ANDRAGOGY FOR ADULT LEARNERS IN HIGHER EDUCATION

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ABSTRACT

There is much information available to the public through published course curricula, syllabi, and online course descriptions at university websites from which we could speculate what is taught to undergraduate business students in the United States. What we do not have as much information about is how the courses are taught. What teaching methodologies are used? And, to what levels do instructors of business classes understand and practice andragogical principles? As competition for adult students in higher education becomes more intense, not only what we teach, but how we teach it becomes more important.

This paper will review and summarize the literature that suggests a significant theoretical difference between andragogy and pedagogy. The premise is that the assumptions behind pedagogy, which in the original Greek means “child conductor,” do not always fit the needs of the adult learner. Andragogy, derived from the Greek word for “adult or man,” provides a better model for the growing number of nontraditional students enrolled in many universities.

This paper will present a theoretical foundation for curriculum development based on andragogical principles. The paper will also present a model with an example of innovative learning which meets the demands of these student populations. Finally, the authors make suggestions for how to plan a course based on the principles of andragogy.

INTRODUCTION

The student population of colleges and universities in the U.S. has changed dramatically in the past thirty years. Although there have been numerous demographic changes, it is questionable how many university professors consider their impact. Educators often speak about pedagogical models, but in our research we found few who mention andragogical models and how to apply them. We believe that new models of learning in higher education must be developed based on the theory of andragogy.

Prior to World War II, higher education was designed primarily for students who could attend school on a full-time basis. A vast change resulted from the passing of the GI Bill in 1944, which gave many older students the opportunity to attend college. In the late 1960’s, college enrollments skyrocketed as the “baby boomers” reached college age. Subsequent economic changes in the U.S. economy in recent years have made it attractive for “baby boomers” to return to school. Social changes that occurred in the 1960’s and 1970’s brought many more females and older adult students into higher education, and these trends continue today.

The term “nontraditional” is multi-faceted. A report from the National Center for Education Statistics (NCES) (2002) defines “nontraditional” as a student having one or more of these characteristics: delays enrollment, attends part-time some of the academic year, works at least 35 hours per week, is financially independent, has dependents, is a single parent, or does not have a high school diploma. So, nontraditional can be measured
on a continuum; a student can be classified from “minimally” to “highly” nontraditional based on how many of these characteristics he or she possesses (Horn 1996). From 1970 to 1999, the proportion of students over 25 years old attending college increased from 28% to 39% and females attending college jumped from 42% to 56% (National Center for Education Statistics, 2002). In 1999-2000, 73% (almost three-quarters) of undergraduates were nontraditional, or they possessed at least one nontraditional attribute. The report concludes that there are at least as many students who would be classified as traditional (possessing none of the nontraditional characteristics) as those who are highly nontraditional (possessing four or more nontraditional variables), at 27% and 25% respectively. At institutions of higher learning where there is a mix of traditional and nontraditional students, there will always be a dynamic tension between the pedagogical and andragogical approaches. For example, traditional students in daytime classes may need more “pedagogy,” and nontraditional students (usually working adults) in evening classes may need more “andragogy.” An effective educator understands the differences between the two types of students, and has the skill and flexibility to adapt to their needs.

These characteristics of nontraditional students distinguish learning needs of adults, and faculty’s knowledge of andragogy is necessary to meet them. "Andragogy is characterized by a problem/project orientation; the use of experienced-based techniques; the facilitation of self-motivation to encourage learning; and, in general, the pivotal role of the learner in acquiring new knowledge or skills" Marshak (1983, p. 81). Marshak discusses “mixed situations” in which both teaching models are used, rightfully or wrongfully, and goes on to cite examples of "nontraditional college programs which must conform to university requirements with respect to examinations, grading and the like...” (p. 81). This approach may violate the pure andragogical model because external evaluations may be imposed and some learning may be dictated, resulting in a case of unmet adult learner needs.

