

Final Examination
EAD 861

**Adult Learning
Final Examination**

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Question 1 - Using the research and theory you have studied in this course, think about and reflect upon your own context as a learner and as a person who facilitates or may facilitate learning among adults. Describe the set of beliefs and assumptions that currently make up your personal theory of adult learning. Organize this essay around the following questions, framing each of your responses within the appropriate literature we have studied:

a. Who or what is the adult learner? What characteristics or attributes of the adult are important to consider in the process of helping adults learn? To what extent is the adult as a learner qualitatively different than learners who are children or youth?

b. In recruiting or motivating adults to participate in educational or training programs in your area, what are the key issues or factors you need to address? What are some of the factors that might influence your learners to decide not to participate or to complete their programs?

c. What does it mean to "learn?" What theories of adult learning inform your understanding of how adults learn? What do these theories say about the *process* by which adults learn? What factors significantly influence or shape the nature of this learning process? (Please note that this question is not specifically asking for *instructional strategies* that are appropriate for adults. Rather, you are to describe the *processes* through which you believe adults learn; i.e. what learning theory, theories, or theoretical concepts reflect your understanding of how adults learn and why).

“The question is no longer whether adult learning is needed, and how important is it. The issue today is how to respond to this increasing and diversified demand, how to manage this explosion” (Belanger, 1996, p. 21). In my mind, an adult learner is any person who reaches the age of majority, usually eighteen years, who is substantially providing for his/her own livelihood and well being and who is interested and motivated to learn. There are more adults in our society than ever before with 72.5% of the population over 18 years of age and with a median age of 36.7 years according to the U.S. Census Bureau’s 2008 projection. This clearly illustrates that adults are the majority audience for education. Companies want graduates not who know everything, but who have the capacity to learn. Today’s adult learners need to be lifelong learners, changing to meet the demands of our rapidly changing societies, where the old manufacturing jobs often disappear only to be replaced by new higher tech positions.

So how are adults different from youthful learners? “The major difference between adults and younger learners is the wealth of their experience” (Taylor, Marienau and Fiddler, 2000, p.7). The capacity for critical thinking or transformational learning is what distinguishes adults (Vaske, 2001). Another point of separation is that a majority of adult learners are working in full or part- time jobs and childcare is considered an important barrier. Working students must attempt to balance their educational needs with their employment demands, a situational barrier. This creates a significant personal challenge that educators should acknowledge and respect. However, cost is the most significant barrier to retention in education (Hengstler, Haas, and Lovacchini, 1994). These factors combine to create uniqueness in adult education. Adult learners

have different motivations, expectations and challenges when compared to youthful learners.

As my understanding of adult learners has evolved, I have learned that motivation is a key metric in the process. "Motivation is the most overlooked aspect of instructional strategy" according to Keller's ARCS Model for Motivation. ARCS stands for Attention, Relevance, Confidence and Satisfaction, which Keller synthesized from existing research in 1987. It is often suggested that Keller's ARCS model be incorporated with Gagne's Nine Events of Instruction (1965) for a more complete and accurate view. Gagne is considered the foremost researcher and contributor to the systematic approach to instructional design. Gagne is known as a behaviorist, and his focus is on the outcomes - or behaviors - that result from training.

Understanding participation and barriers is key factor interwoven within adult education that educators must consider. Cross (1981) classified barriers into three categories: situational, institutional and dispositional. Situational barriers arise from one's situation in life. This could include barriers such as childcare needs, work demands and/or marital situation. Institutional barriers are those that exclude or discourage working adults from participating in educational activities. Inconvenient work schedules, inflexibility, fees and inappropriate course offerings are examples. Dispositional barriers are negative attitudes and perceptions about returning to school that limit a student's successes (Brookfield, 1986; Charner, 1980; Charner & Fraser, 1986; Cross & McCarthan, 1984; Thiel, 1984). Family, friends and coworker's attitudes toward education are powerful peer forces affecting the decision to enroll and/or remain in

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school. Understanding and managing barriers will improve student motivation and participation in educational activities.

