January 2006

Toward a Thorough Understanding of the International Foundation of Andragogy in HRD and Adult Education

John Henschke
Lindenwood University, jahenschke@gmail.com

2006

Toward a Thorough Understanding of the International Foundation of Andragogy in HRD and Adult Education

John A. Henschke, EdD, *Lindenwood University*

Academy of Human Resource Development – 2006

Columbus, OH

Saturday 2/25/06 – 12:25 P. M. to 1:15 P. M.

Food N' Thought Session # 18 –
Research Horizons
Room: Legislative B

"Towards a Thorough Understanding of the International Foundation of Andragogy in HRD & Adult Education"

Mary K. Cooper, Ph. D. -- Assistant Professor
cooper@umsl.edu -- 314-516-6085

John A. Henschke, Ed. D. – Associate Professor
henschkej@missouri.edu -- 314-516-5946

University of Missouri – St. Louis
8001 Natural Bridge Road
St. Louis, MO 63121-4499
USA

Towards a Thorough Understanding of the International Foundations of Andragogy in HRD & Adult Education

Mary K. Cooper
University of Missouri – St. Louis

John A. Henschke
University of Missouri – St. Louis

More than 160 major works published in English from national and international sources on andragogy are presented here, in order to provide a clear and understandable, international foundation for the linkage between the research, theory and practice of andragogy and its application to Adult Education and Human Resources Development. Six themes have emerged that provide a foundation for the linkage: The evolution of the term; historical antecedents shaping the concept; comparison of American and European understandings; popularizing of the American concept; practical applications; and theory, research, and definition.

Keywords: Andragogy, Lifelong Learning, International

Andragogy has been used by some as a code word for identifying the education and learning of adults. For others, it has been used to designate different strategies and methods that are used in helping adults learn. Still others use the term to suggest a theory that guides the scope of both research and practice on how adults learn, how they need to be taught, and elements to be considered when adults learn in various situations and contexts. Yet some still think of andragogy as a set of mechanical tools and techniques for teaching adults. For another group andragogy implies a scientific discipline that examines dimensions and processes of anything that would bring people to their full degree of humaneness. Nadler (1989) stated that Human Resource Development [HRD] is based in learning, and every HRD practitioner should have an understanding of the theories of Adult Learning. There is a broad spectrum reflected in the practice of andragogy, and the extensive literature publication over a long period of time on andragogy [some of which will be introduced and discussed in this paper], opens the door for the theoretical framework of this study to be focused on andragogy.

Background

Although andragogy became popularized in the 1970's and 1980's in the USA through the work of Malcolm Knowles and others, its original introduction into the USA was in 1926 by E. C. Lindeman, and again in 1927 by Lindeman and M. L. Anderson. However, the term was first authored by Alexander Kapp (1833) nearly a century earlier in a German publication. (To see a copy of this publication please go to http://www.andragogy.net) Previous to and since the introduction of andragogy into the USA, extensive English language published literature has addressed and critiqued various aspects of its conceptual meaning and use. However, much of what has been published focuses only on its popularized use, reflecting either a wholesale support of Knowles' version of andragogy and the attendant excitement it generates, or a fairly straightforward debunking and dismissal for the reason of what some call Knowles' unscientific approach.

On the one hand, there are numerous instances and variations where adult educators tended to strongly favor Knowles' version of andragogy, by using a practical approach when facilitating adults learning within their own setting and context. Kabuga (1977) advocated using highly participative teaching/learning techniques with children as well as adults in his native Africa, despite the fact that he has not tested those andragogical techniques there. Eitington (1984, 1989, 1996) promoted pro-active engagement of adult learners in most every situation throughout a book containing twenty-one chapters, six hundred pages, and one hundred usable handouts. Hoffman (1980) emphasized the differences between children and grown-ups (adults), with "schooling" being for children and "learning" being for adults. He affirmed his successful use of active learning techniques in working with more than 600,000 adult participants. Baden (1998) developed and outlined twenty-seven different themes with accompanying interactive techniques that he perceives as being extremely useful in the process of helping association executives become more effective in fulfilling their responsibilities. Zemke and Zemke (1980, 1996) selected at least thirty ideas/concepts/techniques that they think we know for sure about adult learning. They asserted that if it is our job to train adults – whether they want to be trained or not – these ideas can give insight and practical help toward accomplishing that job. The Nebraska Institute for the Study of Literacy (no date given) summarized Brookfield (1986), that in Andragogy, facilitating learning is a transactional encounter in which learner desires and educator priorities will inevitably interact with and influence each other. Henschke (1995) focused on describing a dozen different episodes with groups in various settings, where he applied his *understanding and adaptation of Knowles' theory of andragogy, and then detailed some of the results he considered successful in using that approach with the participants.* This list could go on, but these illustrate strong support for Knowles' version of andragogy.

On the other hand, there are numerous instances and variations where adult educators tended to dismiss Knowles' version of andragogy as being quite inadequate, unscientific, not well researched, being misleading to adult educators, and lacking in understanding of the concept. Hartree (1984) asserted that if viewed from the psychological standpoint, Knowles' theory of andragogy fails to make good its claims to stand as unified theory because it lacks coherent discussion of the different dimensions of learning; and, equally, if viewed as philosophy, it falls short because it does not incorporate an epistemology – an explanation for a way of knowing what one knows. Davenport (1987) presented a case for questioning the theoretical and practical efficacy of Knowles' theory of andragogy, growing out of his research and perspective, perhaps adding to the confusion with his paradoxical definitions of andragogy and pedagogy and with his assumptions that lack clarity and solid empirical support. Davenport finished with his argument that some adult educators strongly urge that adult education would simply be better off to drop the word from its lexicon. Jarvis (1984) wrote that the theory of andragogy has moved into the status of an established doctrine in adult education, but without being grounded in sufficient empirical research to justify its dominant position. While Brookfield (1986) claimed that with andragogy [most probably as exemplified by Knowles] not being a proven theory, adult educators should be hesitant to adopt it as a badge of identity or calling themselves *andragogues* with the attendant belief that it represents a professionally accurate summary of the unique characteristics of adult education practice. Pratt's (1987, 1993) stance appeared to be that andragogy is a relational construct, and that the further debate of it presents tension between freedom and authority, between human agency and social structures, thus seeming to stall the consideration of the usefulness of Knowles' conception of andragogy. Further, Ferro (1997) charged that the use and meaning of the term, *andragogy,* has spawned a debate on the term and fostered the creation of additional unclear terms intended to define aspects of adult education; but he made a plea for adult educators instead to concentrate on what they know best, the planning and delivery of learning opportunities for adults. Hanson (1996) called for adult educators not to search for a separate theory of adult learning [andragogy], but rather that we remove many of the unsubstantiated assumptions based on almost utopian beliefs about the education and training of adults linked to uncontextualized views of learning and empowerment. This list could also go on, but these expressions serve to illustrate opposition to Knowles' version of andragogy.

The weakness of the above picture is that both sides seem to stop short in their discussion and understanding of andragogy. The focus is mainly on the pros and cons of Malcolm Knowles' treatment and interpretation of the concept. Thus, our interest in researching the concept of andragogy takes us past the experience [albeit, a positive experience] of Knowles' presentation of it. We are interested in investigating all the literature we could find and had time to analyze. Of course, this is an ongoing search. In our quest, we found that most of the published material on andragogy that reaches beyond these limitations is largely untapped and not understood, but nevertheless provides a broader and deeper international foundation of the concept and its application to the theory, research, and practice of HRD and Adult Education within adult learning.

It has been suggested by Savicevic (1999) that andragogy is defined as a scientific discipline, which deals with problems relating to HRD and Adult Education and learning in all of its manifestations and expressions, whether formal or informal, organized or self-guided, with its scope of research covering the greater part of a person's life. It is linked with advancing culture and performing: professional roles and tasks, family responsibilities, social or community functions, and leisure time use. All of these areas are part of the working domain of the practice of HRD and Adult Education. It could be said that a clear connection is established from the research to practice of andragogy, with andragogy being the art and science of helping adults to learn and the study of HRD and Adult Education theory, processes, and technology relating to that end.

The Research

The purpose of this study is to answer the question: What are the major foundational English works published on andragogy that may provide a clear and understandable linkage between the research on andragogy and the practice of andragogy within the field of HRD and Adult Education? Following are two major underpinnings relevant for the decisions on what was included: Any material we became aware of in the English language,(since we only are able to speak or read in that language) that presents various aspects of the concept of andragogy as viable and worth consideration for the field of HRD and Adult Education on a world-wide basis; and, a presentation and view of the content of andragogy within any country of the world and with no date/time boundaries. A library search of various data bases was conducted: Sources also include The Adult Education Research Conference; Midwest Research-to-Practice Conference; Lifelong Learning Research Conference; Canadian Association for the Study of Adult Education; Standing Conference on University Teaching and Research in the Education of Adults; Academy of Human Resource Development; and the Commission of Professors of Adult Education. Dissertation Abstracts International database was accessed and we found that there are nearly 200 doctoral dissertations focused on the topic. From these databases we limited ourselves to selecting those that most notably contained a full emphasis on andragogy and not just a tangential mention of the term. Library materials that we had become aware of during a number of years were part of the material included. Bibliographical references in all of the above materials led us to more materials. Numerous international sources were tapped and included scientific research studies, theoretical think pieces, and reports on experiences and/or results from practical applications of andragogy. This interpretative form of research sought out the major themes in the text of works on andragogy that were studied. The major themes discovered are: Evolution of the term andragogy; historical antecedents shaping the concept of andragogy; comparison of the American and European understandings of andragogy; popularization of the American concept of andragogy; practical applications of andragogy; and, theory, research and definition of andragogy.

Evolution of the Term Andragogy

Van Gent (1996) asserted that andragogy has been used to designate the education of adults, an approach to teaching adults, social work, management, and community organization. Its future lies only as a generic term for adult education and as a complement to pedagogy, which has been used mainly to focus on the art and science of teaching children.

Nevertheless, in recent years pedagogy has been used to refer to, not just the art and science of teaching children, but to the teaching of both children and adults or as the art or profession of teaching. Thus, use of the term andragogy is not encouraged because of its being an unclear term (Ferro, 1997). However, Hooks (1994) said "the possession of a term does not bring a process or practice into being: concurrently one may practice theorizing without ever knowing/possessing the term..." (p. 61). Kaminsky (no date given) suggested that whether we have knowledge for naming something academically or not, we may still be practicing pedagogy, andragogy, or any other 'gogy' or 'ism'. Thus, Henschke (1998a) asserted that long before the term andragogy appeared in published form in 1833, ancient Greek and Hebrew educators if not others used words that, although they were antecedents to andragogy, included elements of the concept that has come to be understood as some of the various meanings and definitions of andragogy. Savicevic (2000) also explored various antecedents to and backgrounds of andragogy before the term came into publication. As an illustration of using words that may be unclear or do not have one precise definition, Webster (1996) included 179 definitions of the word 'run'. However, we have not given up use of that term in our vocabulary because of the multiplicity of definitions.

Hugo (2003) put forward the perspective that andragogy is loosely defined as adult learning. However, more specifically andragogy is the formal term used to describe the process of educating and leading adults to fulfill their role as parent, educator, citizen or worker. Likewise, Picavey (2003) said that learning family history in an andragogical way is much more important than just knitting names together. The concept is about culture, human behaviour, social relations, sociology, biology, psychology, philosophy, geography, economics, law, philology, learning, education, and so forth.

Bron (2001) gave the rationale of how andragogy became a term interchangable with adult education in European circles. It shows only one stage of development in asserting its connection with research, because in the USA the term andragogy at another stage meant the practice of the education and learning of adults. However, now andragogy and adult education are used synonymously in Europe.

Smith (1996) provided a brief history of the use of the term andragogy. He then limited himself to presenting Malcolm Knowles' major andragogical assumptions, and addresses some general issues with Knowles' approach by exploring the assumptions including the surrounding, continuing debate. Also, Mynen (no date given) offered a personal statement on andragogy's meaning to himself by focusing only on Knowles' (1996) assumptions. He sought to address where andragogy came from, what it involves, and how one actually does it. He asserted his belief that andragogy may also be applicable to everyone including children, and considered the possibility that the distinction between adult and child learners may not be relevant anymore, but that the two may need to be merged into one.

Reischmann (2005) made a clear distinction in his definition between andragogy and adult education. He defined andragogy as the science of the lifelong and lifewide education/learning of adults. Adult education is focused on the practice of the education/learning of adults. He suggested that not until the reality of andragogy has sound university programs, professors, research, disciplinarian knowledge, and students, would it be shown whether the term andragogy would be needed for clarification of the reality. Another definition is that of Zmeyov (1998) who aptly defined andragogy differently from others. He said that andragogy is "the theory of adult learning that sets out the fundamentals of the activities of learners and teachers in planning, realizing, evaluating and correcting adult learning" (p. 106).

Draper (1998) in providing an extensive, world-wide background on andragogy, reflected on and presented an overview of the historical forces influencing the origin and use of the term andragogy: The humanistic social philosophy of the 1700s & 1800s, the early twentieth century labor movement in Germany and USA, international expansion of adult education since World War II, commonalities of different terminologies, the debate in North America, the progressive philosophy underlying andragogy in North America, stimulation of critical discussion and research, and the viability of andragogy as a theory. He concluded, "Tracing the metamorphoses of andragogy/adult education is important to the field's search for identity. The search for meaning has also been an attempt to humanize and understand the educational process" (p. 24).

