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The Importance of Wisdom in Information Literacy

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The Importance of Wisdom

in Information Literacy

Introduction

In 2003, the board of a small Bible college in Canada began to question whether online resources might replace the need for print materials. At about the same time, government initiatives claimed to make the Internet accessible to all high school students. This prompted the idea to research how well first year college students use the Internet for research. It was not until 2007 that this research happened. It revealed that students tended to use the easier, more accessible resources on the Internet. They had a generally good understanding of what was a quality resource and were cautious of the easier resources such as Google and Wikipedia. Moreover, when time was available, they chose resources that are more reliable. However, by the time this research was ready, the literature had already demonstrated such a conclusion. It was old news. Nonetheless, there were two unique aspects to this research: the students interviewed were from a Bible college context and the theme of wisdom emerged. What was most interesting was how the idea of wisdom seemed natural in this context. This study will use information from these Bible college students to note the potential significance of wisdom in the teaching of information literacy.

Review of related literature

There are several studies concerning how undergraduate students seek information for research. Melgoza, Menny and Gyeszley (2002) studied user preferences and priorities for information resources and their selection criteria, finding that accessibility and ease of use were most important influences in selecting resources. Grassian and Kaplowitz suggested we should save the student's time through good information literacy; otherwise, the student will save time by taking "the shortest route" on finding good information (2001, 115). Griffiths and Brophy found that students tend to evaluate resources based on "incomplete information" (2005, 552). "Only one in five students will ask

a librarian for assistance when using the web" (Thompson, 2003, 263). The bottom line was that undergraduates typically use the easiest, most convenient path of information seeking.

A significant survey of undergraduate students' use of technology is from the Educause Center for Applied Research (ECAR). These studies were extensive but below are a few highlights. Kvavik, Caruso and Morgan found that students might have rated themselves higher than they should have (2004, 42). A year later, the data showed that undergraduate students arrive unskilled and insecure about the technology they know so well but were now being asked to use for academic purposes (Kvavik and Caruso, 2005). In the next year, this study observed increased ownership of technological devices yet commented that "it is one thing to own information technologies, another to use them, and yet another to use them as instruments of academic achievement" (Salaway, Katz and Caruso, 2006, 48). In the 2007 ECAR study, Salaway and Caruso found a relative confidence in students' technology skills. An interesting theme was that students learn skills on an "as needed" basis.

As you narrow the focus to students' use of the Internet for research, Whitmire (2003) confirmed her hypothesis that those who saw knowledge as certain and absolute tended to take anything written on the web as reliable while students who see knowledge as more contextual were more capable of critiquing and evaluating information. Agosto (2002) applied the theories of satisficing to young people's use of the web, supposing that they do not always end up with the best choice but one that is good enough. (Satisfice is a combination of satisfy and suffice.) Buczynski found that those who tended towards satisficing are now using "federated searching services and expensive digital library subscription resources" (2005, 102). Another study confirmed that, "users may satisfice their need for information based on what they are able to find and thus stop

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ABSTRACT

What does wisdom have to do with Internet research? First year students from two small Bible Colleges in Canada participated in focus groups about how and why they used the Internet for research. One of the questions queried whether they used wisdom in the process. While this question seemed natural in a Bible College context, it caused quite a conversation at the library school. These Bible College students seemed to operate with the idea of wisdom even in Internet research. They were able to describe this wisdom and their responses to other questions corroborated their description. Do these students have some advantage? How might the idea of wisdom inform our current notions of critical thinking and information literacy in general?

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looking for more information. Users may also stop looking for information prematurely if the information systems are difficult or unusable" (Prabha et al, 2007, 77).