So then, now that we have identified adult learners and considered their uniqueness in motivation and barriers to learning, perhaps we should discuss learning. What does it mean to learn? Merriam-Webster dictionary defines learning as: 1) the act or experience of one that learns; 2) knowledge or skill acquired by instruction or study; 3) modification of a behavioral tendency by experience (as exposure to conditioning). A common definition of learning in the 1950's was simply "that learning is a change in behavior." Learning has now been divided into five major categories: behaviorist, humanist, cognitivist, social cognitive and constructivist. A brief summary of these segments is shown below.

	Behaviorist	Humanist	Cognitivist	Social Constructivist	Constructivist
View of learning	Change in behavior	Personal act to fulfill development	Information processing	Interaction .observation of others in social context	Construction of meaning from experience
Purpose of learning	Behavioral change	Self-actualized	Develop capacity to learn	Learn new roles	Construct knowledge
Theorists	Pavlov, Skinner	Maslow, Rogers	Bruner, Gagne	Bandura, Rotter	Dewey, Piaget
Instructor role	Arrange environment	Facilitate development	Structure content	Model and guide new roles	Facilitate/negotiate meaning-making
Focal point	Behavior objectives	Self-directed learning	Learn how to learn	Socialization-mentoring	Experiential learning

While there are dozens of theories on learning, these represent the main collective body of work. My view of learning is generally aligned with Malcolm Knowles' six assumptions (Knowles, 1980 & 1984). Knowles professes that the learning environment should cause "adults to feel accepted, respected and supported" with a

“spirit of mutuality between teachers and students as joint inquirers” (1980, p.47). In my teaching of adults, the use of these assumptions has yielded the best learner outcomes and created the best educational environment. While many have criticized Knowles’ andragogy, it has proven to be an enduring model in adult education. I also find myself aligning with Jarvis’ Transformation of the Person Through Experience (Jarvis, 2006 p.16). He describes the learning process as where the ideas of thinking, doing and feeling (experiencing) are used in conjunction with critical thinking, problem solving and reflective learning. I like this model because it represents the continuous learning that I employ in my simulation center learning environment. I use these elements in creating a safe learning environment in my simulation center. Demonstrating respect for my learners with a supportive attitude often reverses student’s previous negative learning experiences. I create challenging scenarios requiring critical thinking and problem solving, including the demonstration and performance of skills. The learners interact with the simulated patient, demonstrating personal and team communication. They must assimilate available facts, including presenting signs and symptoms to reach a diagnosis and the development of a treatment plan. Following their treatment plan, they must then provide the needed medical care, re-assessing the patient for change. The simulation environment allows for a multi-level approach to education. I often refer to Blooms Taxonomy when discussing simulation’s educational value. As described above, we are able to explore learner knowledge, comprehension, application, analysis, synthesis and evaluation within our sessions.

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I have little experience in formal self-directed learning, so I found this area of great interest. Self-directed learning is best described as a method where the learner is the primary initiator for the planning; execution and evaluation of his/her own learning. In my view, less formal self-directed learning goes on daily, where adult educate themselves in their individual areas of interest. This could include hobbies, sports, home repairs or construction. As I reflect, I suppose I have more experience in this area than I realized. I have learned to build a deck, build a computer from parts, rebuild small engines and do some simple investing, although recent results should not be used to judge success. I have had not formal education in these areas, but sought out the requisite knowledge through research and made direct contact with experts for support and guidance. I find Garrison's (1997) collaborative-constructivist model to be simple, direct and representative of my view.

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Question 3 Age-related changes are thought to be significant influences in why adults learn and how they learn. We studied various forms of difference that illustrated biological, intellectual, cognitive, and psychosocial or socio-cultural differences. a) Identify a form of difference for each of these categories (one of each -four altogether) that you feel are important to consider in adult learning; b) briefly describe the overarching theory and theorists which have been used to help develop our understanding of this form of difference; c) identify defining attributes of each form of difference, and d) describe why it is significant in why adults learn and how. As you develop your response, be sure to provide evidence from the research that supports each claim, as well as illustrations from EAD 861.

