

Bridging the Gap on Knowledge, Attitudes, and Practices (KAP) of Librarians and Paraprofessionals in Information Search and Retrieval

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ABSTRACT

The dearth of librarians in the Philippines causes libraries to employ paraprofessionals in support to the librarians. While certain phases in library work such as cataloguing, classification, abstracting and indexing are exclusively assigned to librarians, information search and retrieval, a key library service, is shared with paraprofessionals. This study 1) measures knowledge identifies attitudes and detects practices (KAP) of librarians and paraprofessionals anent information search and retrieval; and 2) defines areas of convergence and divergence in the KAP of librarians and paraprofessionals in information search and retrieval. The probe into the KAP of librarians and paraprofessionals runs through the model of the Information Search Process (ISP) of Kuhlthau (1991). ISP describes users' experience in the process of information seeking as a series of thoughts, feelings, and actions. ISP's series of thoughts, feelings and actions is parallel with knowledge, attitudes and practices (KAP). The model of the ISP is articulated in a holistic view of information seeking from the information user's perspective in six stages: *Initiation, Selection, Exploration, Formulation, Collection, and Presentation* (Kuhlthau, 1991). This study utilizes KAP and ISP as spring-board models in the development of an outcomes-based approach to coalesce knowledge, attitudes and practices (KAP) of frontline service library personnel, professional and paraprofessional alike, for an assiduous and collaborative effort in delivering information services to library users.

Key Words: Information Search Process; KAP Model; Librarians; Paraprofessional; Librarianship; Philippines

INTRODUCTION

The hard truth "There is dearth of Filipino librarians" is strongly supported by the data on Librarians' Licensure Examination 1992-2014 (Santos, 2003; Totanes, 2008; Philippine Regulation Commission). The 5,542 Filipino librarians licensed through examination augmented by those that were granted a license through exemption under the Grandfather's Clause of The Philippine Librarianship Act of 2003 (RA 9246), no matter how talented, intelligent and skilled, are never enough to fill all the libraries in the Philippines. Surrounded by this circumstantial privation of librarians, Philippine libraries employ paraprofessionals in aid. The fusion of professionals and paraprofessionals is quite typical in Philippine library setting.

Whitmyre (2010) believes that although librarians and paraprofessionals are often seen working together, the dichotomy between their jobs does not fetch easy recognition from the

general public. To the private world of library workers though, the difference is quite apparent. Murray (1999) claimed the division of labor between the two groups was clear in the past: support staff performed those tasks considered clerical, while professional librarians did the more complex and intellectually rigorous jobs. Nowadays, the blurring distinctions between the two subjects have moved paraprofessionals to assume more responsibilities and relieve professionals' activity (Wakimoto and Hsiung, 2000).

Librarians are responsible for overseeing the daily functions of the library. Their responsibilities are quite varied and can include highly specialized work. Bayles (1989) in his book discusses the three features essential to a profession which include training, intellect and an ability that puts one in a position to provide an important service to the society. Librarians, professionals as they are, do professional tasks such as but not limited to creating catalogs, preparing abstracts, training staff, crafting strategic plans, preparing budgets, selecting and purchasing library materials. On top of these, the librarians' duty time is mostly spent on providing assistance to library users as it is the librarians' job to answer users' questions and connect them with resources. This may take place in varied ways and levels: from simple locating of a book to teaching users how to use complex resources.

Distinguished from librarians, paraprofessionals are library workers who are not working as librarians (Litwin, 2010) but are supporting the librarians in performing the operations to keep the library both academic and boisterous (Whitmyre, 2010).

Differences in functions of professionals and paraprofessionals are spelled out quite lucidly; however, it is an observable fact in contemporary libraries, that while certain phases of library work, the highly specialized ones, such as cataloguing, classification, abstracting and indexing, are exclusively assigned to librarians, *Information Search and Retrieval*, a key library service is shared with paraprofessionals. This is supported by Cato (2014) stating that paraprofessionals and professionals often share similar duties, regardless of the industries in which they work. Whitmyre (2010) strengthens this claim by saying that there is often an overlap in the duties of the librarians and the paraprofessionals, especially in smaller or understaffed libraries.