Several studies have investigated whether students will most likely go to "easy" Internet sources first, or to what librarians view as more reliable. While students feel they are "techno-savvy," they need careful and specific guidance to help them become "info-savvy" (Brown, Murphey and Nanny, 2003). Davis (2003) found that while citation of more popular web resources increased with wider availability of the Internet, this improved with clearer instruction. Griffiths and Brophy (2005) found that almost half of students went first to Google when they needed to find information. Van Scoyac and Cason (2006) found that students using an electronic library still used Internet sites more than university-subscribed resources. Head (2007) demonstrated that some students do look first to the course readings (40%) or faculty recommended resources (12%). Steinhagen, Hanson and Moynahan (2007) confirm the idea of settling for "good enough," finding search engines like Google fit the bill for instant gratification. Oroszo (2007) found that, "student researchers have an overwhelming preference for online resources that make the best use of their research time." This study also showed that students do rely on recommendations from their instructors. They have a healthy skepticism about the authority of Google and Wikipedia.

In all of this, the theme of time emerges yet it is unclear whether the motivation for saving time is laziness or efficiency. The initial findings of my study were that first year college students have varying levels of confidence and information when using the Internet for research. Most are both informed and confident but a few are overconfident, overcautious, or neither confident nor informed. Most of these students understand the importance of thinking about reliability and quality. They have a reasonable idea of quality in an Internet resource. Success has a lot to do with time. It is not so much that they are not willing to put in the time but they do not want to waste their time. However, when the time is not available,

> *While students feel they are "techno-savvy," they need careful and specific guidance to help them become "info-savvy."*

lazy habits emerge. It seemed that habits had not changed much with the advent of the Internet.

This information has, however, already been demonstrated. The abovementioned Educause surveys have reported findings for college students in general including some distinctions between first year students. The 2007 survey found that first year students were similar to older students in perceived skill using technology for academic purposes. In addition to the studies mentioned above, Gross and Latham (2007) reported an overall information illiteracy amongst first year students connected to an inconsistency of relevant instruction before college and the need to be self-taught. A 2008 survey by the Higher Education Research Institute found that while 75% of students use the Internet for research, only 39% regularly evaluate the quality of these sources. It seems the goal is for what is easy to obtain than what is accurate (Hoover, 2008).

What has not yet emerged in the literature is a connection between wisdom and Internet research. The idea of wisdom rarely surfaces in discussions of Internet research or information literacy in general. There is discussion regarding the idea of wisdom in education generally. Targowski (2005) argued that wisdom is actually the end of a continuum starting from data and going through information, concepts, and various types of knowledge, eventually arriving at wisdom. He has also done an interesting theoretical paper surveying broadly the concepts of wisdom throughout the world geographically and historically (2006). Czarnocka (2006) contends with this article noting that Targowski's model of wisdom is in popular, western men. He would also argue with Targowski's ideal that we are part of a "wisdom society" saying that we are actually part of an "information society" (2006, 155). A recent issue of the London Review of Education gave emphasis to this theme of wisdom in education. Maxwell (2007) argued that "a revolution in the aims and methods of academic inquiry is needed so that the basic aim becomes to promote wisdom, conceived of as the capacity to realize what is of value, for oneself and others, thus including knowledge

and technological know-how, but much else besides" (97). Dean-Drummond (2007) investigated what it might look like to apply a theological vision of wisdom, including prudence and practical wisdom in the arena of a public university. She argued that we have run away from the idea of wisdom because of its religious connections and that we have done so at our peril.

Therefore, it is on this theme that the results of this study will focus. What is the connection of wisdom to Internet research or to information literacy broadly? What do these Bible College students have to say that might inform us about the potential value of wisdom in teaching information literacy? Do these Bible College students or others like them have some advantage because they approach this with the mindset of wisdom?

Methodology

This was a qualitative study based on grounded theory, i.e. theory grounds itself in the data that emerges. The intention of the research was to let the students speak – "to begin with the data and use them to develop a theory" (Leedy & Omrod, 2001, 154). Essentially, the goal was to develop a theory regarding the Internet research habits of these first-year college students. The initial research questions included the following:

- How prepared are first year students to use the Internet for quality research?

