Andragogy refers to theory specific to teaching adults, as opposed to pedagogy, which refers to the teaching methodologies used to instruct children. Popularized by adult educator Malcolm Knowles, andragogy relies on 5 basic tenants: adult learners are self-directed, they possess life experience that informs their learning, they possess a desire to actively participate in the learning process, their learning needs to be relevant to their lives, and they are highly motivated to learn. A review of the literature in library science (specifically library instruction) and adult education aims to arm librarians with a working knowledge of andragogy. This is an especially important undertaking as adult learners are becoming a much larger student demographic at colleges and universities around the world, and the specific needs, characteristics, and anxieties of adult learners are often overlooked. Instruction librarians’ most valuable tool for working with adult learners is bibliographic instruction. Effectively designed sessions can alleviate the library anxiety of adult learners and empower them to become better students.

Keywords: information literacy, library instruction, andragogy, adult education, library anxiety

The library is the ultimate place for independent lifelong learning, where adults have the opportunity to make discoveries and retrieve information that is potentially life changing. In this sense, the library is a venue for progressive adult education, where the “learner takes an active role in learning” and the librarian is more of an information “coach” or guide (Zinn 1999, 27). There is an extremely compatible, yet often overlooked, relationship between the disciplines of adult education and librarianship. Both fields have a historically educational function, both promote personal and societal lifelong learning, and both fields represent a continuum of learning, from self-directed/informal
learning to other-directed/formal learning (Brennan 1999). “The goal of adult educators and libraries converge: empowering the individual for lifelong learning” (Fitzgibbons 1990, 9). Adult learners are a special demographic of students that continues to expand and warrants special attention. If libraries and adult educators can learn more about one another and forge closer and more frequent relationships and collaborations, the adult learner will be better served and truly empowered to succeed in their academic endeavors.

By conducting a review of the last 35 years of literature, in the areas of adult education and library science, the purpose of this paper is to explore the ways in which library instruction, or bibliographic instruction, can be beneficial to adult learners in the higher education setting. Specifically, this review aims to encourage academic instruction librarians to be andragogical librarians, librarians well versed with adult learners, and willing and able to co-create effective learning environments with these students.

Andragogy refers to a school of thought specific to teaching adults, as opposed to pedagogy, which refers to the teaching methodologies used to instruct children. Popularized by adult educator Malcolm Knowles, andragogy relies on five basic tenants: (a) adult learners are self-directed, (b) they possess life experience which informs their learning, (c) they possess a desire to actively participate in the learning process, (d) their learning needs to be relevant to their lives, and (e) they are highly motivated to learn (Merriam and Caffarella 1999).

Arming librarians with knowledge of andragogy is an especially important undertaking for several reasons. Adult learners are an increasing student demographic at colleges and universities around the world, and with so much of higher education focused on traditional on-campus, college-aged students, millennials, and the like, the specific needs and characteristics of adult learners are often overlooked. This is especially true in the library. Librarians often lack the knowledge about the specific needs of adult learners, and adult learners may lack research and technological expertise which could hinder their academic pursuits (Ashcroft et al. 2007; Grassian and Kaplowitz 2001; Holmes 2000; Quinn 2000; Williams 2000; Brennan 1999; Fitzgibbons 1990).

Librarians are key, yet underutilized resources, who can ease the anxiety of these learners and give them tools that will facilitate
their course work. In addition to answering research queries and retrieving information, perhaps the library’s most important service to students is providing library instruction, also known as bibliographic instruction (Grassian and Kaplowitz 2001; Holmes 2000; Brennan 1999; Fitzgibbons 1990). Library instruction is simply explained as a scheduled session where a librarian systematically instructs learners on how to successfully and efficiently manipulate the library’s information resources. Many librarians, who deal primarily with traditional aged college students, may not be aware of the principles of andragogy and, therefore, their instructional endeavors may not meet the needs of adult learners.