OBJECTIVES OF THE STUDY

Embracing the fact that professional and paraprofessional library workers share duties specific to information search and retrieval, and that their working together now and in the future is inevitable, this study was conducted to:

1. measure Knowledge, identify Attitudes and detect Practices (KAP) of librarians and paraprofessionals anent information search and retrieval;
2. define areas of convergence and divergence in the KAP of librarians and paraprofessionals along information search and retrieval; and
3. design an outcomes-based approach to improve the KAP of librarians and paraprofessionals in terms of information search and retrieval.

THEORETICAL FRAMEWORK

Information Search Process (ISP) (Kuhlthau, 1991)

Carol Collier Kuhlthau's (1991) Information Search Process (ISP) Model, based on two decades of empirical research, identifies three realms of search experience: the cognitive

(thoughts), the affective (feelings), and the psychomotor (actions). ISP is a six-stage model of the users' holistic experience in the process of information seeking. "Since its conception and development, the model has been used as a framework and diagnostic tool for understanding the information search experience of people in variety of library and information settings" (Kuhlthau, Heinström & Todd, 2008). ISP's series of thoughts, feelings and actions is parallel with knowledge, attitudes and practices (KAP).

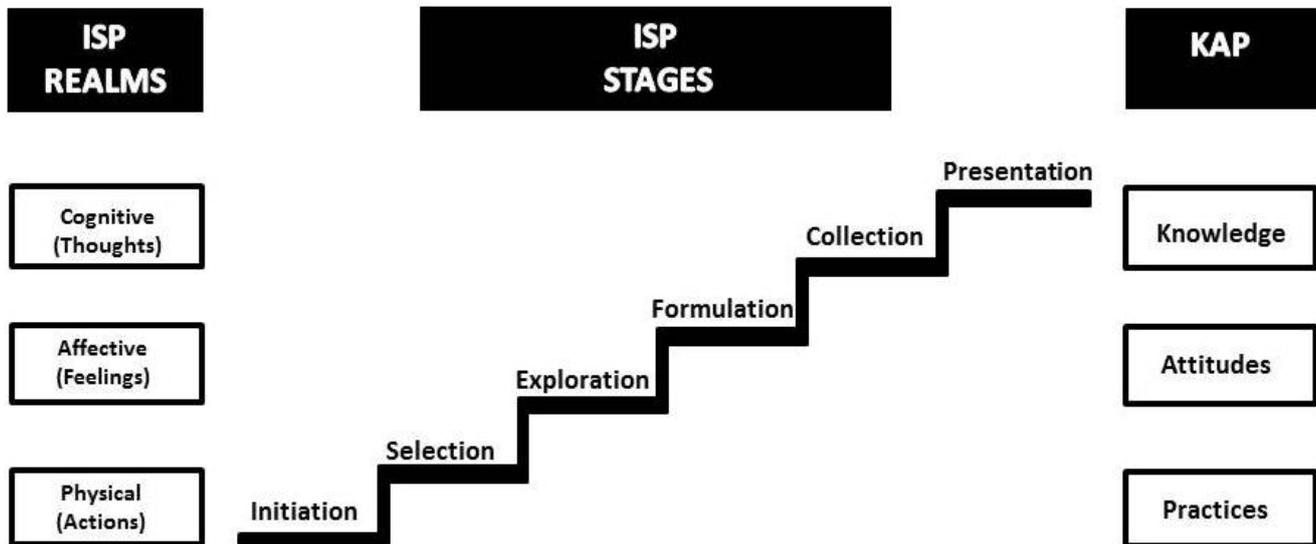


Figure 1 shows the parallelism between the three ISP realms of experience running through six ISP stages and KAP.