Historical Antecedents Shaping the Concept of Andragogy

Wilson's (2002, 2003) research into the historical emergence and increasing value of andragogy in Germany and the USA, discovered, among other things, a connection between a foundational element in adults' capacity to continue learning even into their later years – a concept labeled as 'fluid intelligence' – and its being enhanced through andragogical interventions in self-directed learning. However, Allman (1983) predated Wilson regarding this same connection between plasticity in adult development. She asserted that this concept and research coupled with Mezirow's (1981) and Knowles' (1970, 1980) understanding of andragogy could be linked with her ideas on group learning and then merged into a more comprehensive theory of andragogy.

Heimstra and Sisco (1990) suggested a situation that gave rise to the emergence of andragogy as an alternative model of instruction to improve the teaching of adults. They asserted that mature adults become increasingly independent and responsible for their own actions. Thus, those adults are often motiviated to learn by a sincere desire to solve immediate problems in their lives, have an increasing need to be self-directing, and in mnay ways the pedagogical model does not account for such developmental changes on the part of adults, and thus produces tension, resentment, and resistance. Consequently, the growth and development of andragogy is a way to remedy this situation and help adults to learn. Their article also presented an extensive list of 97 annotated bibliographical references related to andragogy.

Savicevic (1991, 1999a) suggested that Socrates, Plato, Aristotle, the Sophists, Ancient Rome, the epochs of humanism and the renaissance, all reflect thoughts and views about the need of learning throughout life, about the particularities and manners of acquiring knowledge in different phases of life, and about the moral and aesthetic impact. He also credited J. A. Comenius in the seventeenth century with being regarded the founder of andragogy with his primary wish to provide comprehensive education and learning for one and all to the full degree of humaneness, and urging the establishment of special institutions, forms, means, methods and teachers for work with adults. In addition, he theorized that the institutional basis for adult education actually formed in the late eighteenth and early nineteenth centuries in Britain and other countries with the emergence of Mechanics' Institutes, workers' colleges & educational associations, university extensions, board schools for adult instruction, correspondence education, and people's universities. Savicevic (2000) also provided a new look at some of the background and antecedents to andragogy on a much broader scale. However, the explanation of this book is a bit more appropriately placed in the last section on "Theory, Research, and Definitions of Andragogy."

Henschke (1998a) went back earlier in history and claimed that the language of the Hebrew prophets, before and concurrent with the time of Jesus Christ, along with the meaning of various Hebrew words and their Greek counterparts -- learn, teach, instruct, guide, lead, and example/way/model -- provide an especially rich and fertile resource to interpret andragogy. He expected that by combining a probe of these words and elements with other writings, a more comprehensive definition of andragogy may evolve.

Henschke (2004) also found deep involvement in andragogy, when he paraphrases Robert Frost's Poem [*Our Gift Outright*] delivered at the USA 1961 Presidential Inaugural Ceremonies of John Kennedy and Lyndon Johnson. The paraphrase followed the line: Andragogy belonged to us before we belonged to andragogy.

Comparison of the American and European Understandings of Andragogy

Savicevic (1991, 1999a) provided a critical consideration of andragogical concepts in ten European Countries – five western (German, French, Dutch, British, Finnish), and five eastern (Soviet, Czech-Slovak, Polish, Hungarian, Yugoslav). This comparison showed common roots but results in five varying schools of thought: [1] Whether andragogy is parallel to or subsumed under pedagogy in the general science of education; [2] whether agology (instead of andragogy) is understood as a sort of integrative science which not only studied the process of education and learning but also other forms of guidance and orientation; [3] whether andragogy prescribes how teachers and students should behave in educational and learning situations; [4] the possibility of founding andragogy as a science is refuted; and, [5]that endeavors have been made to found andragogy as a fairly independent scientific discipline. Savicevic (1999a, 1999b) clearly aligned himself with the fifth school of thought in that this research aims toward establishing the origin and development of andragogy as a discipline, the subject of which is the study of education and learning of adult in all its forms of expression. Thus, it requires an understanding of andragogy in Europe and America through comparing and contrasting. He identified the problem, the framework of study, the research methodology, the similar and different findings, and the various perspectives in these two places that have the longest traditions and/or strongholds in andragogy.

The European concept of andragogy is more comprehensive that the American conception, even though Europeans do not use the terms andragogy and adult education synonymously (Young, 1985). In addition, the primary critical element in European andragogy is that an adult accompanies or assists one or more adults to become a more refined and competent adult, and that there should be differences in the aims of andragogy and pedagogy (assisting a child to become an adult). Likewise, there should be differences in the relationship between a teacher and adult pupils and the relationship between a teacher and children.

Knowles (1995) provided the most articulate expression and understanding of andragogy from the American perspective. The structure of the theory is comprised of two conceptual foundations: The learning theory and the design theory. The learning theory is based upon adult and their desire to become and/or to express themselves as capable human beings and has six components. [1] Adults need to know a reason that makes sense to them, for whatever they need to learn. [2] They have a deep need to be self-directing and take responsibility for themselves. [3] Adults enter a learning activity with a quality and volume of experience that is as resource for their own and others' learning. [4] They are ready to learn when they experience a need to know, or be able to do, something to perform more effectively in some aspect of their life. [5] Adults' orientation to learning is around life situations that are task, issue- or problem centered, for which they seek solutions. [6] Adults are motivated much more internally that externally.

Knowles' (1995) conceptual foundation of the design theory is based in a process, and is not dependent upon a body of content, but helps the learner acquire whatever content is needed. There are eight components of the design process: [1] Preparing the learners for the program; [2] setting a climate that is conducive to learning [physically comfortable and inviting; and psychologically – mutually respectful, collaborative, mutually trustful, supportive, open and authentic, pleasurable and human]; [3] involving learners in mutual planning; [4] involving learners in diagnosing their learning needs; [5] involving learners in forming their learning objectives; [6] involving learners in designing learning plans; [7] helping learners carry out their learning plans; and, [8] involving learners in evaluating their learning outcomes. Active involvement seems to be the watchword of Knowles' (thus American) version of andragogy, and each step of the andragogical learning process.

Knowles (1970, 1972, 1980, 1989a, 1989b, 1995, 1996, no-date) successfully tested and refined this theory and design on a broad spectrum in numerous settings: corporate, workplace, business, industry, healthcare, government, higher education, professions, religious education, and elementary, secondary, and remedial education. Houle (1992) also emphasizes the impact of Knowles on American andragogy, and how he has worked this out in practice especially in non-school settings and the workplace. He went on to indicate that scholars and theorists may find great value in Knowles' discussion of the development of learning theories in the educational literature, and his exploration of the roots of his own thinking about theorizing. He also spoke about Knowles' work being practical and providing concrete examples and in depth case studies of how learning activities are planned, structured, and executed.

Nevertheless, there was strong criticism of American andragogy, and that coming from Europe and Australia (Jarvis, 1984; Candy, 1991). At the time Knowles articulated andragogy, self-expression and personal development were in vogue. Thus, andragogy was best understood in curriculum terms as an expression of the romantic, was launched into a romantic philosophy, similar to it and receptive to it. So it would seem that andragogy emerged at a time when its romantic philosophical structures reflected the romantic structures of the wider society.

Welton (1995) leveled the assertion that "the 'andragogical consensus' [anchoring the study of adult education in methods of teaching and understanding the individual adult learner], formulated by the custodians of orthodoxy in the American Commission of Professors in the 1950s and solidified by Malcolm Knowles and others in the 1960s and 1970s, has unraveled at the seams" (p. 5). The fundamental accusations expressed are that because of this perspective, adult education has abandoned its once vital role in fostering democratic social action, is on a shaky foundation, works to the advantage of large-scale organizations, and is conceptually inadequate to serve the interests of the disenfranchised in North American society.

Savicevic (1999b) indicated that Knowles was inconsistent in determining andragogy and thus has caused much confusion and misunderstanding. He identified six mistakes of Knowles regarding his perspective on andragogy that are presented here. First, Knowles defined andragogy as 'science and art' following in the footsteps of Dewey in doing the same thing with pedagogy. Second, he defined andragogy as the science and art of 'helping adults to learn' thus reducing it to a perscription or a recipe for how a teacher needs to behave in educating adults. Third, he declared andragogy as a 'model' for teaching even in pre-school, thus moving it away from just applying to adults. Fourth, he directed andragogy only toward problems of learning, thus neglecting social and philosophical dimensions of adults. Fifth, he emphasized an individualistic approach to learning and education with no link to adults' existing circumstances, education level, and other factors relating to learning. Sixth, Knowles' lack of historical awareness prompted him to think he was the first to use andragogy in the American adult education literature.

Grace (2001) considered that Knowles' (hence the Knowlesian American) andragogy as a theory of how adults learn, ascended to prominence in the U. S. adult education after the 1970 publication of his book *The modern practice of adult education: Andragogy versus pedagogy.* By 1990 it was losing much of its punch as a result of the discussion and controversy surrounding it. He felt that Knowles' perspective is too much caught up with individualization, institutionalization, professionalization, techno-scientization, self-directed learning, the politics of exclusion, maintenance, and conformity. Grace also believed it ignores resistance and transformation, and sees mainstream U. S. and Canadian adult education as having been complicit in sidelining cultural and social concerns, thus depoliticizing and decontextualizing adult learning. Although he saw Knowles' andragogy as having been effectively dismantled in the 1980s and 1990s, Grace presents a vigorous case for its needing more of the same to neutralize its continued prominence and influence.

Others could be detailed but are too numerous to mention for lack of space here. Perhaps the reader may recall hearing from various other sources, some lack of enthusiasm about Knowles' andragogy concept. However, just a capsule of few final ones may include the following: Hartree's (1984) feeling that Knowles' andragogy did not live up to what she interpreted as his desire for its becoming a comprehensive learning theory for adult education; Pratt's (1993) perception that after 25 years, Knowles' approach was lacking in its fulfilling a promise of being somewhat of a panecea for a teaching approach in all adult education; and, Shore's (2001) perception that Knowles' andragogy became a catalyst for unproductive debates framed along a binary path, such as adult/child, isolation/relation, objective/subjective, explicit/implicit, Black/White, and the list could go on.

Consequently, one may wonder how, in the face of all the criticism, Knowles' (and thus the American) version of andragogy not only survives, but also thrives and remains robust in the adult education field? A number of explanations from different sources may shed some light on this question. First, Knowles (1989b) provided a clue about a major ingredient necessary and quite obviously present in everything he did and everyone he touched deeply. In his development and revision of his theory he considered both pedagogical and andragogical assumptions as valid and appropriate in certain varying situations [to the delight of some, and to the dismay of others]. The pitfall and problem he discovered with this approach is that ideological pedagogues will do everything they can to keep learners dependent on them, because this is their main psychic reward in teaching.

However, on the other hand, Knowles (1989b) saw that andragogues will accept dependency when it clearly is the reality and will meet the dependency needs through didactic instruction until the learners have built up a foundation of knowledge about the content area sufficient for them to gain enough confidence about taking respnsibility for planning and carrying out their own learning projects. And even pedagogues, when they experience being treated like an adult learner, experience greater psychic rewards when learners become excited with learning, and began experimenting with andragogy. Knowles (1990) indicated the crucial importance of equalness, openness, democratic, realness, genuineness, prizing, acceptance, and empatic understanding on the part of the andragogue. The andragogical teacher/facilitator accepts each participant (student) as a person of worth, respects his feelings and ideas, and seeks to build relationships of mutual trust and exposes his own feelings regarding the relationship between the teacher and adult learner.

Second, Illeeris (2004) a Danish adult educator for 30 years, who is not an andragogue, but a pedagogue, was convinced that adults need to be actively involved in developing and executing adult education programs. He asserted that it is of "... entirely decisive importance that the point of departure of planning is that the participants in adult education programs are *adults*, humans that both formally and in reality are responsible for their own actions and decisions" (p. 163). He went on to indicate here that he is quite in line with Knowles in his agitation for andragogy as a discipline, which is in many ways different from the pedagogy of children's schooling and upbringing.

Third, Peters and Jarvis (1991) call Malcolm S. Knowles one of the best-known and most respected adult educators of all time. They had him provide as an epilogue to their book, an andragogical vision of the future of adult education field. Fourth, Long (1991) speculated that although Knowles" form of andragogy is weak in empirical confirmation there are five reasons it has survived the criticism leveled against it: [1] The humanistic ideas underlying andragogy appeal to adult educators in general; [2] The limited empirical refutation of andragogy has not been strongly convincing; [3] Knowles' reaction to criticism was flexible and encouraging, which permitted him to incorporate some of the criticism in his later revision of the concept; [4] Knowles is a leader in the field and is widely respected for other contributions; and, [5] The inclusion of Knowles' concept of andragogy into the adult education knowledge base, has provided a framework for integrating several potentially useful ideas about adult learners, including self-directed learning.

Fifth, Griffith (1991) credited Knowles as being the best-known American adult educator. He has made numerous contributions to the literature of the field; with an orientation toward practice that makes them attractive to teachers of adults in diverse settings and very likely has resulted in increasing the effectiveness of these teachers. In addition, his commonsense approach in his primarily descriptive rather than analytical writing has a wide appeal. His presentataion of andragogy as a fresh way of thinking about adult education has attracted thousands of disciples from the ranks of practicing adult educators. Griffith concluded by saying that Knowles "...concept of andragogy has undoubtedly inspired countless practicing adult eductors to adopt the term, to embark upon graduate study in the field, and to profess allegiance to their perception of the concept. Knowles has also stimulated a great deal of interest in the self-direced learner and the use of learning contracts" (p. 105).

Sixth, Donaghy (2004) in the process of his doctoral dissertation had an interview with Allen Tough and what he had to say about Malcolm Knowles with his andragogical and self-directed learning perspective.

