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Exploring the lived information seeking experiences of mature students

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Abstract

The purpose of this exploratory qualitative study is to gain a clearer understanding of the lived information seeking experiences of mature students. Such a study is relevant to researchers seeking detailed examinations of mature students' information search experiences, as well as to reference librarians and information literacy (IL) instructors who may wish to refine pedagogy or curriculum in order to help mature students more effectively. This study employed a narrative inquiry design to deeply explore the semester-long information search journeys of two mature students at a regional public university in the state of Oklahoma. Narrative analysis utilizing Carol Kuhlthau's (1991; 1993; 2004; Kuhlthau et al 2008) information search process model uncovered key themes of passion for a topic, time management, the influence of other academic and personal factors on students' search experiences, and willingness to ask formal or informal search mediators for help. These themes have implications for researchers and practitioners seeking to understand and positively transform the information seeking process of mature students.

Keywords

Information seeking, information search process, mature students, non-traditional students, information behaviour, affective information behaviour, USA.

1. Introduction and purpose of the study

Mature college students have been a growing segment of student bodies in American and British colleges and universities for at least the last twenty years (National Center for Education Statistics 2010; McVitty and Morris 2012). However, these students are far less likely to graduate than traditional students (Donaldson and Graham 1999; Wyatt 2011). Institutions of higher education, considering that they are focused on and evaluated in terms of retention and graduation rates, are concerned by this trend.

In an attempt to understand the reasons why college students depart before graduation, scholars have identified key departure factors for undergraduate students in general (Tinto 1975; Ashar and Skenes 1993; Tinto 1997; Purslow and Belcastro 2006; Tinto 2007; Braxton et al 2008), and mature students specifically (Bean and Metzner 1985; Cleary 2011; Sandoval-Lucero et al 2011; Howell and Buck 2012; Sparkman et al 2012). According to scholars (Tinto

1975; Bean and Metzner 1985; Tinto 1997; Tinto 2007), one of the elements of the persistence decision for all students is academic integration, a student's perception of membership and competence within the university's intellectual community. In addition, Deil-Amen (2011) and Braxton et al (2004) contend that the sense of academic integration plays a particularly important role in mature students' decisions to persist or depart higher education.

A key skill needed for academic integration is the ability to successfully search for information by discovering and synthesizing scholarly resources appropriate for research papers and similar academic projects (Braxton et al 2008). According to Kuhlthau (1991, 2004), information seeking is a constructivist and cognitive process. Students construct meaning from the information they find by searching for and thinking about information in an iterative, trial-and-error process. Kuhlthau (1991, 1993; Kuhlthau et al 2008), Genuis (2007), Adams (2010), and Chowdhury et al (2011) have noted that the trial-and-error aspects of information seeking can often inspire feelings of anxiety which can stop an information seeker in his or her tracks. These scholars of information literacy (IL) attempt to provide an improved understanding of the information seeking process to both the librarians, who help students learn how to navigate the college information landscape, and to the mature students who may possess unique information seeking strengths and weaknesses (Given 2000, 2002a, 2002b). Academic librarians are well-positioned to provide mediation and instruction in IL skills, including navigation of the uncertainties of the information seeking process.

While the significance of the problem facing mature students is obvious, the solution is not. It likely will take more than a brief lecture on the information seeking process to help mature students learn how to manage the inherent complexity of information seeking and the negative emotions that are often inspired by a difficult search. This research responds to Given's (2000) call to abandon preconceived notions of the mature student's experiences of the information seeking process. The purpose of this study was to explore the in-depth research paper-writing narratives of a small number of mature undergraduate students at 'Sequoyah State University' (SSU), a regional university in rural Oklahoma. By attending to a small number of students' stories of information seeking as they evolved over the course of a semester, this research provides new insights into the attitudes and anxieties mature students experience while locating and evaluating information.

2. Literature review

2.1 Mature students, academic integration and information seeking

Although a student's path to academic integration usually begins in the physical or virtual classroom, that journey leads most students to the college library. Students commonly find the information seeking process challenging. Most of the literature of library instruction and IL has been devoted to uncovering the best pedagogical methods to teach students to navigate this new information landscape (Dykeman and King 1983; Getty et al 2000; Hurst and Leonard 2007; York and Vance 2009; Clark and Chinburg 2010).

Information scholars such as Kuhlthau (2004), Head (2012), and Nahl and Bilal (2007) argue that the stress and negative emotions sparked by learning a new and occasionally counter-intuitive skill may be an inevitable aspect of the information seeking process. However some, like Julien and Genuis (2009), see students' experiences of emotional roadblocks during the search process as a sign that a student is truly transcending his or her comfort zone of knowledge, and gaining a deeper understanding of a topic. A student must have enough confidence in his or her abilities and intelligence to work through affective challenges and gain deeper understanding of the topic. Through this process of confronting and overcoming moments of confusion and stress in information seeking, a student gains confidence and becomes more deeply integrated in the academic culture of the school.

Unfortunately, affective challenges may be particularly disheartening to mature students. For the purposes of this study, students were identified as mature depending on the degree to which they met the criteria for non-traditional students (an American term for mature students) as outlined in the definition used by the United States' National Center for Education Statistics (Horn 1996; Choy 2002). A student can be considered minimally, moderately or highly non-traditional depending on the number of criteria that he or she meets. While none specifically refer to minimum age, the criteria are common to many college students considered to be mature under age-based definitions. These concerns have also been shown in previous research (Bean and Metzner 1985; Sandoval-Lucero et al 2011; Cleary 2011; Howell 2012; Sparkman et al 2012) to negatively influence persistence and completion.

Horn's (1996 p.3) criteria are:

- delayed enrolment after high school/secondary school,
- part-time enrolment,
- full-time-employment,
- financial independence for financial aid and tax purposes,
- responsibility for dependants,
- being a single parent, or
- completion of high school via General Educational Development (GED) or other alternative certification.