We believe that many educators today focus on pedagogy, when they should be focusing on andragogy. In fact, informal discussions with faculty have indicated that many are not even familiar with the term “andragogy.” The term was made popular by Malcolm Knowles (1977, 1980), who contended that an effective learning design for adults should be based on a different set of assumptions than those of the traditional (pedagogical) learning model. Knowles’ theory suggests that if educators persist in using pedagogy to teach adults, institutions will lose them to other institutions and programs that cater to the adult learner.

REVIEW OF LITERATURE

Although andragogy did not appear in a dictionary until 1981, it has been known as a term in Europe since 1921. In addition, in the United States there have been published hundreds of articles on andragogy dating from the late 1960’s (e.g., Grabowski, 1970; Seaman, 1969; Knowles, 1970, 1977, 1980, and 1984). There are a number of contexts in which teaching and learning based on andragogy can be consequential and are exemplified in the following citations. The differences between andragogy and pedagogy are important in understanding how adults and children learn differently (Davenport & Davenport, 1986). Rather than using the pedagogical model commonly associated with teaching traditional students, educators must design effective activities as part of the learning cycle (Reed, 1993). Henschke (1998) stated that the four major components of a
learning model for adults are andragogy, attitude, competence, and trust. It is imperative that educators understand andragogy, and that programs be developed to meet the demands of an increasing adult population (Patterson & Pegg, 1999).

Malcolm Knowles’ (1977) developed the paradigm of andragogy as we know it today (see Table 1). Lawson (1998) described Knowles’ work as pivotal in terms of a shift in the educational paradigm. It is very interesting to note that, although in academic terms Knowles’ work might be considered “dated,” that most of the articles reviewed for this paper cited at least one article by Knowles and proclaimed him the unmistakable “founder” of adult learning doctrine. Additionally, no one refutes his claims, but only supports them with additional arguments. So, for this paper, we believe it is appropriate to use Knowles’ model as a foundation for course development, and to cite additional supportive literature. Knowles defined andragogy as “the art and science of helping adults learn” (1980, page 43), and claimed that there were four critical andragogical assumptions of adult learners which differ from the assumptions of pedagogy (Knowles, 1977).

Table 1

<table>
<thead>
<tr>
<th>Knowles’ Principles of Andragogy (1977, p. 39):</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. His self-concept moves from one of being a dependent personality toward one of being a self-directed human being.</td>
</tr>
<tr>
<td>2. He accumulates a growing reservoir of experience that becomes an increasing resource for learning.</td>
</tr>
<tr>
<td>3. His readiness to learn becomes oriented increasingly to the development tasks of his social roles.</td>
</tr>
<tr>
<td>4. His time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness</td>
</tr>
</tbody>
</table>

Principle 1: Learner as Self-Directed

These principles are not mutually exclusive; by their very nature and in keeping with Knowles’ intention, they are part of a system of learning theory. Only for the purposes of analysis and example, we will explain each principle individually. In his first principle of andragogy, Knowles (1977) claims that superior andragogical learning conditions should motivate the learners to feel a need to learn. Because adults regard education as a life-time activity, they are able to learn more effectively in a self-directed environment, which is quite different from the environment of traditional students (Patterson & Pegg, 1999). Learning as an iterative, dynamic process of change, dependent on the self-efficacy of the learner to take responsibility for his or her own learning is summarized by Galbraith (1990) who stated that "learners and facilitators are involved in a continual process of activity, reflection upon activity, collaborative analysis of activity, new activity, further reflection, and collaborative analysis, and so on" (p.10). In an analysis of undergraduate management education, Gammie (1995) concluded that “maximum flexibility and student self-governance” result in the most effective programs.

As Reed (1993) indicated, adults should be motivated through internal rather than external means. In support of an andragogical model, students should be dynamically involved in planning their learning process (Cervero & Wilson, 2001).