> I don't know what to say about him...I love the guy, we all did. He's a wonderful man, a very special man and in fact he pioneered self-directed learning. We were very much in sync with each other, although we were on different paths but parallel paths, and we certainly admired and supported each other. Knowles was very approachable, even more so than Kidd and Houle. Knowles was on a first name basis with everyone. He had enormous amounts of energy and outgoing warmth, and he attracted an enormous number of students who carry on his work. Knowles documented the accomplishments of his students in each one of his books (p. 45).

Seventh, Houle (1996), in talking about Knowles' work in andragogy said that it remains the most learner centered of all patterns of adult educational programming. He also added a number of other things. Knowles kept evolving, enlarging, and revising his point of view and therefore became something of a moving target, particularly since he was intimately involved with numerous projects at every level of magnitude in both customary and unusual settings all over the world. He could bring to discussions and debates a wealth of experience that his opponents could not match. In addition, some of his followers developed variant conceptions of andragogy, thereby enlarging the discourse. Knowles idea on andragogy had application to a wide variety of settings. Houle concluded by saying,

> Those who wish to do so can wholly contain their practice in the ideas expressed by Knowles and others, establishing appropriate physical and psychological climates for learning and carrying forward all of its processes collaboratively. Far more significantly, andragogy influences every other system. Even leaders who guide learning chiefly in terms of the mastery of subject matter, the acquisition of skills, the facing of a social problem, or some other goal know that they should

involve learners in as many aspects of their education as possible and in the creation of a climate in which they can most fruitfully learn (p. 30).

Clark (1999) considered that two books written in the 1920s began to change the term "adult learning" – Thorndike's *Adult Learning*, and Lindeman's *The Meaning of Adult Education*. In the 1950s, European educators started using the term 'andragogy', from the Greek word 'anere' for adult, and 'agogus', the art and science of helping students to learn. They wanted to be able to discuss the growing body of knowledge about adult learners in parallel with pedagogy. In contrast to pedagogy - transmitting content in a logical sequence; andragogy seeks to design and manage a process for facilitating the acquisition of content by the learners.

To conclude, Robb (1990) believed that South African andragogics can enable the improvement of understanding between Continental European and American adult educationists. However, for this improvement to take place, he saw the need for three further studies: whether andragogy terminology is necessary; whether adult educationists are scientists; and, where adult educationists differ in America and Continental Europe, that could pave the way for a more adequate description of what andragogy is.

Popularizing of the American Concept of Andragogy

Anderson and Lindeman (1927) were first to bring the concept to America. Although they clearly stated that andragogy was the method for teaching adults, the term did not take hold in the new land until many years later. Knowles (1970, 1980, 1989b, 1995, 1996) indicated that he acquired the term the in 1967 from Dusan Savicevic. However, in conducting extensive research, Sopher (2003) determined that Knowles acquired the term from Savicevic in 1966. Nevertheless, after becoming acquainted with the term, Knowles infused it with much of his own meaning garnered from his already extensive experience in adult education. He then combined his expanding practice around the world, his university teaching of budding adult educators, and the publication of *The Modern Practice of Adult Education: Andragogy and Pedagogy* during the 70s & 80s. This American version of andragogy became popularized as a result during this time. The main structure of his andragogical expression took the form of a process design instead of a content design, with assumptions and processes. The assumptions about adult learners are: they are self-directing, their experience is a learning resource, their learning needs are focused on their social roles, their time perspective is one of immediate application, they are intrinsically motivated, they want to problem-solve, and they want to know why they need to know something. The learning processes adults want to be actively and interactively involved in are: preparing for the adult learning experience, a climate conducive to learning, cooperative planning, diagnosing their needs, setting objectives, designing the sequence, conducting the activities, and evaluating their progress. Boudreaux. et al (2002) examined a portion of the legacy of Malcolm Knowles through studying some of his personal correspondence, and studying it andragogically.

Dover (2006) suggests that although Malcolm S. Knowles was not the first to use the term, his popularization of andragogy explains why Knowles is one of the most frequently cited theorists in adult education, and is often referred to as 'the father of adult learning'.

Practical Applications of Andragogy

Lindeman (1926a, 1926b, 1961) presented an interesting picture of the method for teaching adults. Basically he asserted (1926a) in his first use of the word andragogy, that the method for teaching adults is discussion, which he says is different from the teaching of children. In his classic book *The Meaning of Adult Education* (1926b), he never uses the term andragogy, but does include a chapter entitled, "In terms of method." A thorough analysis of this chapter reveals that he extensively explores, describes and explains the discussion method. Consequently, it seems safe to assume that he laid the earliest groundwork in the U.S.A., for a major practical application of andragogy as the method for teaching adults.

Later, Mezirow (1981) developed a critical theory of adult learning and education, and laid the groundwork for what he called a charter for andragogy that included twelve core concepts. Suanmali's (1981) doctoral dissertation focused on the agreement of 174 adult educators, including professors and practitioners, on ten of those core concepts that all related to self-direction in learning. The major theme was that to assist adults to enhance their capability to function as self-directed learners, the educator must: decrease learner dependency, help learners use learning resources, help learners define his/her learning needs, help learners take responsibility for learning, organize learning that is relevant, foster learner decision-making and choices, encourage learner judgment and integration, facilitate problem-posing and problem-solving, provide a supportive learning climate, and emphasize experiential methods.

Billington (1988, 2000) in her doctoral dissertation studied sixty men and women to determine what key factors helped them grow or if absent made them regress and not grow. The nine factors were: a class environment of respect; their abilities and life achievements acknowledged; intellectual freedom, self-directed learning, experimentation and creativity encouraged; learner treated fairly and as an intelligent adult; class is an intellectual challenge; interaction promoted with instructor and between students; regular feedback from instructor.

Brockett (no date given) affirmed that the principles of andragogy have been applied successfully in a wide range of settings. These include business, government, colleges and universities, continuing professional education, religious education, adult basic education, and even elementary/secondary settings. However, Brockett (1984) also indicated that an andragogical approach works in using a proactive approach for developing written materials. In addition, Brockett (1983) substantiated that andragogy is being used to help hard-to-reach adults become more self-directed in learning to improve their lives. Knowles (1972) and Ingalls (1976) declared that there is a growing interest of many industrial corporations in the andragogical education process, with managers functioning as teachers, and that andragogy offers great potential for improving both interpersonal relationships and task effectiveness. Knowles (No Date Given) also suggested that andragogy applies to any form of adult learning and has been used extensively in the design of organizational training programs, especially for "soft skill" domains such as management development. An example he provided on this is for the design of personal computer training.

Nevins (No Date Given) added to these assertions that successful business leaders are masters of andragogy. They need to be able to think-on-their-feet, quickly gather the facts and quickly make decisions. They recognize that time is not an ally and no-decision is a certain path to failure. On the other hand, they realize that in a short period of time they might not be able to get all of the facts to make a fully educated decision. Knowing that they must make a decision, they use the facts as they know them at the time and extrapolate them to the particular situation that they are faced with. This approach to decision making, he suggests, is the andragogical approach to learning.

Bragar & Johnson (1993) in addressing andragogy/adult learning in the business environment indicated that their research has identified five principles. They are as follows: Learning is a transformation that takes place over time; learning follows a continuous cycle of action and reflection; learning is most effective when it addresses issues relevant to the learner; learning is most effective when people learn with others; and, learning occurs best in a supportive and challenging environment. Adding to this, Morland (2003) asserts that business trainers, coaches, and instructional designers need to understand the dynamics of an andragogical model of adult learning. Despite the controversy elicited by Knowles on an artificially narrow definition of pedagogy, his andragogical insights into adult learning behaviors and motivations are generally accepted.

Pastrana (no date) indicates that Andragogy International is a universe of solutions to facilitate the evolution of companies to their full potential through education, training and consulting. Individuals receive an improvement of the quality and scope of the responsibilities with which they are entrusted. This accrues to the direct benefit of the company and the individuals themselves. However, in a word of caution, Sasmal (no date) attempts to juxtapose the Indian adult's behaviors against the principles of andragogy defined by Knowles, and draws a realistic picture of the adjustments that must be made in truly identifying the principles of learning for the Indian adult. These are mainly that they prefer to play the loyal disciple rather than questioning the trainer's authority, and that training programs must begin with a manual being provided to be considered effective. Nonetheless, the writer of *A philosophy of adult education* (no date) in a Power Point presentation makes a strong case for an andragogical philosophy of adult education. His/her reasoning is that business and industry spend $30 to $40 billiion per year on adult education, equal to 2.55 million FTEs {Full Time Equivalents}, the size of 65 universities in the State of Michigan, and we have a real opportunity for making a significant impact.

Wie (2003) articulated the aims, needs, motivation, skills, self-confidence, learning conditions and responsibility of learners in andragogy. The andragogical principles guarantee learning success and quality of adult learning. In andragogics: The learner determines the aim, motivation of learning is clear and high, learners have practical experience, the educational program is flexible, active teaching methods are used, the educational environment is safe and friendly, information is tested for applicability at the present moment, learners think critically, and learners choose the type of evaluation to be used.

Simonson, et. al. (2003) identified a number of characteristics needed in distance education systems designed for adults, that are derived from Knowles' concept of andragogy. The characteristics are: the physical environment of a television classroom used by adults should enable them to see what is occurring, not just hear it; the physiological environment should be one that promotes respect and dignity for the adult learner; adult learners must feel supported, and when criticism is a part of discussions or presentations made by adults, it is important that clear ground rules be established so comments are not directed toward a person, but concentrate on content and ideas; a starting point for a course, or module of a course, should be the needs and interest of the adult learner; course plans should include clear course descriptions, learning objectives, resources, and timelines for events; general to specific patterns of content presentation work best for adult learners; and, active participation should be encouraged, such as by the use of work groups, or study teams.

Bullen (1995, June) offered in contrast, some words of caution on the use of andragogical principles in distance education. Distance educators need to examine the mandate of their operation, the purpose and nature of the courses and the preferences and characteristics of their learners. Their application of andragogy needed to be moderate rather than radical. If andragogy were adopted on the strength of its underlying assumptions about adults, distance educators would do well to validate those assumptions in their own contexts.

Akande and Jegede (2004) made the case that adults in Nigeria are far behind children in achieving technological literacy. Thus, based on Knowles' (1980) and Zmeyov's (1998) similar definition of andragogy, they explored the mutual opportunities among andragogy and computer literacy to improve adult computer literacy skills in Nigeria. Their perspective holds the view that describes andragogy as one of the new sciences of education that is now gaining ground in many areas. It is democratic in the sense that the learner is seen as an active participant in the whole learning process. Thus, andragogical methods are highly appropriate for adult education in computer literacy. Following this line of thinking, Green (1998) comments on some important factors for consideration in online learning, and suggests that in andragogy learners must balance life responsibilities with the demands of learning. Teachers guide learners to their own knowledge rather than supplying them with facts. Learners need to connect their tremendous amount of life experiences to their knowledge base and recognize the value of the learning. Learners are goal oriented and know the purpose for their learning new information. Learning is self-initiated and tends to last a long time.

Moore (No Date Given), in coming from a university context, focused attention on the term 'adult' as referring to 'all college students, undergraduate and above'. He suggested that 'andragogy' can be more broadly defined as all 'learner-focused' education. He also reflects on the self-directed or autonomous learner by referencing Knowles' (1970) perspective as especially characteristic of learning in adulthood. Adults have a self-concept of independence. Their everyday lives are perceived as being capable of self-direction, and this is also the case in their learning. In his listing of the adult learner characteristics, he provided the following implications for technology use: Adults should be provided with adequate resources and technology tools to direct their own learning; adult learners should regularly be required to relate classroom content to actual life experiences; appropriate beliefs about learning are developed over time by providing students with many opportunities to ask their own questions and engage in personal inquiry; and, motivation and interest can be supported by designing authentic projects or tasks that the learner can see are relevant to their future needs.

Dewar (1999) articulated what she deems to be important principles of andragogy/adult learning for consideation when facilitaiing adult learning online. Increasing and maintaining ones sense of self-esteem and pleasure are strong secondary motivators for engaging in learning experiences. New knowledge has to be integrated with previous knowledge; that means active learner participation. Adult learning must be problem and experience centered. Effective adult learning entails an active search for meaning in which new tasks are somehow related to earlier activities. A certain degree of arousal is necessary for learning to occur. Stress acts as a major block to learning. Collaborative modes of teaching and learning will enhance the self-concepts of those involved and result in more meaningful and effective learning. Adults will generally learn best in an atmosphere that is nonthreatening and supportive of experimentaton and in which different learning styles are recognized. Adults experience anxiety and ambivalence in their orientation to learning. Adult learning is facilitated when: The learner's representation and interpretation of his/her own experience are accepted as valid, acknowledged as an essential aspect influencing change, and respected as a potential resource for learning; the teacher can give up some control over teaching processes and planning activities and can share these with learners; teaching activities do not demand finalized, correct answers and closure; teaching activities express a tolerance for uncertainty, inconsistency, and diversity; and, teaching activities promote both question-asking and –answering, problem-finding and problem-solving. Adult skill learning is facilitated when individual learners can assess their own skills and strategies to discover inadequacies or limitations for themselves.

Fidishun (No Date Given) asserted that to facilitate the use of andragogy while teaching with technology, technology must be used to its fullest. In addition to the arguments of online being flexible for learning, self-paced, anytime and anywhere, learners may also adapt the lessons or material to cover what they need to learn and eliminate the material that is not appropriate or that they have already learned. The design must be interactive, learner-centered and facilitate self-direction in learners. Educators must become facilitators of learning, and structure student input into their design and create technology-based lessons that can easily be adapted to make the presentation of topics relevant to those they teach. Commenting additionally on the value of andragogy in technological learning, Rossman (2000) posits that andragogy provides a context for developing distance education programs, a framework to build a climate conducive to adult learning, and a process for involving the adult learner more actively in the distance learning process.