Mature students place more emphasis on academic integration in their persistence decisions (Braxton et al. 2004; Braxton et al. 2008; Deil-Amen 2011) and depart before graduation at a dramatically higher rate than their traditional peers. Given (2002a) notes that mature students must navigate an academic environment where 'traditional' students are seen as the norm, and both instruction pedagogy and student services are designed for the convenience of young, full-time students rather than part-time, mature learners. Given argues that mature students' tacit status as other (or at least atypical) can lead some to unintentionally disregard their voices as scholars and ultimately stifle their information seeking efforts.

Based on this research, it becomes apparent that mature students must simultaneously contend with the inevitable uncertainty of the search process and an awkward social status in the eyes of many faculty and classmates that leaves them less likely to acknowledge their struggles and

seek help. A mature student who may already have little confidence in his or her academic information seeking abilities may conclude that he or she is simply not capable of success in higher education. Such a belief could put academic integration and continued persistence at risk.

2.2 Originality of the study and relevance to current literature and practice

Academic integration and the learning process of most degree programmes require students to complete research papers. To successfully seek the information needed to write papers at the college level, students must attain a high enough level of IL to successfully search for information in a university library. According to the Chartered Institute of Library and Information Professionals' (2004) definition, IL can be understood as a set of skills that are used by an information seeker to find, evaluate, and effectively communicate information. According to Kuhlthau (1993), IL is both learned and practised through the information seeking process, a seven-stage model of cognitive, process and emotional growth that serves as the theoretical framework of this study. Kuhlthau argues that, in order to become information literate, students need to do more than merely understand the processes of information seeking, and must thoughtfully engage with the information that they find. Information seekers must also be able to manage and navigate the common emotions of uncertainty, doubt and frustration that almost always emerge in the early stages of the information search process.

Tinto (1997) contends that a student is more likely to remain at a university if he or she perceives a sense of both academic and social integration into the campus community. A student's sense of academic integration is largely a factor of academic success, which in turn is determined in large part by the student's ability to accomplish the information seeking activities required in the course of his or her assignments. It seems possible that failure to overcome the struggles inherent to the information seeking process could lead to diminished academic integration, a poor learning experience and a possible decision to withdraw from college. If Deil-Amen (2011) and Braxton, Hirschy and McClendon (2004) are correct that academic integration is particularly important in the persistence of mature students, then the consequences of failed information seeking become even more dire.

Academic librarians, particularly those involved in the instruction of IL skills, are the most likely members of the academic community to understand the information seeking experience and to be able to share the lessons learned. Instruction librarians may intuitively understand information seeking, and the affective experiences of the students they serve, but may not have explicitly considered ways to incorporate emotional information search skills into their pedagogy and curriculum.

As a discipline that was founded on positivist conceptions of knowledge, academic librarianship has historically favoured surveys, bibliometrics, and other forms of quantitative research (O'Connor 2006). Academic librarians have only recently begun qualitatively grappling with the lived experiences of students and other information seekers as they use the library as a physical or virtual location for performing intellectual labour. Given (2002b) used interviews with more

than 20 students to depict the interconnected nature of mature students' academic and everyday search activities. Project IL (Head 2012), launched in 2007, is a large-scale, ongoing mixed-methods research project into the ways that 'early adults conceptualize and operationalize research activities... and especially how they resolve issues of credibility, authority, relevance, and currency in the digital age' (Head 2012).

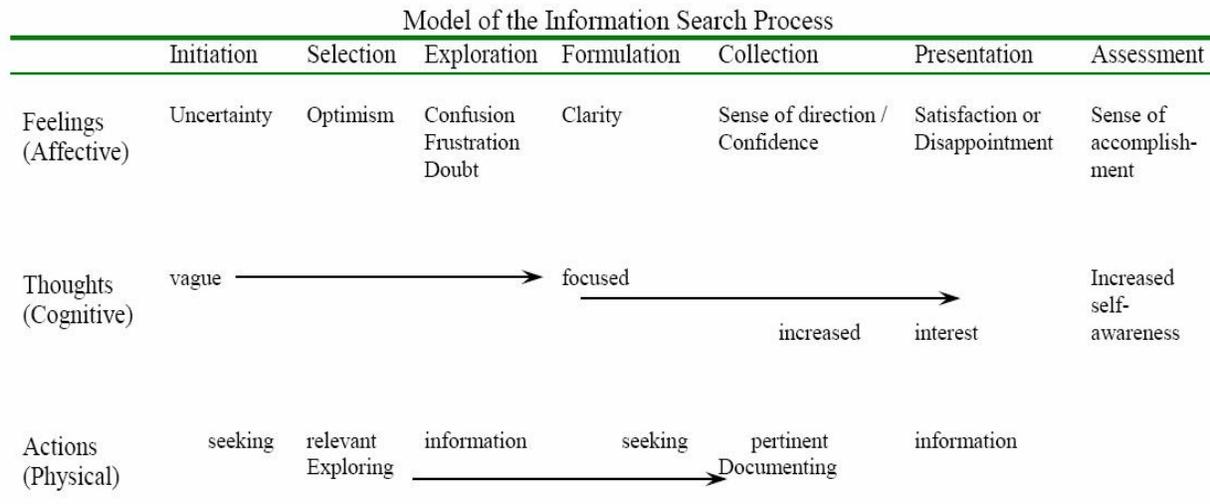
As a large-scale study that includes more than 100 community colleges and universities, Project Information Literacy (PIL) provides a picture of major trends in information behaviour. However, the researchers cannot attempt to deeply explore any individual's information seeking experience. In addition, mature students may approach the information seeking process with very different skills and attitudes than those of the 'early adults' that are the focus of PIL's research. Given's (2002b) work introduced librarians to the possibility that mature students' richer and more varied life experiences lead them to approach information seeking in different ways than their 'traditional' classmates. However, Given attempted to provide a broad overview of the landscape of mature students' information seeking activities, rather than a focused examination of the beginning, middle, and end of a small number of mature students' experiences of a single information search.