- How and why do students use the Internet for research?

- How do students define quality when using the Internet for research?

- How successful are students when using the Internet for research?

- With what level of wisdom do students use the Internet for research?

With the latter three questions, definitions of the concepts of success, quality and wisdom emerged as the interview went, that is to say, there were no prescribed definitions but instead the students operationalized – defined and described – what these concepts meant in the

process of the interviews. While the previous questions will inform this article, it is the last question regarding wisdom that emerged as most significant.

There were ten students from two small faith-based colleges in three different focus groups. The smaller number of participants does limit the transferability of this research, however, as a pilot study, these students still speak well of their situation. Faith based colleges were chosen primarily because of context and connections to gain access to these students. At first, this might have limited the transferability in that the concept of wisdom may not be as familiar on secular campuses. In the end, it is this uniqueness, which forms the basis for the paper.

As a researcher, I recognized both benefits and limitations of focus groups. Benefits include being less intimidating and more conducive to sharing. They tend to help get a group's perspective. Participants hear one another's experiences and feel more comfortable sharing their own (Rothe 99). When there are multiple participants, one acquires a variety of ideas and opinions (Gary & Arrasian, 2003, 212). In fact, participants may leave with a better idea about how to use the Internet (which did happen in this case). The potential deficits include not getting clear answers from quieter individuals or having opinion swayed by participants that are more outspoken (Gary & Arrasian, 2003, 212). In addition, one always should be aware that, as genuine as the participants seem, their responses are perceptions and not necessarily facts (Leedy & Omrod, 2001, 160). I gave attention to some suggested guidelines while leading these focus groups (Leedy & Omrod, 2001, 159,160).

All students were recruited, informed and gave consent according the relevant ethical guidelines. Each focus group was limited to one hour and used a semi-structured interview. These interview questions emerged from the research questions. A group of students pre-tested these questions. (As it turned out, this pre-test group was successful enough to be included in the data.) The interviews were audio and videotaped then later transcribed to

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ensure accuracy and permanence of data. As a rule, the trustworthiness of one's data increases "if multiple sources of data are utilized" (Sprenkle & Piercy, 2005, 48).

From the transcription, I was able to note an "overall sense of the data" (Leedy & Omrod, 2001, 154) and summarize observations. Using various colors of highlighters, I coded and classified the data into themes in order to be able to interpret the meaning of various answers. As I analyzed the data, I constantly compared it back to what came before (Leedy & Omrod, 2001, 154). With grounded theory, the data begins to inform the data (Sprenkle & Piercy, 42). Common trends emerged about the research questions. From this data, I was able to discover how and why these students use the Internet for basic research, more specifically, how students achieve success, discern quality, and use wisdom in their searching.

Results

The following results, as much as possible, come straight from the mouths of the participants. From three hours of interviews, there were many comments but below are the highlights. Summaries and analysis give structure but the words of the students describe the results.

When asked why they used the Internet for research, the theme of time and convenience came through loud and clear. "It is just faster," said Marie. "You can find things right away," says Ida. Wayne would much prefer to use books but if pressed for time, he would use the Internet. Andrew's definition of success was "the faster you find more pertinent information." Carrie preferred an hour of research instead of ten. Time is of essence with these first year students.

When asked how they used the Internet for research, Hugh said it well. "I use Google a lot." Eva does a broad search first and then narrows it down. Keyword searching was most common, sometimes more successful than others. For instance, Todd described with pride a search on the biblical character Job. He just typed "Job" into Google and many things came up (probably along with several items on finding a job.) Two students were aware of Advanced Search but only Wayne used it. Several understood the use of quotations. Only Wayne was aware of Boolean operators. Many looked at the title and the summary to see what might be relevant and reliable. "When you see your first ten results just by looking quickly at the titles and what's written underneath, you can see if you're on the right track" (Eva). Just a few felt aware of how Google worked. "Most times the first two pages will be fairly reliable good sources but sometimes it just means they are the ones that have more links" (Wayne). None looked beyond the first two pages of results. Leo would refine a search by adding a keyword found in a relevant website. Carrie wished there was this academic search engine on Google, but none were aware of Google scholar. So, one can see several good habits of Internet research alongside of some naiveté and poor search habits.

