Qualitative and Quantitative Methods in Libraries (*QQML*) 4*: 411 – 430, 2013*

Using phenomenology to improve information literacy curricular planning and design

Ann Cullen

Simmons College

Abstract. This study took the form of a phenomenological qualitative study of the impressions of faculty experts in adult learning and knowledge management respectively of a conceptual framework for information literacy instructional (IL) design in Master of Business Administration (MBA) programs devised by the researcher. It sought to answer the research question: When devising frameworks to assist with information literacy curricular design, can getting input from faculty in related relevant fields outside of Library and Information Science (LIS) be of assistance in making them more robust? The perspectives of knowledge management and adult learning were examined because they were the two areas outside of the LIS field found to be relevant for their pertinence to the MBA curriculum in creating the conceptual framework. The individuals identified were also selected for their accessibility to the researcher as a means to test her hypothesis about receiving input from relevant non-LIS experts. Following the guidelines of Moustakis (1994) data was collected in the form of semi-structured interviews to gather respondents' impressions and perceptions given their expertise. The data collected sought to explicate phenomena surrounding the research question proposed to gauge the usefulness of taking a broader view when conceiving IL instructional design. This research seeks to build on previous research (Boon, Johnston & Webber, 2007) by highlighting the usefulness of employing phenomenological methods in receiving input from faculty on information literacy instruction. It also tested out a new way of conducting this sort of research through reviewing experts' reactions to a conceptual framework used as a prop to more deeply explore the phenomena of information literacy.

Keywords: Phenomenology, Information Literacy, MBA programs.

Prelude

Standing under the dome of the church of Sant' Andrea della Valle in Rome, when the light is shining through the cupola at just the right point, one can be overwhelmed looking up by a sense of transcendence. One gazes up and views angels and figures flying upward, arms outstretched, doves, clouds, all images applied many years ago by the artist Giovanni Lanfranco with paint and brush.

Received: 28.3.2013 / Accepted: 20.11.2013 ISSN 2241-1925

Yet the experience conveyed when light meets paint in this beautifully constructed space is something more than just pretty pictures. It is a sense of being lifted up and challenged to appreciate, sense and embody a place beyond the concrete here and now. An effect through a clever painting technique called "quadratura" lifts the eye enraptured upward and has the effect of encouraging a consideration of the essence, in this case because it is a Christian church, of one's spiritual experience. It is a phenomenological capturing, so to speak, of this subject. While perhaps not as lofty in ultimate aims, this study attempted to examine the "essence" of a phenomenon of ardent concern today to LIS researchers; in a world every day more intensely assaulted by information overload, how to design information literacy instruction that effectively achieves its aims.

1. Introduction

This study explored the clarity and completeness of a conceptual framework on effective information literacy (IL) instruction design in Master of Business Administration (MBA) programs devised by the researcher, in addition to one without a discipline focus. Information literacy is defined by the American Library Association as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association, 1989). To gather these data faculty experts in knowledge management and adult learning were interviewed. The frameworks created (see Appendix) were informed by the researcher's experience and review of the literature of factors influencing information literacy skill attainment and instruction. This study sought to answer two questions: 1. Can conceptual frameworks that tie together a consideration of all aspects of the learner experience around the attainment of information skills assist in creating curriculum that is more effective in providing information literacy (IL) instruction? And how do these frameworks compare in utility regarding curriculum design to the ACRL information literacy standards? 2. When devising information literacy frameworks like these, can getting input from faculty in related relevant fields outside of Library and Information Science (LIS) be of assistance in making them more robust? In the end it was the second question that dominated the focus of this investigation.

This research took the form of a phenomenological qualitative study of the impressions of two faculty experts in adult learning and knowledge management respectively of the conceptual frameworks proposed. It sought to build on previous research (Boon, Johnston & Webber, 2007; Saunders, 2012) highlighting the need to get more faculty input on information literacy instruction. These disciplinary perspectives were sought because the investigator has seen these as two areas outside of the Library and Information Science (LIS) as relevant in creating the MBA focused framework. It is appreciated that other non-LIS domains might also be applicable but these two areas were selected for their pertinence to the MBA curriculum, as well as accessibility to the researcher to test her hypothesis concerning obtaining input from relevant non-LIS experts.

Adult Learning was selected because MBAs as graduate students are "adult learners." Adult learners are defined as "persons older than traditional college-age students (18-24) and those who have major responsibilities (such as work, family, and community) other than, or in addition to, participating in postsecondary education" (Diamon, 2008, p. 257). Knowledge Management was selected as a relevant area since this field is primarily occupied with identifying the parameters and dynamics of knowledge creation and exchange in organizations (Knapp, 1998), and the effective collection and analysis of information is an important component of that.

This study compared the frameworks proposed (see Appendix) with the Association of College and Research Libraries (ACRL) competency standards for information literacy instruction that have been widely adopted by librarians in the United States since their formal approval by the Board of Directors of ACRL in 2000. In summary they are: "1) Determine the nature and extent of the information needed, 2) Access information effectively and efficiently, 3) Evaluate and incorporate sources, 4) Use information to accomplish a specific purpose, 5) Understand the economic, legal and social issues around using information and use information ethically and legally" (Eisenberg, Lowe & Spitzer, 2004, p. 42). The frameworks created by the researcher as well as the ACRL standards were shared with the respondents and then a semi-structured interview was conducted to gather their impressions and perceptions given their expertise.