A greater understanding of how mature students approach the challenges of information seeking throughout a single search could give librarians the perspective needed to help this population grow in their skills, confidence, and academic integration. Given's (2002a, 2002b) inquiries regarding mature students were a useful first step. The same is true of Gold's (2005) attempt to apply Knowles' (1980) theory of andragogy to IL instruction. However, neither of these researchers delves deeply into students' academic information seeking processes as they experience them. The narrative inquiry described below is an exploratory step towards gaining a deeper understanding of the unique issues that mature students at a regional university may face over the course of an academic information search.

2.3 Theoretical framework

This research explores the lived information seeking experiences of mature students. In so doing, it will provide a clearer understanding of how these mature students' prior histories and current commitments (Ezzy 1993) may influence the affective, cognitive, and physical elements of the information search experience. Kuhlthau, in her ground-breaking (1988, 1991, 1993, 2004) work on information seeking, builds on empirical data as well as pragmatic constructivist theories of learning by Dewey (1933), Kelly (1963) and Bruner (1973) to propose a model of the information seeking process which serves as the framework for this study.

Figure 1: Model of the information search process (Kuhlthau 2004, used with permission of the author):



Kuhlthau (2004) describes a six-stage process of search initiation, topic selection, exploration of the topic, formulation of understanding from the information gathered, collection of additional pertinent information, and presentation of findings grounded in the acquired information. At the conclusion of the process, the information seeker reflects on and assesses his or her experiences, and uses the lessons learned in future searches. Kuhlthau argues that experiencing this process teaches students the skills needed to become information literate, specifically ‘when and why one needs information, where to find it, and how to evaluate, use and communicate it in an ethical manner’ (Chartered Institute of Library and Information Professionals, 2004).

In each stage of this process, information seekers typically feel different emotions, grow in their cognitive understanding of a topic, and undertake different search activities and strategies (Kuhlthau 1993). Although previous theorists (Wilson 1981; 1999; Ellis 1989; Bates 1989) emphasized the cognitive and action aspects of this process, Kuhlthau argues that the emotions of the information seeker play as important a role in their success as do their cognitive understanding or search skills. In other words, ‘when information seeking is viewed as a process of construction, the user’s experience becomes a critical component for analysis’ (Kuhlthau 1993 p. 344).

Once the emotions of the information seeker are admitted into models of the information seeking process, the experience of grappling with and overcoming confusion, frustration, and doubt can be seen as pivotal to a successful information search. In the early stages of the search process, when understanding is vague at best, and information seeking skills may be at their weakest, searchers face the strongest and most self-defeating emotions. According to Kuhlthau (2004), students do not truly gain the upper hand in their affective struggles until they achieve the breakthrough that serves as the boundary between the exploration and formulation

stages of information seeking (stages three and four in Kuhlthau's six-stage process). In a successful search, the information seeker eventually discovers (and comprehends) enough information on their topic to begin creating a vague mental outline of its key issues and nuances. When a searcher achieves this moment of insight Kuhlthau argues that uncertainty dissipates, understanding grows steadily and the information seeker locates and synthesizes information with increased confidence and competence.

3. Research questions, theoretical framework and methodology

3.1. Research questions

This exploratory narrative study examines the following questions about participants' stories of information seeking as well as the key issues and themes that emerge from those stories (Creswell 2007 pp. 109-11):

Central research question:

What are some key meanings of the stories that mature students tell about their experiences of information seeking while writing research papers?

Issue sub-questions

- How is emotion experienced and articulated in participants' stories?
- How do participants think about the information they find during the information seeking process?
- How do participants' search behaviours change as they proceed through the information seeking process?

3.2 Methods and participants

3.2.1 Research design and limitations

According to Crotty (1998 p. 3), research methodology is 'the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes'. The purpose (or 'desired outcome') of this study is to explore the lived experiences of mature undergraduate students at a regional university as they engage in information seeking activities for assigned research papers. Through this exploration, mature students will be able to share their stories of information seeking, both in terms of the process itself and in context of their other life experiences, before and during the college years. By giving voice to these experiences, and by identifying their broader themes and implications, this study will provide a depiction of the unique strengths and challenges the participants experience when engaging in information seeking.

Based on the research questions discussed above, as well as on the purpose of this study, an exploratory narrative inquiry appeared to be an ideal methodology. According to Czarniawska (2004 p. 17), 'narrative is understood as a spoken or written text giving an account of an event/action or a series of events/actions, chronologically connected'. Narrative inquiry views participants' stories as data units that can describe an experience in themselves, and can also be 'analysed for connections between the psychological, sociological, cultural, political, and dramatic dimensions of human experience' (Patton 2004 pp. 115-6). As a methodology that respects the integrity of participants' stories while leaving room for interpretation and analysis, narrative inquiry was an ideal approach for the purpose, constructivist epistemological stance, and theoretical framework of this study.

It must be emphasized at this point that this particular narrative research project is exploratory in nature. As Creswell (2007) and Clandinin (2007) both note, collecting and engaging deeply with a very small number of narrative descriptions of a phenomenon can lead to a deeper understanding of participants' lived experiences, which in turn may help the researcher identify subtle themes that might be lost in a larger amount of data. The results of any qualitative study, particularly an exploratory narrative such as this one, will not provide as many transferable themes to researchers and practitioners as other types of qualitative and quantitative work (Creswell 2007, 2009). However, this modest exploration of a few lived experiences could lead to the emergence of new angles on relatively unexplored phenomena that can be fruitfully explored in larger-scale qualitative and quantitative research.

