PRACTICES OF ADULT LEARNING PRINCIPLES AND LEARNING STRATEGIES OF FINANCIAL AID ADMINISTRATORS IN OKLAHOMA

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CHAPTER 1

INTRODUCTION

Introduction

Postsecondary education is critical to our nation's strength. Americans' need for ongoing learning is growing steadily. Access to a college education has never been more important for individuals and society (Kipp, Price, & Wohlford, 2002, p. 1). It is vital that all qualified students have the opportunity to attend college. Moreover, college graduates earn substantially higher incomes than do non-graduates in today's knowledge-based economy (p. 5).

Various financial aid programs help make college affordable for low-income students of all ages. Financial aid programs can encourage or discourage attendance by students at various income levels (Kipp, Price, & Jill, 2002, p. 1). Therefore, it is important for financial aid administrators to be knowledgeable of federal regulations and work within the best interests of the students and the taxpayers who fund the federal and state financial aid programs.

Higher Education

Higher education is a wonder of post World War II America, stimulated by a democratic intellect that demanded greater access to educational institutions and more

educational opportunities. After World War II the number and types of colleges and universities expanded dramatically to accommodate a growing number of students (Gumport, 1997, p. 23; Lucas, 1996, p. 12). Higher education broke loose from its minor role in the nation and people's lives and became a powerful industry for several reasons. Often, those with college degrees are offered higher incomes and status. Additionally, regional competition has pressured states and localities to build new campuses and expand existing ones. "Between 1950 and 1990, the number of colleges and universities almost doubled, from 1,851 to 3,535, growing by 26 percent in the 1960's and again by 24 percent in the 1970's" (Lazerson, 1998, p. 5).

The quality of life enjoyed by the American people in the new millennium is partly due to the broad foundation provided by the American university during the twentieth century (Rhodes, 2001). Higher education has been the gateway to advancement for numerous citizens as well as immigrants. "It has been the path for social attainment for millions from impoverished backgrounds, the generator of the nation's leaders in every area of life, the key to vastly improved professional services from health care to technology" (p. 1). The American university has educated the workforce, enriched the individual experience, and

enlightened public life. "It has quickened the social conscience and empowered and inspired each rising generation" (p. 1). America has the best funded higher education system in the world by most standards (Layzell, 1997, p. 19).

Tuition rates increased greater than the rate of inflation of the average income of workers during the 1980's; thus, it became more difficult for families to pay for a college education (Lazerson, 1998, p. 6). Paying for a college education is one of the most costly expenditures that many American families face. Attending college has become less affordable for the average American family as increases in tuition and fees outpace household incomes (Bovbjerg, 2000). Thus, the cost of education is still substantial for students.

College prices had very little growth in the 1970's. In the early 1980's tuition and fees began to increase much more rapidly than consumer prices. Over the last ten years the average tuition and fees rose 51% at public and 36% at private four-year colleges and universities, and 26% at two-year public colleges (College Board, 2004, p. 3) For the average American family, increases in tuition and fees have grown faster than household incomes (Bovbjerg, 2000).

Financial Aid

Student financial aid is one of the main means by which the federal government supports higher education. It is among the least coordinated and consistent of all government programs (Fenske & Huff, 1983, p. 13). Ironically, it is also one of the most heavily and closely regulated (p. 13).

Over the past 30 years, billions of dollars in financial aid have been provided to college students by federal and state governments (King, 1999, p. 64). There is an elaborate and lucrative student aid industry that has developed to facilitate the flow of funds from the government to the students. This industry has made the student aid process more efficient and reduced the amount of fraud in the federal and state aid programs (p. 64).

> The increasing complexity of the administration of student aid, and the growth of the student aid industry, have received little public attention. This is, at least in part, because these developments have occurred without the awareness of most students and their families. In many ways, from the student's perspective, the financial aid process has become more simple over the years. Today, after completing the federal financial aid form, the entire process is managed for them by the campus financial aid office. These offices are responsible for translating the complexity of numerous aid programs into language that will be easily understandable to their students. (p. 65)

Financial Aid Administrators

Financial aid is a very complex profession because of

the complexity of the numerous types of aid programs. Each student who applies has a multitude of individual and unique needs and issues. Financial aid administrators must address each student's needs and issues while not breaching federal regulations and institutional policies.

Financial aid administrators are involved in properly managing various publicly funded or subsidized student financial assistance programs. Sometimes they encounter circumstances that require them to balance competing values. The choices they make can have a profound impact upon their career, institution, and the future of the financial aid programs that students depend upon. Stan Ikenberry, a Distinguished Service awardee, has said that in making decisions we have to balance the practical and the ideal (Martin, 2001 p. 32).

The primary goal for the financial aid profession is to help students achieve their educational potential by providing appropriate financial resources, but how one carries out that goal is equally important (Martin, 2001, p. 33). Financial aid administrators are professionals who perform adult education functions in an informal setting and who are in need of constant professional development. In carrying out their daily tasks, they work with adult students that come from different cultures and backgrounds.

As a result, financial aid administrators should be aware of adult learning principles in order to communicate effectively with their students and co-workers. In addition, financial aid administrators work in a profession with constant change. Adult learning principles and learning how to learn need to be applied so they can keep up in this complex profession.

Continuing Professional Education

Professionals have learned through various methods such as books, discussions with colleagues, formal and informal educational programs, and the aspects of their everyday practice. Formal continuing education programs have dramatically increased. Knowledgeable observers estimate that billions of dollars annually are spent to provide and promote attendance at continuing education programs (Eurich, 1985, p. 513).

As a result of this surge in continuing education, organized and comprehensive continuing education programs exist today in many professions. According to the evidence, most professions now embrace the importance of lifelong professional education. "To achieve its greatest potential, continuing education must fulfill the promise of its name and be truly continuing--not casual, sporadic, or opportunistic. This fact means essentially that it must be

self-directed" (Houle, 1980, p. 13).

> The much larger phenomenon of which such continuing education is a minor part in continuing learning. Continuing learning includes self-directed learning, informal learning experiences, the mentoring that is implicit in most professional and occupational settings, and human-resource-placement schemes that pass promising professionals through sequences of responsibilities with high learning potential. Professional life involves continuous reflective practice. Within this general learning environment, continuing education has its episodic uses. Its value is heightened when it is integrated with the larger realm of self-directed learning activities, as in a professional's plan to meet the challenge of new responsibilities. (Nowlen, 1988, p. 10)

Reflective Practitioner

As professionals within a certain discipline, it is assumed that the professionals will have received the proper education and training in that field. During the course of a professionals' career, it becomes imperative to attain a deeper knowledge of how they can better understand the relationship between professional knowledge and artistry in the profession (Cervero, 1988, p. 43).

Problems in the real-world do not always present themselves as well-formed structures. These types of problems are not solvable by the application of technical knowledge or sophisticated techniques of decision theory (Schon, 1987, p. 4). In this situation, professionals have to use their own unique knowledge of their profession to

solve the problem at hand.

From this critical viewpoint, there are two central forms of knowing. These are knowing-in-action and reflection-in-action. This model assumes that the actions professionals take to solve real-world problems are spontaneous and do not stem from a rule or a plan they had before acting (Cervero, 1988, p. 43). Often times professionals will make decisions without knowing upon what theorist or rule the decision was based. Schon (1983) calls this process knowing-in-action and describes it as the mode of ordinary practical knowledge (p. 54).