The data collected sought to explicate phenomena surrounding the research questions proposed to gage the usefulness of taking a broader view when conceiving IL instructional design. These interviews aimed to capture the essence and meaning of these experts' points of view. This research also seeks to propose a new way to think about confronting the phenomena of faculty-librarian disconnect that this researcher has examined previously (Cullen, 2011). It contends that if we include more input from the experts in the disciplines and communities we wish to serve with IL instruction, this will make the models developed to support it more relevant in achieving learning outcomes (Oakleaf, 2011). Therefore, an added insight provided by this study is that it offers a different way to address librarian-faculty disconnect where librarians look to the educational expertise of faculty, as partners, for input to provide a more holistic view of information literacy curricular planning and design.

2. Review of the Literature

In preparing this study it was found that two areas of the literature were relevant for review. These were, 1) the uneven success of information literacy instruction and, 2) the issue of there often being a disconnect in the working relationship of librarians and faculty in academia.

Uneven success of information literacy instruction. O'Farrill (2008) defines literacy as "the progressive development of competencies for becoming aware of, accessing, critically interpreting and effectively using a variety of languages, codes, semiotic resources and technological affordances as tools for learning, communication, and sense making in situated social practice" (p. 167). While

somewhat cumbersome, this definition of the aspirations of literacy effectively sums up all the elements often hoped for. Despite these goals, information literacy instruction has often not achieved success. As Saunders (2012) points out "recent research indicates that students largely lack the competencies associated with information literacy and that many colleges and universities are not moving beyond one-shot, course—level library instruction sessions to integrate information literacy into their curricula at the program and institutional levels" (p. 226).

The lack of success has been attributed to several factors. One of which is that librarians have typically limited communications around what needs to be taught and how instruction should be provided to themselves, not seeking input often enough from outside fields (Owusu-Ansah, 2005; Stevens, 2006; Haras & Brasley, 2011). In particular, one very useful contingency for this input in academia would be faculty, yet that has seldom been the case (Gullikson, 2006; Boon, Johnston & Webber, 2006; Wu & Kendall, 2006).

Boon, Johnston and Webber (2006) point out that the "frameworks for information literacy … have been produced by Library and Information Science practitioners rather than academics and/or researchers and were not devised through the use of an applied research methodology" (p. 206). In their examination of faculty perceptions of information literacy they recommended that this instruction "acknowledge, and act upon the affective higher-order aspects which are so important to academics" (p. 224). The faculty they interviewed "described conceptions of information literacy ranging from lower order, emphasizing access and retrieval skills, to higher order, emphasizing autonomous learning, critical thinking and personal development" (p. 224). One key finding in Saunders' examination of faculty perspectives of information literacy was that "the seeming unwillingness of faculty to partner with librarians may have less to do with lack of respect for the position, and more to do with a lack of understanding of how librarians can contribute to and support their instruction" (p. 232).

Librarian-Faculty disconnect. One reason often given for faculty and librarian disconnect is related to perceptual issues that faculty see librarians in a service role and not as peers with unique expertise to share (Christiansen, Stombler & Thaxton, 2004). "The perception among faculty is that librarians' work is service-oriented—their primary duties are the organization and facilitation of access to knowledge and other resources. By contrast, faculty members see their own work as focusing on the production and dissemination of knowledge... [they see librarians as] experts, but not in terms of production. They are expert servers, and to the degree that social prejudice about service operates in academic settings, viewing librarians as a different status group is reinforced" (p. 119). In her review of the literature Anthony (2010) identifies many "disconnects" between librarians and faculty. Some of them include: "no incentives or rewards to encourage collaboration" (p. 83); the use of different terminology and conceptual orientations, "for example 'critical thinking' is a process whereas 'information literacy' suggests a final outcome" (p. 84); that faculty feel guilty or embarrassed that they are not aware of the available

resources and don't want to admit it (p. 84); and that faculty fear "being viewed as unscholarly by asking librarians for help" (p. 84).

In terms of librarians views of faculty, Given and Julien (2005) conducted a study of seven years of posts from a listserv for librarians on their experiences with bibliographic instruction and information literacy. They uncovered that librarians in this study often held negative views of faculty and their appreciation of the potential contribution the library and research instruction could offer as part of their courses. The authors suggested that such negative attitudes were counterproductive and could account for a gap between these two groups. They proposed that it is essential that librarians move past such views and seek to understand the faculty perspective, to engender the mutual respect necessary to promote effective collaboration and partnerships.

3. Information Literacy Frameworks this Study Reviewed

As a contrast and to potentially complement the established ACRL competency standards for information literacy, two new frameworks were devised by this researcher (see Appendix). These two frameworks, in addition to the ACRL standards, were reviewed for this study. A framework focused on MBA instruction was first devised and then followed by a more generalized model not aimed at a specific discipline.

The Conceptual Framework for MBA Business Intelligence Skill Development listed in the Appendix as Exhibit 2 is the product of a number of years of research on this topic by this investigator. The source of material for this framework came from a combination of primary and secondary research on the information skills MBAs should have (Cullen, 2010; Cullen, 2012; Edmondson & Cullen, 2008; Hesseldenz, 2012; Wallace, Cullen, & Esty, 2007) as well as the experience of this researcher, who has worked as a business librarian and educator in both academic and corporate environments for over 20 years.