Morrall (1993) raised the question of whether andragogy may flourish outside of a sustained, concentrated time period, in a part-time, short-term course. Although some evaluations suggest that it may, the critical component contributing to its success appeared to be in the residential aspect of the program that was involved in enabling the implementation of andragogy. Ellis (no date) focuses on an application of andragogy to a graduate-level web technologies course comprised of working professional students. Both student feedback and instructor opinion on the application of Knowles' theory of andragogy to this course have been strongly positive. In seeking to bring numerous factors together in online learning, Thorpe (1999) developed a 24 slide Power Point presentation addressing the question of how to put the pieces together: learner, institution, and technology. He also focuses on who the learner is, and that andragogy must be learned, designed to fit the learner and to incorporate technology positively.

Gibbons and Wentworth (2001) expressed a concern about colleges and universities that are rushing at an alarming rate to answer the call of the growing number of online learners. They raised a crucial question: Can faculty make effective use of the online learning platform to design, construct and deliver a meaningful online course that addresses the motivations, needs, learning styles and constraints on non-traditional learners, while achieving the same learning outcomes as onground? They seek to address this question by revealing the need for substantive differences between online and onground teaching methodologies. They declare that dialogue is the methodological heart of the online learning paradigm. They also support the idea that learning a subject well requires intensive discourse in any field or discipline, and that the learners' need for individual dialogue contributes as much to the teaching and learning structure as the teacher offers in the way of course content or design. They further assert that those who teach online need to be trained [helped to learn] to respect the maturity of the adult learners and their motivations for learning. In this process of their being helped to become online faculty, they evolve from being an instructor and content expert to a facilitator and resource person. The new facilitator learns to create a course that emphasizes the primacy of the learner, grants a substantial measure of control to learners and places learning directly in the context of learners' own experiences. Additionally, Esposito (2005) found that emotional intelligence, a type of social and personal intelligence, is important to managing interpersonal relationships and interactions, especially in the business and educational sphere. These are the hallmark of andragogy that also offers more personalized and effective solutions for the learners.

Osborn (1999) declared that andragogy has the potential to play an important role in distance learning. However, she found that students need to be coached in the principles of the approach so they underastand the teacher's expectations. Most students have been trained to rely on their teachers for leadership. Some need to be shown how to take responsibility for their own learning and become self-directing. Similarly, Paraskevas and Wickens (2003) tested the strengths and drawbacks of the Socratic Seminar, one teaching method of the andragogic model. This is a teacher-directed form of instruction in which questions are used as the sole method of teaching. This places students in the position of having to recognize the limits of their knowledge, and hopefully, motivating them to learn. This was found to be a very effective method for teaching adult learners, but should be used by the instructor with caution, knowledge, skill, and sensitivity, and depending on the personality of the learners.

Conner (1997-2003) strongly declared that andragogy refers to learner-focused education for people. Thus, in the information age, the implications of a move from teacher-centered to learner-centered education are staggering. Postponing or suppressing this move will slow our ability to learn new technology and gain competitive advantage. To succeed, we must unlearn our teacher-reliance. Further, Hugo (2003) summarized key characteristics of learners and mediated learning scenarios, with special reference to the potential of andragogically oriented Interactive 3D Visualiazation and Virtual Reality [IVVR]. He compared the effectiveness of these IVVR technologies with that of traditional pedagogical methods such as classroom training, self-study using media like text, broadcast video and audio, and other computer-based appproaches

Burge (1988) said that one reason for distance educators to look at andragogy is the concept of quality. She asks the question: Would an andragogical learner-centered approach contribute to or undermine academic rigour? She believed that a closer examination of the key implications of andragogy and a learner-centered view within the new classrooms of distance education will contribute to academic rigour. It will also expand the definitions of helping adults learn to include more of the subtle qualitative aspects of learning. The quality of counselling and tutoring, as distinct from quality of course content, is another professional issue that benefits from a closer look at andragogy.

Carlson (2005) sought to answer the question: What is the nature of the lived experiences of adults in the context of learning a foreign language in a formal learning environment? The theoretical framework of this qualitative study was grounded in Knowles' andragogy, Tough's self-directed learning theory, and Mezirow's perspective transformation theory, as well as in the researches of adult foreign language learning and factors that influence that process. The purpose was to discuss the applicability of andragogy, self-directed learning theory, and perspective transformation theory in the adult foreign language learning process and to create an interdisciplinary discourse among the scholarships of adult education, psychology, and linguistics.

Barclay (2001) made it clear that Knowles' concept of andragogy became infused with humanistic psychology. Although subjected to much debate as to whether it should be considered a theory, method, technique, or simply a set of assumptions, andragogy now occupies an important place in the adult education field. It has engendered awareness of the learning needs of adults and is now emerging as a base of concepts applicable for learnng at a distance.

Zhang (1996) told about how andragogy was used in a major way to help the People's Republic of China move from a traditional planned economy toward the socialist market economy system. He told that in the discussing educational theories in the development of andragogy, Deng XiaoPing pointed to adult education/andragogy as the key to developing human potential, skills, technology, talent and knowledge. This would be accomplished through a job training system, continuing education, adult basic education system, and adult higher and middle school education system. Further, Raslavicus (2003?) within the context of the College of American Pathologists, is convinced that in the future they will have to demonstrate what they have learned. He issues a warning that the time is nearing when it will no longer suffice to list on one's relicensure application or reapplication to the medical staff only the courses one has taken or the journals read. The requirement will be to *demonstrate* that one has maintained competence by showing something has been learned in the process.

Salama (2003) conducted a group discussion on architectural pedagogy and andragogy for educators, practitioners, scholars, and those intetrested in in-depth debate on architectural education teaching practices. The discussion involved the development of knowledge, values, cultural, and philosophical positions. The objective was to discuss: Theoretical assumptions, experiences, and experiments that pertain to the history of architectural education; design studios; teachng methods and techniques; learning settings; sustainability and andragogy/pedagogy, and othe issues of concern to education policy makers and university administrators.

Oduaran, et al (2004) asserted that among other transformations in African university adult and continuing education, andragogy is taught as a mainstream course. Andragogy is also applied as the major principle guiding interactions among Information and Communication Technologies [ICT] and diversity. Likewise, Patterson (No Date Given) conducted a one-day, six-hour intensive teacher/learner andragogical seminar-workshop to help learners choose and use teaching methods that are consistent with how older youth and adults learn. This gets the learners involved in meaningful participation in in-depth Bible study. In the area of faith and belief, Jorgensen (1998) combines ideas of Knowles, Rogers, Jarvis and Ellen White into a comprehensive andragogical process for engaging Seventh-Day Adventist college students to think through their faith and what it means to them.

Isenberg (2005) developed and tested a 'Virtual Health Coach' Internet program that combines andragogical principles with Internet technology. It has numerous health issues being dealt with such as smoking cessation and weight loss. It is being used with the military, health care institutions, and is available online through website technology. The research indicates excellent success with the participants in dealing with health issues.

Rostad (1998) outlined the library of the Nordic Folk Academy as a meeting place and an information center specialized in non-formal adult education, adult learning and andragogy. It possesses 20,000 volumes of books and 250 periodicals. It applies andragogy to make certain that people with low education, elderly people or people from sparsely populated areas avoid being marginalized. In a very practical way, Chesbro and Davis (2002) connect education on the health issue of osteoporosis (significant loss of bone density) with an application of andragogy – a process of education – based intervention with adults, especially in this case with older adults.

The Board of Registration of real estate brokers & salespersons (No Date Given) included a category labeled 'andragogy' as part of the curriculum for the 30-hour instructor course. They include such suggestions as: Presenting new ideas by relating them to pre-existing learner knowledge, teach at learners' level not over their heads, show specific benefit of new material to learners, encourage appropriate learner questions, be tolerant of all, use a variety of teaching methods that will involve all learners in the learning process, build learners' self esteem, call learners by name, and present key points by using examples as illustrations. Also, Imel (1989) mainly concentrated on answering the question 'is teaching adults different' by answering 'yes' and 'no' regarding the use of the andragogical model. She said that it mainly comes down to the following emerging considerations for practice. Determine the purpose of the teaching-learning situation, the context, the goals of the learners, and the material to be covered. Provide opportunities for teachers to practice learner-centered methods, by engaging teachers in learning technuiques especially suitable for adult students, such as small-group discussion methods, and effective use of non-traditional room arrangements. Select teachers on the basis of their potential to provide learner-centered instructional settings.

Haugoy (2003) identified andragogy closely with various models of flexible open classrooms for the independent students, who can control their own learning processes, and have the will, motivation and discipline to continue working. Athough these models go back to Gruntvig, they have found their way into Norway, Sweden, Denmark, Lithuania, Hungary, Malta, Spain, Belgium, and the Netherlands. Adding to the strong advocacy for using andragogy with adults in their learning, Wartenberg (1994) shows two seemingly disparate concepts of andragogy (the study of how adults learn) and whole language are compatible and should be considered by planners and implementers of adult literacy programs. Schneider (2003) suggests that andragogy is more suited for non-traditional learners, and pedagogy is more suited for a traditional instructional approach. Further, Stratton (no date) outlines the processes of andragogy and then poses various scenarios for solving adult learning problems with the andragogical perspective. And Penny (1998) addresses the question: What is the measuring stick for andragogy? Rather than moving grades as in pedagogy, andragogy lends itself to moving levels of true understanding. In andragogy, one achieves the objectives set forth. Beyond this, Kail and Cavanaugh (2004) say that lifelong learning is becoming increasingly important, but it should not be approached as merely an exstension of earlier educational experiences, but viewed and implemented andragogically with the understanding that learning styles change as people age.

Lieb (1991) was involved in health services. His take on andragogy is that adults are autonomous and self-directed, have accumulated a foundation of life experiences and knowledge, and are goal-oriented, relevancy-oriented, and practical. He focuses on what motivates adult learners, learning tips for effective instruction in motivation, reinforcement, retention, transference, and insists that we 'treat learners like adults'. Likewise, Gehring (2000) was concerned about applying principles of andragogy in the correctional setting. His tentative conclusion affirmed that although not all residents of correctional settings are ready to take full responsibility for their learning, there are some who are. These mature students, who deserve recognition as whole persons, will benefit from having the facilitator apply andragogical princlipes in their learning activities. Although residents of correctional situations are frequently 'late bloomers', they are quite capable of learning and maturing. The author of Andragogy: Prison literacy – (no author, no date) asserts that to appeal morally-cognitively to adult inmates, in at least a somewhat context and in study of their membership in the human community, is to entail the principles of andragogy (the learning of adults, as opposed to the teaching of children).

Colan, et al. (2003) asserts that andragogy is placed within the trends and context of adult education, variables affecting adult learning, a toolkit for facilitators, and various learning theories: Action learning, experiential learning, project-based learning, and self-directed learning. Somewhat parallel, Harriman (2004) addresses the essentials of andragogy / adult learning: Definition, questions whether it is different from the learning of children, principles, myths and nineteen [19] methods of how adults learn best online, including the structure and characteristics of each method. Added to this, the writer of *Andragogy: Adult learning theory* (no date) provides andragogical assumptions about the design of learning, principles, characteristics, key successful factors, learner motivation, motivation barriers, curriculum design, and teaching delivery in the classroom.

From a very practical standpoint, Carroll (1990) supports the andragogical point of view and vows that adults need to know why and the importance of learning something, to learn experientially, to learn problem-solving, and that they learn best when the topic is of immediate value to them. Knowles' andragogy is considered by Livingstone (2001) as one theory that stresses the active practical engagement of adult learners in the pursuit of knowledge or cultural change. Mihall and Belletti (1999) provide an example of a one hour training program including objectives, a contrast of children and adults as learners, comparing the assumptions of pedagogy and andragogy, adult learning principles, present training methods advantages and drawbacks with appropriate application, participants giving feedback, and a quiz. As a quite practical 'wrap-up', Martin University webmaster (2006) sees andragogy as the place and process where adult learners (average age of 40) are involved in the learning process, and are encouraged to bring their considerable life and work experience into the discussions. Thus, adults often get better jobs, build their self-esteem and serve as role models to family and friends to their great benefit.

Johnson (2000) believed that built into andragogy is a method for engaging learners in the discovery of meaning for them in their personal and professional lives. During his forty years in the field, in a wide variety of settings he successfully tested and applied this andragogical method with many participants affirming the results. Further, Henschke (1998b) emphasized that in preparing educators of adults, andragogy becomes a way of being or an attitude of mind, and needs to be modeled/exemplified by the professor. Otherwise, if we are not modeling what we are teaching, we are teaching something else. Knowles (1970, 1980) provided in his books numerous examples of the successful practice and application of andragogy. Knowles et al (1998, 2005) added more examples of success in practicing and applying andragogy.

Theory, Research and Definition of Andragogy

Rosenstock-Huessy (1925) posed andragogy as the only method for the German people and Germany, despirited and degenerated in 1918 after World War I, to regenerate themselves and their country. He suggested that all adult education (andragogy), if it is to achieve anything original that shapes man, which arises from the depths of time would have to proceed from the suffering which the lost war brought them. Historical thinking is a fundamental dimension of andragogy, in that past events are to be analyzed for what can be learned from them so that past failures might not be repeated. In this way the past becomes unified with the present and future – history past becomes unified with present knowledge and action for moving us toward the future. In andragogy, theory becomes practical deed; in the responsible word, in the crucible of necessity, however, practical deeds become the stuff of theory. Andragogy is not merely "better" as an education method for this purpose it is a necessity. Additionally, Simpson (1964) very early proposed that andragogy could serve as a title for an attempt to identify a body of knowledge relevant to the training of those concerned with HRD and Adult Education. He posited that the main strands could be parallel to what already existed in child education. The main strand would be the study of: Principles of adult education, the study of adults, educational psychology of adults, and generalized andragogical methods for teaching adults. He issued a call for adult education to do this.