In studying age related changes in adult learners, I learned that biological changes are a significant factor to be considered in the educational process. We all know that biological change is a fact of life. I had not thought about the educational impact on adult learners prior to this class. The life expectancy in the United States is 78.1 years according to the Central Intelligence Agency's World Factbook. As life expectancy increases and lifelong learning increases, the effects of our physiologic (biological) changes become more relevant to education. Ethnicity plays an important role in some of these biological changes. Men of color are more likely to suffer from hypertension, lung disease, colorectal cancer and others than Caucasians. The overall effect of these specific disease processes on learning is largely unknown, but some physical changes have been shown to affect learning. Declines in the ability to see and hear can create problems in learning. The ability to perceive small changes in printed material and on computer screens is one notable problem. Between the ages of forty and fifty years,

many adults notice a change in their close vision. This results from the lenses becoming denser resulting in a loss of elasticity of the lenses (Meisami, Brown & Emerle, 2003; Stuen & Faye, 2003). Most of us correct this with eyeglasses. Eye surgeries such as Lasik and Radial Keratotomy have become more widely accepted over the past twenty years, eliminating the need for glasses in most cases. As the aging process continues, the eye requires additional light to see clearly. Additionally, depth perception, color vision, sensitivity to glare and adaptation generally decline with age. These vision changes need to be considered in educational design allowing for reasonable and adequate accommodation for adult learners. Room lighting is a direct example to be considered. Hearing is another physiologic change commonly associated with aging. Hearing loss is a progressive but gradual process generally starting in the thirties (Bee & Bjorkland, 2004). Most adults do not notice any discernable change until their fifties and sixties, when sounds, especially in the high-frequency range, become difficult to hear (Kline & Scialfa, 1996). The basic cause appears to be from “gradual changes in the inner ear” that result in structures in the inner ear becoming less responsive to sound (Rados, 2005, p22).

Hearing devices may be assistive, however most adults do not use them either out of denial of the problem or because they do not want to “look old”.

Intellectual changes occur with age as well. The central nervous system includes the brain and the spinal cord. Research is ongoing on the affect of the aging brain and the plasticity of the neurons, which increase their connections although there is a decrease in their numbers as we age. This plasticity allows the brain to maintain much of its

function (Bee & Bjorkland, 2004; Timiras, 2003). Brain scans have shown that deficits in one area of the brain may be compensated for in other areas (Cabeza, Anderson, Locantore & McIntosh, 2002; Reuter-Lorenz & Lustig, 2005). A consistent finding related to changes in the central nervous system concerns declining reaction time as people age (Bee & Bjorkland, 2004; Schaie & Willis, 2002). This reaction time can affect the educational setting when older adults are learners. Teachers need to be cognizant of this variation in older aged students. The question remains whether intelligence declines with age and many adults wonder if they will be less “with-it” as they age. The research is ongoing; the answers are mixed and are often controversial.

The fear of memory loss is a common concern of people as they age. My grandmother suffered from Alzheimer’s disease and my mother was her primary caregiver. Not knowing if the disease was genetic caused my mother a great deal of concern. She was constantly uneasy about the potential of her repeating this devastating illness and becoming a burden on her children. In the end, she did not. Often, memory functions are equated with learning or are seen as one of the primary mental processes associated with learning (Hoyer & Roodin, 2003). It is logical that if a person’s memory declines that a failure in the learning process will follow. How we process information is integrally related to the cognitive processes involved in memory. Usually the memory process is divided into three phases (Anderson, 2005; Ormrod, 1999; Schacter, 1996). Encoding is the initial phase where information is entered into the system. Filing of this information for future use is termed the storage phase. Retrieval is the final phase when the information is recalled for use. It is generally accepted that certain memory

functions decline with age. However, there are significant difficulties with study methodology and variables. Because the different age groups being studied have grown up in different historical and cultural circumstances the conclusions become questionable. Although the focus of the research is memory and aging, some of the authors of these memory and aging studies do not define *older adult*, not even in terms of age ranges (Naveh-Benjamin, Hussain, Guez & Bar-On, 2003; Rodgers & Fisk, 2001). Another concern about the research has been that the tasks and skills are generally artificial and out of context of everyday life. It is important to acknowledge adult learners prior knowledge and experiences, and to be aware that a decline in memory function is not a natural part of aging. Educators should be aware of this memory stereotype and combat it in their educational efforts.