The framework is split into two parts: factors influencing this type of instruction and a list of dimensions of skills to be attained. In terms of the sources of research for "Factors Influencing Effective Instruction," the management literature on the competencies current MBA graduates need to have (Datar, Garvin & Cullen, 2010) and the information behavior of managers (de Alwis, Majid & Chaudhry, 2006) were reviewed. One area of additional influence was research on how identity, environmental and lifecycle characteristics can affect how information gathering is approached by individuals (Fisher, Erdelez & McKechnie, 2006; Heinstrom, 2005). Much of the work in this area comes out of LIS scholarship on information behavior, defined as "how people need, seek, manage, give and use information in different contexts" (Fisher et. al, 2006, p. xix). What this fundamentally related area of research has revealed about the diverse ways individuals interact with information was something this researcher found largely absent in information literacy models and felt was critical to incorporate. The research around identity and decision making characteristics of effective leaders also influenced the

thinking around this part of the model (Ibarra, Snook & Ramo, 2010; Petriglieri & Petriglieri, 2011).

The element of assessment was then added to the framework for a consideration of the determination of learning outcomes (Oakleaf, 2011). This then led to an examination of how these skills would manifest themselves. Through a review of the literature five dimensions were identified. They distill the chief aspects of the information related skills effective business managers need to have. While there is much literature implying that the information skills primarily needed are in the area of competitive intelligence and environmental scanning (Amos, 2011; Choo, 2002), this researcher found this perspective too limiting if the ultimate aim was to present a generalized understanding of what would need to be known to use and process information well. The "dimensions of business intelligence" skills presented in the framework demonstrate a way to think about everything that can potentially be involved in collecting evidence, considering that when making decisions "the proper mix of judgment, theory, and data is different for each decision and will be filled in with different insights as decision makers triangulate from multiple channels" (Keisler & Noonan, 2012, p. 280). These dimensions cover what needs to be known as well as how to effectively process what is uncovered.

In the area of ***what*** type of skills the manager must have in identifying relevant information, being skilled in environmental scanning and sense making or what Mayo and Nohria (2005) call "contextual intelligence" is, without question, one of the skills required. In their study of the characteristics of "1,000 great U.S. business leaders of the twentieth century …[they] examined the conditions under which each thrived…[and found] the ability to seize the zeitgeist- a skill [they] call 'contextual intelligence' – proved universally pivotal to their success" (p. 46). This is an important area of business intelligence skills to develop as earlier noted (Amos, 2011) that the business community readily appreciates.

A different sort of intelligence, to gather going beyond understanding present and past facts, is determining what currently doesn't exist but could. The framework presents this as "creative intelligence" the ability to see information available at the edges, make connections and being willing to push boundaries and get out of one's comfort zone. In a six year study Dyer, Gregersen and Christensen (2009) surveyed "more than 3,000 executives and 500 individuals who had started innovative companies or invented new products" (p. 62). They found that the most creative executives had "five discovery skills that distinguish [them]: associating, questioning, observing, experimenting and networking" that collectively they describe as "creative intelligence." They found it was this characteristic that enabled them to generate "breakthrough business ideas" (p. 62).

In thinking about ***how*** to apply these two contrasting intelligence skills in the area of information gathering, three key dimensions become apparent. The first is evidential responsibility. This consists of collecting and documenting sources and presenting information to clearly communicate and demonstrate authority and credentials concerning a point of view.

Insight and forward view or problem finding, in addition to analysis skills, is another important dimension in terms of how the two intelligence dimensions previously mentioned are applied (Roberto, 2009; Runco & Chand, 1994). Problem finding is defined as "the more proactive dimension of finding new and interesting problems to solve, rather than be limited to a given input and respond with some sort of output" (Kaufmann & Runco, 2009, p. 153). There is extensive research supporting the benefits of having strong capabilities in this area, in terms of coming up with new ideas and thinking well (Runco & Chand, 1994). The need for instruction in this is highlighted by Michael Roberto in his 2009 book *Know what you don't know*. After pointing out the benefits of what is learned in business school and in particular learning by the case method, he points out one way this learning experience often falls short. "Too many case studies deprive students of the opportunity to work on their problem finding skills" (p. 91). He goes on that since cases often define the problem for the student, "they need only apply the right analytical techniques to solve the problem. The best case studies make the students assess a situation, search for patterns, and try to discern the problem for themselves. Those types of cases provide enduring value, because they help build leaders' problem-finding capabilities – something they will desperately need in the 'very messy' real world" (p. 91).

The final dimension required is the ability to effectively combine disparate intelligence and do something that Roger Martin (2007) calls "integrative thinking." In his research he interviewed over 50 successful leaders and found they all shared this trait: "the predisposition and the capacity to hold in their heads two opposing ideas at once. And then without panicking or simply settling for one alternative or the other, they're able to creatively resolve the tension between those two ideas by generating a new one that contains elements of the other but is superior to both" (p. 62). So, this final point to some extent encompasses all the other dimensions through this ability to consider multiple options potentially coming from diverse information sources and knowing how to effectively synthesize them.

The work in creating this framework for skill attainment in MBA instruction led this researcher to consider whether elements of it might be applied to information literacy instruction in other domains. From this idea, the Conceptual Framework for Effective Information Literacy Instruction Design in Exhibit 3 was developed. It can be viewed as an attempt to generalize the concepts covered in Exhibit 2 (see Appendix).

4. Method

Research Design. The research material examined was the content of one in person interview and one telephone interview, that were both digitally recorded and transcribed by a professional transcription service. The researcher then employed phenomenological analytic techniques (Groenewald, 2004; Moustakas, 1994) in reviewing and analyzing these results to determine general themes and commonalities. The phenomenological method was followed as the most useful approach to conduct this in-depth exploration to capture the essence

and meaning of these experts' point of view and interpretation as they reviewed the three information literacy conceptual frameworks.