Many adult learners are not familiar with the numerous information resources, print or electronic, and have not, if ever, conducted academic research. There may also be a certain level of library anxiety experienced by adult learners who are afraid to ask questions, who do not want to appear unknowledgeable, or who are just overwhelmed by the entire academic research process (Cooke 2006; Atlas 2005; Collins and Veal 2004; Harrell 2002; Veal 2002; Goodson 2001; Grassian and Kaplowitz 2001; Quinn 2000; Jiao and Onwuegbuzie 1997; Fitzgibbons 1990). This fear, and the specific learning needs of adult learners, extends to those students attending classes on campus and those attending at a distance.

While adult education literature often addresses the various support services available to adult learners (i.e., counseling services, tutoring services, the library, etc.), it often does not have an in-depth focus on the importance of the library to the academic pursuits of adult learners, particularly that of library instruction. And, similarly, the library literature has not dealt extensively or consistently with the specific clientele of adult learners on a general level, or how to effectively teach them about library resources. “Adult learners have academic library needs that have not been specifically addressed in either adult literature or library literature” (Hine et al. 1989, 20). And a good deal of the early library literature that dealt with adult education and librarianship pertained to the public library, which serves a very different clientele than the academic library. Also, library literature often recommends better serving adult learners, but does not go the extra step of promoting andragogy.

By exploring the literature in both fields, library science and adult education, and completing a critical review of said literature,
it is hoped that it will be exemplified how librarians and adult educators can work more closely together to better serve adult learners, and that both bodies of literature will be further informed. Academic instruction librarians will also benefit from this gathering of research and find their teaching and outreach endeavors with adult learners more knowledgeable and precise.

**Literature Review**

**Adult Learners**

**CHARACTERISTICS AND REASONS FOR PARTICIPATION**

All instructors, library and otherwise, should acquire and maintain a solid understanding of the adult learner, as adult learners participation in educational endeavors continues to grow and expand. Adult learners differ from traditional learners in responsibility level, and not necessarily age, gender, or other such distinguishers. Traditional students, typically, have not had a significant dormant period in their educational pursuits, attend school full-time, and do not have many of the social responsibilities normally attributed to adults. Adult learners “return to campus with special needs and often under stressful circumstances; they have strengths and deficits as learners that set them apart from traditional-aged students” (Darkenwald 1992, 31).

While many of the quantitative studies found in the literature define adult learners in concrete, numerical terms, adult educator Gordon Darkenwald (1992) defines adult learners through a sociocultural lens; adult learners are not defined by age, rather they are individuals who have “terminated continuous formal education and has assumed the roles characteristic of adult status in society” (30). Darkenwald continues by stating, the “student role is subordinate to other life roles, which is nearly always the case when individuals are focused on their own lives and livelihoods” (30). This sociocultural definition could easily apply to a 60-year-old returning to campus after a 40-year absence, or to an 18-year-old who dropped out of high school.

The National Center for Education Statistics National Household Education Surveys Program, who defines the adult learner as a civilian, non-institutionalized adult, 16 years of age and older, pursuing formal education (in which an instructor is present) on
a part-time basis, in an effort to pursue work and non-work related goals (Creighton and Hudson 2002; Kim et al. 2004; O’Donnell 2006), maintains that the number of adult learners furthering their education has steadily increased since the 1960’s when researchers Johnstone and Rivera conducted their 1965 benchmark study of adult education trends at the National Opinion Research Center in Chicago (Merriam and Caffarella 1999; Creighton and Hudson 2002).

Participation has increased in all specific subcategories of adult learners; participation has increased for men, women, and racial and ethnic minorities, regardless of their age, education level, or occupation (Creighton and Hudson 2002). There has also been increased participation by immigrant populations. And, as technology in society continues to grow and change, more women work outside of the home, and the population continues to age, the demand for adult education continues to be very necessary (Kim et al. 2004). Job obsolescence, job competition, employment longevity, acceptability of career changes, higher personal aspirations, professional advancement, the need for socialization, cognitive interests, and an increase in leisure time and disposable income, also factor into the reasons why adults continue to pursue education (Maehl 2003; Holmes 2000; Cross 1991). Adult learners pursue a variety of educational subject areas, including Adult Basic Education (ABE), English as a Second Language (ESL), vocational and technical training, computer technology, and work-related and personal topics of interest (Kim et al. 2004). Subsequent studies conducted by the National Center for Education Statistics, which utilized random telephone surveys and interview to solicit data, revealed that adult education participation levels in the United States had reached 40% in 1990, 45% in 1999, 46% in 2001–2002, and 47.6% in 2004–2005 (Creighton and Hudson 2002; Kim et al. 2004; O’Donnell 2006).