The determination of professional and paraprofessionals' Knowledge, Attitudes and Practices (KAP) is based on the six stages of Kuhlthau's (1991) Information Search Process (ISP) Model, namely:

1. *Initiation.* This is the stage that involves introduction/immersion to the search task. Here, the searcher becomes aware of a lack of knowledge or understanding and feelings of uncertainty and apprehension are common.
2. *Selection.* This is about choosing research topic/problem to be pursued. This is a time when a general topic is defined and initial uncertainty often gives way to a brief sense of optimism and a readiness to begin the search.
3. *Exploration.* This phase includes conduct of research across informational resources to gain an idea about the search topic. This stage often goes an encounter with inconsistent, incompatible information paving the way to increasing uncertainty, confusion, and doubt.
4. *Formulation.* This is characterized by a focused perspective, diminishing uncertainty and improving confidence.
5. *Collection.* Also known as information collection, this is a stage of ISP when interaction between the user and the information system functions most effectively and efficiently and when information pertinent to the focused perspective is gathered and uncertainty subsides as interest and involvement deepen.
6. *Presentation.* Being the last stage, presentation is when the search process is complete; new knowledge is formed and new understanding is enabling the person to explain his or her learning to others. This is otherwise known as search closure.

Knowledge, Attitudes, Practices (KAP)

The classic triangulation of thoughts, feelings and actions as the focus of any constructive process had rarely been taken into consideration in study or discussion of information seeking behavior (Kuhlthau, 1991): the main reason why knowledge (thoughts), attitudes (feelings), and practices (actions) of librarians and paraprofessionals were the subject of this study. Gumucio (2011) has an extensive write up about KAP. As suggested by the acronym, it has three components namely: Knowledge, Attitude and Practices.

Accordingly, the first one, *Knowledge*, is a set of understandings. It is one's capacity of imagining and way of perceiving. The degree of knowledge assessed helps to locate areas where information and education efforts remain needed. The second, *Attitude*, is a way of being; a position; leanings or tendencies. Finally, *Practices*, or behaviors are the observable actions of an individual in response to a stimulus. This is something that deals with the concrete that is actions.

The probe into the Knowledge, Attitudes and Practices of librarians and paraprofessionals ran through the model of the Information Search Process (ISP). This study utilized KAP and ISP as spring-board models in the development of an outcomes-based approach meant to widen similarities in knowledge, attitudes and practices (KAP) of frontline service library personnel, professional and paraprofessional alike, for an assiduous and collaborative effort in delivering information services to library users.

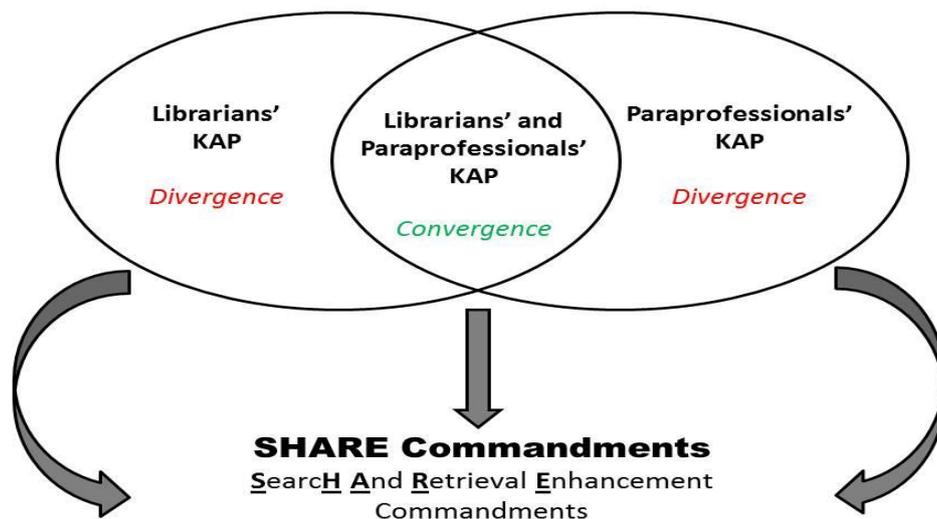


Figure 2 is a diagram of divergence and convergence in KAP of professional and paraprofessional library workers leading to the formulation of a Search and Retrieval Enhancement (SHARE) Commandments

METHODOLOGY

Purposive or selective sampling was used harvesting 51 responses from library employees of four *CongregatioImmaculatiCordisMariae* (CICM) academic institutions. These were the University of Saint Louis (USL) (Tuguegarao City, Cagayan), Saint Louis University (SLU) (Baguio City), Saint Louis College (SLC) (San Fernando, La Union) and Saint Mary's University (SMU) (Bayombong, Nueva Vizcaya). These four libraries were chosen because of their common vision, mission, values and academic culture.