With the vast wealth of experiences professionals have in their repertoire, reflection-in-action allows for a new situation to be perceived as being familiar, thus allowing the professional to make sense of the situation. Recognition and evaluation of new situations happens in the midst of action, and therefore the professional must do an on-the-spot experiment, test its utility, and incorporate this new understanding into immediate action (Cervero, 1988, p. 44).

Schon believes that there must be fundamental changes in continuing professional education programs to find a balance between applied sciences and reflection-in-action. There needs to be a purposeful consideration of the

acquisition of reflection-in action within continuing education programs. This inclusion is important because it is the basis for professional artistry, and it is an important source of knowledge for a professional's repertoire. Becoming aware of reflection-in-action must become an explicit part of continuing education (Cervero, 1988, p. 46). This can be executed through the techniques that professionals use within their organizational setting and through the individualized framework they bring to their performance (P. 46).

Adult Learning

Knowles (1980) suggested that the experience of the learner is "the central dynamic of the learning process" (p. 56). Experience is "the interaction between individuals and their environment" (p. 56). Today's information revolution has provided many opportunities for learning. Not only are there tremendous opportunities to learn, but these occur in a variety of different media.

Adult learning is based on the concepts of andragogy, self-directed learning, learning how to learn, and learning strategies. These concepts are important in discovering why and how an adult learner goes about mastering a learning process. They also offer an importance to understanding the processes used by financial aid administrators in their

determination of how to administer financial aid to the many students requesting this.

Andragogy

Andragogy is a key concept in adult education. Andrgogy is "the art and science of helping adults learn" (Knowles, 1980, p. 43). It is a learner-centered philosophy that focuses on adults and their learning needs.

Knowles' (1980) adragogical model began with four assumptions: (a) as people mature their self-concept moves from one being dependent to one being self-directed; (b) people accumulate a reservoir of knowledge that serves as a resource for learning; (c) people have a readiness to learn when they have a need to learn; (d) adults want immediate application for what they have learned (pp. 44-45). Later, Knowles added two additional assumptions. They are (a) that adult's motivation to learn is internal, and (b) that adults need to know why they should know something prior to beginning a learning project (Knowles, 1990, p. 61).

Self-Directed Learning

Self-directed learning is:

> A process in which individuals take the initiative, with or without the help of others, in diagnosing their learning need, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (Knowles, 1975, p. 18)

Self-directed learning must be intentional and purposeful. It occurs somewhere other than in a designated educational institution, receives no institutional accreditation, and is voluntary and self-initiated (Brookfield, 1986, p. 47). Self-direction has two forms. The first uses specifying goals, identifying resources, implementing strategies, and evaluating progress. The second form of self-directed learning refers to a particular change of consciousness. This occurs when learners come to regard knowledge as relative and contextual and can use this perspective to find ways to transform their personal and social worlds (p. 47).

Self-directed learning is a process in which people take the initiative to plan, implement, and evaluate their learning experiences (Merriam & Caffarella, 1999, p. 293). Self-directed learning is important to the people in the financial aid profession because they have to learn new rules and regulations for a variety of situations on a daily basis. Through the use of technology, this information can be readily available to them.

In a rapidly changing, technologically-complex society, many authors believe that the ability to be a self-directed learner is a fundamental requirement for all adults (Oddi, 1987, p. 21). The concept of self-directed learning as it

applies to the present Information Age provides an explanation of how people in the financial aid profession are able to learn the rules and regulations and deal with complex issues that may arise in their daily work.

Learning How to Learn

Adults are faced with situations that require constant learning. Many adult learning situations are outside any formal education. Often, these situations involve family or work-related issues. Learning how to learn is the process of how adults acquire the knowledge and skills essential to function effectively in various learning situations (Smith, 1976, p. 5).

Learning how to learn is a process that involves three sub-processes: (a) planning, which describes how adult learners identify their needs, how they set goals, and how they select their resources and strategies; (b) conducting, which describes how learners negotiate their resources and strategies and learn how they give and receive feedback; and (c) evaluating, which describes how adult learners measure the extent to which their goals are met and how to proceed with follow-up activities(Smith, 1976, p. 6). There are three key ingredients that are necessary in order to understand the "learning how to learn" concept. They are the learner's need, the learning styles of each learner, and

the training needed for each learner. The learner's needs are what the learner needs to know in order to be successful. Learning styles are the highly individualized preferences and tendencies learners use as they approach problems; training is an organized activity to increase one's competence in learning (Smith, 1982, p. 17).

Adults who have learned how to learn are able to take control of their own learning, overcome obstacles, and know the conditions in which they learn best (Smith, 1982, p. 16). The concept of learning how to learn is important for financial aid administrators because of the complexity of the federal laws that govern the financial aid process.

Learning Strategies

Learning strategies are "the techniques and skills that an individual elects to use in order to accomplish a learning task" (Fellenz & Conti, 1989, p. 7). Learning strategies are often confused with learning styles. Learning styles are "a person's highly individualized preferences and tendencies that influence his or her learning" (Smith, 1982, p. 17); people demonstrate consistency in the style they follow (p. 17).

Learning strategies differ from learning styles in that they are techniques one selects for a specific task rather than stable traits (Fellenz & Conti 1989, p. 8). These

strategies vary by the learner and the learning objective. Sometimes the learner gives little thought to the process and sometimes much deliberation as to which strategy to use for a specific learning task (p. 8).

Learning strategies in the field of Adult Education have been conceptualized as consisting of the five areas of (a) metacognition, (b) metamotivation, (c) memory, (d) critical thinking, and (e) resource management (Conti & Kolody, 2004, p. 184). Metacognition is "thinking about the process of thinking" (Counter & Fellenz, 1993, p. 9). Metamotivation is "motivation of the individual to learn" (Fellenz & Conti , 1993, p. 15). Memory is "what people know about how they remember" (Paul & Fellenz, 1993, p. 22). Critical thinking involves a reflective thinking process utilizing a higher order of thinking skills in order to improve learning (Fellenz & Conti, 1993). Resource management is the ability to identify sources of information and prioritize their use (p. 35).

Problem Statement

Adults often apply their learning to real-life situations (Conti & Fellenz, 1991, p. 64). Real-life learning involves learning that is "relevant to the living tasks of the individual in contrast to those tasks considered more appropriate to formal education" (Fellenz &

Conti, 1989, p. 3).

There are several differences between learning for everyday situations and learning for academic and test-taking reasons (Sternberg, 1990). In highly structured academic settings, instructors often present students with a defined problem, lead them to information on solving the problem, and then impart clear feedback to the students regarding the successfulness of their solution. Adults in real-world situations, however, must recognize and define problems in more loosely structured environments. They must gather background data without assistance and frequently do not receive the necessary responses and reactions to their efforts until after errors have occurred.

Financial aid is a very difficult profession to be in due to the complexity of the different types of aid programs as well as the complexity of the students being served. Each student who applies has a multitude of individual and unique needs and issues, and students come from diverse cultures and backgrounds. Financial aid administrators must address each student's needs and issues while not breaching federal regulations and institutional policies. To be able to deal effectively with the students, who are the customers in higher education, and with co-workers, financial aid officers need to understand the characteristics of the adult

learner.

Financial aid officers work in a world of constant change, since change is inevitable within the financial aid community (Clemente, 2002, p. 7). Therefore, they have a constant need for new knowledge. Financial aid administrators should be aware of adult learning principles in order to be competent, reflective practitioners and for on-going professional development.