BARRIERS, MENTAL MODELS, AND ANXIETY

Whatever benefits adult learners may reap in their pursuit of education, there are fears, anxiety and mental barriers to overcome, which will hopefully not overwhelm or squelch learner motivation and success. Barriers, or mental models, that can hinder an adult learner vary, and can stem from different origins. Barriers could be cultural, with an adult learner feeling like an “other”
(Ross-Gordon 2003), particularly if an adult learner has a negative self-image or lacks self-confidence. Excessive life obligations, fear of technology, fear of inadequate study and cognitive skills, fear of achieving poor grades, or perceived competition with younger, traditional undergraduate student are additional mental barriers faced by adult learners (Holmes 2000).

Barriers could also be physical, with the learner experiencing visual, aural, or mobility issues that could affect their performance (Knox 1986), and barriers could even be environmental if the physical classroom is uncomfortable and not arranged in a conducive manner. Other barriers include course content that is not immediate or irrelevant, resentment due to being forced into the learning environment, low education levels, low confidence levels, general fear of change and new experiences, being overwhelmed with a new situation and information, and mental distractions (Rogers 2002; Cross 1991; Knox 1986).

Adult learners are typically more mature and have greater life experience, “but they may also have formed fixed convictions that restrict their openness” (Maehl 2003, 1814). These convictions could include a deep emotional investment in prior knowledge and experiences, prejudices, and old habits. While prior experiences provide grounding for an adult’s self identity and can provide a substantive and beneficial base for future learning, past experience can “create biases that can inhibit or shape new learning” (Knowles et al. 1998, 139). An example of this type of barrier would be library anxiety, where a learner allows a prior negative experience in the library to preclude future research and interactions with library staff. With these types of barriers, some “unlearning” (Rogers 2002), “unfreezing,” or “relearning” (Knowles et al. 1998) may be required, and the learner, in conjunction with their instructor, will have to work to reexamine their existing beliefs and open themselves to new information and experiences. If these barriers cannot be overcome, it is possible for learners to withdraw physically and emotionally from the educational experience.

There are many ways for library and classroom instructors to assist adult learners in overcoming mental barriers and anxiety. Strategies can range from the very simple (adjusting the lighting, temperature and seating in a room) to the more complex (helping an adult learner regain their confidence in the classroom).
Above all, instructors should have respect for their adult learners, and they should make concerted efforts to relate the classroom to the outside world and establish personal connections with learners (Kasworm, Polson, and Fishback 2002). The psychological climate of a room is just as important as the physical and intellectual climates; the learning environment should be open, trusting, respectful, safe, and hopefully engaging.

**ANDRAGOGY**

Andragogy, popularized in United States adult education by Malcolm Knowles, is actually a European concept that means “the art and science of helping adults learn” (Tight 2002, 112). Linked strongly to the concepts of experiential learning and self-directed learning, andragogy differs from pedagogy, which encompasses methodologies specific to how children learn. Initially put forth by Knowles as a theory of adult learning, it was heavily criticized by other scholars in the field (Rogers 2002; Tight 2002; Merriam and Caffarella 1999; Knowles et al. 1998; Pratt 1993; Cross 1991; Feuer and Geber 1988; Pratt 1988; Knox 1986) for being overly simplistic, dated (Tight 2002), and too broad (Knowles et al. 1998). It was also criticized for focusing only on the psychology of the learner and not taking into account the learners’ life circumstances that could affect learning, as well as for not considering the social factors that can affect learning. “Knowles never proceeded to an in-depth consideration of the organizational and social impediments to adult learning; he never painted the ‘big picture.’ He chose mechanistic over the meaningful” (Grace, as quoted in Merriam and Caffarella 1999, 276).

The “theory” of andragogy was criticized for implying that all adult learners are self-directed and that children are not, and for lacking “the reflective, personal and serendipitous aspects of adult learning, while suggesting a reductionist and behavioristic, competency-based approach to practice” (Tight 2002, 113). Arguing that andragogy was not a theory, it was subsequently reclassified as “principles of good practice” or a “set of assumptions,” a “set of guidelines” (Knowles et al. 1998), and as a “philosophy” (Pratt 1993).