Next, "down the chain" is Wikipedia. Andrew explained, "If [Google] doesn't work, I go to Wikipedia and see what their sources are because they actually list their sources." There was certainly awareness of the lack of authority on Wikipedia. Paula said, "When I found out it wasn't credible I don't even touch it because, why, if it's going to be maybe faulty." If Andrew sees Wikipedia through Google, he usually tries to stay away from it. Marie really liked the way Wikipedia outlined its topics and Andrew really liked how it will give you the order of pertinence. A few students had strategies for dealing with the uncertain reliability. Leo said, "I go onto the discussion about [the article] to see what people in general are saying about it." Some students take a site like Wikipedia but then back it up with other sites. Wayne explained, "I just look at the websites that they reference from and I use what those websites said instead of what Wikipedia said."

Most students were aware that Wikipedia was "a whole bunch of different communal things where you can add your own content and modify other people's stuff" (Wayne). Marie realized "Sometimes they are totally out to lunch but sometimes it is very similar to what else I've have been searching." Andrew commented, "I doubt that very many people

go in there just to fool around with other people's stuff." Marie described "a friend [who] tried to test it by writing in that he was the inventor of the toaster." Within a day or so, he received notification that he had given inaccurate information. Wayne felt, "It depends a little bit on the topic. Things that are more common, like famous people, generally have more people checking to make sure it's still relevant and accurate. But some of the more obscure things, especially theological stuff, they may not have as many people checking it to make sure it's accurate." He pointed out, "There is a page on Wikipedia that says that you can't really reference Wikipedia as an actual source." In the end, he said, "The great thing about Wikipedia is that an encyclopedia can easily write an article about starvation in Africa but they're off in London. Whereas with Wikipedia, somebody could say, 'I've been to that village. Let me tell you what it's actually like there.'" This is especially interesting in light of the fact that Wayne grew up in Papua New Guinea and Tanzania. While these students are using a less reliable source like Wikipedia, they are aware and thinking about their process. Moreover, they see some benefits to Wikipedia.

It was encouraging to hear the ways that these students thought about quality. They named several factors concerning finding a quality resource on the Internet. The first thing mentioned was spelling mistakes. Paula said, "If there's spelling mistakes or, say, Jesus wasn't capitalized, I know that they're not that credible." Marie said, "If I was reading through a sentence and there's like ten errors, you know ..." Eva became uncertain "if it is written sloppy." Students also look at web design. Hugh pointed out, "If a website looks pretty professional and they actually put time into designing it, then I could lean towards trusting it." Students are wary of too flashy design as if they are "trying to show off something they don't have" (Wayne).

These students recognized the importance of reference information. Who is behind this information? "If you see that it's from so-and-so publishing house and this person wrote it and it was revised this day, it seems to be a little

more reliable" (Eva). Wayne said, "I'm much more comfortable if it's from a university or bigger institution or if the editor has a couple of degrees or some sort of credibility behind his or her name that you can say that this is a professor of 'blah.'" Paula thinks, "Who it's written by and date and everything should not be too hard to find either." Wayne felt, "Sites that actually have all the reference information are more valid and reputable because people might want you to be using this for research." Marie said, "I check with other sources to make sure that you find a reputable one." Along with this comes looking at the web URL. "If it is 'freepages.something' or ten million characters long, you are probably not going to use that," said Leo. Wayne explained, "He likes the URLs that are shorter." Carrie avoids personalized websites. Wayne adds, "Ones that have "mygooglehomepage" in the URL are just personal opinion." Marie noted that the "edu" domain means it is generally educational.