The Information Search Process developed by Kuhlthau (1991) was used to determine the Knowledge, Attitudes and Practices of library professionals and paraprofessionals. The questionnaire consisted of two choices (*one choice denoting Kuhlthau's ISP descriptor*) per

stage of ISP and categorized as KAP, accordingly (See Appendix A). Respondents were requested to choose a descriptor that best describes their experience in information search process. The questionnaire consisted of 42 items: 13 on knowledge, 13 on attitudes and 16 on practices that ran along the six stages of ISP namely: Initiation, Selection, Exploration, Formulation, Collection and Presentation.

Using frequency count on each of the six stages of ISP, similarities and dissimilarities in KAP of librarians and paraprofessionals were determined. The study juxtaposed highly selected responses of librarians and paraprofessionals against Kuhlthau's ISP Model indicating whether it affirms or negates the principle. Subsequently, the study described whether the responses of librarians and paraprofessionals are alike or not.

RESULTS OF THE STUDY

A total of 51 respondents participated in the survey; 65% were librarians and 35% were paraprofessional workers in the library. Majority of library workers who participated in the study were females and were 20-29 years of age. Most librarians and paraprofessionals were in their early career (0-5 years of service spent in the institution).

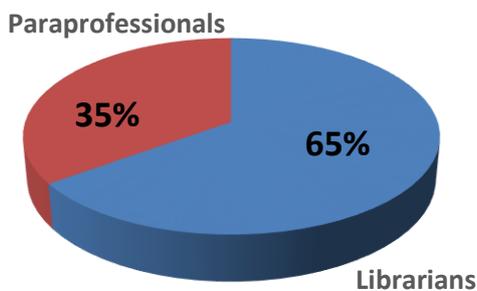


Figure 3. Number of Librarians and Paraprofessionals

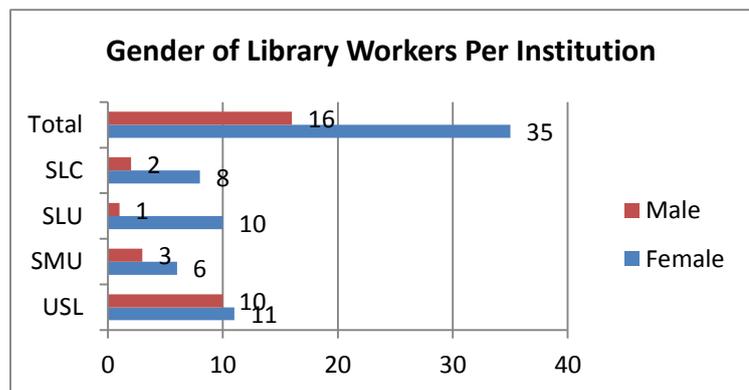


Figure 4. Gender of Library Workers per Institution

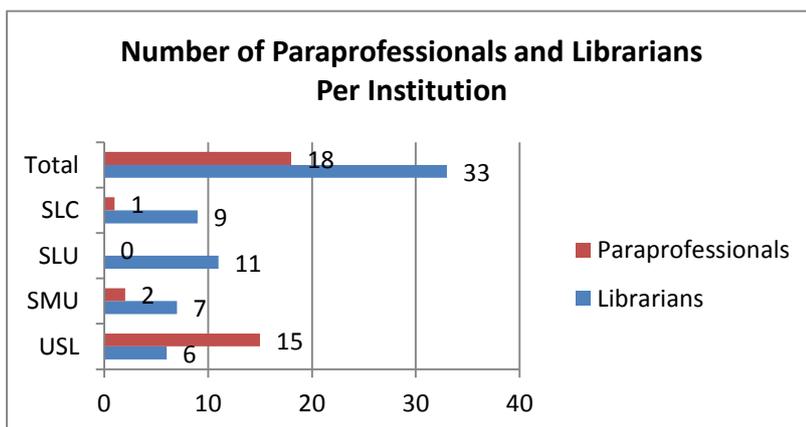


Figure 5. Number of Paraprofessionals and Librarians per Institution

Although most institutions have a larger number of librarians who participated in the study, USL was an exemption with paraprofessionals outweighing the number of librarians.