Learning style and cognitive style are important concepts to discuss here. Cognitive style is the combination of your informational processing characteristics combined with your underlying personality traits. This might be described as the way you see and make sense of the world. Some people tend to look at problems from a global perspective, while others are more interested in taking in the detail (Flannery, 1993). Although a great deal of research has been done on cognitive style, most of this has involved children with little implication for adult learning. Learning style “attempts to explain learning variation between individuals in the way they approach learning tasks” (Toye, 1989, pp. 226-227). Learning style can be separated by the focus on the practical learning situation versus cognitive style’s focus on perception, organization and information processing. Kolb developed the Learning Style Inventory, which is

commonly used tool to assess learning styles in adult education. He categorizes the styles into four categories; accommodators, divergers, convergers and assimilators (Kolb, 1984, and Kolb & Kolb, 2005). Learning style may also be at least in part culturally based. Anderson (1988, p. 4) says “it would seem feasible that different ethnic groups, with different cultural histories, different adaptive approaches to reality, and different socialization practices, would differ concerning their respective learning styles.” Educators should be sensitive to this imperative in their settings, being careful not to assume that everyone is as they are. I find this to be particularly true when encountering a multi-national audience with various cultures represented. I must force myself to pause and reflect on how I am received and perceived by learners from other cultures. When considering the use of learning style inventories, one should be cautioned, “although various authors claim strong reliability and validity for their instruments, a solid research base for many of these claims does not exist” (James & Blank 1993, p. 55). Thinking styles (Sternberg 1994) is another term, which is very similar, if not identical to learning styles. He defines thinking styles as “a preferred way of using one’s abilities. It is not in itself an ability, but rather a preference. Hence, various styles are not good or bad” (p.36). He further asserts that instructors are best at teaching people who match their own style of learning and thinking.

A final area to be explored is the psychosocial element in adult learning. This includes factors such as race, sex, class and culture and their effect on learning. Adults hold some type of social position in the community. Their life is defined by a number of factors such as if they work, where they work, what position they hold, family and

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relationship status, community related stature as well as learning position.

“Learning...is about the continuing process of making sense of everyday experience” (Jarvis 1992, p. 11). In my healthcare setting, nearly all clinical practitioners need to participate in continuous re-education to keep up with the advances in healthcare and its technologies. A hospital is social by its nature and is highly interpersonal between staff, patients and families facing dynamic healthcare challenges. Each person’s ability to function depends on what others do and how several other individuals performed their part of the equation. These healthcare partners come from a wide variety of races, classes, backgrounds, cultures and communities. Reaching a commonality is an ongoing challenge where team dynamics and team communication is involved. These issues present major educational projects in our system that reach to the heart of patient safety, our number one goal.

I have found that theory and research discussed in class have been of great value to my everyday practice in adult education in healthcare. I have a new depth of understanding of the educational approach and a new respect and appreciation of adult learners.

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Question 4. The notions of self-directed learning, reflection, and learning from and through experience occupy critical locations in the research and theory on adult learning. They are also central theoretical notions to emerging ideas of transformative learning. They are also central theoretical notions to emerging ideas of transformative learning. Using the research and theory studied in this course, a) Define what is meant by each of these terms or concepts (self-directed learning, reflection, and learning from and through experience), identifying a model or theory for each in your definitions that you feel best describes or reflects the process in adult learning; b) Suggest the ways in which these ideas (SDL, reflection, and learning from experience) are theoretically manifest in our understanding of learning as transformative (i.e., are illustrated in our theories of transformative learning); and c) Identify and briefly describe incident from your experiences in EAD 861 this past semester that you feel illustrates these terms and their inter-relationship with transformative learning or at least the potential for transformative learning. Be sure to define your terms and be specific in your use of examples that serve to illustrate your argument.