Finally, and perhaps most important, is relevance. Eva feels that "if you find something that you were really looking for or is really useful to what you're doing," you have quality. Andrew describes quality in these words: "The information is pertinent to what you are looking for … not going off on tangents and the majority of what you're looking at is relevant." Paula noted, "It might be good quality for other parts of research but not necessarily for your paper." As a matter of good habit, Andrew never goes with the first site he sees. Wayne noted, "Just because it is in the top ten does not mean it is necessarily any better of a source."

Given the context of a faith-based college, wisdom is a familiar term to these students. This may have been different on secular campuses. I introduced the question by relating it to the wisdom taught in the Old Testament/Hebrew Bible. Then I asked them if they used wisdom when they used the Internet for research. There was little need to explain the concept more. Marie said, "It depends on how much time I have left for my assignment. I get a lot lazier when I only have a couple days to get done whereas I'm much more critical and I'll look at

What is the connection of wisdom to Internet research or to information literacy broadly?

it more if I [have more time]. I'll be much more discerning about what sources I use." Carrie describes wisdom as "in-depth thought, going deeper, searching more, trying to understand things you do not understand. I think I learn more and develop more when I actually have to think about what I'm doing." Wayne said wisdom is "to do some sort of critical look at content and compare it." Ida said, "You use wisdom when you put effort into making sure you are getting credible things." Hugh spoke of "just double checking the sources when you find something." Marie tries not to just look from her perspective, but to try to get a more rounded view. "I'm trying to do it more so I see different perspectives so I can form an opinion based on all of the resources not just necessarily the ones that I like." Carrie expresses the importance of caring about what you are doing. In high school, she did not care much but now she does and it makes a difference in what she looks for. Andrew reflects, "Trying to do the best you can, not just taking the first information you see but actually ensuring that it's good information. Try to verify it and not always with other Internet sources. [Pause] I guess if you define it that way, I'm not very wise when it comes to Internet research."

Discussion

As mentioned above, there is much to analyze from this data but other studies have already reported similar findings. The uniqueness of this study is how wisdom emerged as significant in the context of the Bible College. As a researcher who comes from a Bible college and teaches in the area of ancient Hebrew wisdom, I did not see the concept of wisdom as uncommon. The idea of wisdom is part of our conversation at the Bible College, not only in courses on Biblical wisdom but also in discussions of vocation or in other decisions. When designing the research and interview questions, it did not seem odd or unique to ask about wisdom in Internet research. This did not become a question until faculty and students at the School of Library and Information Science where I was enrolled wondered just what I meant by the term wisdom.

Wisdom is essentially the ability to make good choices in life. It includes ideas of knowledge,

skill and experience. It involves those things that help a person grow up and mature – the building of character. Through it, one knows the right things to do at the right time. Biblical wisdom is a gift from God for ultimately only God knows where to find it. In the Hebrew Bible, it complements God's ways as seen in the Torah (See Koptak, 2003, 38-40; Crenshaw, 1998, 3).

Wisdom as a concept seldom appears in the context of Internet research and seldom with first year college students. Yet these Bible College students seemed to understand what wisdom was in this context. There was no reaction or questions. They simply answered the question. Several characteristics emerged from their descriptions of wisdom in Internet research. The first is a critical look at the resources available. This assumes the student has sufficient time and includes comparison and discernment. This discernment involves checking not only credibility but also relevancy to the topic. It includes backing up your sources with others that might corroborate something that has questionable authority. Secondly, wisdom takes effort to look more in depth at your resources. You have to try harder, work harder. You should double check your sources. To do this, you need to care about what you are doing. This attitude will make a difference in the effort you put into your research. Thirdly, is openness to new ideas emerged. This attitude allows you to look at a variety of perspectives in order to get a more rounded view of your subject. You should not limit your sources to only those that agree with your preconceived ideas.