Ultimately, qualitative research, especially exploratory qualitative research, is less about generating definite knowledge than exploring avenues that may lead to a fuller understanding of a phenomenon. As Patton notes in his seminal text on qualitative analysis: 'the validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information richness of the cases selected and the observational and analytical capabilities of the researcher than with sample size' (2004 p. 245). By collecting multiple narratives from two to four participants over the course of an entire semester, the study was designed to favour the details of an individual's journey over a breadth of numerous experiences.

3.2.2 Data collection methods

Qualitative data collection methods are designed to explore the meanings that people assign to phenomena in their worlds and seem particularly appropriate for this study. Qualitative data-gathering is a process that is grounded first and foremost in the meanings of the lived experiences of research participants (Creswell 2007, 2009). Based on the concept of purposeful sampling (Patton 2004), participants were selected based on how well their particular histories and planned search activities might shed light on mature students' information seeking experiences. In addition, participants attended at least one library instruction session. Participants were selected from a third-year interviewing skills course in the Department of Social Work at 'Sequoyah State University' (SSU). To avoid possible imbalances of power that might occur in the process of interviewing a participant who has received instruction or reference assistance from the researcher, participants were not selected from the university where the researcher is employed.

This researcher visited a library instruction session that students attended as part of the preparation for their first assignment. Students were told about the project and learned about the informed consent process and about the definition of mature students as described in the literature review. Interested students added their names and email addresses to a sign-up sheet indicating eligibility and interest. Ten potential participants were contacted to verify their interest and determine how many study criteria they met before proceeding. Four eligible research participants were available to meet for initial interviews at a mutually convenient place and time.

Each participant was assigned a pseudonym that was used in transcripts and memos. All identifying information was stored on an encrypted and password-protected portable hard drive. One participant (White/Native American male) did not appear at the first appointment, did not respond to follow-up calls and emails and was dropped from the study. A second student (African-American male) participated in the first interview, but did not attend the second. This student did not respond to multiple calls and emails for rescheduling or to clarify continuing willingness to participate. For that reason his first interview was not included in this analysis. The remaining two participants came to both one-on-one interviews.

Data gathered for the proposed study consisted of two open-ended, semi-structured interviews conducted with each of the research participants as they completed a series of research assignments over the course of a semester. The first set of interviews took place the weekend after their first paper was due, with the second meetings taking place one week before the end of the semester as they completed work on their final papers. Researcher journals and notes were also created and preserved to serve as additional background data.

3.2.3 Data analysis methods and trustworthiness of the study

The transcripts were initially analysed with an open coding process (Creswell 2007 pp. 239-40), in which the transcripts were coded line-by-line to capture all themes related to issues of information seeking. An axial coding procedure (p. 237) was then performed in order to organize the most significant and surprising codes that emerged in open coding into key themes. Particular attention was paid to patterns and themes, both those described by members and those that emerged from close readings of the interview transcripts. The researcher journal and notes were not coded, but they were consulted to uncover additional nuances of the themes that emerged from the open and axial coding of the transcripts. The researcher journal also served as a check against researcher positionality overwhelming the meanings expressed by the participants. At this point several loose memos were drafted on each of the key themes and their possible implications. A more focused memo was written on the ways the two participants' experiences did and did not seem to follow the progression of Kuhlthau's model.

To ensure that the study was methodologically sound, analytic procedures included techniques to maximize the trustworthiness of the study. According to Lincoln and Guba (1985), a trustworthy qualitative study is credible, transferable, dependable and confirmable. Researchers commonly support credibility through the use of member checking - a process by which research participants can review transcripts or preliminary results and offer suggestions or corrections. The participants in this study were all offered the opportunity to review the

transcripts of their interviews and they were forwarded a preliminary draft of this article. Neither of the students included in this study replied to either email.

As with any qualitative inquiry, one cannot assume that findings in one setting will inevitably transfer to another context. Instead, one must consider whether the results of any research study are transferable to other contexts. Readers will be able to determine transferability between this study and their setting based on the detailed descriptions of participants and their experiences. All data and analytic notes were preserved to provide dependability to the research model and to confirm the data gathered.

3.3 Researcher positionality

As Patton (2004 p. 64) notes in his text on qualitative research methods: 'Reflexivity has entered the qualitative lexicon as a way of emphasizing the importance of self-awareness, political/cultural consciousness, and ownership of one's perspective'. Because qualitative analysis is grounded in the notion of researcher as instrument, a brief reflective discussion of positionality provides a necessary insight into the choices and perspectives that influenced data gathering and analysis.

This researcher is academic librarian at a regional public university in the state of Oklahoma. As a librarian at an institution with a large number of mature learners, I have a personal and professional interest in understanding the strategies students use to navigate the information seeking process. I also want to use my professional and academic skills to share techniques that will help students achieve their college goals. While I have established relationships with librarians and faculty at SSU, I have never worked there, and did not select any participants that I previously knew.

I recognize that my own passion about the role of IL in student academic integration and success could colour my research choices. I agree with Gadamer's assertion (1996 p. 318) that perfect bracketing of my positionality from my analysis is 'always already' impossible. However, I maintained a researcher reflection journal to make these issues of positionality in data-gathering and analysis as explicit as possible, and to limit the potential for my opinions to drown out the voices of the students whose stories I explored in this study. While they were not coded, my notes served as background information as I coded and analysed the interview data.

For clarity of reading, and in the spirit of narrative inquiry's explicit treatment of the voice of the researcher-as-narrator as another source of data worthy of analysis and critique (Wolcott 2009; Chase 2011), I present my actions and choices during the interviews in the first person. As Wolcott argues, 'recognizing the critical nature of the observer role and the influence of his or her subjective assessments in qualitative work makes it all the more important to have readers remain aware of that role, that presence' (2009 p. 17).