No longer can educational systems hand knowledge to the next generations; rather, schools from primary through university must develop the conditions, foundations and motivation for people to see learning as their own responsibility and motivation (Schrader-Naef, 2000, p. 144). Lifelong learning is becoming a professional necessity and formal training is only the beginning of a path of a continuous education and modification of knowledge. Yet self-directed learning (SDL) is a multifaceted matter. According to Lowry (1989), SDL is "a process in which individuals take the initiative to diagnose their learning needs, formulate learning goals, identify resources, select and implement learning strategies and evaluate learning outcomes" (p.98). Self-Directed

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Learning is based in the autonomous, independent individual who chooses to undertake learning for personal growth (Merriam and Caffarella 1999). Candy (1987) usefully distinguished three meanings of the term "self-directed learning:" autonomy as a personal quality; autodidaxy as learning outside formal instruction; and learner-control as (along with teacher-control) an essential consideration of formal instruction. Accomplishing this starts with involving the learners in making decisions about their program (Boud 1990, Hammond & Collins 1991). As you can see here, the definition and dimensions of self-directed learning can spark controversy and misconception. Many believe that self-directed learning is an individual decision, but none of us exists in a vacuum or are very independent, so is the choice to continue learning made autonomously? I believe that a complex interaction of social, cultural and educational factors influence the individual's decision. This is in agreement with Brockett (2000) who suggests that since the mid 1980's there has been a shift away from the individual and looking toward the sociopolitical context of adult education. I find myself best aligned with Knowles' position on self-directed learning. Knowles believes that humans grow in their capacity to be self-directed as a component of maturity, that their experiences develop as a rich source of learning, that their tendency is to be problem or task centered and that learners are motivated by their internal incentives. He opines that people who take initiative in their learning learn more deeply and learn more permanently. I believe that self-directed learning can be transformational in that it can expose a new power of knowledge and enlighten an individual at a level previously unrealized level. The quantum exchange of the authority for learning, the self-realization of exposing knowledge in a self-driven fashion can take the learner beyond

their normal boundaries in traditional education. This challenges the process and the premise of education for most learners.

In my mind, experience is integral to learning but especially adult learning. As stated earlier, “The major difference between adults and younger learners is the wealth of their experience” (Taylor, Marienau and Fiddler, 2000, p.7). Tennant (1991) describes three levels using experiences in education. In level one “teachers can link explanations and illustrations to prior experiences of learners...” In level two “teachers can attempt to link learning activities to learners’ current experiences at work, home or in the community” (p. 196-197). Third, teachers can create activities such as simulations, games and role-plays. Kolb & Kolb (2005) examined the work of Dewey, Piaget, Jung and Rogers and compiled six propositions of experiential learning theory. They are: “learning is best conceived as a process, not in terms of outcomes” (p. 194), “learning is re-learning” (p. 194). Students’ ideas must be drawn out, discussed and refined. Next, learning requires a resolution of “dialectically opposed modes of adaptation to the world”, that is learners must move between “opposing modes of reflection and action and feeling and thinking” (p. 194). Fourth, learning is holistic. Fifth, learning involves interactions between the learner and the environment. Lastly, learning is constructed in nature. I use experiential learning in my simulation center to create direct embodied experiences involving physical, emotional, mental, psychomotor elements, as in Tennant’s third level. The simulations are designed to examine prior knowledge, experience, decision-making, team communication, patient interaction as well as process and flow considerations. Experiences involve judgment, thought, connections, perceptions and

emotions all of which are personal. These experiences combine to link neurons in the brain in a powerful multiplicity manner. As you experience significant events, your thought circuitry links to your emotional circuitry, which then links to your physiological circuitry, creating multi-dimensional responses. These neural links create the experience in your brain. Jarvis' model of experiential learning adds that our construction of our experiences is affected by our "psychological history" (Jarvis, 2001, p. 52). My thought on this is that our "psychological history" is yet another set of experiences. Learning from experiences is broken into two major categories, reflective and non-reflective learning. Non-reflective learning is remembering an experience and repeating it or just doing as we are told. Reflective learning occurs when we "plan monitor and reflect upon our experiences" (p. 52). "Ironically, often the more experiences we have, the less likely we are to learn from them. Instead we tend to choose what is familiar and deny ourselves new learning (Jarvis, 2001). Boud and Walker (1991) take a situated approach to experiential learning. They recognized that a learners' specific context shaped his/her experience. In addition to Boud, Keogh and Walker, other authors also recognize the importance of emotion in experiential learning (Beard & Wilson, 2002; Dirkx, 2001a, 2001b). I find myself most in step with Boud, Cohen & Walker's (1993) five propositions of learning from experience.

- 1) Experience is the foundation of and stimulus for learning.
- 2) Learners actively construct their experience.
- 3) Learning is a holistic process.
- 4) Learning is socially and culturally constructed.
- 5) Learning is influenced by the socio-emotional context in which it occurs.