Principle 2: Learner as Resource

Knowles’ second principle claims that adults can be a resource for their own learning and the learning of others. According to Patterson & Pegg (1999), collaboration was the most cited difference in adult learners when compared to children. Galbraith
(1990) claims that collaboration is a key ingredient for successful adult learning methodologies. Using an andragogical model requires that educators undergo a basic change in the way that they feel about learning and allow learners to rely on themselves as resources of learning (Boud, Cohen, & Walker, 1993; Cell, 1984). The model must follow Knowles’ theory on andragogy and must value nontraditional students’ life experiences and awareness of self (Uehling, 1996).

Principle 3: Learning as Developmental

The third principle in Knowles’ andragogical model is focused on the learners’ developmental goals. The andragogy paradigm requires that instructors choose strategies that will enable adults to achieve their learning goals. By “romancing” the individual adult learner, organizations and society are improved because “a society whose central dynamic, change–economic and technological, political, social, cultural, even theological-- requires a citizenry that is able to change” (Knowles, 1980, p.36). This suggests a focus on learning to learn, which may be a developmental goal of the mature learner. Lawson (1998) supports the importance of andragogy in helping adult learners make career transitions and claims that andragogy can be a powerful tool in influencing the delivery of services to adults. “Program evaluation procedures can help determine if the participants in the learning activity reached their educational objectives and desired outcomes; they can be used in the planning process and for program improvement; and they can be used for program justification and accountability” (Galbraith, 1990, p.8-16). Beaman (1998) indicated that adults “need assessment not just for evaluation, but also for motivation and feedback. Assessment for adult learners can also be empowering and can lead to a richer, deeper learning experience” (p. 58). Learners may develop skills and self-awareness through feedback and evaluation of others’ behavior in the classroom (Saunders, 1991). “The driving force in lifelong learning is not the acquisition of knowledge per se as it is amongst youngsters, but rather the self-actualization of individuals of themselves and through the organizations where they work and live. That can scarcely be accomplished through a normative curriculum or through any model of higher education provision based on the philosophy of ‘faculty knows most - and best’ ” (p.328) (Prestoungrange, 2002).

Principle 4: Learning as Application to Real World

The last principle of andragogy according to Knowles (1977) is the need for immediate application of theory to practice and the related focus on problems as opposed to content. The learning strategies should be less involved with theory, and more focused on emphasizing practical applications of knowledge relevant to the real world (Patterson & Pegg, 1999). Similarly, Galbraith (1990) claims that successful education will relate theory to practice, and Wankel & DeFillippi (2003) advocate bringing “real world” opportunities into the classroom through simulations, cases, technology, and collaborative learning opportunities between educational institutions and business. There is little evidence to suggest that making higher education for nontraditional adult learners should be anything but as real as possible, and as immediately applicable to their own lives as is reasonable.

ANDRAGOGY IN ACTION

As seen in Table 2, Kennesaw State University typifies the demographic changes experienced by American institutions of higher learning over the past few decades. This data is based on an undergraduate and graduate population totaling 15,654. A
comparison of the data available revealed few significant differences in the demographics between graduate and undergraduate students, so the data was not separated into these two groups, unless otherwise indicated on the table. In summary, females outnumber males by a wide margin (9754 females: 5900 males), surpassing the national average of 56% female students (NCES, 2002). There are roughly 50% more full-time students than part-time students. There are approximately twice as many students taking a combination of day and evening classes as there are taking only evening classes; and this could be interpreted as fulfilling a need for a wide range of class times to meet the needs of students with many other demands on their schedules. It is interesting to note that the average age of undergraduate students (25) is older than the highest age of the generally accepted traditional range (ages 18-22). It is not surprising that the graduate students’ average age is nine years greater (34 years). In total, over half of the undergraduates matriculating are in nontraditional categories.

Table 2
Demographics of an Urban University in 2002
N=15654
Variable
Gender
Males 5900 (38%) 9754 (62%) --
Females 9754 (62%) 5900 (38%) --
Enrollment Status
Full Time 9175 6479 --
Part Time -- -- --
Day/Evening
Day 6312 3294 6048
Evening -- -- --
Both -- -- --
Age (undergraduate)
Average 25 77 14
Youngest 18
Oldest 25
Age (graduate) 34 74 18
Source: Kennesaw State University Web Site Fact Book 2002

In the Summer Semester 2003, one of the authors (Thompson) designed and facilitated a course which encompassed many of the andragogical principles presented in this article. The design of the course will be presented in terms of Knowles’ model of andragogy.