Knowles subsequently revised his discussion of andragogy in 1989, relabeling andragogy “as a model of assumptions about learning or a conceptual framework that serves as a basis for an
emergent theory” (as quoted in Merriam and Caffarella 1999, 274). Andragogy and pedagogy are now viewed on an educational continuum as opposed to being viewed as distinct and unrelated concepts.

Despite the controversy, the bottom line is that andragogy has promoted awareness for the field of adult education and of adult learners and their needs; it gives adult educators a purpose, and it provides “an alternative to the methodology centered instructional design perspective” (Feuer and Geber, as quoted in Knowles et. al. 1998, 1). The tenants of andragogy should be viewed in conjunction with other theories, models and educational endeavors to facilitate adult learning. Andragogy is not intended to define the field of adult education. Andragogy “presents core principles of adult learning that in turn enable those designing and conducting adult learning to build more effective learning processes for adults” (2). This is precisely why andragogy is so relevant and important to bibliographic instruction and library services, it makes librarians aware of adult learners and provides a model for the effective design of instruction and services.

BIBLIOGRAPHIC INSTRUCTION / LIBRARY INSTRUCTION

Bibliographic instruction, or library instruction, has a rich history and tradition in libraries, particularly in the academic library. Typically described as formal instruction sessions conducted by academic librarians, bibliographic instruction (BI) classes attempt to teach students how to use the library and its resources. BI classes are based in the physical library, are tool or resource based, are focused on the mechanics of using said resources, and are usually tied to course assignments (Grassian and Kaplowitz 2010; Grassian 2004; “Information Literacy Glossary” 2006; “Guidelines for Instruction Programs” 2003). Among the longstanding goals of bibliographic instruction are: (a) that students develop the art of discrimination to be able to judge the value of books to develop critical judgment, (b) that students become independent learners and learn how to teach themselves, and (c) that students continue to read and study and become lifelong learners (Robinson, as summarized by Brennan 1999). Bibliographic instruction sessions are important tools for campus outreach and library public relations, but most importantly, they are
pedagogical tools that enable students to make the best of their academic endeavors.

Instruction or teaching librarians are typically not andragogical in their teaching styles; this circumstance could have several origins, including that many instruction librarians deal primarily with traditional aged students, and they are not aware or knowledgeable about andragogy and adult learners. But, as adult learners continue to pervade college and university campuses in great numbers, libraries and their instructors must get up to speed and be ready, willing, and able to instruct this distinct population of learners. So, in effect, many librarians are going to have to strive for a transformative learning experience and become andragogical librarians.

THE CHANGING ROLE OF THE LIBRARIAN

No longer are librarians bespectacled, shushing, old ladies, who retrieve information and have minimal contact with learners. As the demographics of our country change, so are our campuses, and thus our libraries. The library profession has witnessed a paradigm shift in what it means to be a librarian in a teaching environment (Kobzina 2010; Kesselman and Watstein 2009; Hall 2008; Gold 2005; Hearn 2005; Vella 2002; Grassian and Kaplowitz 2001; Currie 2000; Holmes 2000; Quinn 2000; Brennan 1999; Fitzgibbons 1990). Librarians are evolving and changing “roles from information provider to learning facilitator” (Gold 469); librarians are now personal pathfinders (Holmes 2000), collaborators with faculty, facilitators, learning counselors, consultants, and embedded course assistances who are “helping adults learn how to learn” (Smith, as quoted in Fitzgibbons 29). John Dewey nicely sums up the role of the instruction librarian by stating, “the library is a school, and the librarian is in the highest sense a teacher” (Dewey, as quoted in Brennan 17).

ADULT LEARNERS IN THE LIBRARY

As instruction librarians become more andragogical in their approach, they find themselves presented with several different types of adult learners (Goodson 2001; Heller-Ross and Kiple 2000; Holmes 2000; Veal 2000; Williams 2000; Knowles 1975). Re-entry students, graduate students, and distance learners have
many similarities, but the instructional approach for each group can vary.