While it is known that financial aid administrators must utilize a variety of adult learning principles in their profession, what is not known is their practices of adult learning principles or the learning strategies that financial aid administrators use. This knowledge is basic to planning professional development activities for financial aid officers that will meet their need for content knowledge related to adult learners and that will allow the professional development activities to be designed to fit their learning needs.

There is a high turnover rate among the financial aid administrators. Only 31.5% of financial aid administrators have over 10 years of experience (Williams, 1999). Such a high turnover makes it difficult to develop reflective practitioners for the field and may lead to ineffective service being provided. The real loser in this is the

individual student who gets driven out of the system.

Well-trained professionals are needed to change this situation. One of the first steps for this change is finding out the practices of adult learning principles and the learning preferences of those currently in the field of financial aid.

Purpose

The purpose of this study was to describe the practices of adult learning principles that financial aid administrators possess and to describe their learning strategies. This was done by surveying financial aid staff in Oklahoma related to their practices of adult learning principles using Principles of Adult Learning Scale (PALS). Their learning strategies were identified using the Assessing the Learning Strategies of Adults (ATLAS) instrument. The data from these instruments were used to describe the participants in serval ways. First a profile was constructed, and scores from this profile were compared to demographic variables. Finally, exploratory techniques were used to investigate for inherent groups among the financial aid officers.

Research Questions

The following research questions guided this research:

1. What are the practices of adult learning principles of financial aid

administrators?
2. What are the learning strategy preferences of financial aid administrators?
3. How do these preferences compare with the norms for ATLAS?
4. What is the relationship of practices of adult learning principles and learning strategies?
5. Do groups exist among financial aid administrators based upon their practices of adult learning principles?

The information was collected both electronically and in person. The survey form with sections for demographic data, PALS items, and ATLAS items was posted on the internet. Paper versions were also used at group meetings. The practices of adult learning principles of the participants were determined by the frequency distribution on the responses to the PALS items of the survey. Likewise, the learning strategies were expressed by the frequency counts of the participants in the ATLAS categories. How the learning strategy preferences compare with the norms of ATLAS was analyzed by chi square, comparing the observed distribution to the expected norms for ATLAS. The relationship of the practices of adult learning principles and learning strategy preference was determined by one-way analysis of variance with the PALS scores and with the financial aid officers grouped by ATLAS categories. The groups of financial aid administrators were found by using cluster analysis with the items from PALS.

CHAPTER 2

REVIEW OF THE LITERATURE

History of Financial Aid

Post World War II was a time of extraordinary growth and expansion for institutions of higher education. The initial stimuli for this growth were returning veterans, industrialization, and an increase in the high school completion rate. During the 1960's, higher education expansion continued at an unprecedented rate due to the post war Baby Boom and the increasing number of women attending college (Trow, 1979). After World War II, there was a debate over who should pay for a college education since college was considered a public good which would benefit the entire nation (Somers, 1972).

> Federally funded programs for higher education started in 1944 with the Serviceman's Readjustment Act. On June 22, 1944, President Franklin D. Roosevelt signed the Servicemen's Readjustment Act of 1944, better known as the GI Bill of Rights. This bill was established to assist the economy by providing veterans opportunities to pursue training and education to become more employable....This act was very controversial at the time but has since been recognized as one of the most important acts of Congress. This GI Bill had an indirect impact of popularizing the idea that large number of people could benefit from a college education (www.mankato.msus.edu, n.d., par. 1)

In the decade after World War II, the economy had an unprecedented peacetime prosperity. There was little public demand for the federal government to become involved in assisting students seeking a college education. By 1957,

the public attitude toward government involvement in aiding education had changed dramatically (www.chessconsulting).

The Soviet launch of the Sputnik that year provoked an outcry from the American people. America was culturally unprepared to be second best to the Russians. Congress denied any responsibility for the inferiority of the Americans and placed the blame on the educational system (McCormick, 1972, p. 2). They claimed "the real problem lay in the weakness of the American education system and would require a new dynamic and total commitment to the problems facing higher education" (p. 2).

In response to the Sputnik satellite and a number of reports indicating the need for improvement of scientific and technical education, the National Defense Education Act was passed. By implementing a student loan program for students pursuing programs in math, science, or modern languages, this act created the first widely available federal aid program and established the concept that students, not the institution, are and must be the primary beneficiary of student aid (www.mankato.msus.edu).

This student loan program offered long-term, low-interest loans to qualified students in the fields of math, science, and foreign languages and later was available to students in all academic majors (www.chessconsulting.org). The name of the loan program changed from the National Defense Loan Program to the National Direct Student Loan

Program. Today it is known as the Federal Perkins Loan Program.

With the landslide victory of Lyndon Johnson in the 1964 presidential election and two-to-one Democratic majorities in both the House and Senate, the Great Society was launched. The Great Society, through the domestic policies of President Lyndon Johnson, sought to fight the war on poverty. Education was viewed as crucial to breaking the cycle of poverty. Johnson felt that "the answer for all of our nation's problems, the answer for all of the problems of the world, comes down, when you really analyze it, to one single word--education."

In 1965, several landmark bills were passed including the Voting Rights Act, Medicare, the Elementary and Secondary Education Act, and the Higher Education Act. (HEA-65). This is the current legislation that provides funding for federal student aid programs. The HAE-65 has several components or "Titles" relating to the specific area of education. The portion that deals with student aid programs is Title IV. This section of the legislation established federal scholarships for needy undergraduate students, consolidated laws authorizing the National Defense Student Loan Program and the College Work Study program. It also created the Educational Opportunity Grant and the Guaranteed Student Loan Program.

The college population grew dramatically in the 1970s

due to the coming of age of the Baby Boomer generation. This left many needy students unable to attend post-secondary education because of limited funds and the uneven distribution of campus-based aid (www.chessconsulting.org).

The Higher Education Amendments of 1972 were in response to the discrepancy of funding among institutions. The amendment created the Basic Opportunity Grant Program (BEOG), known today as the Pell Grant Program. The BEOG was intended to serve as the foundation of an undergraduate student financial aid package, and other aid would be added to it. The BEOG Program put forward the concept of portability of financial aid programs, as opposed to campus-based aid, where the institution determines who and how much students will receive.

The cost of attending college outpaced inflation during the decade of the 1970's. As a result, Congress came under pressure to assist middle-class students to attend college. Congress enacted the Middle Income Student Assistance Act of 1978 (MISAA) at the request of President Carter. MISAA expanded the eligibility for the Basic Education Opportunity Grant to middle and upper-middle income students and eliminated all income restrictions for the Guaranteed Student Loan Program.

There have been a variety of amendments added to the Higher Education Act of 1965 to allow more programs to be made available. The legislation is effective for 5 years at

a time. Congress reviews this legislation prior to its expiration.

> Reauthorization of the Higher Education Act of 1965 is the process by which Congress reviews current legislation and makes changes to the legislation. Because Title IV of the HEA deals with all components of the Title IV student aid programs, this is an extensive process which generally results in significant changes being made. Aspects of student aid program included in the HEA are the federal Title IV programs, the federal student aid delivery process, student eligibility criteria, and a variety of administrative and reporting regulations which institutions must adhere to when participating in Title IV student aid programs. (www.mankato.msus.edu, n.d., par. 4)

Financial Aid Profession

Financial aid is a very diverse field and involves many functions.