Hadley (1975) developed an instrument of sixty items that could assess an adult educator's orientation with respect to the constructs of andragogy and pedagogy, the Education Orientation Questionnaire (EOQ). These items were developed from a pool of more that 600 statements illustrating how pedagogical or andragogical attitudes and beliefs about education, teaching practices and learning were obtained. Likewise, Henschke (1989) developed an andragogical assessment instrument entitled, Instructional Perspectives Inventory (IPI) that included the following seven dimenstons: Teacher empathy with learners, teacher trust of learners, planning and delivery of instruction, accomodating learner uniqueness, teacher insensitivity toward learners, learner-centered learning processes, and teacher-centered learning processes. The central and major core of this instrument was originally a focus on the teacher trust of learners. However, Stanton (2005) related the concepts with the concepts in readiness for self-directed learning, and there was not only congruence between the two, but also the IPI was validated as an almost perfect 'bell-shaped' measurement of an andragogical facilitator.

The Nottingham Andragogy Group (1983) addressed their beliefs about adults and adults' abilities to think creatively and critically in learning settings. They describe methods, several features of a teaching and learning process, and some stages of course development centered on their notions about critical thinking. Section one deals with adult development; section two with the empirical and theoretical foundations for a theory of andragogy; and section three purposes a model and theory. The perspective is clearly driven by research in adult development through life phases. They also reported a belief that Alexander Kapp, a German teacher, first used the word andragogy in 1833 to describe the educational theory of Plato.

Poggeler (1994) listed ten trends which he hopes will be helpful for future development of European andragogical research, including: international knowledge, comparative understanding, political influences, a clear picture of *adult* as the 'subject' of adult education, concentration on the thirty to fifty age group, explaining the *social structure* of the clientele, "development-andragogy" of the Third World, criteria for successful learning and teaching, understanding the "lifeworlds" of the participants, and new types and alternatives of adult education. Some of these may also be applicable to the USA. However, Schugurensky (2005) argued that Knowles' ideas about andragogy did not offer anything new to the field of adult education even though it made the list of those things chosen as a 'selected moment of the 20th century'. However, he did acknowledge that Knowles' theory has an impact on the field of education. Nevertheless, the argument he presented shows a woeful lack of understanding of the scope of andragogy in general and Knowles' perspective in particular.

By contrast, Zemyov (1994) clearly stated that the most important trend in adult education in Russia is the application and further development of Knowles' (1970, 1980) theory of adult learning, or andragogy, in the process of education. He further stated that Knowles' concept of andragogy [the art and science of helping adults learn] "...which scientifically founds the activity of the learners and of the teachers in the process of the determination of goals and tasks, of content, forms and methods, of organization, technology and realization of learning, is considered now in Russia by many scholars and teachers as a fundamental theoretical base for adult education. The main scientific and practical problem for the adult educators consists in finding out the most appropriate combination of pedagogical and andragogical models of learning for obtaining assigned objectives of learning for a learner in an actual situation" (pp. 36 & 37). On the other hand, Delahaye, et al (1994) measured student's orientation to andragogy and pedagogy by using the Student's Orientation Questionaire developed by Christian (1982), and found them represented as being orthogonal or at right angles to each other. This relationship reflects some of the complexities involved in adult learning.

Conner (1996) depicted andragogy's major focus as understanding and adjusting our experiences and beliefs in relationship with the world we face on a daily basis. She questioned how we can expect to analyze and synthesize the extensive information with which we come in contact if we allow others to determine what should be learned, how it will be learned, and when it will be learned. She insisted that in order to succeed, we must unlearn our teacher-reliance. Further, Hoods Woods (1998) perceived andragogy, as related to wilderness teaching, being based on four environmental influences active in every being. They are: External [Physical]; Internal [Physical]; External [Spiritual]; and, Internal [Spiritual]. These four influences interact with one another to determine how successfully we will be able to face survival challenges in any environment.

Boucouvalas (1999) insisted that although refined methodological or epistemological tools and indicators are critical for sound research in comparative andragogy, the role and influence of the 'self' of the researcher in the research process, is an equally critical element to be considered. Additionally, Johnson (2000) saw andragogy as an approach to learning that includes a focus primarily on the needs of the learner in every aspect of his/her life. He also asserted that given most, if not all definitions in the social science literature, andragogy could qualify as a theory or at least an emergent theory.

Rachal (2000) found little empirical evidence that andragogy provides better results from learning than other approaches. However, he identified from nineteen empirical studies, insights that may contribute toward helping establish criteria for an operational definition of andragogy suitable for implementation in future empirical studies of andragogy. He later (2002) clearly identified seven criteria: Voluntary participation, adult status, collaboratively-determined objectives, performance-based assessment of achievement, measuring satisfaction, appropriate adult learning environment, and technical issues. However, Ovesni (1999) supported the idea that andragogy is to generate its own knowledge and is able to offer something to other sciences in scientific cooperation. Andragogy does not belong to any other science no matter what that other science is called. It is simply an integral part of a family of sciences studying education and is neither superior nor subordinate to any other science. Andragogy thus retains its independence from other sciences.

Aspel (2003) said, that to implement the concept of andragogy certain changes need to be made, even though the change from pedagogy to andragogy may be slow in coming. The changes are: 1. Adult learners need to know the why, what, and how of what is being taught; 2. They need to have a self-concept of their autonomous self-direction; 3. Their prior experiences need to be taken into consideration; 4. They need to be ready to learn; 5. Adults need to have an orientation to learning; 6. They need to undersstand their motivation to learn.

Ross (198_?) connected the concept of andragogy and its value with some of the research on teacher effectiveness. He believed that teachers behavior relates to student achievement regarding such things as: Clarity, variability, enthusiasm, task-oriented behavior, use of student ideas, types of questions asked, probing, and levels of difficulty of instruction. Further, Monts (2000) suggested that various research issues regarding andragogy need to be explored, such as the effect of instruction of students in self-directed learning has upon academic success. There is also the necessity of instructors and students needing training in andragogical teaching and learning in order to break away from the pedagogical mentality, and gain a greater effectiveness in the utilization of the andragogical model. To this end, Reischmann (2000) indicated that in 1994 he changed the Otto Freiderick University, Bamberg, Germany, "Chair of Adult Education" to "Chair of Andragogy." His understanding differentiates "andragogy as the research" and "adult education as the practice" in the education and learning of adults.

Henschke (1998a) attempted a descriptive definition of andragogy that moved in the direction of calling it a scientific discipline of study. Additionally, Furter (1971) proposed that universities recognize *a science for the training of man* to be called andragogy, with its purpose to focus not on children and adolescents, but on *man throughout his life*. The perspective of Akande and Jegede (2004) holds the view that describes andragogy as one of the new sciences of education that is now gaining ground in many areas.

Merriam (2001) posited that the scholarship on andragogy since 1990 has taken two directions. One stream seeks analysis of the origins of the concept or its usage in different parts of the world, thus becoming a touchstone for professionalizing through the establishment of a scientific discipline. The other stream critiques andragogy for its lack of attention to the context in which learning occurs. She emphasized that andragogy as one of the two "pillars" of adult learning theory (self-directed learning being the other pillar) will continue to engender debate, discussion, and research, thus suggesting that in so doing, it will further enrich our understanding of adult learning. Similarly, Reischmann (2004) added some historical perspective on the why of various periods in its emergence and then lying dormant for extended decades, to the scientific basis of andragogy. Much of his discussion centered on whether a term such as "andragogy" was necessary or that the field of adult education has been and will be able to flourish and do its work without a unique term.

Pinheiro (2001) found the perception of a multicultural international population of students in an American univrsity indicated a preference for teaching-learning experiences congruent with the andragogical model. Their positive and preferred experiences were characterized by the andragogical themes of engagement and connectedness, while their negative and not preferred experiences were characteriazed by disengagement and disconnectedness. While St. Clair (2002) only added to the practice perspective of andragogy. He suggests that andragogy does not work for everybody, and it does not define adult education. However, he does allow that it is one theory for the 21st century that will maintain its role as a necessary component of the field's shared knowledge.

Kajee (2003) reported on the impact of andragogy from a study conducted with English as a Second Language [ESL] undergraduate students in a university in South Africa. Their online Site Philosophy tabluates the characteristics of adult learners according to Knowles' conception of andragogy and their implications for the use of Information and Communication Technology [ICT] in adult learning, with the major impact of this environment bearing postitively on learner autonomy and self-directedness.

A Google Cache on Community Colleges (2004) related andragogy and brain plasticity which acknowledges that the brain expands with knowledge accumulation regardless of age. The brain like a muscle becomes stronger the more it is used. From the andragogical point of view, adults have an independent self-concept and exercise their brain muscle by directing their own learning. Additionally, Wilson (2004) contributed a new paradigm for the scientific foundation of andragogy that defines learning in respect to the anatomical make-up of the brain and its biological functions. It moves away from a general definition to a specific definition, using empirical research conducted by the neuroscientists and biologists on memory, recall, learning, plasticity and experience.

Milligan (1995, 1997, & 1999) scientifically investigated andragogy. He conceptualizes his summary of it as the facilitation of adult learning that can best be achieved through a student centered approach that, in a developmental manner, enhances the student's self-concept, promotes autonomy, self-direction and critical thinking. However, despite some questions being raised, and lingering doubts, he believed that problem-based learning, most notably used in nursing education, has elements of andragogy within it. Likewise, Mazhindu (1990) established a foundational link between andragogy and contract learning. Thus, he asserted that contract learning [with its foundation in andragogy] may well help to facilitate continuous, meaningful and relevant learning throughout the nurse's career that was begun in basic nurse education. Andragogy [contract learning] is suggested as one effective alternative to traditional nurse education.

Ovesni (2000) proposed three concepts and models of andragogues' professional preparation, based upon scientific research in andragogy. They are: model of professional preparation of andragogical personnel of general profile; model with viable tendency toward distinction; and, models of divversification with respect to the field of the system of adult education, i. e. the scope of the system and with respect to institutions and associations within which the process of education is performed. While Krajinc (1989) in echoing some others provides the most succinct and pointed definition of andragogy to date, and perhaps the most beneficial, as she states, "Andragogy has been defined as...'the art and science of helping adults learn and the study of adult education theory, processes, and technology to that end' " (p. 19).

Heimstra and Sisco (1990), and Heimstra (no date) made what could be considered an extensive addition to the theory, research, and definition of andragogy. They provide annotations on 97 works related to andragogy, thus contributing to its international foundation. Heimstra says that applied correctly, the andragogical approach to teaching and learning in the hands of a skilled and dedicated facilitator can make a positive impact on the adult learner.

The most comprehensive of all the publications on andragogy is a book that includes thirty of the author's publications within a twenty-six year period (Savicevic, 1999). His work has addressed how andragogy has and will shape the literacy, the work place, universities, training and research, the humanistic philosophies, the evolution and future of andragogy and the practice of adult education. He also provided a number of descriptions and definitions of andragogy.

Previously, Cooper and Henschke (2001) identified eighteen English language articles and studies as foundational to the theory of andragogy in its relationship to practice. Showing the continuing discovery and expansion of a much broader than Knowles' conception of andragogy, the number of documents referenced and analyzed in this article contributing to the international foundation for its research, theory and practice linkage now stands at more than one hundred fifty-four, and more are waiting to get included on the list. Most dictionaries up to this time have not included andragogy. However, the Webster Encyclopedic Unabridged Dictionary (1996), showing some recent recognition of the term in modern vocabulary, includes the definition of andragogy as, "the methods or techniques used to teach adults" (p. 77).

Savicevic (2000) added another component to the scientific foundation and design of andragogy in his book. It is in the Serb language, but he has provided a summary in English. The summary is as follows: The study is dedicated to search of the roots of andragogical ideas starting from the antique civilizations up to the present time. We understand the term andragogical ideas as thoughts and concepts of persons about education and learning of adults, system of andragogical institutions that appeared in certain civilizations, as well as andragogical practice in which such ideas were realized. The structure of the study is made of the following parts – Conceptual and methodological frames of research; Searching for the roots of andragogical ideas; Andragogical ideas in the international context; Andragogical ideas in Yugoslav context; and, Comparisons and final general discussion. Each part is made of several chapters that are interconnected and logically linked.

Conclusions: Implications of Applications of the Findings to the Linkage of Practice, Theory or Research

Although it has not been possible to go into the depth needed for a better understanding of andragogy in this paper due to space limitations, hopefully the six major themes that have emerged are enough to encourage the adult education and human resource development practitioner, theorist and researcher to continue her/his exploration (theory, practice and/or research) of the concept of andragogy. Readers aware of other English language works that may add to the foundation of andragogy are invited and encouraged to inform the authors so as to add to the discussion and contribution of this topic within HRD and the Adult Education Fields and to the constituencies served by those involved.

This interpretative form of research sought out the major themes in the text of works on andragogy that were studied. The major themes discovered are: Evolution of the term andragogy; historical antecedents shaping the concept of andragogy; comparison of the American and European understandings of andragogy; popularization of the American concept of andragogy; practical applications of andragogy; and, theory, research and definition of andragogy. However, the most striking observation of all the themes is the strength of the foundation that will help advance adult education, which emerged in the last theme – the theory, research and definition of andragogy.