The phenomenological method has not been extensively used in LIS research. In his article "Phenomenology and Information Studies" (2004) John Budd makes a strong case for the value of phenomenological research in LIS. As he points out "the question, 'What does it mean to be informed?' is the kind of reflective questioning that is integral to being. If information gives shape to our thoughts and beliefs, what happens within us that results in reshaping? …Seeking information …necessitates such a reflective action that inevitably has at least some existential character" (p. 48-49). Bruce is one researcher in LIS who has extensively used this method to examine information literacy (Bruce, 1998), most significantly in her identification of seven ways or as she calls them "seven faces" of how information literacy can be experienced (Bruce, 1997). However, her approach has been to examine the subject's experience of the phenomenon (phenomenography) rather than concentrating on the essence of the phenomenon itself (phenomenology), the focus of this study. Boon, Johnston and Webber (2007) have also used phenomenography in exploring faculty perceptions of information literacy. This researcher sees this study as an addition to that body of work.

In the phenomenological research process, the self-reflective data gathered initially is an important first step (Polkinghorne, 1989; Moustakis, 1994). This activity, also called "bracketing" (Creswell, 2007), for this researcher consisted largely of reflecting on her lived experience providing this sort of instruction in her job, as a business librarian, and also the considerable amount of literature read and conversations exchanged reflecting the frustrations of librarians at not connecting more fully with their communities. As Miles and Huberman (1994) point out, memoing can be very helpful to qualitative research "when the analyst does not have a clear concept in mind but is struggling to clarify one" (p. 73). Consequently, a considerable amount was done, which in the end only made this investigator more acutely aware of the importance of getting an outside perspective. When through this process personal bias was reduced, which it was found had to be cleared away not only at the beginning but also reappeared in the midst of this analysis, an even deeper understanding of the phenomena reported in the results occurred.

The respondents were chosen based on their expertise in knowledge management and adult learning respectively. Both were female and tenured faculty at the level of full professor at different higher education institutions. A semi-structured protocol to interviewing was used with a guide (see Appendix) lightly followed to serve as an anchor to the "conversational partnership" (Rubin, 1995, p. 119) and guarantee some consistency in the scope of these conversations.

After collecting the data, analytic techniques were employed involving coding to generate themes. The classification followed was the Stevick-Colaizzi-Keen method discussed by Moustakis (1994) with some elements influenced by Creswell's interpretation of it (Creswell, 2007). This included first, a personal description and reflection of the phenomena being studied.

Then considering "each statement with respect to significance for description of the experience" (Moustakis, 1994), this researcher recorded what Moustakis calls "relevant statements" that were labeled in the data analysis as "Significant Statements". Then each "nonrepetitive, nonoverlapping statement" was listed to generate "meaning units of the experience" (Moustakis, 1994) which were then clustered into themes.

5. Results

From the two interviews, 135 significant statements were extracted. Formulated meanings were then determined from these statements and arranged in clusters of meaning unit categories, resulting in the generation of three themes. The first and prominent theme identified was "Thinking Well" defined in this study as the core motivator as well as ultimate goal of information literacy instruction. This research revealed the dominance of this theme in thinking about the essence of this instruction and once clearly appreciated the other two themes as an ancillary to this became apparent in the data analysis. Theme 2 of "Audience" concerns both the learner, to make sure instruction is designed appropriately to be meaningful, given the higher level thinking goals, as well as to appreciate other relevant audiences and how they are interpreting these concepts. Then Theme 3 of "Clearer Communications" conveys the importance of language and messaging regarding these ideas. Throughout the interviews frameworks were often referred to by their exhibit number (see Appendix). In this review of the data and discussion of the results, this will be done as well.

Since one important objective of this study was to assess the respondents' reaction to the frameworks proposed, not surprisingly, when analyzing the transcript many comments had the respondents restating what was said in the frameworks. From a methodological perspective this served as a useful way to determine which parts more frequently caught the attention of the respondents. In particular, in the interviews, a large proportion of the discussion revolved around the concept presented of the five "Dimensions of Business Intelligence." A tabulation in Table 1 of the times this was mentioned is listed along with other totals or "counts" from the data analysis. The respondents also found Exhibit 2 and 3 to be "more interesting" than Exhibit 1, since they both saw them dealing with a broader level of pedagogical issues around this topic (see Table 1.) One respondent stated that "Exhibit 2 is a sort of different kind of model. It's not a list of outcomes so much, or of criteria for success. It's more a model for instruction. And it's a lot more interesting."

Respondent Meaning Units	**Counts**
Concerning discussing a preference for Exhibits 2 and 3 over Exhibit 1	26
Referring to the "Dimensions of Business Intelligence	34
Concerning Theme 1 "Thinking Well"	98
Concerning Theme 2 "Audience"	21
Concerning Theme 3 "Clearer Communications"	16

Table 1 Counts from Data Analysis

Another issue identified in analyzing and exploring the data was the dominance of the Theme 1 "Thinking Well" with regards to the grouping of meaning units (see Table 1). Due to this, attempts were made to consider how to possibly break Theme 1 down further but in the end it was determined to keep it in tact. To illustrate the concepts identified feeding into this theme, the meaning unit categories or sub-themes are listed in Table 2.

Sub-themes	Counts
Dimensions of Business Intelligence	34
Complexity	10
Vocabulary/Definitions	12
Factual versus higher order learning	18
Outcomes versus Process	24

Table 2. Theme 1 "Thinking Well" Meaning Unit Categories or Sub-themes

The data gathered was affirmative in answering both research questions this study sought to answer. As to the question of whether getting input from faculty in related disciplines outside LIS when devising information literacy frameworks could make them better, the richness of the results provided certainly confirmed that this could be valuable.