4. Findings

All four interviews conducted for this project took place at the 'Corner Café', a popular meeting place just off-campus and frequented by students at SSU. A typical small town America coffee bar with a Southern twist, the floors were made of rough-hewn wood. Country music and classic rock played on the speakers and students sipped Lattes underneath prairie landscape paintings and local Native American weavings that hung on the walls. The obligatory bulletin board outside the toilets sported flyers for both Yoga classes and concealed carry weapon permit training. This location was suggested by one participant, and both students seemed to feel at home in a convenient off-campus space that they visited regularly. Both participants have lived their entire lives in the United States, specifically in the state of Oklahoma. Their voices are partially a product of that heritage. Ashley and Veronica's direct quotes are depicted exactly as spoken, American colloquialisms and grammatical errors intact, in order to present their lived experiences as fully and clearly as possible.

4.1 Ashley's story

'Ashley' is a White 44-year-old married mother of three adult children, all of whom live together in their home a short walk from the SSU campus. Ashley returned to school in order to be able to support herself financially. She intended to leave her troubled marriage of 25 years after graduating and getting a job with which she could support herself. She had already cleared many personal and academic hurdles to make it to this point, including two deaths in the family, and a son released from prison in the week her paper was due. She downplayed the importance of those events to her academic journey. However, Ashley had not even started her first paper when we met a few days after the deadline, and expected to receive a 0 on an assignment worth 20 per cent of her final grade. When asked what happened, she said:

'Like, I checked out the books I need for this... I can't sit there and read about this, then write about it. I'm no good with research. Figuring out [what's in the books], I think... I don't want to write about that stuff. I know I have to, I know I do, but I don't like to.'

When asked why she didn't like to 'write about it', she responded:

'It's hard for me. It's just, just the whole research from start to finish. It's hard. I guess, I don't want to say I'm lazy, it's I don't, I just know that a research paper is stressful. And I do what I can to avoid stress.'

Given that Ashley had just shared a story of persisting through four failed attempts at remedial mathematics before finally passing on her fifth try, it seemed possible that there more to her roadblock than simple stress. As her first interview drew to a close, Ashley changed her reasoning. Instead of citing stress, she said, 'I'm just chicken'.

When asked why she felt scared to get help with her information seeking at the library, she shared the following story:

'When you write your paper, you're gonna screw it up. You're not gonna get the header right, you're not gonna get this centered, you're gonna mess it up somehow. When we were in the writing lab, she went over, God, So many things... And I had a hard time following, and she would end up standing behind me saying 'No, click this, click that, click this...' because I would get lost... My, I can't, process it fast enough, I guess.'

Based on Ashley's wording and inflection, it seemed that she felt that the writing lab instructor was judging her attempts to engage in academic writing in the proper manner rather than guiding her through the process. Despite her averted eyes, quavering voice, and squirming body language during this passage, Ashley never stated in the first interview that she felt intimidated at the writing centre. However, the theme did emerge explicitly in her second interview while discussing the topic of her reluctance to ask for help from any instructor, librarian, or other formal mediator (Kuhlthau 2004). Regardless of the exact emotion Ashley experienced that day, she seemed to imply that the negative writing lab experience, as well as other negative encounters with various enrolment advisers, made her wary of asking anyone at SSU for help, library staff included. Rather than experiencing the issues of information seeking or formatting a paper as discrete obstacles, Ashley instead seemed to understand all of them as part of the overarching task of 'writing a research paper'.

Throughout Ashley's comments, her frustration at one aspect of academic searching and writing bled over into others. Ashley's experiences seemed to form a vicious cycle where an obstacle in one area (formatting a paper appropriately) made struggles in another (information seeking) seem more imposing. Ashley repeatedly stated that she didn't know why she felt blocked by the idea of even asking someone for help. However, as our first conversation drew to a close, I reflected just how much fear and anxiety seemed to be exhibited in her words, body language and tone of voice.

At the end of the semester, I worried that Ashley might have dropped the class, or that she would not be willing to speak with me. However, she was still in the class, and she seemed quite eager to share the story of the second part of her semester. One of the first things she mentioned was that her husband had left her and that she and her daughters had moved in with her new boyfriend. Ashley stated he was the first and only person who had been helpful in her school work. She described him as very intelligent and supportive of her goals. Ashley smiled as she said:

'He makes me study. He makes me do things. He pushes me, you know? And I had him help me set [the bibliography formatting] up, because I can't do it myself.'

Since we had talked last she had turned in another paper that required peer reviewed library sources in addition to the article she was critiquing in the paper itself. She enjoyed the assignment and felt she had done a good job of analysing the article. However, she also stated that she forgot she had to find and include additional sources. For that reason, Ashley only

received half-credit for the assignment. When Ashley was asked to explain why she thought she hadn't remembered that aspect of the assignment, she simply reiterated that she forgot. However, the issue of information seeking arose again toward the end of the interview, after she stated that she hadn't learned anything about searching for information all semester. When I asked her why she thought that she hadn't learned anything, she responded:

'Because I'm no good at it... the looking for stuff. I hate it. It's just too much to worry about... focusing. Focusing is my problem.'

Again, I was struck by how much of the responsibility for her struggles she assumed herself, and how it seemed that she had trouble asking for guidance from professionals who could potentially help her improve at the things she was 'no good' at. Finally, upon asking her why she hadn't asked her instructor for more clarification, she paused for a very long time and said:

'Smart people intimidate me. And people who are in charge of me.'

Then I asked why she had felt intimidated by the staff at the library, at which point she concluded with this fascinating story:

The library people, half the people there don't know what they're doing anyway. Because I have problems with the computer, or... um somebody has to ask someone for help they say I don't know, I don't know... and you sit there for 20 minutes [while they try to figure it out]. And finally they go find somebody else who might know what they're doing. But anyway they're all in there because they know what they're doing, right?