> Financial aid has different meanings for various groups. In the narrow sense, students often use the term to refer to grant and scholarship assistance or "free money" which does not have to be repaid. Financial aid administrators take a much broader view. We generally define financial aid as any assistance provided for the purpose of helping a student meet their college costs including grants, scholarships, loan and employment programs. (www.chessconsulting.org, n.d., par. 1)

The first known group of organized financial aid administrators were from 95 private colleges and universities. They founded the College Scholarship Service (CSS) in 1954. "CSS developed a standard need analysis system to award financial aid based on family income and assets" (www.chessconsulting.org, n.d., par. 4). The

National Association of Student Financial Aid Administrators (NASFAA) was founded in 1966 from an outgrowth of six regional professional associations. NASFAA is the largest post-secondary education association in Washington, DC with 10,000 aid administrator members nationwide (www.chessconsulting.org).

Before the GI Bill was passed there was no federal program to help students pay for college. The government's involvement in financial aid with the passage of the National Defense Act of 1958 and the Higher Education Act of 1965 created the need for people to administer these programs.

In the past 50 years, higher education has seen rapid changes as financial aid has grown into a profession. Financial aid is one of the most dynamic higher education professions due to the increase in enrollment, costs, aid programs, technological advances, and intrusive federal regulations (www.chess consulting.org).

In the early 1990's, student borrowing increased due to the increase in costs for attending college. With the increase, the national student loan default rates skyrocketed to 22.4%. As a result, financial aid administrators were assigned additional responsibilities by the U.S. Government to prevent defaults. Now, aid administrators had to provide intensive debt management counseling and become more involved with career planning and

placement. The national default rate is now below 6% (www.chessconsulting.org).

In addition to the changes in financial aid, regulations of the profession have significantly increased. There are over 7,000 regulations affecting financial aid for American colleges and universities.

> To manage the increased workloads, aid administrators have had to become much more process-oriented than they were in 1988. Aid administrators have become much more concerned with following the rules and regulations of aid, rather than making sure students receive aid packages that meet their needs and safeguard limited funds. (www.chessconsulting.org, n.d., par. 12)

At the expense of individual attention to needy students, financial aid administrators must devote their energies to compliance with highly complex, ever-increasing regulations. Financial aid administrators must verify incomes, check satisfactory academic progress, manage default rates, place a certain percentage of student on the work study program in community service jobs, and use arcane formulas to determine the amount of aid that must be returned to the government when students withdraw (Bodofsky, 2000, p. 21)

"The effective delivery of student financial aid is at a crossroad" (Cornell, 2000, p. 38). External market forces, which are combined with internal pressures and giant leaps in technology over the past few years, cause financial aid administrators to re-examine their traditional

approaches to student aid administration. Without reacting to and adjusting to these forces and changes, the financial aid profession cannot exist in this changing environment and meet the needs of students and the demands of school officials (Cornell, 2000, p. 38).

> The paper-to-computer shift in daily operations demands that current financial aid staff members be trained and retrained at a much more constant level than in the past. To truly remain competitive and provide the best service possible, staff members must be trained and retrained to take full advantage of the technology they have at their fingertips. (p. 39)

Technology has improved and streamlined many tasks that financial aid administrators previously did by hand. As the financial aid profession is transformed, it is important to remember that the human aspects of financial administrators cannot be computerized. Twenty percent of students take up about eighty percent of a financial aid officer's time (Gibbons, 1999, p. 40). Most of that time is spent on conversing and counseling activities that cannot be done on a self-serve web site. Professional (human) judgment will remain an important part of the financial profession as long as students continue to bring their individual life circumstances into their financial aid profiles (p. 40).

> Teaching and training is one of the foundations of financial aid profession--with it, aid administrators help families decide what is best for their situation. When training new financial aid counselors at Alvernai College, I would often begin an answer to a question with, "It depends." Although frustrating to the counselor, the answer very often did "depend" on a number of variables,

> demonstrating why training is so crucial. Because financial aid is constantly changing, financial aid professionals must continue to seek training and train others to provide optimal service. (Heist, 2002, p. 17)

Financial aid administrators educate families when they provide counseling and when they conduct financial aid nights. "Financial aid professionals train and educate a number of different constituencies on an ongoing basis" (Heist, 2002, p. 19).

Adult Learning

More knowledge about the unique characteristics of adult learners and their learning processes have been gained between the decades of 1960 and 1980 than ever before in all previous history. Houle's seminal study stimulated a rash of research by adult educators in 1961. By 1980, there was enough knowledge of adult learners and their learning to organize it into a systematic framework of assumptions, principles, and strategies (Knowles, 1984, pp. 6-7).

Andragogy

Malcolm Knowles revolutionized the education and learning of adults through the advancement of andragogy. Knowles became noted for his work distinguishing andragogy from pedagogy. Andragogy is defined as the art and science of helping adults learn while pedagogy is the art and science of teaching children (Knowles, 1980, pp. 41-43).

Pedagogy was the first learning model upon which teachers could base their teaching and curriculum. The

purpose of this model was to give teachers suggestions of how knowledge was to be transmitted from teacher to the submissive student. The following assumptions existed about the child learner:

- The need to know. Learners only need to know that they must learn what the teacher teaches if they want to pass and get promoted; they do not need to know how what they learn will apply to their lives.
- The learner's self concept. The teacher's concept of the learner is that of a dependent personality; therefore, the learners's self-concept eventually becomes that of a dependent personality. (Knowles, 1980, p. 55)

Knowles argued that the pedagogical practice would not be successful with adult learners. "Adults are almost always voluntary learners, and they simply disappear from learning experiences that don't satisfy them" (Knowles, 1970, p. 38). Adults need to be taught as adults, and adult educators need to practice the theory of andragogy.

Knowles (1980) described the andragogical learning process as involving the following phases in both the total programs and individual learning activities:

1. The establishment of a climate conducive to adult learning;
2. The creation of an organizational structure for participative planning;
3. The diagnosis of needs for learning;
4. The formulation of directions of learning (objectives);
5. The development of a design of activities;
6. The operation of the activities;
7. The rediagnosis of needs for learning (evaluation). (Knowles, 1980, p. 59)

An environment conducive to learning is the initial step in the adragogical program-planning model. The climate must be physically as well as psychologically supportive. The physical climate includes suitable seating, comfortable room temperature, and visually pleasing surroundings. The psychological environment should be one of acceptance, emotionally at ease, mutual support, and trust.

The second step is the creation of an organizational structure for participative planning. The learners are involved in the planning of their own learning. People feel more committed to a project if they were involved with the planning of it.

In step three the learner self-diagnoses the gaps in competencies they possess and what they want to accomplish. Then in step four the learner and educator formulate learning objectives to accomplish the goals determined in the previous step. In step five the learner and educator develop and design learning activities based on the learning objectives established in step four. The next step is the operation of learning activities to attain the learning objects, by selecting the appropriate materials, resources, and techniques. The instructor serves as a facilitator, guide and resource (Knowles, 1980, p. 239). Then in the final step they evaluate if the learner has accomplished their learning objectives (p. 247).