Legend for Tables 1-3:

- Means negates Kuhlthau's ISP Model Descriptors
- + Means affirms Kuhlthau's ISP Model Descriptors
- Convergence Means responses of Librarians and Paraprofessionals are alike
- Divergence Means responses of Librarians and Paraprofessionals are dissimilar

Knowledge of Librarians and Paraprofessionals

Table 1. Knowledge of Librarians and Paraprofessionals

ISP Stages	Kuhlthau's ISP Model Descriptors	Status		Divergence / Convergence
		Libra.	Parapr.	
Initiation	1. Awareness of Lack of Knowledge	-(93%)	-(100%)	Convergence
	2. Contemplates the Problem	-(84%)	+(56%)	Divergence
	3. Search process is vague	-(82%)	-(78%)	Convergence
	4. Relates the search problem to prior experience and knowledge	+(88%)	+(78%)	Convergence
Selection	1. Weighs search problem against search requirements	+(85%)	+(83%)	Convergence
	2. Considers availability of information and time allotment	+(100%)	+(100%)	Convergence
Exploration	1. Becomes oriented and sufficiently informed about the topic	-(61%)	-(67%)	Convergence
	2. Formed a focus or personal point of view about the topic	-(82%)	-(56%)	Convergence
Formulation	1. Identifies and select ideas in the information from which to form a focused perspective of the topic	+(79%)	+(72%)	Convergence
	2. As the search progresses, concepts/constructs become clearer	+(76%)	+(78%)	Convergence
Collection	1. Search results supports/answers the search problem	+(79%)	+(56%)	Convergence
	2. Gained a deeper interest in the search topic	+(70%)	+(72%)	Convergence
Presentation	1. Culminates the search with personalized synthesis of the topic/problem	-(64%)	+(67%)	Divergence

In Initiation stage, librarians and paraprofessionals relate the research problem to previous experience and knowledge. They understand and possess a clear view of the search process which insinuates cognizance of information need. Kuhlthau (1991) quotes that at the first stage of the search process a person becomes aware of lack of knowledge or understanding. This may not apply to librarians/paraprofessionals since lack of knowledge begins with the user and is referred for expert advice and since librarians/paraprofessionals only provide solutions to reference questions from persons who seek knowledge and enlightenment from them. Understanding the search question/topic is a fundamental stage in reference service. Most paraprofessionals contemplate the search problem while most librarians do not. In most ISP descriptors of the stages, librarians' and paraprofessionals' knowledge are alike and positively adheres to the model. However, they obtain general knowledge about the search topic as the search activity proceeds which affect exploration to go beyond what is required by the library user. Nevertheless, a focused perspective of the topic progresses in the formulation stage. Paraprofessionals culminate the search process with personalized synthesis of the topic/problem. On the other hand, librarians conduct search with generalized synthesis. This affirms that librarians are for real, generalists in nature.

Attitudes of Librarians and Paraprofessionals

Table 2. Attitudes of Librarians and Paraprofessionals

ISP Stages	Kuhlthau's ISP Model Descriptors	Status		Divergence / Convergence
		Libra.	Parapr.	
Initiation	1. Feeling of uncertainty and apprehension at the start of the search process	- (82%)	- (78%)	Convergence
Selection	1. Feeling of readiness to begin the search	+ (91%)	+ (67%)	Convergence
	2. When this stage is delayed/postponed, feeling of anxiety is likely to intensify until the topic is selected/understood	- (79%)	- (72%)	Convergence
Exploration	1. Feeling of confusion, uncertainty and doubt exists while searching	- (73%)	- (78%)	Convergence
	2. Information encountered rarely fits smoothly with previously-held constructs which lead to sense of personal inadequacy and frustration	- (91%)	- (94%)	Convergence
	3. Information from different sources commonly seems inconsistent and incompatible causing sense of personal inadequacy as well as frustration	- (94%)	- (100%)	Convergence
Formulation	1. Feeling of uncertainty diminishes once search is in progress	+ (79%)	+ (67%)	Convergence
	2. As the search progresses, confidence increases	+ (94%)	+ (83%)	Convergence
Collection	1. Clearer sense of direction	+ (76%)	+ (56%)	Convergence
	2. Feeling of confidence continue to increase	+ (88%)	+ (67%)	Convergence
	3. Uncertainty subsides with interest in the project deepening	+ (82%)	- (67%)	Divergence
Presentation	1. Feeling of relief	+ (94%)	+ (100%)	Convergence
	2. Sense of satisfaction	+ (79%)	+ (67%)	Convergence