I nervously agreed, and stated that the library staff were there to help. She responded, 'I'm a lost cause'. And yet, Ashley also concluded with the words: 'I'm stronger than I thought'. In the final analysis, it seemed as though Ashley's strength and anxieties were at odds as she journeyed through her very eventful semester, and the eventual victor was still in doubt.

4.2 Veronica's story

'Veronica' is a 39-year-old of White and Native American heritage. Now a divorced single mother of two teenagers, she left high school early to get married when she became pregnant with her first child. However, she returned to school a few years later to earn her GED and a certification as a medical assistant. Veronica balances her studies in social work with a part-time job as a medical assistant. She lives in a rural community about an hour's drive from the main campus of SSU. While Veronica was also motivated to return to school a second time to start a new career, her reasoning was quite different from Ashley's:

'After being in the medical field for 14 years as a medical assistant, I felt like I had a bigger calling than that.'

After deciding to change careers to social work, she completed the first two years of general education requirements at a local community college, before transferring to SSU to complete her bachelor's degree in social work. As we began talking about her first research paper, a

project about child sex trafficking, Veronica kept returning over and over to her *'passion'* for the topic, and the ways she felt that passion fuelled her thorough information seeking activities. In addition to finding peer reviewed articles on the topic as required by the assignment, she had found websites of organizations related to helping victims of sex trafficking, and even attended a conference for social workers who served that population.

Veronica also described her search process related to a paper in another class. This paper focused on the Court Appointed Special Advocates (CASA) programme, a service where volunteers advocate for the rights of children involved in the child welfare system. Veronica had somehow found enough spare time in her schedule to volunteer as a CASA and she was similarly passionate about this topic. Veronica stated her passion was a key force she felt had fuelled her pre-existing knowledge of both topics, and that it kept her going as she grappled with the inevitable ups and downs of information seeking. While discussing her child sex trafficking paper, she said:

'I just do more further investigation and research on that. That's my passion, when I get my degree, I want to open safe havens for, for these people, you know.'

Passion for a topic, according to Veronica, made for an easier information seeking experience:

'If I'm not interested in that, the last thing I want to do is research about it, you know?'

In both our conversations Veronica repeatedly brought up time constraints as an obstacle that she experienced during information seeking. Veronica wanted to learn as much as she could in the hopes that the information she uncovered and analysed might be of use to others. However, she found it difficult to fit in enough time to complete as much information seeking as she wanted to. She cited her lack of internet access at home, her hour-long drive to school, outside obligations, and the high standards she set for herself as factors that compounded her time limitations.

When asked why she more often chose to write on topics that she was already knowledgeable and passionate about, as opposed to subjects that she simply wanted to learn more about, Veronica mentioned that seeking information on the former kind of topic was much faster. As she put it, *'time's a factor here!'* Knowing that she didn't have internet access at home, I asked Veronica if she did most of her information seeking on campus. She said:

'Yeah, research and stuff, I use the library or another – the writing lab or something. As long as there's a computer open.'

Turning to the steps Veronica took to seek and integrate information, she stated that she regularly asked for help from librarians and others during her information seeking, and she seemed to feel a powerful need to use the information that she discovered to help future students and clients. Veronica reported that she had a good encounter with a librarian when she asked for help after discovering that she needed more sources for a paper than she could find:

'He was in his office and he came downstairs and he helped me search what I needed. And like I said, there was several peer reviews [scholarly articles] that he was shocked that they didn't have... He just showed me that there were other venues to go, you know.'

Veronica also liked to show her work to her instructors and classmates in order to get feedback and improve, with the hope of writing papers that were *'good enough for my professors to be able to use as examples'*.

As our second interview concluded, I asked Veronica what she would do to improve on her information seeking efforts during the next semester, after writing several papers that she considered good, but not as good as she'd hoped. Her response managed to sum up all of the key themes of her experience:

'I think for next semester, every paper that I wrote for this semester, I think I need to give more love and attention and time into these next papers next semester. More critical research on them, you know?'

When asked 'What do you mean by 'critical research'?', Veronica responded:

'Actually, going in and you know, using the library. I know that library has a lot to offer... If I can just get the time to go there, find out what I need to do, and get help in finding that kind of research in there. You know, I do want professional papers. You know, I love papers that possibly my professors will use. You know, after I graduate, you know, I do want to find the papers and I can't say that any of the papers that I wrote are that good or good enough for them to use.'

As I left the Corner Café on that final day to drive back to my own university, I reflected that it seemed that Veronica's goal of devoting as much *'love and attention and time'* to her information seeking had less to do about earning a good grade than it did about fulfilling what she describes as a calling to be a useful student and, ultimately, a helpful social worker.

4.3 Key themes

By looking at these two narratives in relation to each other it becomes possible to identify common or contrasting themes in Ashley's and Veronica's lived experiences. Several overarching subjects emerged in each story, if sometimes in different ways.

4.3.1 Personal problems

Both participants managed serious personal challenges over the course of the semester. Ashley grappled with personal losses, the return of her son from prison and the break-up of her marriage. Veronica spent part of the semester helping her mother deal with a serious health condition. Neither of these women discussed these issues as causes of stress, much less as excuses for weaker performance. Rather they depicted these stressors as simply one more obstacle they had to manage in their daily lives.

4.3.2 Lack of time

Both students perceived that they had limited time to complete their information seeking, in part because they both lacked reliable internet access off campus. Because Ashley only lived a few blocks from campus before her husband filed for divorce, she could occasionally pick up the university's wireless signal on her smartphone. However, her priority was checking email and the course management system rather than attempting intensive information seeking. Veronica had no internet access at home. She did all of her information seeking on campus. Although this meant that help was always nearby, it also meant that both students had limited time to complete their information seeking activities.