Theme 1: Processing Information Well (Thinking Well). The theme of processing information well pervaded much of the exchange with the respondents. Both clearly saw a difference between Exhibit 1 and the corresponding frameworks developed by the investigator in Exhibits 2 and 3. Exhibit 1 was seen as "a list of outcomes" while Exhibits 2 and 3 were seen as "much more process oriented," and this concept of "process" continued to reappear in their comments. For example, in this description:

> For knowledge management, this is exactly what needs to be done. You have to be able to take information, make sure it comes from the right sources, process that in your mind, to be able to create insight and your issues around insight development and forward view of the phenomenon of that, so very much related, very much having to go through this whole similar model of processing, if you will, to turn the information into knowledge at the individual level.

Comments like this led to the consideration of "Processing Information Well" as a theme and caused this researcher to be reminded that processing information well is synonymous with thinking well since thinking is an information processing system (Aanstoos, 1985). Thus, the designation of "Thinking Well" for Theme 1. As one interviewee stated, "to create knowledge, you have to take information and basically go through everything that you have listed here, in terms of the dimension of business intelligence, you have to do all of that, and the outcome is knowledge, individual knowledge that has been gained from the raw material of information."

In addition to the frameworks in Exhibits 2 and 3 being seen as a process, the respondents also commented on how they touched on "higher-order learning." Exhibit 1 was seen instead by the respondents, as stated by one of

them, as "level one learning, factual learning." Factual learning was described as "this is the capital of such-and-such country, now you have it. You don't have to apply so much of creative intelligence, insight, or integrative thinking about that." One respondent mentioned that at the "beginning of our conversation, that the first thing that occurred to me was very concrete. How to do a search. Right? It wasn't philosophically interesting at all. Very concrete. Your dimensions of business intelligence skills is not really -- it's emancipated itself from library skills, basically. You're saying these are skills generally. Business skills generally." The other respondent commenting on this mentioned that:

> There are different levels of learning. One is just like that raw, factual learning. One is the chemical chart order so once you identify the source and get the relevant information, that's pretty much -- in order to go to look up the information, if you will, that's it. But if you really want to be a good chemist, or if you want to take advanced courses in chemistry, they don't stop here. The idea is to really push you through your graduate education to do these other three levels [dimensions] as well.

She then went on to say that the "idea of a learned person is someone who is information-literate, in the sense that they can do all of these things." One respondent directly commented on the required element of motivation and that if "you want to develop some deeper thinking and learning skills, then you have to be pushed to develop, through instructional design, to be able to do these other things as well."

Another point that came up was the issue of vocabulary. It was found in particular with the Adult Learning expert that there was a need for clarification on the terminology used in the frameworks. The conversation that ensued, in defining terms, supported a consideration of appreciating the complexity and extra sensitivity required in adequately communicating the desired goals of this sort of instruction.

The thinking well theme dominated the focus of these interviews as the respondents reflected on the concept of processing information well as essential to any discussion around the effective design of information literacy instruction. Comments concerning "higher order learning" and developing the ability to process complex concepts led to the appreciation of this key finding of this study. As part of this, an additional factor commented on was the potential complexity of teaching these concepts so that they are fully understood by the learner. Given this complexity and potential sophisticated level of learning, approaching it as a contextually relevant process is essential. In designing this instruction a focus is required on the characteristics of the educational environment and learners themselves.

6. Discussion

What is the motivation? Is processing information well of interest? Attainable?	*Who is your audience?*	*Thinking carefully about concepts and using language that your audience understands*
Theme 1. Thinking Well	**Theme 2. Audience**	**Theme 3. Clearer Communications**
Thinking well and the need to use abstraction to explain complex concepts. That providing information literacy instruction must be directly linked with learner's desire to stretch their intellectual abilities and process information well. This is a key motivating factor the design of this instruction must address.	In colleges and universities (the focus of this study) that there are five different audiences for communications regarding frameworks for information literacy instruction – faculty, students, librarians, instructors and the learning institution overall.	The need to develop better communications that adequately cover all the elements that need to be addressed, some of which are more abstract and complex. Appreciating that these could differ depending on who the audience is.

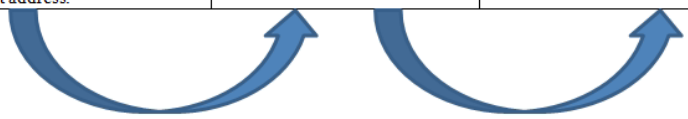


Figure 1 Conceptual Map linking 3 Themes

The conceptual map in Figure 1, graphically depicts the themes uncovered. The cluster of "Thinking Well" (Theme 1) is positioned first, highlighting the importance of considering the motivation of the learner or audience and their desire to aim for a higher level of learning and processing information well. This theme is then linked to that of "Audience." That the effectiveness of plans for information literacy instruction hinge on how clearly they address the needs and varying potential characteristics of their audience. In colleges and universities (the focus of this study) there are five different potential audiences for communications regarding frameworks for information literacy instruction: faculty, students, librarians, instructors and the learning institution overall. This then led to the final cluster of "Clearer Communications" (Theme 3). That in the respondents' experience with the library, librarians and even the frameworks discussed for this study, they conveyed that more could be done to better communicate the value of this instruction, particularly, in its role in covering the five dimensions of processing information well. That in their educational programs, information on how to gather information well wasn't being retained and more could be done. Their comments suggested that there is a need to do a better job to make faculty really understand the details of what information literacy means and how it impacts teaching and scholarship, as well as the skills students will need when they graduate in terms of using information effectively in their jobs. The framework proposed in Exhibit 2 appears to be one useful mechanism for this based on the data collected in this study. That by creating communications that more completely appreciate the characteristics of the audience being addressed, it would strengthen and enhance the institutional community's understanding of the extent of the value of information literacy instruction.