These seem to tie together the contiguous combination of theory and practice in experiential learning that is in synchrony with my knowledge and experience.

Reflection in learning is the examination of our beliefs and assumptions that affect how we make sense of an experience. Mezirow (2000) identifies three types of reflection. Content reflection is thinking about the experience itself, process reflection is thinking about ways to deal with the experience and premise reflection examines long held beliefs or assumptions, including values, involved in the experience. Brookfield (1987, 1994) is the most prominent adult educator writing about critical reflection thinking. His work links the concepts of critical thinking, critical reflecting and transformative learning. Like Mezirow, he uses five stages:

- 1) A trigger event, some unexpected happening that prompts a sense of inner discomfort and perplexity (Brookfield, 1987, p. 25).
- 2) Appraisal, a self-examination with “brooding” about the discomfort
- 3) Exploration, looking for new and different ways of explaining the experience.
- 4) Develop alternative perspectives, testing a new role or new way of behaving while gaining confidence in the new perspective.
- 5) Integration, where we are able to integrate the new ways “into the fabric of our lives” (p.27).

I use reflection in learning on a daily basis in my simulation center learning environment. Reflection is a very important part of our post simulation debriefing. Looking at Brookfield’s five stages, I believe that I use his model nicely. In reviewing the video of the simulation exercise, we explore an event or trigger, doing a self-appraisal of the events leading up to it, exploring the event, looking for ways of explaining and

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understanding the event. We then look at alternatives, mentally trying out alternative ways to handle the event, and then we reach a conclusion of the step, where we explore the integration of the alternative methodology to real patient care. This process is repeated for each event or trigger seen during the simulation exercise. Some of the events are initially unseen by the participants. They are brought to light by the facilitator who is a content expert and familiar with the session objectives. An example of this would be a step missed in a procedure. The missed step may not be apparent, leading to the event. By examining the event using Brookfield's process, we can uncover the root cause and integrate the needed corrective measure into patient care. This is the essence of medical simulation! We attempt to review actual practice looking for errors, mis-steps or process flaws with the goal of interceding before a live patient is affected.

Self-directed learning, learning through experience and reflection are all involved in our daily lives as educators. We are using these methodologies as we model our educational programs for our learners. They are integral elements in adult education that must be carefully coordinated to deliver content for our learners. With my learners, I find that acknowledging their experience is vital to breaking down barriers and creating an engaging learning environment. Using their experience to build upon in our learning leads to a powerful and transformative experience.

References

Vella, J. (2002). *Learning to Listen, Learning to teach*. Washington D.C: Jossey-Bass

Taylor, J.B. (2006). *My Stroke of Insight: A brain scientist's personal journey*. New York, NY:Plume

Merriam, S. B., Caffarella, R. S., Baumgartner, L. M. (2007). *Learning in adulthood*. San Francisco, CA: Jossey-Boss

Gagne, R.M. (1965), *The Conditions of Learning*. Rinehart and Winston

Simon R, Rudolph J.W., Raemer D.B. *Debriefing Assessment for Simulation in Healthcare*. Cambridge, MA Center for Medical Simulation, 2009.

Twigg, C.A. (1994) *The changing definition of learning*. Retrieved from

<http://net.educause.edu/apps/er/review/reviewArticles/29422.html>

Neyhart, D., Karper, E. (n.d.). *APA formatting and style guide*. Retrieved from

<http://owl.english.purdue.edu/owl/resource/560/01/>

U.S. Census Bureau (n.d.) *U.S. Census bureau fact finder*. Retrieved from

http://factfinder.census.gov/home/saff/main.html?_lang=en

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Kerka, S. (2002) *Teaching adults: Is it different*. Retrieved from

<http://catalog.lib.msu.edu/record=b4602215~S39a>

U.S. Central Intelligence Agency (n.d.) *The world factbook*. Retrieved from

<https://www.cia.gov/library/publications/the-world-factbook/rankorder/2102rank.html>

Crowe, J.L. (2000) *Evaluation of adult learners: Ethical Issues*. Retrieved from

<http://education.fiu.edu/newhorizons/journals/vol14n3.pdf>