4.3.3. Passion

Passion emerged as a critical theme that affected Ashley and Veronica in very different ways. Although Veronica spent large parts of both interviews eagerly sharing what she had learned about her two subjects, Ashley could barely remember either of her topics, and didn't talk much about either one. Veronica repeatedly stated that she was '*passionate*' about learning new things and sharing them with her professors, friends and future clients. However, Ashley's overriding passion seemed to be directed toward completing assignments (which she described as '*obstacles*' and '*blocks*') that required information seeking through brute force. This grim sense of determination reflected in her comments and tone of voice reminded me of her story of '*struggling*' with basic mathematics for four semesters before finally passing. While neither motivation is better than the other, their different passions may have led to different approaches to information seeking.

4.3.4 Asking for help

Finally, it seemed that Veronica was much more likely to turn to library staff for help, and reported more positive experiences when she did. On the other hand, Ashley didn't seem to really trust anyone aside from her new boyfriend to give her useful help with information seeking or any other skill related to writing a research paper. Based on the story of library frustration that Ashley shared, one can understand why she came to that conclusion. Ashley did not state whether a student worker, paraprofessional or librarian with professional qualifications was unable to help her with her computer work. However, given that she responded to a question about the anxiety she felt during information seeking with a story of confusion at the writing centre, it seems likely that this critical encounter would have served as a deterrent to Ashley in asking any other library worker for help, regardless of his or her job title.

5. Discussion

The key themes of personal stresses, passion, a shortage of time, and these two students' differing tendencies to ask for help seem to emerge from an initial analysis of the narrative data. As described above, Veronica and Ashley report very different experiences during the semester. By expanding the focus from individual themes to the totality of Ashley's and Veronica's journey, this discussion will explore the research questions through the lens of Kuhlthau's Information Search Process Model (2004). As discussed in section 3, this study explored the following questions about the information seeking experiences of two mature students as described in their narratives:

Central research question

What are some key meanings of the stories that mature students tell about their experiences of information seeking while writing research papers?

Issue sub-questions

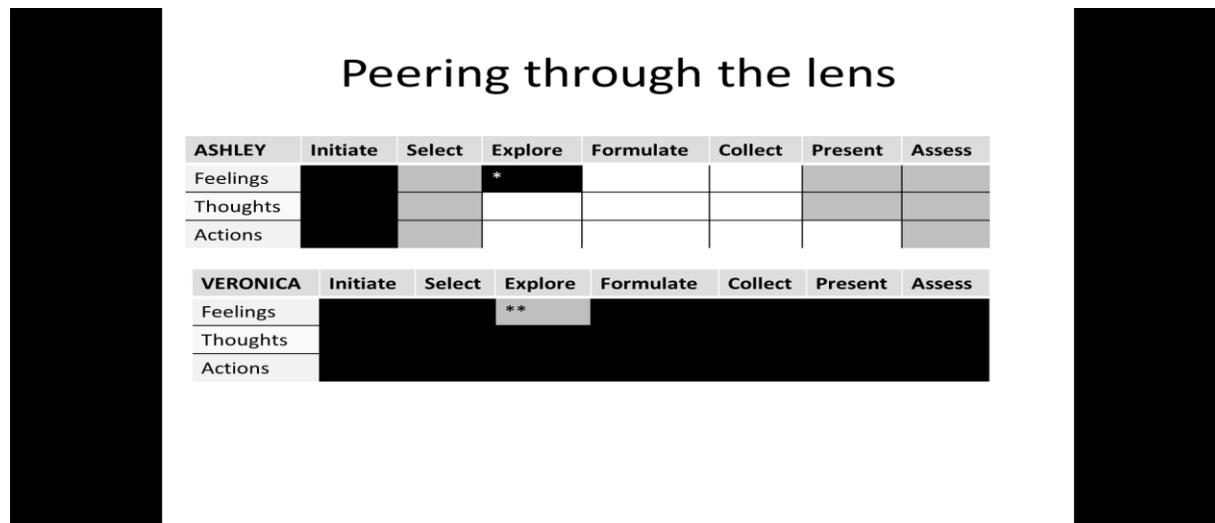
- How is emotion experienced and articulated in participants' stories?
- How do participants think about the information they find during the information seeking process?
- How do participants' search behaviours change as they proceed through the information seeking process?

Each of the three sub-questions explored in this narrative study flow from one of the aspects (affective, cognitive and procedural) of Kuhlthau's information seeking process. However, the composition of these questions was based on an assumption that is implicit in Kuhlthau's diagram but which was undermined by Ashley and Veronica's stories. Ashley and Veronica's narratives seemed to imply that success or struggle in one domain affected others at each stage of the process. Upon examining Ashley's and Veronica's narratives, it seemed clear that these students' thoughts, feelings, and actions could not be examined in isolation. For that reason, the following discussion is organized chronologically, rather than by research question.

5.1 Feelings, thoughts, and actions: viewing information narratives through the lens of the information search process

Figure 2 depicts the perceived experiences of Ashley's and Veronica's information seeking experiences across the six stages and three aspects of Kuhlthau's Information Search Process model. If the student described an experience as entirely positive, the box is filled in black. If the student was uncertain whether the cognitive, affective or action goals of a certain phase were met, the block is filled in grey. If the participant did not state that they had what they would perceive as a successful information seeking experience, the block was left blank.

Figure 2: Ashley's and Veronica's information seeking experiences



As the semesters began, both Ashley and Veronica expressed that they had vague ideas about their information seeking strategies. Both took actions to learn more at a general level, and both reported minor but manageable levels of anxiety. Both selected topics they were comfortable with, curious about, and were somewhat familiar with, though Veronica expressed far more passion and excitement about her projects, and Ashley expressed wariness as well as optimism. Kuhlthau (1993) argues that uncertainty is an emotion that students should be feeling early in the process as they identify and explore their topics. She, as well as other scholars of information seeking (Mäkitalo et al 2005; Hyldegård 2006, 2009; Brumfield 2008; Genuis 2008; Chowdhury and Gibb 2009; Adams 2010), even contend that uncertainty is a necessary motivating force in the early stages of the search process.