Rosenstock-Huessy (1925) advanced the idea that andragogy is a necessity in which the past, present and future merges with theory becoming practical deeds; Simpson (1964) gave four strands for the training of adult educators; Hadley (1975) developed a 60 item questionnaire assessing an adult educator's andragogical and pedagogical orientation; Henschke (1989) developed an Instructional Perspectives Inventory with seven factors including teacher trust of learners; Stanton (2005) validated Henschke's instrument in line with self-directed learning readiness, resulting in an almost perfect bell-shaped curve; the Nottingham Andragogy Group (1983) addressed their beliefs about adults and adults' abilities to think creatively and critically in learning settings; Poggeler (1994) listed the ten trends which he hopes will help future andragogical research; Schugurensky (2005) did not understand the scope of andragogy in general and knowles' idea of andragogy in particular; Zemyov (1994) saw Knowles' view of andragogy as being the fundamental scientific foundation of the theory base of adult education in Russia; Delahaye (1994) found an orthogonal relationship between adult students' andragogical and pedagogical orientation; Christian (1982) developed a 50 item instrument to measure student's andragogical and pedagogical orientation; Connor (1997-2003) pressed us to become more self-reliant and giving up our teacher-reliance; Hoods Woods (1998) perceived andragogy as being based on four environmental influences active in every being; Boucouvalas (1999) posited the importance of the researcher in the research process; Johnson (2000) saw andragogy as fulfilling all the criteria of a theory; Rachal (2000, 2002) provided seven criteria for empirical research in andragogy; Ovesni (1999) supported the idea that andragogy is to generate its own knowledge and is able to offer something to other sciences in scientific cooperation; Aspel (2003) encouraged us to change from pedagogy to andragogy even though it may be a slow transition; Ross (198?)connects some of andragogy's value with its similarity to research in teacher effectiveness; Monts (2000) articulated the need for basic instruction of both teachers and students in andragogy; Reischmann (2000, 2004, 2005) represented a shift of understanding in the direction of andragogy; Henschke (1998a) called for andragogy to be a scientific discipline of study; Furter (1971) proposed that andragogy be recognized in universities as a science for the training of man throughout his life; Adande & Jegede (2004) hold that andragogy is one of the new sciences of education that is now gaining ground in many areas; Merriam (2001) posited that scholarship on andragogy is one of the two major pillars of adult learning research and theory;

Reischmann (2000,2004,2005) offered some historical perspective on the various periods that the term "andragogy" emerged and later receded; Pinheiro (2001) found that international students in American universities prefer learning experiences with the andragogical themes of engagement and connectedness; St. Clair (2002) allowed that andragogy is one theory for the 21st century that will maintain its role as a necessary component of the field's shared knowledge; Savicevic (1999b) added another element to the scientific foundation and design of andragogy by searching its roots; Kajee (No Date) reported that with ESL students, the major impact of andragogy and technology is on learner autonomy and self-directedness; Wilson (2004) offered a new paradigm of the function of the brain and its anatomy being much more closely allied with andragogy and learning than previously thought; A Google Cache in Community Colleges (No Date) found that in andragogy adults have an independent self-concept and exercise their brain muscle by directing their own learning; Milligan (1995,1997 & 1999) summarized andragogy as contributing vastly to the enhancement of human abilities of autonomy, self-direction, and critical thinking; Mazhindu (1990) established a foundational link between andragogy and contract learning; Ovesni (2000) proposed three concepts and models of andragogues professional preparation based upon scientific research in andragogy; and, Krajinc (1989) provided a very succinct and pointed definition of andragogy; Heimstra and Sisco (1990, and Heimstra (no date) contributes an annotation of 97 works related to andragogy; Savicevic's work in andragogy is the most comprehensive to date (1991, 1999a, 1999b, 2000); Cooper and Henschke (2001) provided an ongoing investigation into the comprehensive concept of andragogy; and, Savicevic (2000) added the scientific dimension of searching for the roots and ancient background of ideas connected with andragogy worldwide.

Another value of this research for practice is that much of the research emerged out of practice as indicated by the title of Dusan Savicevic's book (1999), *Adult Education: From Practice to Theory Building.* A final value of this research for practice is the benefit of those theorists, researchers, and practitioners who are willing to intentionally use andragogy as a means for: finding out, learning, and ascertaining new things for their own growth; understanding and realizing fresh ways to improve their research or practice of HRD and adult education; and, enhancing the enlightenment and illumination of the adult constituents they serve on their journey to a full degree of humaneness.

In the USA, much of the study of andragogy has been based on a popularized version, which has its origins in the work of Malcolm Knowles. However, the first known use of andragogy is in 1833, where Alexander Kapp uses it in a discourse on Plato. Originally Lindeman only very cryptically introduced the concept to the USA in 1926, and repeated it with Anderson in 1927. While the concept has continued in Europe, often it has done so as a societal concept, going beyond education. The European and American versions have their differences, but continued study and research of both are necessary to make more visible andragogy's broad foundation, its linkage, which fully understands the theoretical concept, and putting it into practice.

References

Akande, J. O., & Jegede, P. O. (2004). *Andragogy and computer literacy: The Nigerian perspective.* The African Symposium: An on-line educational research journal, July, 2004, 4(2).

Alfred, M. V. (no date). *The politics of knowledge and theory construction in adult education: A critical analysis From an Africentric feminist perspective.* University of Wisconsin-Milwaukee.

Allman, P. (1983). The nature and process of adult development, chapter 2.5. In *Education for Adults: Adult Learning and Education, Vol. 1*. Malcolm Tight (Ed. London: Croom Helm & The Open University. 107-123.

Allman, P., & Mackie, K. J. [Eds.] (1983). *Towards a developmental theory of andragogy.* Nottingham, UK: The University of Nottingham, Department of Adult Education.

Anderson, M. L. and E. C. Lindeman. (1927). Education through experience: An interpretation of the methods of the academy of labor, Frankfurt-am-Main, Germany. *Workers' Education Research Series, Monograph No. 1.* New York: Workers Education Bureau Press, Inc.

Aspell, D. D. (2003). *Andragogy: Adult learning.* San Antonio, TX: University of Texas. Unpublished paper.

Baden, Clifford. (1998). *Adult learning in associations: Models for good practice.* New York: American Society of Association Executives.

Ballard, G., Chen, A., and Jewette, S. (2002). *Adult learning theories.* file://G:\adultlearningtheories.htm.

Barclay, K. (2001). *Humanizing learning at a distance.* Honlualoa, HI: University of Hawaii. Unpublished Doctoral Disseration.

Billington, D. D. (1988). Ego development and adult education. Doctoral Dissertation. The Fielding Institute. Dissertation Abstracts International, 49(7). University Microfilms No. 88-16, 275.

Billington, D. D. (2000). Seven characteristics of highly effective adult learning programs. *New Horizons for Learning.* Seattle: New Horizons. http://www.newhorizons.org

Blair, D. T., & Ramones, V. A. (1997). *A question of nursing competence.* Perspectives, 3, 1. Retrieved from http://mentalhelp.net/poc/view_doc.php?type=doc&id=345

Boucouvalas, M. (1999). Comparative thinking and the structures of adult cognition: An epistemological and methodological challenge for comparative adult education. In J. Reischmann, Z. Jelenc, & M. Bron, (eds.) *Comparative Adult Education 1998: The Contribution of ISCAE to an emerging field of study.* 65-76. Bamberg, Germany: ISCAE Proceedings.

Boudreaux, M., Chermack, T., Lowe, J., Wilson, L., and Holton, E. III. (2002). The legacy of Malcolm Knowles: Studying andragogy andragogically. In Egan, T. M., and Lynham, S. A. (Eds.). *Proceedings of the Academy of Human Resource Development International Research Conference.* Volume 2, pp. 877-884. Honolulu, Hawaii.

Brager, J. & Johnson, K. (1993). *Adult learning: New research on continuous learning in the business environment.* Atlanta, GA: American Society for Training and Development Annual Conference.

Brockett, R. G. (1984). Developing written learning materials: A proactive approach. In *Lifelong Learning: An Omnibus of Practice and Research. Volume 7, Number 5,* February, 1984, pp. 16-18, 28.

Brockett, R. G. (1983). Self-directed learning and the hard-to-reach adult. In *Lifelong Learning: An Omnibus of Practice and Research. Volume 6, Number 8,* April, 1983, pp. 16-18. .

Brockett, R. G. (no date given). Humanism as an instructional paradigm. Website: *http://www-distance.syr.edu/romiral&html* (Listed also to appear as a chapter in C. Dills & A. Roomiszowski (Eds.), *Instructional deveopment: State of the art paradigms in the field* (Volume Three). Englewood Cliffs, NJ: Educational Technology Publications, in press.)

Brookfield, S. D. (1986). *Understanding and Facilitating Adult Learning.* San Francisco: Jossey-Bass Inc., Publishers.

Bullen, M. (1995, June). *Andragogy and university distance education.* Paper presented to the seventeenth conference of the International Council for Distance Education, Birmingham, UK. Website: http://www2.cstudies.ubc.ca/~bullen/bullen1.html

Burge, L. (1988). Beyond andragogy: Some explorations for distance learning design. *Journal of Distance Education/Revue de l'enseignement a distance (1988).*

Candy, P. (1991). *Self-direction for lifelong learning: A comprehensive guide to theory and practice.* San Francisco: Jossey-Bass Publishers.

Carlisle, R. (2000, October 29). *Andragogy: Tips on teaching adults in community college environment.* Retrieves January 14, 2005, from http://www.tsjc.cccoes.edu/masters/pdraft/tipsonteaching/index.html

Carlson, A. (2005). "Adults' Experiences in Learning a Foreign Language in a University Classroom." In Cooper, M. (Ed.) *Adult education: Working for you, A CD Proceedings of the American Association for Adult and Continuing Education,* Pittsburgh, PA: American Association for Adult and Continuing Education.

Carroll, J. M. (1990). "Learner characteristics: When working adults sit down to learn." www.spsu.edu/htc/hughes/com

Chesbro, S. B, and Davis, L. A. (2002). "Applying Knowles' model of andragogy to individualized osteoporosis education." *Journal of Geriatric Physical Therapy.*

Christian, A. C. (1982). *A comparative study of the andragogical-pedagogical orientation of military and civilian personnel.* Unpublished doctoral dissertation, Oklahoma State University, Stilwater, OK.

Clark, D. (1999). Andragogy. http://www.nwlink.com/~donclark/hrd/history/history.html

Clements, M. (2001, June 27). *Using guests in the virtual classroom.* Paper presented at the meeting of the Ninth Annual Learning & Teaching Conference, Nottingham.

Colan, J., Grabowski, S., and Smith, K. (2003). "Current trends in adult education." In Orey, M. (Ed.). Book *Learning, teaching, and technology. Available website: http://www.coe.uga.edu/epltt/AdultEducation.htm*

Conner, M. L. (1997-2003). Andragogy + Pedagogy. *Ageless Learner, 1997-2003.* http://agelesslearner.com/intros/andragogy.html

Cooper, M. K., & J. A. Henschke. (2001). Andragogy: Its research value for practice. In *Proceedings of the Midwest Research-to-Practice Conference in Adult, Continuing and Community Education.* Charleston, IL.

Cooper, S. (2005). *This is the learning theories web: Andragogy Malcolm Knowles.* Life Circles. Retrieved January 14, 2005, from http://www.konnections.com/lifecircles/knowles.htm

Davenport, J. III. (1987). Is there a way out of the andragogy morass? *Lifelong Learning: An Omnibus of Practice and Research*, Vol. 11, No. 3.

Delahaye, B. L., D. C. Limerick, & G. Hearn. (1994). The relationship between andragogical and pedagogical Orientations and the implications for adult learning. *Adult Education Quarterly*, 44, (4), 187-200.

Dewar, T. (1999). *Adult learning principles (a selection).* http://www.calliopelearning.com/adult.htm

Donaghy, R. C. (2004). "An afternaoon with Allen Tough." In J. Henschke, (Ed.) *Proceedings of the 2004 CIAE Pre-Conference,* Louisville, KY: Commission on International Adult Education (CIAE) of the American Association for Adult and Continuing Education (AAACE), (pp. 37-53.

Dover, K. H. (2006). "Adult learning theorist: Malcolm S. Knowles – Biography." Adult/Continuing Education: A Free Newsletter Guide.

Draper, J. A. (1998). The metamorphoses of andragogy. *The Canadian Journal for the Study of Adult Education,* 12(1), 3-26.

Ellis, H. J. C. (no date). *Andragogy in a web technologies course.* Hartford, CT: Rensselaer at Hartford, Department of Engineering and Science.

Eitington, J. E. (1984, 1989, 1996). *The winning trainer, instructor, facilitator, teacher, conference leader, etc. 3rd edition* – 1996. Houston: Gulf Publishing Company.

Esposito, M. (2005). *Emotional intelligence and andragogy: The adult learner.* Thonburi, Thailand: 19th Iinternational Conference, Learning Organization in a Learning World.

Ferro, T. R. (1997). The linguistics of andragogy and its offspring. In *Proceedings of the Midwest Research-to-Practice Conference in Adult, Continuing and Community Education,* East Lansing: Michigan State University.

Fidishun, D. (No Date). *Andragogy and technology: Integrating adult learning theory as we teach with technology.* Malvern, PA: Penn State Great Valley School of Graduate Professional Studies.

Furter, P. (1971). *Grandeur et misere de la pedagogie.* University of Neuchatel.

Gehring, T. (2000). A compendium of material on the pedagogy-andragogy issue. *Journal of Continuing Education, Vol. 51, Issue 1, pp. 151-163.*

Gibbons, H. S., & Wentworth, G. P. (2001). *Andragogical and pedagogical training differences for online instructors.* State University of West Georgia, Distance Education Center: Online Journal of Distance Learning Administration, Volume IV, Number III, Fall, 2001.