The Conceptual Map in Figure 1 depicts the idea that designing instruction starts with the desire and motivation of students to "think well". A key

component of thinking well is listening and asking good questions, and positions information literacy as part of developing quality inquiry skills. It also highlights the connection between information literacy and being an effective communicator. That one is an effective communicator because people believe what one says. A reason for this acceptance is because of the persuasiveness of one's arguments. In a more sophisticated intellectual or professional environment the way a person persuades is, with quality, evidence. This evidence can come in several forms, primary or secondary, collected data or internalized knowledge, but whatever it is, it must be effective in convincing the audience. It is the responsibility of an academic program of higher learning to teach the skills to do this well.

7. Limitations and Future Research

One significant limitation of this study was the small sample size, reducing the generalizability of results. This was due to the time constraints of its completion as a pilot study for a course assignment. Due to this being a one semester project, there was limited time to solicit respondents and collect data. Consequently, expanding this research by interviewing other experts using the same methods employed in this study would be worthwhile. Potential subjects might include experts in the following areas: Communications, Organizational Behavior, Decision Sciences, Entrepreneurship, Innovation, General Education, other areas of the social sciences as well as individuals in relevant administrative fields and roles such as Business School administrators and Teaching and Learning Center and instructional design professionals.

This researcher found employing the method of using the frameworks as a prop offered a novel approach in LIS information literacy research. It generated a rich discussion that brought unexpected ideas to the surface, such as the respondents' extensive focus on the five dimensions of business intelligence in Exhibit 2. This is another reason this researcher thinks it would be useful to expand this study, by getting input from additional relevant experts to further test the robustness of this method of phenomenological inquiry. It would assist in addressing the gap that exists in this relatively unexplored area of information literacy research.

One conclusion arrived at after reviewing the results, was that exploring a second broader holistic framework (Exhibit 3) at this time is not warranted. The central place the "Dimensions of Business Intelligence" took in the interviews suggests that beyond business they could cover other fields as well. Consequently, there is potentially more to gain through further refinements to the framework in Exhibit 2 and perhaps, once components are revised, to then evaluate how other disciplines might be considered. The results of the study also point to the possible usefulness of adding something about communications to the frameworks. Something on this topic might be inserted in the existing frameworks, or a related additional one might be created, focused on the theme of clearer communications as they relate to information literacy.

Another consideration that this research points to is that there might be an opportunity to do more with services offering teaching and learning support at

colleges and universities. Many colleges and universities have Teaching and Learning Centers to support faculty and instruction (Shroeder, 2011). Information literacy pedagogical guidance, from the perspective of an instructional program about evidence, would be a useful addition to this type of a service with staff from the library working in partnership with it. This type of intra-organizational collaboration, regarding concerns around the teaching of evidence, might also be a way to address the disconnect between librarians and faculty that can often occur.

8. Conclusions

This research uncovered that information literacy is trying to explain and teach a complex process; the concept of processing information well or thinking well. There is a need to create frameworks for its design, that include all the relevant factors to this instruction, and appreciate all that is involved; that fluency in these skills supports the overall goal of academia to achieve higher level learning in one's area of study. It also suggests that, perhaps, if communication were around the concept of "information processing" rather than "information literacy," from a pedagogical perspective, what LIS professionals have been aiming for might have been more easily understood and potentially embraced as a key component of academic instruction.

In the classroom information is normally provided to students. A process focus on information suggests that rather than presenting it as inert, connect it with the process of students gathering and digesting it for themselves. In this way widen the horizon of potential evidence covered and give students more practice to understand and refine their skills in using the evidence they have located elsewhere to substantiate their position. This information literacy positioning directly linked to course pedagogy can only enhance the learning experience and transference of new knowledge. As Gilchrist (2007) points out "current research in learning indicates process-oriented pedagogies (as compared to content-oriented pedagogies) lead to more effective learning, yet content delivery remains the major instructional delivery mode of most college-level courses" (p. 6). If information literacy is positioned to convey the point of being a process, rather than a list of outcomes, it offers a way to be easily linked with concepts already taught, since so much of teaching concentrates on the process of digesting new material through class activities and projects.

If an important component of higher education is the ability to effectively use evidence to gain clarity in fully digesting learnt concepts, then new types of messages and models concerning this instruction are required. It demands a change in the behavior of educational designers and planners to find the places in the curriculum where this instruction could be enhancing course learning and pedagogy. The method tested in this study presents a new way to examine what to think about in designing information literacy instruction that could reveal insights that could be advantageous in creating curriculum that delivers on the desired goals and truly resonates with the community it is created to serve.

References

Aanstoos, C. M. (1985). The structure of thinking in chess. In A. Giorgi (Ed.), *Phenomenolgy and psychological research* (pp. 86-117). Pittsburgh, PA: Duquesne University Press.

American Library Association. (1989). *Presidential Committee on Information Literacy. Final Report*. Chicago: American Library Association.

Amos, D. (Ed.). (2011). *Competitive intelligence and decision problems*. Hoboken, New Jersey: Wiley.

Anthony, K. (2010). Reconnecting the disconnects: Library outreach to faculty as addressed in the literature. *Colleges & Undergraduate Libraries*, 17, 79-92.

Boon, S., Johnston, B. and Webber, S. (2007). A phenomenographic study of english faculty's conceptions of information literacy. *Journal of Documentation*, 63(2):204-28.

