospital. (2009), Medical library. Retrieved in January 27th, 2011.
<http://rhcm1.com/Default.aspx>
- Rusch-Feja D, Siebeky U. Evaluation of usage and acceptance of electronic journals: results of an electronic survey of Max Planck Society researchers including usage statistics from Elsevier, Springer, and Academic Press. D-Lib Magazine [Internet], 1999 Oct;5(10). retrieved in January 30th, 2011.
<http://www.dlib.org/dlib/october99/rusch-feja/10rusch-feja-summary.html>