Principle 1: Learner as Self-Directed

The class was authorized by the College to be offered only if at least twelve students registered for it; it was not a required course, only an elective if enough students were interested. So, the professor had to market the class to get the minimum number of students to enroll. We can assume that the students who registered for the class had an interest in working on a project like this from the beginning; the professor was very clear about “real world experience” and “intense work load.” The students were responsible for their own learning and had many opportunities to learn through various methodologies including instructor led discussions, brainstorming, role play, small group discussions, and guest speakers. On the first day of class, the client presented two projects which had been previously determined by the instructor and the client to be appropriately difficult and challenging for these senior level students. The professor encouraged the students to choose the project they were interested in, and which would be a challenge developmentally, and each student chose his or her preference.

The team process was documented by the team members in the form of “individual student activity logs” in which each student tracked his or her “billable
hours” as a consultant on the team, a “team activity log” which was a detailed record of the team process, and “team evaluations” which were completed for developmental purposes at midterm and for evaluative purposes at the end of the semester. So, in this sense, the students were “self-directed;” on an individual level and as a member of a team they were responsible for their level of involvement and record-keeping throughout the semester.

Principle 2: Learner as Resource

The team learning environment is an excellent way for adult learners to play the role of expert. In these projects, we needed team members who performed many functions, task-oriented or relationship-oriented. Both team projects were fairly technologically demanding, and, to some degree, all team members functioned in the capacity of technical expert. The professor’s role as coach inspired the team members to take on various responsibilities and roles; throughout the semester the class discussed the team processes and how they could be improved. It was evident that all of the students in this class had been required to work on team projects in the past, either in school, at work, or both. Their previous experiences as team members contributed to each team’s development and success in reaching their project goals. Several of the team members in each team functioned as internal consultants in their jobs and were very valuable team players in terms of client relationship development and maintenance. These members understood the trials and frustrations of working with a client, and were able to coach others who did not have these kinds of experiences. In fact, the projects were not easy by any means; the subject matter was sophisticated, the timeline was grueling, and the client sometimes did not have the information needed when the team wanted it. The point is that the teams had the expertise collectively to accomplish the goals set forth by the client and professor, and were encouraged and motivated to apply them.

Principle 3: Learning as Developmental

Throughout the course, from the high level design (a collaborative effort between client and professor) to the delivery of the final presentation and evaluation, the learning climate was one in which students were encouraged to participate in decision making about their projects and even encouraged to make mistakes as a learning methodology. The professor and client were both heavily involved as coaches in the problem solving aspects of the two projects. The purpose of one team project was to analyze the need and make recommendations for an intranet and internet website for company diversity. This involved benchmarking other companies, interviewing high level executives in the client organization, and synthesizing a vast amount of data into a document that would be coherent and complete. The resulting document was quite impressive not only in length (with supporting material, over 200 pages), but in the quality of the written and oral presentation. The other team was charged with conducting a feasibility study for virtual training methodologies for a segment of the client organization’s population. Their research was challenging because the companies who provide these kinds of services are difficult to access without the promise of a sale. In the end, this team presented a highly professional presentation (oral and written). Each team spent hours preparing, practicing, providing feedback to each other, and being coached through their final presentations, which were presented to the professor, the client, six executives from the client organization, and the Dean of the College of Business.
These projects were deemed highly successful by all parties involved. For example, the students were exceedingly pleased with the results, as evidenced by students’ comments informally shared throughout the semester, and on final course evaluations (see Appendix A: Students’ Comments Summer Term 2003). The Dean of the College sent an email to the professor the day after the presentation saying, “Very impressive.” The client said, “I don’t have anything negative to say about this project” and wanted the teams to present to an executive group at headquarters after the semester was over. But, most importantly, the work that the students completed for these projects has been implemented by the client organization, which is related to the fourth principle. Principle 4: Learning as Application to Real World