Green, J. (1998). Andragogy: Teaching adults. In B. Hoffman (Ed.). Encyclopedia of Educational Technology, Retrieved February 11, 2006, from file://C:/Dociments.

Grace, A P. "Using queer cultural studies to transgress adult educational space." In Sheared, V., and Sissel, P. A. (Eds.), *Making space: Merging theory and practice in adult education.* Westport, CN: Bergin & Garvey – An Imprint of Greenwood Publishing Group, Inc. (pp. 257-270).

Griffith, W. S. (1991). "The impact of intellectual leadership." ," In Peters, J. M., & Jarvis, P. (Eds.). *Adult education: Evolution and achievements in a develping field of study.* San Francisco: Jossey-Bass Publishers, pp. 97-120.

Hadley, H. N. (1975). *Development of an instrument to determine adult educator's orientation as andragogical and pedagogical.* Unpublished doctoral dissertation, Boston University School of Education, Boston, MA.

Hanson, A. (1996). The search for a separate theory of adult learning: Does anyone really need andragogy? In *Adult Learners, Education and Training I.* Eds. Edwards, Richard; Hanson, Ann; and Raggatt, Peter. London: Routledge and The Open University. 99-108.

Harriman, G. (2004). "Adult learning." Found on file://G:\adultlearning@GaryHarriman_com.htm

Hartree, A. (1984). Malcolm Knowles's theory of andragogy: A critique. *International Journal of Lifelong Education,* 3, 203-210.

Hatton-Montoya, S. (1998, May 1). *RE: Kairos/andragogy.* Retrieved January 14, 2005, from http://www.ttuedu/wcenter/9085/msg000003.html

Haugoy, G. (2003, September 18). *Developing flexible open classrooms fro the independent students.* Retrieved July 13, 2005, from http//www.elearningeuropa.info/index.php?page=doc_print&doc_id=4341&docing=1.

Heimstra, R. ((2004, September 15). *Graduate adult education: Foundations of practice.* Retrieved January 14, 2005, from http://www-distance.syr.edu/adulted.html

Heimstra, R. (No Date). "Moving from pedagogy to andragogy; with annotated bibliography of sources related to andragogy." Retrieved on 2/10/06.

Heimstra, R., & Sisco, B. (1990). *Individualizing instruction.* San Francisco: Jossey-Bass Publishers.

Henschke, J. A. (1989). "Identifying Appropriate Adult Educator Practices: Beliefs, Feelings and Behaviors." In *Proceedings of the Eighth Annual Midwest Research-To-Practice Conference in Adult, Continuing and Community Education.* St. Louis, MO: University of Missouri

Henschke, J. A. (1998a). Historical antecedents shaping conceptions of andragogy: A comparison of sources and roots. In *Proceedings of the International Conference on Research in Comparative Andragogy.* Radovljica, Slovenia. 9/ 10-13/ 1998.

Henschke, J. A. (1998b). Modeling the preparation of adult educators. *Adult Learning, 9* (3), 11-14.

Henschke, J. A. (2004). *My Gift Outright [Regarding Andragogy] (*Paraphrase of Robert Frost's *"Our Gift Outright"* Delivered at the USA Presidential Inaugural Ceremonies of JFK & LBJ, 1961.

Henschke, J. A. (1995). Theory and practice on preparing human resource development professionals. In *Proceedings of Academy of Human Resource Development Research Conference.* St. Louis: University of Missouri. 7-2.

Henschke, J. A. (2000-ff.). Website: http://www.umsl.edu/~henschke/andragogy/

Hoffman, F. (1980*). How to teach grown-ups.* Calabasas, CA: Practical Management Associates, Inc.

Holmes, G. & Abington-Cooper, M. (no date). Pedagogy vs. andragogy: A false dichotomy? *The Journal of Technology Studies*, 50-55.

Hoods Woods. (1998). *Andragogy: The act, process, or art of imparting knowledge and skill to adults.* http://www.survival.com/gogy.htm

Hooks, B. (1994). Theory as liberatory practice. (from *Teaching to Transgress – as quoted by Kaminsky, Sherrie in "Comparing Pedagogy and Andragogy for Both Common and Dissimilar Meanings") Website: http://www.usm.maine.edu/~dlarson/kaminsky2.htm*

Illeris, K. (2004). *Adult education and adult learning [first English edition translated from Danish].* Malabar, FL: Krieger Publishing Company.

Imel, S. (1989). *Teaching adults: Is it different?* ERIC Digest No. 82. Identifier # ED 305495

Imel, S. (1994). *Guidelines for workihng with adult learners.* (ERIC Document Reproduction Service No. 154). (Report No. EDO-CF-94-154)..

Ingalls, J. D. (1976). *Human energy: The critical factor for individuals and organizations.* Reading, MA: Addison-Wesley Publishing Company.

Isenberg, S. K. *The Experience of Applying Principles of Andragogy to Internet Technology,* Unpublished Doctoral Dissertation at the University of Missouri-St. Louis, Division of Educational Leadership and Policy Studies, April, 2005.

Jarvis, P. (1984). Andragogy: A sign of the times. *Studies in the Education of Adults,* 16, 32-38.

Johnson, L. (1991, 1992, 1993). *Understanding and managing conflict.*

Johnson, L. F. (April, 2000). *"Dialogues in andragogy,"* A Paper Presented to a Doctoral Research Graduate Credit Seminar on Andragogy, conducted at the University of Missouri – St. Louis, Winter Semester, 2000.

Jorgensen, H. K. (1998). "Adult learning theories and religious education for seventh-Day Adventist college students: From theory to practice. Silver Spring, MD: 332-98 Institute for Christian Teaching, Education Department of Seventh-Day Advintists; Presented for the 22nd Faith and Learning Seminar hel at Seminar Schlossbogenhofen St. Peter Am Hart, Austria, August 9-21, 1998.

Kabuga, C. (1977). Why andragogy in developing countries? *Adult Education and Development: Journal for Adult Education in Africa, Asia, and Latin America.* 8 pp.

Kail, R., and Cavanaugh, J. (2004). *"Teaching touches lives."* In Book, Human development a life span view 93rd. ed.). Bellmont, CA: Thomson Wadsworth.

Kajee, L. (No Date). *Making waves, not just surfing the net: ICT and learning in the ESL classroom.* Johannesburg, South Africa: University of the Witwatersrand. Unpublished paper.

Kamansky, S. (notdate given). *Comparing pedagogy and andragogy for both common and dissimilar meanings.* Website: http://www.usm.maine.edu/!dlarson/kaminsky2.htm

Kamansky, S. (no date given). Comparing pedagogy and andragogy for both common and dissimilar meanings. Website: http://www.usm.maine.edu/~dlarson/kaminsky2.htm

Kapp, A. (1833). Die andragogik ober bildung im mannlichen alter. *Platons Erziehungslehre, als Padagogik fur die Einzelnen und als Staatspadagogik.* Germany: Minden und Leipzig.

Kay, J. B. (1994). *Accelerated learning and andragogy.* file://G:\andragogyandacceleratedlearning.htm

Knowles, M. (No Date). *Andragogy.* http://tim.psychology.org/knowles.html

Knowles, M. S. (1970 & 1980 – original and revised editions*). The modern practice of adult education*. New York: Association Press, & Cambridge Book Publishers.

Knowles, M. S. (1972). "The Manager as Educator." *Journal of Continuing Education and Training.* Vol. 2, No. 2. Baywood Publishing Company, Inc., pp. 97-105.
Knowles, M. S. (1989a). Adult learning: Theory & practice. In L. & Z. Nadler, (eds). *The Handbook of Human Resource Development, Second Edition.* New York: John Wiley & Sons.
Knowles, M. S. (1989b). *The making of an adult educator: An autobiographical journey.* San Francisco: Jossey-Bass Publishers.
Knowles, M. S. (1990). *The adult learner: A neglected species (4th edition).* Houston: Gulf Publishing Co.
Knowles, M. S. (1995). *Designs for adult learning: Practical resources, exercises, and course outlines from the father of adult learning.* Alexandria, VA: American Society for Training and Development.
Knowles, M. S. (1996). Adult learning. In Craig, R. L., (ed.). *ASTD Training & Development Handbook: A Guide to Human Resource Development, Fourth Edition.* New York: McGraw Hill.
Knowles, M. S. (no date). Lifelong learning: A dream. *Creating the future.* Retrieved January 14, 2005, from http://www.newhorizons.org/future/Creating the Future/crfut_knowles.html
Knowles, M. S., Holton, E. F. III, and Swanson, R. A. *The adult learner. (5th edition).* (1998). Houston: Gulf Publishing Co.
Knowles, M. S., Holton, E. F. III, and Swanson, R. A. *The adult learner. (6th edition).* (2005). San Francisco: Berrett-Koehler Publishers, Inc.
Krajinc, A. (1989). Andragogy. In C. J. Titmus (ed.). *Lifelong Education for Adults: An International Handbook.* Oxford: Pergamon. 19-21.
Lekoko, R., Oduaran, A., & Oeuaqran, C. (no date). *Learning transformations in university continuing and the African response.* Botswana, Africa: University of Botswana.
Lieb, S. (1991). *Principles of adult learning.* Phoenix, AZ: Vision – South Mountain Community College. http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/adults-2.htm (& 1. htm)
Lindeman, E. C. (1926a). Andragogik: The method of teaching adults. *Workers' Education*, 4: 38.
Lindeman, E. C (1926b, 1961). *The meaning of adult education.* Montreal: Harvest House.
Livingstone, D. E. (no date). *Adults' informal learning: Definitions, findings, gaps and future research.* Retrieved December 28, 2004, from
http://www.oise.utoronto.ca/depts/sese/csew/nall/res/21adults ifnormallearning.htm
Livingstone, D. W. (2001). "Adults informal learning: Definitions, findings, gaps, and future research; new approaches for lifelong learning (NALL) working paper # 21-2001. Toronto: Ontario Institute for Studies in Education – Advisory Panel of Experts on Adult, Learning (APEAL) Applied Research Branch, Human Resource Development, Canada.
Long, H. B. (1991). "Evolution of a formal knowledge base," In Peters, J. M., & Jarvis, P. (Eds.). *Adult education: Evolution and achievements in a develping field of study.* San Francisco: Jossey-Bass Publishers, pp. 66-96.
Martin University, Webmaster (2006). Andragogy. 2171 Avondale Place. Indianapolis, IN, 46218
Mazhindu, G. N. (1990). Contract learning reconsidered: A critical examination of the implications for application in nursing education. *Journal of AdvancedNursing, 1990, 15, pp. 101-109.*
Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *The New Update on Adult Learning Theory.* San Francisco: Jossey-Bass, New Directions for Adult and Continuing Education, Imel, S., Editor in Chief, No. 89, Spring 2001. 3-13.
Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education*, 32(1). Fall. 3-24.
Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco: Jossey Bass. pp. 198-201.
Mihall, J., and Belletti, H. (1999). *Adult learning styles and training methods: Forget those 13,000 hours* FDIC ADR..
Miller, P. (1998). *Class notes from session # 4 – February 10, 1998.* file://G:\andragogynotes Review of the Literature.
Milligan, F. (1999). "Beyond the Rhetoric of Problem-Based Learning: Emancipatory Limits and Links with Andragogy." *Nursing Education Today, 19,* pp. 548-555.
Milligan, F. (1995). "In Defence of Andragogy." *Nursing Education Today, 15,* pp. 22-27.
Milligan, F. (1997). "In Defence of Androgogy. Part 2: An Educational Process Consistent with Modern Nursing Aims." *Nursing Education Today, 17,* pp. 487-493.
Monts, B. (2000). *Andragogy or pedagogy: A discussion of instructional methodology for adult learners.* Illinois State University. Unpublished paper.

Morland, D. V. (2003). "How to teach adult learners." *ROI (Return on Investment) Learning Services Professional Guidelines Services.* Downlinked from an andragogy google search.

Morrall, P. (1993). "The Beginning of the End of Andragogy." *Senior Nurse, Vol. 13, No. 5,* September / October, 1993, pp. 42-44.

Moore, J. (No Date). *Site philosophy: Learner-focused education, andragogy.* http://www.edtech.vt.edu/edtech/is/ocs.introp2.html

Moore, M. (1986). Self-directed learning and distance education. *Journal of Distance Education/Revue de L'enseignmenta a Distance,* 1-15. Retrieved December 28, 2004, from http://cade.athabascau.ca/voll.l/moore.html

Mynen, M. (No Date). *What andragogy means to me.* http://www.instructordiploma.com/core/102%20b/victoria/mynen.htm

Nadler, L. & Nadler, Z. (Eds.) (1989.) *The Handbook of Human Resource Development Second Edition.* New York: John Wiley & Sons.

Nebraska Institute for the Study of Adult Literacy. (no date given). *Andragogy: Alternative interpretations and applications summarized from understanding and facilitating adult learning by Stephen Brookfield (1986).* Website: http://literacy.kent.edu/~nebraska/curric/ttim1/artsum.html

Nevins, S. C. (no date given). Andragogy versus pedagogy: The secret to successful business learning. Website: http://www.westchesterventuregrp.com/EntrepreneurForum/Andrag..

No author (no date). *Introduction to Andragogy.* Retrieved Novembe 1, 2004 from http://learning.msu/Adult/andro.htm

Nordic Council of Ministers: Sigrin Rostad, Nordic Council of Ministers (no date). *Overall plan fro Norwegian project, presented to the Nordic council of ministers.* Copenhagen, Denmark: Nordic Folk Academy.

Nottingham Andragogy Group. (1983). *Towards a developmental theory of andragogy.* (Adults: Psychological and Educational Perspective No. 9). Nottingham, England: University of Nottingham Department of Adult Education.