Bruce, C.S. (1998). The phenomenon of information literacy. *Higher Education Research and Development*, 17(1), 25-43.

Bruce, C.S. (1997). *The seven faces of information literacy*. Blackwood, South Australia: Auslib Press.

Budd, J. (2005). Phenomenology and information studies. *Journal of Documentation*, 61(1), 44-59.

Christiansen, L., Stombler, M. &Thaxton, L. (2004). A report of librarian-faculty relations from a sociological perspective. *The Journal of Academic Librarianship*, 30 (2), 116-121.

Choo, C.W. (2002). *Information management for the intelligent organization: The art of scanning the environment*. Medford, New Jersey: Information Today, Inc.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications.

Cullen, A. (2010). *MBA education and managerial information skills: An exploratory study of faculty and practitioner perceptions*. Unpublished paper for Simmons Course LIS 621.

Cullen, A. (2011). *Librarian-faculty disconnect: Its impact on integrating research instruction as part of an MBA program's curricular revision*. Unpublished paper for Simmons Course LIS 654.

Cullen, A. (2012). *Testing a model for introducing information skill development in the MBA curriculum*. Unpublished paper for Simmons Course LIS 601.

deAlwis, G., Majid, S., &Chaudhry, A.S. (2006). Transformation in managers' information seeking behaviour: A review of the literature. *Journal of Information Science*, 32(4), 362-377.

Datar, S. M., Garvin, D. A. & Cullen, P. G. (2010). *Rethinking the MBA: Business education at a crossroads*. Boston, MA: Harvard Business Press.

Diamon, R. (2008). *Designing and assessing courses and curricula: a practical guide*. 3rd Edition, Jossey-Bass: San Francisco.

Dyer,J. H., Gregersen, H.B. & Christensen, C. (2009). The Innovator's DNA. *Harvard Business Review*, 87(12), 60-67.

Edmondson, A. & Cullen, A. (2008). *Information use by managers in decision making: A team exercise teaching tote*. (HBS No. 609-027). Boston, MA: Harvard Business School Publishing.

Eisenberg, M. B., Lowe, C., A., & Spitzer, K. L. (2004). *Information literacy: Essential skills for the information age*. Westport, CT: Libraries Unlimited.

Fisher, K. E., Erdelez, S., &McKechnie, L.E.F. (Eds.). (2006). *Theories of information behavior*. New Jersey: ASIS&T.

Gilchrist, D. L. (2007). *Academic libraries at the center of instructional change: Faculty and librarian experience of library leadership in the transformation of teaching and learning*. Unpublished Ph.D., Oregon State University.

Given, L.M. & Julien, H. (2005). Finding common ground: An analysis of librarians'expressed attitudes towards faculty. *The Reference Librarian*. No. 89/90, 25-38.

Groenewald, T. (2004). A phenomenological research design illustrated. *International Journal of Qualitative Methods*, 3(1). Article 4. Retrieved 9/21/12 from http://www.ualberta.ca/~iiqm/backissues/3_1/pdf/groenewald.pdf.

Gullikson, S. (2006). Faculty perceptions of ACRL's information literacy competency standards for higher education. *The Journal of Academic Librarianship*, 32, 583-592.

Haras, C. &Brasley, S. S. (2011). Is information literacy a public concern?: A practice in search of a policy. *Library Trends*, 60(2), 361-382.

Heinstrom, J. (2005). Fast Surfing, broad scanning and deep diving: The influence of personality and study approach on students' information-seeking behavior. *Journal of Documentation*. 61(2), 228-247.

Hesseldenz, P. (2012). Information literacy and the evolving MBA degree. *Journal of Business & Finance Librarianship*, 17(4), 287-299.

Ibarra, H., Snook, S. &Ramo, L. G. (2010). Identity-based leader development. In N. Nohria& R. Khurana (Ed.), *Handbook of leadership theory and practice* (pp. 657-678). Boston: Harvard Business Press.

Kaufmann, G. & Runco, M.A. (2009). Knowledge Management and the Management of Creativity. In T. Rickards, M.A. Runco & S. Moger (Eds.), *The Routledge companion to creativity* (pp. 149-159). New York: Routledge.

Keisler, J.M. and Noonan, P.S. (2012). Communicating Analytic Results: A tutorial for decision consultants. *Decision Analysis*. 9(3): 274-292.

Knapp, E. (1998). Knowledge management. *Business & Economic Review*, July, 1998.

Martin, R. (2007). How Successful Leaders Think. *Harvard Business Review*, 85(6), 60-67.

Mayo, T. &Nohria, N. (2005). Zeitgeist leadership. Harvard Business Review, 83(10), 45-60.

Miles, M.B., &Huberman, A.M. (1994). *Qualitative data analysis: A sourcebook of new methods(2nd ed.)*. Thousand Oaks, CA: Sage.

Moustakas, C. (1994). *Phenomenological research methods*. Doi:10.4135/9781412995658

Oakleaf, M. (2011). Are they learning? Are we? Learning outcomes and the academic library. *The Library Quarterly*, 81(1), 61-82.

O'Farrill, R. T. (2008). Information literacy and knowledge management: preparations for an arranged marriage. *Libri*, 58, 155-171.

Owusu-Ansah, E. K. (2005). Debating definitions of information literacy: Enough is enough. *Library Review*, 54(6), 366-374.

Petriglieri, G. &Petriglieri, J. L. (2010). Identity workspaces: The case of business schools. *Academy of Management Learning & Education*, 9(1), 44-60.