The purpose of this course was to provide students with an opportunity to work together as a team of human resource consultants to a client organization, a very large international corporation headquartered in Atlanta, Georgia. Based on students’ feedback at the end of the semester, the course was “a real world experience” and allowed students “to apply key learning from other classes” (see Appendix A: Students’ Comments Summer Term 2003). Formally, the course description supports this principle of real world application and reads: “This course is a directed research project on a set of predetermined human resource management issues conducted within a sponsoring organization. Students work in small groups to design and implement a study to resolve a real business problem. Groups present their solutions to executives of sponsoring organizations and to KSU faculty.”

Additionally, the professor focused on developing five competencies within this course which, at an exploratory level, were identified as those meeting the needs of business. (a) Learners need real experience and businesses want graduates who can apply relevant theories to real world problems (Elliot, Goodwin, and Goodwin, 1994; Masikiewicz, 1995; Norman, 2003; Theibert, 1996). The notion of giving the students an opportunity to apply theory to real world problems also supports the principles of andragogy (Knowles, 1977; Cervero & Wilson, 2001). (b) College graduates need to come to the world of work with communication skills, including team work, interpersonal, supervisory, and presentational (Elliot, Goodwin, and Goodwin, 1994; Goffee, 1996); Norman, 2003). (c) Businesses want graduates who can solve problems and use creativity (Masikiewicz, 1995). (d) Students should enter the job market proficient in technical skills and the self efficacy to learn new ones (Wankel & DeFillippi, 2003). (e) Businesses want entering employees who exhibit leadership skills (Rifkin, 1996). Each of these competencies was addressed through various teaching methodologies practiced in the course. For example, for the communication competency, all students were coached and evaluated on presentation skills, writing skills, and team communication skills throughout the semester.

Additionally, the course objectives and assessments supported this principle and read:

Table 3

<table>
<thead>
<tr>
<th>Course Objectives And Assessments : At the end of the course, students should be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply HR practices and techniques to real-world settings. This will be assessed by completion of a consulting type project in cooperation with industry professionals at the host organization. The project will conclude with a formal presentation to the rest of the class and to the industry participants. A written Management Report will also be submitted</td>
</tr>
</tbody>
</table>
to the sponsors and instructors.

2. Identify and use various sources of HR information, including the Internet, the library, personal interview, and employer/employee sources. An assessment of this objective will be based on a Management Report to be submitted to the instructor and host organization.

3. Use analytical and critical thinking skills to synthesize information and make recommendations for implementation of HR practices and techniques. An assessment of this objective will be based on the industry participants’ and the instructor’s judgment of the viability, consistency with accepted practice, and realistic nature of the students’ conclusions and recommendations.

CONCLUSION
We believe that using Knowles’ (1977) principles of adult learning as described in this paper as a model for course development will result in more successful educational programs. In keeping with Knowles’ (1977) paradigm, Cervero & Wilson (2001) take incorporating andragogy into course design to a level of ethical responsibility when they claim that “the highest professional and moral principle for adult educators, then, is to involve learners in identifying their needs” (p. 5). Whether or not you agree with this or any other practice of applying andragogy to the adult learning environment as a moral issue, there is enough evidence to claim that it is the logical and “right” thing to do for our adult learners.

Future research should focus on answering the following questions: (a) Do teachers in higher education use andragogical methods or not? If they do, what methodologies best support the principles of andragogy? (b) If they do not use andragogy as a foundation for course development, what methods do they use? (c) If they do not use andragogy as a foundation for course development, why not?

REFERENCES


Norman, J. (2003). Creativity is important. The Orange County Register.


APPENDIX A: STUDENTS’ COMMENTS SUMMER TERM 2003

Note from the professor: On the following pages, you will find all the students’ comments I received from the class presented in this article. They have not been edited, but are verbatim, except in the case of clarification or ease of reading where I have added words in brackets [].