Perhaps the largest contingent of adult learners that an instruction librarian may encounter, re-entry students are adult students returning to school after an extended absence, with a specific goal in mind. They are seeking education to secure a career change, a promotion, or just job security. These learners also attend classes because they understand their own life circumstances and their need for new knowledge, and many want to learn just for learning’s sake (Holmes 2000). Such adult learners have already formed their life identities and have an appreciation for the refinement further education can provide them, and as such, re-entry students have a “heightened eagerness to receive instruction and an increased receptivity to the acquisition of new skills” (130). With this in mind, librarians not only need to be acutely reactive to these learners but proactive in their attempts to assist them.

Re-entry students may have less technological knowledge, particularly when it comes to searching for and retrieving information. These adult learners need to learn how to use new resources efficiently and frequently. And, given their life obligations and time constraints, they will need to learn how to use the library’s resources from off-campus or at a distance. When instructing these learners, instruction librarians should strive to make the learning meaningful, immediate and relevant to their needs and should strive to address broader information needs. “Instruction for re-entry students needs to be student-centered, life and situation based, beginning and ending in the experiences of the student, and connected to their real and immediate needs” (Holmes 2000, 135).

Most instruction librarians are familiar with graduate students. Graduate students comprise a slightly different demographic to adult learner as they are already versed in their academic content and the culture of higher education. However, that is not to claim that they know how to use the library and conduct higher level research. Librarians cannot assume that these adult learners know, or ever knew, how to use the library (Williams 2000). Graduate students may require more direction and guidance in how to use the resources, more experiential learning, and they require instruction on how to search libraries in general (not
just the one on their campus) as they search for the specialized information needed for theses or dissertations.

Distance learners are becoming more and more prevalent and pose a particular challenge to instruction librarians as they need to develop an effective means of instructing learners they may never see in person. Distance learners maintain more geographic and physical access barriers than other adult learners. Often graduate students, distance learners seek further education for job placement and advancement (Heller-Ross and Kiple 2000). Distance learners are especially prone to anxiety and require great flexibility and alternative modes of contact, service, and instruction from libraries (Cooke 2006; Atlas 2005; Collins and Veal 2004; Harrell 2002; Veal 2002; Goodson 2001).

LIBRARY ANXIETY AND TECHNOSTRESS

Libraries are often perceived as overwhelming and often as “secretive, mysterious, and anxiety-producing places (Grassian and Kaplowitz 2001, 90). Library anxiety can affect all adult learners, not just distance learners, and can be a particularly difficult problem for librarians, instruction, or otherwise (Jiao, Collins, and Onwuegbuzie 2008; Jiao, Onwuegbuzie, and Waytowich 2008; Carlile 2007; Gross and Latham 2007; Kwon, Onwuegbuzie, and Alexander, 2007; Cooke 2006; Atlas 2005; Collins and Veal 2004; Harrell 2002; Veal 2002; Goodson 2001; Grassian and Kaplowitz 2001; Quinn 2000; Jiao and Onwuegbuzie 1997; Fitzgibbons 1990). A type of mental barrier, library anxiety could prevent an adult learner from ever using, or abandoning the library or its resources. Originally defined by researcher Constance Mellon, library anxiety is “an uncomfortable feeling or emotional disposition experienced in a library setting that has cognitive, affective, physiological, and behavioral ramifications. Library anxiety is characterized by negative emotions including tension, fear, feelings of uncertainty and helplessness, negative self-defeating thoughts, and mental disorganization, all of which have the propensity to debilitate information literacy” (Mellon, as quoted in Jiao and Onwuegbuzie 372–73).

Library anxiety can stem from many things, including a prior negative experience in a library, the advent of new electronic tools and information resources and the learning curve associated with using them, the fear of failure, low levels of academic confidence,
impatience and other time constraints, and the reluctance to ask for assistance because of embarrassment (Fitzgibbons 1990). This anxiety can also be a direct result of a not knowing that they can ask questions and request assistance in the library, the learner’s pride and reluctance to admit that there is something they do not know (Atlas 2005).