It is worthy to consider that librarians and paraprofessionals harbor feelings of confidence and certainty of the search topic at the beginning of the search process which also jives with having a clear understanding and outlook of the search problem as evident in Table 1. Feelings of confusion/doubt and personal inadequacy/frustration are unlikely to exist for them in the Exploration stage. As Kuhlthau (1991) described Formulation stage to have feeling of clarity, both librarians and paraprofessionals agree to same feelings. Positive feelings continue to exist at the latter stages. However, paraprofessionals' uncertainty grows in the collection stage.

Practices of Librarians and Paraprofessionals

Table 3. Practices of Librarians and Paraprofessionals

ISP Stages	Kuhlthau's ISP Model Descriptors	Status		Divergence / Convergence
		Libra.	Parapr.	
Initiation	1. Recognize a need for information	+ (70%)	+ (78%)	Convergence
	2. Collaborate with others regarding search topic and approaches to searching	+ (91%)	+ (100%)	Convergence
Selection	1. Identify single topic to be investigated	+ (67%)	- (56%)	Divergence
	2. Select an approach to searching	+ (55%)	+ (56%)	Convergence
	3. Conduct preliminary search of information available	+ (100%)	+ (89%)	Convergence
	4. Skim/scan for an overview of alternate	+ (97%)	+ (89%)	Convergence
	5. Confer with others as I conduct the search process	+ (76%)	+ (89%)	Convergence
Exploration	1. Investigate information on the general topic in order to extend personal understanding	+ (97%)	+ (89%)	Convergence
	2. Locating information about the search topic	+ (97%)	+ (78%)	Convergence
	3. Reading to become informed	+ (64%)	+ (72%)	Convergence
	4. Relating new information to what is already known	+ (88%)	+ (78%)	Convergence
Formulation	1. Form a focus from the information encountered	+ (88%)	+ (83%)	Convergence
Collection	1. Gather information related to the focused topic	- (61%)	- (89%)	Convergence
	2. Conduct comprehensive search of all available resources	+ (79%)	+ (72%)	Convergence
Presentation	1. Complete the search	+ (91%)	+ (78%)	Convergence
	2. Perform organizing strategies, such as outlining, for preparing to present or otherwise using the information are applied	+ (73%)	+ (89%)	Convergence

Paraprofessionals are likely to be puzzled in search process as they come up with as many topics to be investigated. Nonetheless, almost all of the practices of librarians and paraprofessionals positively converge but only one practice divert from the ISP Model. This referred practice is found in the collection stage wherein they retrieve all information realizing that these may further the search perspective.

CONCLUSION

While Information Search Process Model remains useful for explaining students' information behavior, it has also been found useful for adult information seeking in work and everyday life (Kuhlthau et al., 2008). Although there is a minor deviation from the model, librarians and paraprofessionals proved to think, feel and act in an almost similar way with Kuhlthau's

ISP Model. They also share almost similar information behaviors in terms of their cognitive, affective and psychomotor domains. Realizing that paraprofessionals did not study Library Science, the similarities shown may have been honed through the orientation and immersion of paraprofessionals in the duties, responsibilities and culture expected from the job in reference service as a shared role of library workers. Nonetheless, divergence of knowledge, attitudes and practices (KAP) exists between the two. Thus, this study proposes an approach to unify divergent KAP of librarians and paraprofessionals and to strengthen their convergent KAP in conducting information and reference service to library clients.