Self-Directed Learning

Self-directed learning is one of the basic principles of andragogy. Alan Tough (1978) found that approximately 90% of adults are involved in at least one major learning project a year, and nearly 80% of those projects are managed by the adults themselves (p. 252). He found that learners used 13 steps when choosing what, where, and how to learn:

1. Deciding what detailed knowledge and skill to learn
2. Deciding the specific activities, methods, resources, or equipment for learning
3. Deciding where to learn
4. Setting specific deadlines or intermediate targets
5. Deciding when to begin a learning episode
6. Deciding the pace at which to proceed during a learning episode
7. Estimating the current level of ones knowledge and skill or their progress in gaining the desired knowledge and skill
8. Detecting any factor that has been hindering learning or discovering inefficient aspects of the current procedures
9. Obtaining the desired resources equipment or reaching the desired place or resource
10. Preparing or adapting a room (or certain resources, furniture or equipment) for learning or arranging certain other physical conditions in preparation for learning
11. Saving or obtaining the money necessary for the use of certain human or nonhuman resources
12. Finding time for the learning
13. Taking steps to increase the motivation for certain learning episodes. (Tough, 1971, pp. 94-95)

"Too many practitioners, the term self-directed learning conjures up images of isolated individuals busily engaged in determining the form and content of their learning efforts and controlling the execution of these

efforts in an autonomous manner" (Brookfield, 1986, p. 56). Knowles (1975) states that it is not in isolation or autonomous, but self-directed learning usually occurs in association with helpers, such as teachers, tutors, and peers (p. 18).

Tough (1978) defined a learning project as "a highly deliberate effort to gain and retain certain definite knowledge and skill, or to change in some other way"(p. 250). Knowles (1975) describes self-directed learning as a process that consists of six major steps: (a) climate setting, (b) diagnosing learning needs, (c) formulating learning goals, (d) identifying human and material resources for learning, (e) choosing and implement appropriate learning strategies, and (f) evaluating learning outcomes. There is convincing evidence that people who take the initiative to learn, learn more things and learn better than people who sit passively for the teachers to teach them. Learning is more purposeful and with greater motivation; therefore, self-directed learners retain and use their new knowledge longer and better (Knowles, 1975, p. 14).

Learning How to Learn

Learning how to learn is the process of how adults acquire the knowledge and skills essential to function effectively in various learning situations (Smith, 1967, p. 5). Learning how to learn is the process of:

Possessing, or acquiring, the knowledge and skill

> to learn effectively in whatever learning situation one encounters. If you possess the necessary knowledge and skill, you've learned how to learn; and when you help yourself or others to acquire that kind of knowledge or skill, the concept is also at work. (Smith, 1976, p. 19)

Robert M. Smith developed a theory based on the concept that it is "as important to teach adults how to learn as it is to specify particular curricular domains for learning" (Brookfield, 1986, p. 64).

Learners' needs consist of what people need to know about learning to become a successful learner or what competencies their learning require (Smith, 1982, p.20). One needs to have a general understanding that adulthood is a prime time for learning and that there are a wide variety of options for continuing education (pp. 20-21). People can learn on their own or through an agency for credit, personal enrichment, or professional development (p. 21). In order to achieve lifelong learning, basic skills such as reading and listening skills are necessary for learning (p. 21). In addition, people need to have self-awareness as learners, such as knowing their strengths and weaknesses and preferences of learning methods (p. 21).

Learning styles are an "individual's characteristic ways of processing information, feeling, and behaving in learning situations" (Smith, 1982, p. 24). Everybody has a learning style and these individual preferences and dispositions are a viable component of the learning how to

learn concept. "Learning styles have important implications for program planning, teaching and learning" (p. 24).

Training is the "deliberate efforts to help people become better at learning and more successful in the educational arena" (Smith, 1982, p. 25). It is an organized activity to increase people's competence in learning. Training can last minutes or weeks and can take place in an assortment of places (p. 25).

Adults that have learned how to learn know how to take control of their own learning. They know how to develop a learning plan and diagnose their strengths and weaknesses as a learner. They know the criteria for sound learning objectives, the conditions under which they learn best, and how to learn from life and everyday experiences. They also know how to negotiate the educational bureaucracy, learn from various sources such as television, radio, and computers. They know how to lead and participate in discussion and problem-solving groups and get the most from a conference or workshop. They also know how to learn from a mentor, use intuition and dreams for learning, and how to help others learn more effectively (Smith, 1982, p. 16).

Reflective Practitioner

The early dominating theory of professional education was based on the functionalist approach or technical rationality. The main assumption of this theory is that problems faced in professional practice are well formed and

are solved by applying scientific knowledge. Thus, professionals are seen as applying their expertise to solve well-defined problems (Cervero & Azzaretto, 1990, p. 161). This linear standpoint of professional practice can be challenged on two major counts: "the notion of a fixed and unambiguous problem and the basis of professional knowledge.

Problems in the real world do not present themselves as well-defined unambiguous situations, but rather they appear as messy indeterminate ones. A new viewpoint, which is referred to as the critical viewpoint, has emerged in reaction to the functionalist approach. While functionalism sees well-defined problems, the critical viewpoint considers that professionals construct the problem from the situation (Cervero & Azzaretto, 1990, p. 161).

The major concept in the critical viewpoint is the dialectic. Professionals conduct most of their practice in the "real world" and are always in a dialectical relationship with unique and uncertain situations. Professionals must be able to solve these situations that are ambiguous and uncertain (Cervero & Azzaretto, 1990, p. 163).

The second distinct characteristic of the critical viewpoint is the nature and origin of professional knowledge. Where the knowledge comes from is not clear, but it is believed to come from the professional's past experiences. Schon (1983) argues, "The practitioner has

built up a repertoire of examples, images, understandings, and actions" (p. 138). When professionals make sense of a unique situation, they see it as something familiar in their repertoire (Cervero, 1988, p. 44). "The knowledge from their repertoire is not applied in a rule like fashion, but rather functions as a metaphor or exemplar for helping to define the new situation" (Cervero & Azzaretto, 1990, p. 164).

To understand the relationship between professional knowledge and artistry, Schon suggests that "we should start not by asking how to make better use of research-based knowledge but by asking what we can learn from a careful examination of artistry, that is, the competence by which practitioners actually handle indeterminate zones of practice" (Schon, 1987, p. 13). Schon studied professional artistry in a variety of professional fields and identified two types of knowing that are fundamental in professional artistry. The two types of knowing are knowing-in-action and reflection-in-action.

Knowing-in-action is described as "the characteristic mode of ordinary practical knowledge" (Schon, 1983, p. 54). Professionals constantly make judgments and decisions and are not able to identify the rule or theory on which they were based. "Most of the spontaneous actions that professionals take do not stem from a rule or plan that was in their mind before acting" (Cervero, 1988, p. 43).

Knowing-in-action has three properties:

1. Professionals know how to carry out certain actions and judgements without thinking about them prior to or during performance.
2. Professionals are not always aware of having learned to do these things.
3. Professionals are unable to describe the knowledge that the action reveals. (Schon, 1983, p. 54)

Since most situations in professional practice are those of uncertainty, uniqueness, and value conflict, knowing-in-action will usually not solve a particular problem. Alternatively, one needs to adjust the situation to make it solvable. The ability to do this is the core to professional artistry; this is called reflection-in-action. "Professionals reflect in the midst of action without interruption; their thinking reshapes what they are doing while they are doing it" (Cervero, 1988, p. 44). The objective of reflection-in-action is to change uncertain and unclear situations into certain and clear ones. The key to this is to bring past experiences into the present situation (Cervero, 1988, p. 44).