Jiao and Onwuegbuzie (1997) concluded that there are five components of library anxiety: (a) barriers with staff, (b) affective barriers, (c) comfort with the library, (d) knowledge of the library, and (e) mechanical barriers. They also discovered that the highest levels of anxiety are associated with the use of technology. The authors recommend that librarians acknowledge library anxiety and confirm that library instruction is an effective tool in combating this barrier.

Expounding on the anxiety associated with the use of technology, Quinn describes the phenomenon of technostress, which is defined as “a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner” (Brod, as quoted in Quinn 2000, 50). Technostress, like general library anxiety can be more acute in adult learners, who must not only acquire new academic knowledge and complete assignments, they must also learn how to navigate an entirely new technological system and language. Lack of technology skills can indeed serve as a handicap to learners. Quinn also relates technostress to adult learners’ emotions and fear of failure and rejection, to which librarians need to respond and counteract. The author recommends interactive library instruction as a means of combating technostress. As adult learners actively participate and learn, they will gain confidence and independence with navigating the library and technology tools.

EFFECTIVE BI FOR ADULT LEARNERS

Instruction librarians would be well served to glean strategies and methodologies from the education literature and from the model of andragogy. Certainly, there cannot be an absolute fit between traditional classroom instruction and library instruction as there are several fundamental differences. Library instructors do not instruct in an academic area, rather they instruct learners how to best utilize the library’s resources to suit their academic disciplines. Library instruction is also typically very brief (anywhere
from 30 minutes to two hours) and occurs one time, what is referred to as a “one-shot” class (Holmes 2000). In addition, library instruction can range from informal tours and orientations, to basic library skills classes, to course related classes, to formal for-credit library and research classes (Brennan 1999). So, although strategies employed in adult education classrooms may not always be applicable to the library classroom, the underlying principles are beneficial and will serve instruction librarians well.

Adult learners are multi-taskers, with responsibilities of work, family, and school, and, consequently, they want pertinent information and assistance from the library and have little time to experiment. Conversely, these students are motivated to improve their education, have a great interest in their course of study, and are fairly open-minded to new ideas. Library services created specifically with adult learners and andragogy in mind are more effective and interesting (Ward 2006; Caravello 2001). To that end, a goal of bibliographic instruction is to address these needs, and many factors contribute to the creation of such a successful session. Key components include praxis, immediacy, and engagement, with the idea of creating relevant content and strive to have the learners interact with and utilize that content effectively and repeatedly.

Adult educator Jane Vella (1994, 2002) discusses a variety of educational virtues that work in tandem to create a conducive and holistic learning environment; praxis, immediacy, and engagement are three of these virtues.

The virtue of immediacy suggests a learner-centered classroom with a level of spontaneity, and a freedom to address learner needs on the spot. This is in direct opposition to the traditional banking system of education, which was described by Paulo Freire (Vella 2002). Vella states, “adult learners need to see the immediate usefulness of new learning: the skills, knowledge, or attitudes they are working to acquire” (19). Vella also states that “most adults do not want to waste time” (19). Adults are willing to work and know that it is necessary to receive reinforcements but “we want to see something in hand as soon as possible” (19). Malcolm Knowles theorized that “as a person matures, his time perspective changes from one of postponed application of knowledge to immediacy of application” (Smith para. 14).
Making the content immediate for learners sets the stage for their engagement and participation in the class. Knowles noted the importance of the “enthusiasm and commitment of participants” in the learner environment and process (Smith para. 11); this enthusiasm and collaborative spirit between instructor and learners is powerful and contributes greatly to an engaging and dynamic learning interaction. Immediacy is especially important for the adult learners in the library classroom, who are operating within margins and may be feeling ambivalent about attending a library instruction session. Immediacy provides the crucial spirit necessary to produce positive and effective teaching and learning interactions.

A second important virtue that contributes to a successful learning environment in the library is engagement. When engaged, learners co-create knowledge with their instructors and have a consultative voice in the educational process. Engagement invites creativity and participation, and this type of learning environment differs from traditional, formal learning environments, engagement is the sole responsibility of the learner (Vella 2002). Traditional learning, which consists of rote learning and memorizing information, is not compatible with the way adults learn. Engagement requires intense and continuous work to maintain currency (Hill 2001). When educators teach in an effort to cover a set curriculum, the opportunity to engage students in more effective and significant learning is often missed (Vella 2002).