A moderate amount of wariness suggests that seekers are moving out of their comfort zones, finding new information about their subjects and thinking about relevant issues in new and more complex ways. Veronica expressed little uncertainty early in her searching, possibly because she was already somewhat knowledgeable and passionate about both topics she selected. Her relative confidence could indicate a greater comfort with the uncertainties of information seeking. However, it might also imply that her explorations did not actually lead her outside her cognitive comfort zone, or both factors may have been at play.

Ashley, by contrast, stated that she felt profound anxiety throughout the exploration stage. Instead of overcoming it, she stated that she found herself unable to face thinking about her topic or taking actions to access additional help in order to formulate a coherent understanding. In other words, her emotional struggles appear to have made cognitive and procedural gains less likely. Ashley seemed to never arrive at the key moment of clarity that Kuhlthau (1991, 1993, 2004) states must take place between the exploration and formulation stages. To use

Ashley's own words, her information seeking and sense-making efforts seemed to remain '*stuck*' at that roadblock.

Veronica continued to move forward in the ways predicted by the model. Although Veronica preferred to '*just write*' rather than creating a formal outline, she deliberately formulated her basic arguments and the areas she wanted to cover based on her initial exploration. She then returned to the library to collect the required number of sources, or '*peer reviews*' as she called them, to provide support to her claims, consulting library staff for help as needed. In the inverse of Ashley's experience, Veronica's increasing cognitive understanding of her topic as well as her growing skill in the process of information seeking led to increased confidence. This confidence seems to have fostered a virtuous cycle of success that lasted for the rest of Veronica's search process. At the end of the process, Veronica wrote a paper that discussed her findings and presented her work to her instructors.

In the end, Veronica stated that she thought and felt that the results of her information searches were good enough, if not as intellectually refined as she had hoped. She assessed her work positively but intends to devote more energy to her future information seeking activities in the hope of creating model papers that her professors will one day find useful. Ashley turned in one of her two papers, but stated that she forgot to use outside sources on the paper she did complete. Ashley stated that she was unhappy with her performance, but was cautiously optimistic that what she did learn will serve her well next time, especially with her new boyfriend helping her. Time will tell whether Ashley can ultimately overcome the roadblock that stymied her information seeking.

5.2 Conclusions and implications for research and practice

By exploring two mature students' information seeking experiences, four key themes of the information seeking experience were identified:

- the role of personal commitments and concerns in information seeking,
- The lack of time,
- Passion as a force in overcoming or avoiding 'blocks',
- Comfort or lack of comfort in asking for guidance.

These themes were further explored through the lens of Kuhlthau's (1991, 1993, 2004) model of the information search process, which proved to be a useful framework for describing and understanding Ashley's and Veronica's experiences. Ashley's and Veronica's lived information seeking experiences lead to several important conclusions regarding the theory, research and practice of information seeking and IL instruction. Their experiences also suggest avenues for future research as well as implications for the practice of reference encounters and IL instruction.

5.2.1 Implications for research

As Ashley and Veronica neared the end of the exploration phase of their information seeking, their experiences matched what the model would predict. Based on these two narratives, the emotions surrounding information seeking seem to have energized Veronica while blocking Ashley during the critical transition between exploring atopic and formulating a clear, focused direction for targeted searching. These observations may imply that the affective domain of information seeking could be an especially powerful help or hindrance to mature students.

Given this insight, future researchers might wish to focus on common emotions surrounding information seeking and the ways in which those emotions influence success beyond the exploration stage. Nahl and Bilal's (2009) monograph on the role of the affective domain in information behaviour provides an introduction to these issues. Future fruitful work in this area could focus on the transition between gathering information and formulating ideas about it, and the affective factors that may foster or stymie that vital transition.

Also, considering the ways in which Ashley's and Veronica's information searches were both influenced by previous life experiences, it seems possible that mature students' more complex and conflicted attitudes toward higher education in general (Given 2002a) may influence mature students' emotional experiences of information seeking. Ashley's and Veronica's narratives seem to imply this is the case. However, this study indicates that a broader exploration of mature students' emotions surrounding information seeking may be warranted.

In addition, Ashley and Veronica's radically different experiences with information search mediators suggest that both formal mediators (such as librarians) and informal mediators (such as Ashley's boyfriend) play a vital role in seekers' experiences of and success in the information search process. Although a few authors (Limberg and Sundin 2006; McKenna 2009; Shah and Kitzie 2012; Fourie 2013) have explored the issues of formal information search mediation, Ashley and Veronica's narratives suggest that librarians' understanding of the phenomenon may be incomplete.

5.2.2 Implications for practice

If, as is implied by these two interviews, the affective domain can play a make-or-break role at key points in the information search process, then the emotional aspects of information seeking should be addressed in IL pedagogy and curriculum. Instruction librarians often enter the field because of innate talent in and passion for information seeking (O'Connor, 2006). For that reason, academic librarians may actually be less than ideally positioned to guide students who may be more likely to take a 'satisficing' (Warwick et al 2009) approach to information seeking in the small gaps of time between academic, personal, and professional commitments, and who are possibly more vulnerable to the effects of information search anxiety and confusion.

By gaining a better understanding of the emotions of information seeking, the influence of mediators and the practical constraints on mature students' search activities, practitioners may become better equipped to guide students' information seeking more effectively. This study is merely a preliminary step toward understanding the affective information seeking experiences of mature students. However, Ashley and Veronica's experiences could serve as a foundation for future inquiry into the possible influence of personal stress, time, passion, and the ability or willingness to ask for and receive guidance as factors in a successful information search. This line of research could provide instruction and reference librarians with more effective strategies for teaching mature students how to navigate the 21st century information landscape during the university years and beyond.

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