Some of their descriptions of how they use common Internet resources like Google and Wikipedia corroborate the students' description of wisdom. While some students simply use keyword searching, a few were aware of advanced searching. Others worked to discern quality from the titles and short descriptions. Most students were aware of the uncertain authority of Wikipedia and were therefore cautious. When they used it, some looked to the comments about an article while others used Wikipedia as a conduit to other more reliable resources. Alongside the uncertainty

Just what are the similarities and differences between wisdom and critical thinking?

was awareness that Wikipedia had the potential to provide a first hand perspective unavailable in some more reliable resources.

Students' characteristics of quality, or lack thereof, also support their description of wisdom. Not only do they watch for warning signs like poor spelling or sloppy writing but they also discern where a resource comes from by looking at the URL or other information within a website. Alongside these is relevance to your subject. The ideal is to find a resource that meets the former characteristics of quality and is also relevant to your subject. Discerning quality is a significant sign of wisdom.

However, do they actually use wisdom? These students could describe what wisdom looked like yet they admitted that they did not always practice wisdom when they used the Internet for research. Time regularly emerged as a challenge to using wisdom in research. These students said that when they had time they would use sources that are more reliable but that when time was short, they left behind these principles of wise Internet research. This corroborates the literature and emphasizes the need to help these students learn how to be more efficient with their time through effective information literacy.

The question emerges whether these Bible college students, with this idea of wisdom behind them, have some advantage when approaching Internet research. If they, in fact, take the time to use wisdom – to look critically, discern quality, put in effort, and be open to a variety of ideas – will they be more successful in their research? As encouraged by some recent thinkers, perhaps we should bring back this concept of wisdom not only with Internet research but also in many other areas of education and life. Perhaps those who have retained the ancient religious ideals of wisdom are further ahead. Yet on further reflection, these descriptions of wisdom have a familiarity to them. As I worked to explain to those at the School of Information and Library Studies what exactly I meant by wisdom, I realized that it was very similar to current notions of critical thinking. Even the word "critical" was a part of the students' descriptions. Yet

just what are the similarities and differences between wisdom and critical thinking? This will have to wait for another study.

Conclusion

What began as a study of the Internet research habits of first year college students produced findings in an unforeseen area. Amidst conversations of the need to bring wisdom back into education, some Bible college students already operate with it as part of their mindset. With it, they think critically, discern quality, put in effort, and remain open to new ideas. Are they at an advantage? Perhaps they are but there does seem to be a lot in common between ancient ideals of wisdom and current notions of critical thinking. It is curious, however, that what is so commonplace in the context of a Bible College caused quite a stir of conversation at the library school. Perhaps the benefits of wisdom could add to our conceptions of critical thinking. Maybe the practice of wisdom could contribute to Internet research and information literacy in general. A few students at two small Bible Colleges in Canada would agree.

Future research

So much more is possible with the data from this study. Perhaps most interesting to this researcher is the connection between the ancient concept of wisdom and the current emphasis of information literacy on critical thinking. An analysis of ancient maxims of wisdom from both religious and secular sources would shed light on the idea of critical thinking for today. Much value is possible from a look at wisdom from history. Furthermore, in light of discussion of transformational learning as an educational approach,[1] perhaps we need to begin to think about transformational literacy – finding the information you need to make a difference in your life. Maybe, when applying wisdom to research, information literacy would become transformational literacy.

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1 Transformational learning theory encourages people to move beyond knowledge and information to transformation in your life. Edge (1956) anticipated the idea when he talked about teaching for results. Philosophical foundations for transformational learning come from Freire (1970). A current leading thinking in the area is Mezirow (2000).

Another interesting study would be to analyze how Bible College students, or students of theology in general, do research. Are there different patterns or approaches? Does religious faith make any difference to research? Does a faith community affect the way a student would research a topic that could potentially make a difference in his or her life? Perhaps there could be a comparative study between students who study religion on a purely academic level and those who study it for the purposes of ministry. This might help Christian and theological librarians better meet the needs of these students. ☩

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