<p>| Question 1: Identify the aspects of the course that most contributed to your learning/include examples of specific materials, exercises and/or the faculty | Question 2: Identify the aspects of the course, if any, that might be improved (include examples of specific materials, exercises and/or the faculty member’s |</p>
<table>
<thead>
<tr>
<th>Member's approach to teaching, supervision, and mentoring)</th>
<th>Approach to teaching, supervision, and mentoring)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Approach to teaching very enthusiastic</td>
<td>• Nothing</td>
</tr>
<tr>
<td>• Great mentor, extra help always offered</td>
<td></td>
</tr>
<tr>
<td>• Keeps class involved in discussions</td>
<td></td>
</tr>
<tr>
<td>• Good group projects</td>
<td></td>
</tr>
<tr>
<td>• Fair tests</td>
<td></td>
</tr>
<tr>
<td>• Very friendly</td>
<td></td>
</tr>
<tr>
<td>• The real life situation made the eight weeks fly by.</td>
<td>• The client was very confusing</td>
</tr>
<tr>
<td>• This is one of my favorite classes.</td>
<td></td>
</tr>
<tr>
<td>• Dr. Thompson was a great inspiration.</td>
<td></td>
</tr>
<tr>
<td>• The project combined with the book helped me a great</td>
<td>• Guidelines from [client] were not very</td>
</tr>
<tr>
<td>deal [in] understanding the consulting process</td>
<td>clear in the beginning. Professor's input and</td>
</tr>
<tr>
<td>• Dr. Thompson made the class very interesting and fun</td>
<td>direction were very valuable.</td>
</tr>
<tr>
<td>• I learned about the process of consulting and the</td>
<td>• Receive necessary materials from client</td>
</tr>
<tr>
<td>importance of providing the client with what they want</td>
<td>earlier</td>
</tr>
<tr>
<td>• Dr. Thompson’s approach to teaching this class was</td>
<td>• Meet more often and over 16 weeks instead of 8.</td>
</tr>
<tr>
<td>awesome! It worked really well with a small class.</td>
<td></td>
</tr>
<tr>
<td>• Keep the real world application [client]</td>
<td></td>
</tr>
<tr>
<td>• The group work was actually a positive experience. I</td>
<td>• My only suggestion would be to have a site</td>
</tr>
<tr>
<td>feel we all got along well and contributed well to the</td>
<td>visit earlier in the semester.</td>
</tr>
<tr>
<td>project.</td>
<td></td>
</tr>
<tr>
<td>• Tests were self-explanatory and straightforward.</td>
<td></td>
</tr>
<tr>
<td>• Enjoyable experience.</td>
<td></td>
</tr>
<tr>
<td>• Our group work was excellent. The teams worked well</td>
<td></td>
</tr>
<tr>
<td>together and accomplished the goal of producing a great</td>
<td></td>
</tr>
<tr>
<td>presentation.</td>
<td></td>
</tr>
<tr>
<td>• Great class. Applicable to real world. Allowed us to</td>
<td></td>
</tr>
<tr>
<td>apply key learnings from other classes</td>
<td></td>
</tr>
<tr>
<td>• The class was a real learning experience. Dr. Thompson</td>
<td></td>
</tr>
<tr>
<td>allowed us the opportunity to explore and experience</td>
<td></td>
</tr>
<tr>
<td>consulting in a real manner.</td>
<td></td>
</tr>
<tr>
<td>• It was such a rich experience working with a local</td>
<td></td>
</tr>
<tr>
<td>company and having the opportunity to work with their</td>
<td></td>
</tr>
<tr>
<td>personnel.</td>
<td></td>
</tr>
<tr>
<td>• Professor guided team through</td>
<td>• [no suggestions for improvement]</td>
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</tbody>
</table>
consulting phases step by step. Was very helpful in understanding and dealing with the process of becoming a consultant.