Osborn, S. (1999). *Andragogy.* . Belgrade, Yugoslavia: Faculty of Philosophy. Forum Website: http://ifets.gmd.de/

Ovesni, K. (1999). *Andragogy as an integral part of educational sciences.* Belgrade, Yugoslavia: Faculty of Philosophy. Forum Website: http://ifets.gmd.de/

Ovesni, K. (2000). *Concepts and models of professional preparation of andragogues.* Retrieved July 12, 2005, from http://www.geocities.com/kowesni.geo/indexma.html?200512

Paraskevas, A., & Wickens, E. (2003). Andragogy and the Socratic method: The adult learner perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education,* Vol. 2, No. 2.

Pastrana, M., (no date). *Andragogy International Universe.* N. Miami Beach, FL: Andragogy International Universe, Inc.

Patterson, B. (No Date). *The basics of andragogy – adult teaching / learning.* Gresham, OR: Adult Continuing Christian Education – A Mission Program of Strengthening Growing Christians and Churches. http://www.makedisciples.net/acce/basics_of_andragogy.asp

Peters, J. M., & Jarvis, P. (1991). *Adult education: Evolution and achievements in a develping field of study.* San Francisco: Jossey-Bass Publishers.

Picavet, G. (2003). *Andragogy: An introduction – Belgium/roots project.* http://Belgium.rootsweb.com/sci/andragogy.html

Pinheiro, S. O. (2001). *Perceptions versus preferences: Adult international students' teaching learning experiences in an American University.* Retrieved October 24, 2005 from http://nccrest.edreform.nte/resounce/7101

Poggeler, F. (1994). Introduction – Trends of andragogical research in Europe. In Jarvis, P., & F. Poggeler (eds.) *Developments in the Education of Adults in Europe.* Frankfurt am Main: Peter Lang, Studies in Pedagogy, Andragogy and Gerontology, Poggeler, F. (ed.) Vol. 21, 9-15.

Pratt, D. D. (1984). Andragogical assumptions: Some counter-intuitive logic. *Proceedings of the Adult Education Research Conference, No. 25.* Raleigh: North Carolina State University.

Pratt, D. D. (1988). Andragogy as a relational construct. *Adult Education Quarterly.* 38 (3). Spring. 160-172.

Pratt, D. D. (1993). Andragogy after twenty-five years. In *New Directions for Adult and Continuing Education: An Update on Adult Learning Theory.* Ed. Sharan B. Merriam. No. 57, Spring, 1993. 15-24.

Rachal, J. (2002). Andragogy's detectives: A critique of the present and a proposal for the future. *Adult Education Quarterly: A Journal of Reserarch and Theory.* 22, (3), May, 2002.

Rachal, J. (2000). *"Effectiveness of andragogy concurrent session presentation,"* American Association for Adult and Continuing Education Conference, Providence, RI, November, 2000.

Raslavicus, P. (2003?). "The 'Androgogy' of Learning." *College of American Pathologists* – From the President's Desk. Northfield, IL.

Reischmann, J. (2000). *Our understanding of andragogy.* Bamberg, Germany, Otto Freiderick University. Homepage: http://www.andragogy.net

Reischmann, J. (2004). "Andragogy." *A Manuscript Prepared for Publicaiton in an Enzyclopedia.* Located on http://www.andragogy.net .

Reischmann, J. (2005). *Andragogy: History, meaning, context, function.* In English, L. M. (Ed.), International Encyclopedia of Adult Education. Houndsville, NY: Palgrave Macmillan.

Robb, W. M. (1990). Can South African andragogics improve understanding between Anglo-American and Continental European adult educationists? *Toward 1992 -- Education of Adults in the New Europe. Proceedings of the 20th SCUTREA Conference*, West Sheffield, England.

Rosenstock-Huessy, E. (1925). *Andragogy – 1925.* Retrieved October 26, 2005, from http://www.argobooks.org/feringer-notes/t24.html

Ross, B. E. (198_?). "Integrating Andragogy with Current Research on Teaching Effectiveness." *Proceedings of the Lifelong Learning Research Conference.* Pp. 29-33.

Rossman, M. H. (2003). "Andragogy and distance education: Together in the new millennium." In N. Gadbow (Ed.). *New Horizons in Adult Education* – ISSN. 1062-3183, Volume 14, Number 1, Winter, 2003.

Salama, A. (2003). *Architectural pedagogy and andragogy.* *http://archnet.org/groups/apa/index.tel?n_days=5*

Sasmal. C. K. (no date). *Adult Learning in Indian Call Centers.* Bangalore, India: Trans Works Information Services.

Savicevic, D. (2000). *The roots and evolution of andragogical ideas.* [Koreni I razvoj andragoskih ideja – in the Serb Language]. Beograd: Serbia [formerly Yugoslavia] Institut za pedagogiju I andragogiju Andragosko drustvo Srbije

Savicevic, D. (1999a). *Adult education: From practice to theory building. Vol. 37*. In F. Poggeler, (ed.) Studies in Pedagogy, Andragogy, and Gerontagogy. Frankfurt am Main: Peter Lang.

Savicevic, D., (1999b). Understanding andragogy in Europe and America: Comparing and contrasting. In J. Reischmann, Z. Jelenc, & M. Bron, (eds.*)* *Comparative Adult Education 1998: The Contribution of ISCAE to an emerging field of study.* 97-119. Bamberg, Germany: ISCAE Proceedings.

Savicevic, D. (1991). Modern conceptions of andragogy: A European framework. *Studies in the Education of Adults*, 23(3), 179-201.

Schnieder, K. (2003). *"A guide for developing higher education computer-based learning activities: A concept map.* Concordia University.

Schugurensky, D. (2005). *Selected moments of the 20th century.* Department of Adult Education, Community Development and Counseling Psychology, The Ontario Institute for Studies in Education of the University of Toronto, Toronto, Ontario, Canada.

Shore, S. (2001). "Talking about whiteness: "Adult learning principles" and the invisible norm." In Sheared, V., and Sissel, P. A. (Eds.), *Making space: Merging theory and practice in adult education.* Westport, CN: Bergin & Garvey – An Imprint of Greenwood Publishing Group, Inc. (pp. 42-56).

Simonson, M., S. Smaldino, M. Albright, & S. Zvacek. (2003). *Teaching and learning at a distance: Foundations of distance education.* (Second Edition). Columbus, OH: Merrill Prentice Hall.

Simpson, J. A. (1964). Andragogy. *Adult Education*, 37 (4). 186-194.

Smith, M. K. (1996). Andragogy: The History and Current Use of the Term Plus an Annotated Bibliography. *The Encyclopedia of Informal Education.* http://www.infed.org/lifelonglearning/b-andra.htm Last Updated 6/15/04.

Smith, M. K. (2002). Malcolm Knowles, informal adult education, self-direction and andragogy. *The Encyclopedia of Informal Education.* Retrieved January 14, 2005, from http://www.infed.org/thinkers/et-knowl.htm

Sopher, M. J. (2003). *An historical biography of Malcolm S. Knowles: The remaking of an adult educator,* University of Wisconsin-Madison, Department of Continuing, Adult and Vocational Education. Unpublished Doctor of Philosophy Dissertation.

Stanton, C. *A Construct Validity Assessment of the Instructional Perspectives Inventory,* Unpublished Doctoral Dissertation at the University of Missouri-St. Louis, Division of Educational Leadership and Policy Studies, April, 2005.

St. Clair, R. (2002). *Andragogy revisited: Theory for the 21st century – myths and realities 19.* http://www.cete.org/acve/testonly/docgen.asp?tbl-mr&id=109
Stratton, C. (no date). *"Does theory inform our teaching practices in andragogy?"* Instructional Development Services. Taken from: http://www.newhorizons.org/future/creatingthefuture/crfutknowles.html or http://adulted.about.com/os/adutlearningthe/a/knowles.htm
Suanmali, C. (1981). *The core concepts of andragogy.* Doctoral Dissertation. Columbia University Teachers College. Dissertation Abstracts International, University Microfilms No. 8207343.
The Board of registration of real estate: Brokers & salespersons. (No Date). *Category: Andragogy – From a Curriculum for the 30 Hour Instructor Course.* http://www.mass.gov/dpl/boards/re/contedu/inst02.htm
Thorpe, Dr. E. (1999). *Andragogy and technology.* Accessible: thorpet@mail.mohawke.on.ca
VanGent, B. (1996). Andragogy. In A. C. Tuijnman (Ed.).*The International Encyclopedia of Adult Education and Training.* Oxford: Pergamon. 114-117.
Wartenberg, A. D. (1994). *Andragogy and whole language.* ERIC Identifier: ED365958. Paper presented at the Annual Meeting of the Deleware Valley Reading Association (Merion, PA), 3/15/94.
Wave Technologies International, Inc. (no date). *Learning: The critical technology, a whitepaper on adult education in the information age.*
Webster's Encyclopedic Unabridged Dictionary of the English Language – Updated Revised Deluxe Edition. (1996). New York: Random House Value Publishing, Inc.
Wie, A. L. (2003). *Improving adult learning.* Hogskolen i Nesna: Socrates Education and Culture.
Wilson, C. (2002). *A comparative study of the historical development of andragogy and the formation of its scientific foundation: In Germany and the United States of America, 1833-1999.* Doctoral Dissertation Draft in Progress, Tulsa, OK: Oral Roberts University.
Wilson, C. (2003). *A comparative study of the historical development of andragogy and the formation of its scientific foundation: In Germany and the United States of America, 1833-1999.* Tulsa, OK: Oral Roberts University. Unpublished Doctoral Dissertation.
Wilson, C. (2004). *Neuroandragogy: A Neurological Approach to Adult Education and Learning.* Farmingdale, NY: A Manuscript Being Prepared for Publication as a Book. [Possible Alternate Title: *Understanding Adult Brain Functions: A New Paradigm for the Study of Adult Education of Androgogy].*
Wise Caterpillar Training and Development Links. (no date). Retrieved December 28, 2004, from http://www.wisecaterpillar.com/trainlink.html
Young, G. (1985). "Andragogy and pedagogy: Tow ways of accompaniment." In *Adult education quarterly,* 35 (3), 160-167.
Zemke, Ron, & Susan Zemke. (1981). Thirty things we know for sure about adult learning. *Adult Learning in Your Classroom.* Ed., Jones, Philip G. Minneapolis: Lakewood Publications, *Training Magazine*, June, 1981. In Chapter 4: Understanding the Adult Learner, 115-118.
Zemke, Ron, & Susan Zemke. (1996). Adult learning: What do we know for sure? In *The New Training Library: Adult Learning in Your Classroom.* Ed., Zielinski. Minneapolis: Lakewood Books. In Chapter 2: Understanding and Motivating the Adult Learner, 71-74.
Zhang, Wei. (1996). Adult Education in China. *International/Global Comparative Education in Adult Education, (Translated by Carole Yufang Huang).* Ed. Zhang, Wei. Beijing: Industrial Publishers.
Zmeyov, Serguey I. (1994). Perspectives of adult education in Russia. In *Developments in the Education of Adults in Europe. Vol. 21 of Studies in Pedagogy, Andragogy and Gerontology.* Eds., Jarvis, Peter, & Poggeler, Franz. Bern, Switzerland: Peter Lang. 35-42.
Zmeyov, S. I. (1998). Andragogy: Origins, developments and trends, *International review of education: 44 (1), 103-108.*
(no author). (no date). *Andragogy: Prison literacy – implications for program and assessment policy – page 25. htm.*
(no author). (no date). *Andragogy.* Retrieved January 14, 2005, from http://www.neoam.cc.ok.us/~rhsutton/andragogy.htm
(no author). (no date). *Andragogy.* Teaching and Learning Online: Transitioning Course Materials to the Online Environment. Retrieved January 14, 2005, from http://www.isd.uga.edu/sclark/transition/andragogy.htm
(no author). (no date). *Andragogy: Adult learning theory*
(no author). (no date). Theories. *Andragogy (M. Knowles).* Retrieved January 14, 2005, from http://tip.psychology.org/knowles.html

(no author). (no date). *Andragogy vs. pedagogy*. Retrieved January 14, 2005, from http://courses.forum.ncsu.edu/cgi-bin/netforum/aee523_moore/a/15—6.1
(no author). (no date). *Andragogy vs. pedagogy*. Retrieved January 14, 2005, from http://courses.forum.ncsu.edu/cgi-bin/netforum/aee523_moore/a/14--6.13.1
(no author). (no date). *A philosophy of adult education.* A Power Point Presentation.
(no author). (no date). *CRLA II topic 3*. Retrieved January 14, 2005, from http://www.1.fccj.edu/smaddox/crla_ii_topic_3.htm
(no author). (no date). *Hayes brake.*
(no author). (no date). *Moving from pedagogy to andragogy*. Retrieved December 28, 2004, from http://home.twcny.rr.com/hiemstra/pedtoand.html
(no author). (no date). *Moving from pedagogy to andragogy*. (Adapted and updated from Hiemstra, R., & Sisco, B. (1990). *Individualizing instruction.* San Francisco: Jossey-Bass.) Retrieved January 14, 2005, from http://www-distance.syr.edu/andraggy.html
(no author). (no date). *PPT Slide Show* file://G:\KnowlesAndragogy.htm
(no author). (2003, September 24). *Psychology of adult learning: Andragogy vs. pedagogy*. Retrieved January 14, 2005, from http://sloan.soe.unc.edu/blogs/adult_learning/archives/000008.html
(no author). (no date). *The seven principles*. Teaching and Learning Online: Transitioning Course Materials to the Online Environment. Retrieved January 14, 2005, from http://www.isd.uga.edu/sclark/transition/seven.htm