Polkinghorne, D. E. (1989). Phenomenological research methods. In R. S. Valle & S. Halling (Eds.), *Existential-phenomenological perspectives in psychology: Exploring the breadth of human experience*. (pp. 41-60). New York: Plenum Press.

Roberto, M. (2009). *Know what you don't know*. Wharton School Publishing, NJ, 2009.

Rubin, H. J. & Rubin, I.S. (1995). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage.

Runco, M. A. & Chand, I. (1994). Problem finding, evaluative thinking, and creativity. In M. A. Runco (Ed.), *Problem finding, problem solving, and creativity* (pp. 40-76). Norwood, New Jersey: Ablex Publishing Corp.

Saunders, L. (2012) Faculty Perspectives on Information Literacy as a Student Learning Outcome. *The Journal of Academic Librarianship*. Vol. 38, No. 4, pp. 226-236.

Schroeder, C. M. (2011). *Coming in from the margins: Faculty development's emerging organizational development role in institutional change*. Sterling, VA: Stylus Publishing, LLC.

Stevens, C. R. (2006). Beyond preaching to the choir: Information literacy, faculty outreach and disciplinary journals, *The Journal of Academic Librarianship*, 33(2), 254-267.

Wallace, D., Cullen, A. & Esty, B. (2007). *Shifting Gears: The Role of Reference and Research Services in Curriculum Design, A Case Study of Faculty and Library Collaboration at the Harvard Business School*. Paper presented at Columbia Libraries Reference Symposium, New York, NY, March 9, 2007. Retrieved on 9-30-12 from https://www1.columbia.edu/sec/cu/libraries/bts/img/assets/9337/ShiftingGears.pdf.

Wu, Y. D. & Kendall, S. L. (2006). Teaching faculty's perspectives on business information literacy. *Reference Services Review*, 34(1), 86-96.

Appendix

Intervention Description and Interview Guide

Intervention Description:

I. Email this interview guide with Exhibits 1-3 to respondent/co-researcher one week before the interview.
II. At the beginning of the interview, review with respondent Exhibit 1. ACRL Standards and Exhibit 2. Conceptual Framework for MBA Information Skill Development. Quickly go over content of each.
III. Start the research interview loosely following interview guide, questions 1-5.
IV. In the last part of the interview discuss framework in Exhibit 3. Conceptual Framework for effective information literacy instruction design in general (see interview question 6).

Interview Guide:

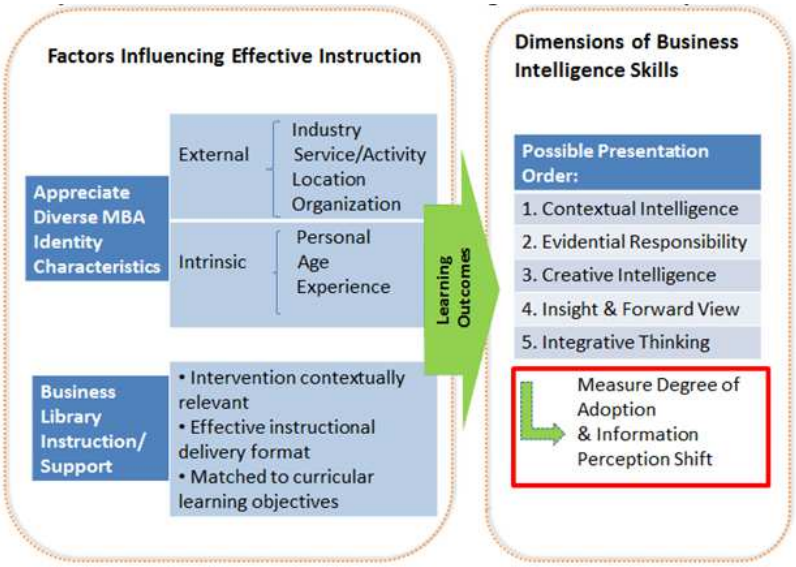
1. In your teaching and research, what incidents demonstrating effective information gathering stand out to you?
2. How do you relate the ACRL guidelines to the Framework in Exhibit 2 in terms of guidance for actually designing relevant instruction?
3. Proceeding through each part of the framework in Exhibit 2, share your impressions of it generally and as it relates to MBA education given your expertise in (KM/Adult Learning)?
4. How does this framework relate to your actual experience doing as well as teaching about research?
5. How do you feel this framework relates in terms of your field's interpretation and investigations around idea generation, information gathering and the effective use of information?
6. As a generalized depiction of the themes we discussed in Exhibit 2 but not focused on a specific discipline, what are your impressions of the framework in Exhibit 3?

Exhibit 1. ACRL Information Literacy Competency Standards for Higher Education

1. The information literate student determines the nature and extent of the information needed.
2. The information literate student accesses needed information effectively and efficiently.
3. The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.
4. The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.
5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

(Performance indicators and outcomes linked with each standard at - http://www.ala.org/acrl/standards/informationliteracycompetency)

Exhibit 2. Conceptual Framework for MBA Business Intelligence Skill Development



Dimensions of Business Intelligence Skills Defined:

- Contextual Intelligence - skilled at environmental scanning and sense making.
- Evidential Responsibility – collecting and documenting sources and presenting information to clearly communicate and demonstrate authority and credentials concerning a point of view.
- Creative Intelligence - see information available at edges and make connections; willing to push boundaries and get out of comfort zone.
- Insight and Forward View (problem finding) - in addition to analysis skills capability to develop insights which are more open ended and exploratory.
- Integrative Thinking - consider multiple options potentially coming from diverse information sources and knowing how to effectively synthesize information retrieved.

Exhibit 3. Conceptual Framework for effective information literacy instruction design