> When practitioners acquire a new way of seeing the present situation, the utility of this new view must be evaluated by asking whether 1) the situation can be framed in such a way as to make it solvable and 2) the results of this problem solving process are valued. This entire process is achieved in the midst of action. Professionals rethink some part of their knowing-in-action, conduct an on-the-spot thought experiment to test its utility, and incorporate this new understanding into immediate action. (Cervero & Azzaretto, 1990, p. 164)

Schon (1983) believes that knowing-in-action and

reflection-in-action must be a definite part of continuing education. Applied science is an important source of information for knowing-in-action. However, applied science can not stand alone and must be incorporated with reflection-in-action for it to become a part of one's repertoire (Cervero, 1988, p. 45). Continuing education programs should be a place where "practitioners learn to reflect on their own tacit theories of the phenomena of practice, in the presence of representative of those disciplines" (Schon, 1987, p. 321) related to their own practice situations (Cervero, 1988, p. 44).

Continuing and Professional Education

Jobs and professional skills are viewed as a commodity in today's economy. "New jobs with higher skill requirements are quickly created and traditional ones with lower skill requirements simultaneously vanish" (Sleezer, Conti, Nolan, 2004, p. 20). Society requires that professionals occupation be better than what they are. Therefore, an effort must be made to improve its patterns of lifelong learning (Houle, 1980, p. 30).

> A dynamic concept of professionalization offers educators both the opportunity and the challenge to use active principles of learning to help achieve the basic aims of the group with which they work. They become not merely reinforcers of the status quo, as they so often are now, but the colleagues of all who work to further the power and the responsibility of the vocation. (Houle, 1980, p. 30)

In order for lifelong education for professionals to be

fully effective, it must be conceptualized and applied in a sophisticated manner. Those seeking professionalizing goals for a vocation use one or more of three major modes of learning (Houle, 1980, p. 31).

The first mode of learning is inquiry, which is the process of creating new ideas, techniques and strategies. This mode of leaning can be engaged in a structured setting, such as seminars or discussion groups. However, this mode of learning mostly occurs as a by-product of establishing policy or seeking consensus. The effectiveness of the inquiry mode is measured by the accomplishment of the objectives (Houle, 1980, p. 31).

The second learning mode is instruction. Those that use this learning mode assume that the instructor will convey everything to be learned. Because established institutions use this mode so extensively in working with young people and children, most think of it as the only form of education. Evaluation of success is measured by the achievement of the student's goal that is set by the teacher at the beginning of the learning episode. This mode of learning is known as competency-based instruction; "it is easy to use when measuring skill, but more difficult when dealing with knowledge or sensitiveness" (Houle, 1980, p. 32).

Performance is the third mode of learning. This is the "process of internalizing an idea or using a practice

habitually, so that it becomes a fundamental part of the way in which a learner thinks about and undertakes his or her work" (Houle, 1980, p. 32). The mode of performance may be fostered by formal use of the other modes of learning and reinforced by rewards and punishment. Evaluation of this mode is the actual performance judged by peers, supervisors, or external examiners. "The use of this mode in the workplace is sometimes guided by what is called change theory. Often it involves not only formal educational activities but also manipulation of various physical and social aspects of the environment" (Houle, 1980, p. 33).

The value of continuing learning is not the same as to be a continuing learner. Many professionals can report nearly verbatim what they have been taught about "keeping up to date" but show little signs of participation in educational activities, performance at work, or putting knowledge into practice. In comparison, numerous professionals engage in intense and prolonged learning without ever paying attention to the fact they are doing so (Houle, 1980, p. 76).

The process of systematic learning to prepare for the field of practice and maintain proficiency in a context of changing knowledge base and practice is central to the concept of professional (Knox, 1993, p. 275). An important part of this systematic learning is self-directed learning in addition to formal education and informal education

furnished by the workplace, by professional associations, and by other providers.

An attribute of continuing education is that it enables practitioners to progress from novices to experts in their careers (Knox, 1993, p. 275). Performance standards and accountability of the professions is a growing interest to society. Therefore, strategic planning of continuing professional education should not only consider the knowledge and experience of the learners but the contextual influences for the learning, such as the impact of professional performance on the increasingly informed public and relations between continuing education providers (p. 276).

> Every member of a profession (even a person who follows a traditional sequence of study and practice) has a distinctive style of lifelong learning influenced by an individual background, unique combination of character traits, and the special circumstances of his or her immediate environment, including stimuli provided by people and institutions who seek to advance continued education. As personalty and circumstances change, so does this pattern of learning. (Houle, 1980, p. 77)

There is no easy or routine method of continuing education to ensure the establishment and maintenance of ethical, intellectual, and social standards in a professionalizing occupation among the stresses and temptation of practice (Houle, 1980, p. 74). Vocations wishing to professionalize themselves must raise and maintain their dignity and integrity by the use of

principles and practice. This can be accomplished by the positive influence of education and the negative influence of self-regulation, by free discussion, and by having the opportunity to scrutinize the governing principles of the practice. The intent of every form of continuing education is to "convey a complex attitude made up of a readiness to use the best ideas and techniques of the moment but also to expect that they will be modified or replaced" (p. 75). "The major lesson of continuing education is to expect that the unexpected will continue to occur" (p. 75).

Many people do not fit the customary sequences of learning (Houle, 1980, p. 77). Presently many people are entering the professions later than at the traditional time. Others are shifting to second professions. In addition, the desire to learn may occur later in life than traditionalists have assumed (p. 77).

Houle (1961) conducted a seminal study on the motivations of adult learning. From his research, Houle discovered that adults participate in educational activities for three distinct reasons. The three categories of learners are goal-oriented, activity-oriented and learning-oriented.

Goal-oriented learners want to gain specific objectives, such as learning how to speak in public or to learn better business practices (Cross, 1981, p. 83). Learning happens in multiple episodes revolving around the

identification of an interest. Goal-oriented learners do not restrict their learning activities to a particular learning method, but select the method that will best achieve their purpose, such as taking a course or reading a book (p. 82).

Activity-oriented learners participate in learning activity for the sake of the activity itself or for social interaction. They do not take a course for the sole purpose of developing a skill or to learn a subject matter (Cross, 1981, p. 83). They may join a class to escape an unhappy home or job situation, loneliness, boredom, or even to find a spouse (p. 83).

In contradiction to the activity-oriented learner, the learning-oriented learner pursues learning or its own sake. "They seem to possess a fundamental desire to know and to grow through learning, and their activities are constant and lifelong" (Cross, 1981, p. 83). Most learning-oriented learners are avid readers. They choose jobs and join groups based on the learning potential they offer (p. 83).

Grotelueschen (1985) and other researchers developed an extensive body of literature concerning the reasons professionals participate in continuing education. The instrument used for this research was the Participation Reason Scale (PRS), developed in the late 1970's. The PRS was used to assess the reasons several professions participate. The scale identifies five areas of

participation: (a) professional development and improvement, (b) professional service, (c) collegial learning and interaction, (d) professional commitment and reflection, and (e) personal benefits and job security. The studies found that these five areas are important to professionals, but the most important was "professional improvement and development, followed by professional service, collegial learning and interaction, professional commitment and reflection, and personal benefits and job security" (Cervero, 1988, p. 64).