RECOMMENDATION

SearchHand Retrieval Enhancement (**SHARE**) Commandments

ISP Stages	Commandments		
	Knowledge	Attitudes	Practices
Initiation	Be humble to recognize the need for information; only then could search have the chance to begin and information to flow-in.	When you are anxious and afraid at the start of the search, fret not. That is perfectly normal for any start.	Contemplation is the tool of the philosopher, as is the librarian's. Contemplate then on the problem before searching becomes mayhem. A small talk over topics, concepts, subjects, to pursue in the search, won't hurt.
Selection	When a search query is thrown at you, be ready to identify a topic of broader coverage than the query. Hunting is great for those who possess a bird's eye view.	You have selected a wider topic. Your anxiousness should dissipate; your optimism should grow; and searching should be on the phase "ready-set-go".	Begin the search. Fish for general information available on the topic.
Exploration	You are a library professional. Information is your business. Discern information with greater likeliness to match the need and dismiss the unlikely ones.	As you begin your adventure in the information maze, relax. You are only exploring. It is perfectly fine to feel confused and have doubt at where you are going, what you are doing and how you are doing it. Remember, you are in a maze.	Reading is the key to successful searches. This time, read through all articles you find.
Formulation	Learn how to select ideas from which you construct a more focused answer to the search query. You know you cannot stop at search results that are raw and unprocessed.	Much like wearing spectacles, search is a blur at first. As you go further, concepts become clearer. At this point, feel your confidence rising and certainty intensifying.	Narrow down results to highly relevant information to the search.

Collection	Train your brain to deselect general information after results have been narrowed. Redirect results to the topic in focus.	Much of your time has been invested on the search that you should at this point harbor deepened interest in the subject.	Write down in-depth notes specifically on relevant results.
Presentation	Acquire the knack for producing information in new form from the wide array of information collection.	Feel relieved that search is complete. If search did not go as planned, disappointment is but appropriate.	Search until finish, and when you are done, cap it with a synthesis.

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APPENDIX A
KAP-ISP Questionnaire

This questionnaire is in pursuant to a current study to gauge Knowledge, Attitudes and Practices (KAP) of Librarians and Library Paraprofessionals on Information Search and Retrieval. The researchers seek your honest and most confident responses to the following items based on KAP Framework and *Kuhlthau's* Information Search Process Model. Rest assured, any information which may be gleaned from this material shall be treated most confidentially and shall be used for the sole purpose of the study.

Kindly send us your accomplished questionnaire through venuspiarra@yahoo.com or bilysonalejo@gmail.com on or before **December 18, 2014**.

We look forward to hearing from you. Thank you very much!

Venus Ibarra-Guyos and BilysonAlejo
Researchers

Name: _____ Age: _____ Date: _____

Institution: _____ Years of Service: _____

Please tick one:

Gender: Male Female

Occupation: Librarian Paraprofessional Library Staff

Each Knowledge, Attitudes and Practices (KAP) category is equivalent to the six stages of *Kuhlthau's* Information Search Process (ISP) Model's namely:

- Initiation – introduction/immersion to the search task.
- Selection – choosing research topic/problem to be pursued.
- Exploration – conduct of research across informational resources to gain an idea about the topic
- Formulation – turning point of the ISP where focus on the topic is created.
- Collection – stage of ISP when interaction between the user and the information system functions most effectively and efficiently; also called information collection.
- Presentation – when the search process is complete and new knowledge is formed; also called search closure.

From each pair of descriptors, kindly select the LETTER of the **item that best describes you as you do your usual Search and Information Retrieval activities**. Please write the letter of your choice in the LAST COLUMN provided.

EXAMPLE:

Knowledge			
STAGE	CHOICE A	CHOICE B	YOUR ANSWER
Initiation	I know nothing about the search topic and I am aware of the lack of knowledge.	I learn that I know nothing about the search topic only when a user pops it out as an information need.	B

Begin here.