If adult learners and instructors are to be co-creators of knowledge, both should be contributing to the learning process and interacting with the content. As part of this interactive process, all participants should be fully connected with the content and what is going on in the classroom. Certainly engagement is tied to the immediacy of the content; if the content is relevant and interesting, it will be easier for students to interact with the content, reflect upon it, and make it their own. When a learner owns a concept or piece of information, it becomes a permanent part of their knowledge base, it becomes reusable, and the learner is able to apply that knowledge to future situations or informational needs (one of the goals of information literacy).

The virtue of engagement has been shown to be crucial in the way knowledge is produced, evaluated, and legitimized. Vella
states that, “our job in adult education is . . . to engage adults in effective and significant learning” because “without engagement there is no learning” (1994, 238). Adult educator Jack Mezirow also supports the virtue of engagement by stating, “without the expression and recognition of feelings participants will not . . . begin critical reflection” (Baumgartner 2001, 18).

Jack Mezirow’s cognitive rational approach in adult education describes ideal conditions for transformational learning as “including the need for ‘a safe, open and trusting environment’” (Baumgartner 2001, 20). Mezirow’s theory describes people engaging in “critical reflection,” “reflective discourse,” and “action on the new perspective.” This is praxis. Vella states, “doing is the way adults learn anything. . . . praxis is doing with built in reflection” (1994, 14). Praxis, which is the Greek word for “action with reflection” (126), is a way for instructors to convert the knowledge they are teaching into actions that the students can demonstrate, and is a process of learning and reflecting on what was learned by repetition, revising or recreation. Mezirow concurs with this notation of praxis, claiming that people “engage in ‘reflective discourse’” which means “they talk with others about their new perspective” and they take the perspective and create an “action on the new perspectives” (Baumgartner 17). Adult learners tend to perform praxis in their daily lives by engaging in actions and looking at the implications and consequences of those actions. Vella believes that, “doing is the way adults learn anything: concepts, skills or attitudes” (14). She proposes “engaged learners do learning tasks using new content and then do further learning tasks to reflect on what they have completed” (Vella 2002, 115). Engagement of learners can lead directly into praxis, and the combination of these virtues can assist greatly in the creation of an effective andragogical library instruction environment.

CREATING A LEARNING ENVIRONMENT

One of the ideas heavily stressed in the study of adult education is that the learning environment should be student-centered and adult learners should have a consultative voice in the educational process (Vella 2002). The more learners are involved in the process, the more they will take away from the learning experience. Vella advocates a holistic perspective of the educational process by stating, “The whole is far more than the sum of its
parts. Learners learn more than what we teach” (30). The learning environment co-created by adult learners and their instructors is more than just content and encompasses all aspects of the physical room, information, and the people involved in the process; educators must be aware of the ever changing dynamics that exists in a classroom, a delicate balance of many elements that can change at any time. With the phenomenal growth of online education in recent years, the concept of creating a learning environment takes on new meaning and nuance (Bozeman 2009; Davis and Smith 2009; Dewald 2009; York 2009; Mulherrin 2005), especially when considering the role of the library and information literacy.

Similarly, the Middle States Commission on Higher Education states that “Information literacy is much more than technological competence or on-line research. It encourages critical thinking and reflection in the context of the increasingly extensive amounts of information now available through a wide range of technologies” (Middle States 2003, 2). The bibliographic instruction and information literacy processes, just like the adult education process, are about more than just the content being presented; they are about the adult learner, the instructor, the content, the technology, the classroom dynamics, and the entire learning experience as a whole.

Conclusion

A review of the adult education and library literature, as they pertain to adult learners and library instruction, has revealed that adult learners have unique needs, they have library anxiety and a variety of barriers that affect learning, libraries, and librarians have to be proactive and compassionate when approaching them, and andragogical and experiential learning models should be utilized when designing instructional resources and services for them. The review also yielded information about library anxiety and confirms that bibliographic instruction is an effective tool in combating this dilemma.

Future research will benefit from empirical studies and case studies documenting specific instruction and information literacy initiatives targeted toward adult learners. An area of specific concern is the provision of information literacy instruction in
the online learning environment, in both synchronous and asynchronous learning course modules.

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