> In his classic work, The Inquiring Mind, Cyril O. Houle noted the "value of widespread lifelong learning in professional and vocational accomplishment. The need to maintain and enhance occupational skills has been brought home forcefully by the competition of the market, the rapid advancement of knowledge in every field, the need to cope successfully with larger and more complex forms of ... knowledge and the steady raising of acceptable levels of performance" (1961, p. 81). Despite the age of these words, they are nontheless true today. (Mott, 2001, p. 21)

"Members of a specific profession are like all other adults in that they share basic human processes such as motivation, cognition, and emotions" (Cervero, 1988, p. 16). They also belong to a profession like most other adults but differ in the profession that they belong. Each of these situations need to be taken into account of continuing professional education. Continuing professional education is based on the fact that the participants are adults who work in a particular setting. Therefore, many of the same

processes that are used in continuing professional education are used in adult and continuing education, human resource and development, and training (p. 16).

Instrumented Learning

Instrumented learning is the idea of using instruments to help people learn. The idea of using instruments as a training tool originated in the mid 1950's with the evolution of training laboratories (Blake & Mouton, 1962). With the acceptance and innovativeness of such laboratories, many advancements in a variety of fields are using instruments as an alternative approach to learning (Blake & Mouton, 1962).

Instrumented learning is a process where an individual responds to a series of questions, statements, or words related to a particular theme. The feedback from the instrument to the individual is concise, meaningful, and non-threatening. "Based on the feedback, individuals receive a clearer picture of where they are in that particular area" (Drucker, 1991, p. 1)

Learning instruments are designed to contain descriptions which relate back to theory, concepts, and ideas which help the learners understand themselves (Blake & Mouton, 1972a, p. 113). "Learning instruments give people a way of examining their behavior within a systematic framework of theory which can be directly translated into practice" (p. 114). People are able to see their weaknesses

and replace them with strengths (p. 114).

Instrumented learning provides learning opportunities for individuals in numerous learning situations. The process of learning with instruments has four learning cycles of experience. They are dilemma, intervention, critique, and generalization (Blake & Mouton, 1972b, p. 150). The first phase involves confronting a dilemma and having to devise a solution for it. In the second phase, one must invent and experiment with ways to find an answer to the dilemma. Then in the third phase, feedback and assessment of one's achievements are provided. Critique methods are useful in helping individuals to become aware and more knowledgeable about their personal assumptions. Critique helps a person see how alternatives could have been used in the dilemma. At this point the comparison learning is most powerful, and many different types of comparisons can be made, including:

1. Comparing your answer or reaction against theory
2. Testing what you think against subject-matter expert's thinking, through expert keys, etc.
3. Testing what you think against what others know about you, such as your boss, wife, collages, teammates, or customers
4. Testing your answers against what is judged to be ideal if you could do the "best" thing without constraint (Blake & Mouton, 1972b, p. 150)

Which one of the four comparisons to use is dependent on what one is trying to learn.

Galileo said, "You cannot teach a man anything. You can only help him to discover it within himself." By using learning instruments, people are able to discover what is within themselves. Self-assessment gives a response that people can understand, and people do not often argue with their own data (Drucker, 1991, p. 1). As a result, learning instruments are effective because:

1. Learning instruments help people become introspective. Many people when asked to examine their attitudes, values or behavior have difficulty beginning the process. They just don't know where to begin. Learning instruments facilitate the process.
2. Learning instruments bridge the gap between theory and practice. They answer the question, "How does this apply to me?" The involvement of the learner in the process provides an insight into the theory and possible application in their life. It "makes sense" to them because they see the connection between their data and the theory.
3. Learning instruments provide a structured process. Since the goal of most learning instruments is focused, the process can be highly structured and provide feedback to the learner. Receiving the data in small pieces, the learner can build on each step of the process and gain important insights.
4. Learning instruments help participants transfer learning. The learning instrument aids participants in the application of what has been discovered to every day application. Since the process is so personal and involved, the move to application is easier. Many instruments have an action step in the process.
5. Learning instruments are non-threatening. Most learning instruments are self-administered and self-scored so

> the comfort level of the participant is dramatically increased. People deal with the feedback provided on a personal level and disclosure is always optional. (Drucker, 1991, pp. 1-2)

The application of instrumented methods range over a wide spectrum of topics and subject matters. The only real limitation is on the person creating the instrument (Blake & Mouton, 1972b, p. 151).

Due to technological progress, the nature of the workforce today is made up of mostly knowledge workers or service workers (Drucker, 1991, p. 4). This is in contrast to the manual laborers in the industrial era. In the era of knowledge and service workers, the work is difficult to define, measure, and attach value because the results are intangible. People tend to get frustrated when there is no tangible output to measure their performance. The tools and techniques developed to measure and improve productivity and performance in the industrial era are not applicable to this new kind of work.

Learning instruments enable the learner to learn without a teacher. Learning instruments provide guidance and direction that is usually provided by an instructor. The instrument is neutral, and therefore there is no authority or dependency to interfere, as with a teacher-student relationship (Blake & Mouton, 1984 p. 60).

There are many similarities between instrumented learning and adult learning. They both take a deliberate

effort to learn on the part of the learner. Adult learning is based on the concepts of andragogy, self-directed learning, and learning how to learn. Learning instruments are self-administered and self-scored. Learning Instruments are non-threatening and bring about self-concept which are adult learning principles. Learning instrument provide direction and act as a facilitator of the learning process. These concepts are important in discovering why and how an adult learner goes about mastering a learning process.

Learning Strategies

The focus of adult learning is on the adult as a learner. Adults are faced with a myriad of problems and situations in life, and each person has a different and unique strategy to solving them. Learning strategies are the techniques or skills an individual elects to use to accomplish a learning task (Fellenz & Conti, 1989, p. 7).

Learning strategies are often confused with learning styles. Learning strategies are techniques and traits developed through experience and are more of a preference developed throughout life and vary with tasks (Conti & Kolody, 1999a, p. 2). Such strategies fluctuate by individual and tasks (Fellenz & Conti, 1989 p. 8). This is in contrast to learning styles, which are the inherent ways people process information and which are stable traits that are not easily changed (Conti & Kolody, 1999a, p. 2).

Learning strategies have grown out of the

> tradition of study skills but differ significantly from that tradition. Rather than skills in note taking, outlining, and test passing, learning strategies tend to promote metacognitive, memory, and motivational strategies. (Fellenz & Conti, 1989, p. 8)

"Learning Strategies in the field of adult education include the five conceptual areas of metacognition, metamotivation, memory, critical thinking, and resource management (Conti & Kolody, 2004, p. 184). The Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS) was developed to assess adult learning strategies. SKILLS is made up of real-life learning circumstances that include various types and levels of learning. Each circumstance consists of 15 items to evaluate the likelihood of the learner to select a specific learning skill in resolving the particular circumstance. SKILLS determined the learning strategies preferences of adults in the five conceptual areas.

Metacognition is "thinking about the process of thinking" (Counter & Fellenz, 1993, p. 9). Learners who have the ability to control, to reflect on, and to be conscious of their learning processes exercise more control over the processes and become a more effective learner than those who do not (Fellenz & Conti, 1989, p. 9). Adult learners need to be aware of themselves as learners and be in control of their learning process (Smith, 1982, p. 57). The three major areas in metacognitive strategies are

Planning, Monitoring, and Adjusting.