KNOWLEDGE			
STAGE	CHOICE A	CHOICE B	YOUR ANSWER
Initiation	I know nothing about the search topic and I am aware of the lack of knowledge.	I learn that I know nothing about the search topic only when a user pops it out as an information need.	
	Before I conduct the search, I spend a great deal of time planning about how to do it.	I launch into an immediate search when a search topic is given to me by a user.	
	Starting the search process is vague to me.	How to begin the search process is quite clear.	
	I have zero knowledge regarding the subject matter of the search.	I can relate the search topic to my previous knowledge.	
Selection	Before searching, I ask the library user for search requirements. Eg. What format is required, print or non-print?	I don't consult the library user for any requirement.	
	When searching, I consider availability of information and time required by the user to accomplish the search.	Time and information availability are not important considerations to me when I search.	
Exploration	I become oriented and succinctly informed about the research topic as I do my search.	I obtain general knowledge about the topic as the search process proceeds.	
	My exploration of the search topic goes beyond what is required by the library user.	I form a focus or personal point of view about the topic and stick to it.	
Formulation	I identify and select ideas in the information from which to form a focused perspective of the topic.	I synthesize ideas from all search results and create diverse topics after.	
	As an offshoot of the search, concepts/constructs become broader, wider, and deeper.	As the search goes on, concepts/constructs become more focused, narrowed and detailed.	
Collection	The search results answer the need of the library user.	The search results offer a new perspective on the search topic not necessarily the one needed by the library user.	
	After the search process, I	I have gained a deeper interest in	

	develop a waning interest in the subject matter of the search.	the search topic after the search process.	
Presentation	I end the search with a generalized synthesis of the search topic presented to the library user.	The search culminates in a personalized synthesis of the search topic presented to the library user.	

ATTITUDES			
STAGE	CHOICE A	CHOICE B	YOUR ANSWER
Initiation	I am always sure and confident at the start of my search activities.	I harbor feelings of uncertainty and apprehension when beginning a search.	
Selection	I have doubts in my search capabilities and in how I select materials for my search.	I am ready for any search process.	
	Some search activities make me anxious and confused.	I am clear about my searches.	
Exploration	When searching, I experience confusion, uncertainty and doubt.	I feel clarity, confidence and sure about how I do search exploration.	
	The information encountered jives with previously-held constructs, which leads to sense of success on search process.	Information encountered rarely fits with previously-held concepts which lead to sense of personal inadequacy and frustration	
	Information from different sources seems inconsistent and incompatible causing sense of dissatisfaction and disappointment.	Information across different sources complements one another resulting to sense of personal gratification in the search process.	
Formulation	As the search progresses, feelings of certainty decrease.	Feelings of uncertainty diminish once search is in progress.	
	As the search progresses, my confidence builds up, too.	As the search progresses, my confidence is slowly disintegrating.	
Collection	I know what exact search results apply to the library user's needs.	I have a load of search results for the library user.	
	I am sure that the materials I have at hand answer the library user's need.	I have this feeling that the information I have for the user is not what the user needs.	
	My uncertainty subsides with interest in the project deepening.	My uncertainty grows with interest in the project deepening.	
Presentation	I feel relieved as I present the search results to the library user.	Presenting the search results to the library user makes me feel nervous.	
	I usually feel concerned as I present results to the library user.	As I present results to the library user, there is feeling of satisfaction.	

PRACTICES

STAGE	CHOICE A	CHOICE B	YOUR ANSWER
Initiation	I recognize need for information even without being informed of the need.	I am unaware of the need for information until I am informed of the need.	
	I deal on the search topic and the search process alone.	I collaborate with the user and other info professionals on the search topic and the approaches to searching.	
Selection	I identify one general topic to be applied in my search strategy.	I come up with many as many topics to be investigated.	
	I adopt any approaches to searching.	I select an approach to searching.	
	My initial step is to conduct preliminary search for information available.	I do not do preliminary searches.	
	I scan overview of alternative topics.	I don't scan overview of alternative topics.	
	I confer with others as I begin the search.	I consider working alone when doing research.	
Exploration	I investigate information on the general topic to extend personal understanding of it.	Understanding of the topic searched is limited to information at hand.	
	I use available information at hand.	I look for more information about the topic.	
	I read search results thoroughly and aggressively.	I do shallow reading of the search results just enough to get the gist.	
	I find no relation of new information to existing knowledge	I easily relate new information to what is already known.	
Formulation	From the information I encountered, I for a focused topic for the search.	I struggle formulating a focused search on the information previously encountered.	
Collection	I gather only information related to the focused topic.	I retrieve all information realizing that these may further the search perspective.	
	I conduct comprehensive search of all available resources.	I do selective search of all available resources.	
Presentation	I complete all searches no matter the hindrances.	I have the tendency to go back to previous steps resulting to partial search product.	
	I present the result of the search process as is.	I perform organizing strategies (e.g. outlining) before I present search result to the library user.	