Planning strategies involve the learner in determining the purpose of the situation or task and in identifying the steps needed to accomplish the task. Learners accept responsibility and control over their learning experiences. "Ways to implement metacognitve planning include overviewing, focusing on purpose, and acknowledging one's learning style" (Conti & Kolody, 1999a, p. 4).

Monitoring helps keep the learners on track as they learn. Learners can assess and evaluate their purpose, resources, strengths and weaknesses through a learning project (Fellenz & Conti, 1989, p. 10). Strategies that can be used in monitoring are self-testing, comparing progress with previous learning situation, and asking for feedback (Conti & Kolody, 1999a, p. 4).

Adjusting helps learners evaluate and regulate their learning activities (Fellenz & Conti, 1989, p. 10). Learners may modify and revise their learning plans based on the evaluation of their learning progress. Learning sometimes requires modification to respond to changing learning situations (Conti & Kolody, 1999a, p. 4).

Metamotivation is "motivation of the individual to learn" (Fellenz & Conti , 1993, p. 15). Metamotivation is the awareness and control over what energize and directs one's learning. Attention, Reward/Enjoyment, and Confidence are the learning strategies involved in metamotivation.

Attention is the focus on the material to be learned (Conti & Kolody, 1999a, p. 4). One should be aware of and avoid potential distractions. "Attention involves the arousal of interest in learners, the stimulation of an attitude or inquiry, and the maintenance of attention" (Fellenz & Conti, 1993, p. 15). Reward/Enjoyment is experiencing satisfaction and having fun with a learning activity. The effective domain is the major factor in this component.

> Personal growth, increase in self-esteem, helping others, working as part of a team for a worthwhile project, feeling good about accomplishments, or pride in the results of an activity are all recognized as strategies that motivate learners to embark upon and to sustain a learning experience. (Conti & Kolody, 1999a, p. 4)

Confidence is believing in one's ability to learn. One's self-esteem is a very important factor in educational participation (Conti & Kolody, 1999a, p. 6). "Belief that one can complete the learning task successfully is an important factor in the motivation to learn" (Fellenz & Conti, 1993. P. 16).

Memory is "what people know about how they remember" (Paul & Fellenz, 1993, p. 22). Memory is "the capacity of humans to retain information, to recall it when needed and recognize its familiarity when they later see it or hear it again" (Fellenz, 1993, p.16).

Critical thinking involves a reflective thinking process utilizing a high order of thinking skills in order

to improve learning (Fellenz & Conti, 1993). Critical thinking is improving individual and societal learning. In today's society of the Information Age, the appreciation for the value of higher order thinking skills has increased (Conti & Kolody, 1999a, p. 7). Critical thinking strategies in the SKILLS model is based on Brookfield's (1987) four components: (a) identifying and challenging assumptions, (b) challenging the importance of concepts, (c) imagining and exploring alternatives, and (d) reflective skepticism. The SKILLS learning strategies associated with critical thinking skills include Testing Assumptions, Generating Alternatives, and Conditional Acceptance (p. 7).

Testing Assumptions involves the "process of challenging assumptions that presumes the ability to identify these assumptions and the willingness to examine them" (Conti & Kolody, 1999a, p. 8). Exploring alternatives when engaged in critical thinking is essential when solving real-life complex problems (p. 8).

Resource Management "relates to how learners identify and critically use appropriate sources of information for the learning task" (Conti & Kolody,2004, p. 185). It is the ability to identify sources of information and prioritize their use (Fellenz & Conti , 1993, p. 35). Resource management strategies can be divided into three categories a) identifying the appropriate learning resource b) critical use of the resource c) the use of human

resources in learning.

Resource management entails more than just including others in the learning process. It is the "dialogue that involves listening to people with different opinions or insights into issues as well as the use of discussion to think through or study problems. In some situations, the support provided by human resources may be as important as the information they contribute" (Fellenz, 1993, p. 37). This type of networking is considered important when measuring learning preference in incorporating human resources (Fellenz & Conti, 1993, p. 9).

Teaching Styles

Teaching style is identified as "the attitudes teachers hold toward various instructional programs, methods, and resources as well as [the students] they prefer working with." (Dunn & Dunn, 1979, p. 241). Gauld's definition of teaching style is "the consistent way a teacher organizes and delivers a body of knowledge." (Gauld, 1982, p. 13). Conti (1998) defines teaching style as "the distinct qualities displayed by a teacher that are persistent from situation to situation regardless of content" (pp. 74-75).

It is often stated that educators should adapt their teaching style to the learning styles of the students (Dunn & Dunn, 1979; Ellis, 1979). This opinion contradicts the basic meaning of style, "which is the function of an individual's personality, experience, ethnicity, education,

and other individual traits" (Heimlich & Norland, 1994, p. 45). An educator should not and cannot "change" personality to satisfy the learner. However, the teacher can adopt and adapt classroom methods and techniques to be more consistent with his/her individual style. Knowing one's teaching style can be useful in determining which methods to adapt with one's style and knowing one's classroom limitations (pp. 45-46). For the adult educator to be successful, it is important to understand what their current style is and how it can be improved and strengthened (pp. 7-8).

The teaching-learning transaction is a dynamic action in which both the teacher and learner are active participants (Conti, 1989, p. 3). Moreover, the style of the teacher makes a difference to the learner.

> A growing body of research is developing that supports the beliefs that of most who have taught adults that the way the teacher approaches the learning situation makes a difference in the way students learn. The overall traits and qualities that a teacher displays in the classroom and that are consistent for various situations can be described as teaching style. Knowledge of teaching style can make a difference in how teachers organize their classroom, how they deal with learners, and how well their students do in learning the content. (Conti, 1989, p. 3)

"Most adult educators want to be the best they can be and are willing to work to improve. They can do so by understanding how their beliefs and behaviors relate to teaching and learning" (Heimlich & Norland, 1994, p. 3). There is a process that provides individuals the opportunity

to gather information about themselves, to assess that information, and to act upon the assessment to become more internally consistent or congruent. This process requires steps of exploration, reflection, and application (p. 3).

Exploration consists of a wide variety of activities such as discovering, naming, creating, defining, placing, and categorizing one's beliefs. Gathering of information and to a lesser extent the interpretation of that information is much of what is done in the exploration stage. For example:

> An adult educator exploring beliefs about the role of the teacher in the educational process might list, name, and group those beliefs and perhaps describe where each belief originated, but would not place a value--for example, right or wrong, good or bad or outdated--on those beliefs. Exploring actual teaching behavior would involve similar kinds of activities: describing, listing, naming and so on. Again, no value would be placed on the behavior. (Heimlich & Norland, 1994, p. 4)

The next step in the process of congruence and improvement is reflection. This step involves examining the gathered information about beliefs and behaviors. Educators make intuitive sense of beliefs and behavior by questioning, comparing, experimenting, considering, assessing, and valuing. "Reflection provides the opportunity to assess the match, or congruence, of belief and behavior: Am I thinking one thing but doing another? Do I believe, value, and react consistently?" (Heimlich & Norland, 1994, p. 4). Reflection takes time and assumes prior experience, such as

experiences in teaching adults. Reflection offers the opportunity to compare theory to practice, belief to behavior, and understanding to doing (p. 4).

The final step is application. Application suggests that inconsistencies between belief and behaviors have been resolved and changed to provide a "match". At this point the teachers are then able to add new behaviors and position into their teaching repertoire. "A new stance or a new action has been explored and reflected upon and is now a part of that individual" (Heimlich & Norland, 1994, p. 4). One's individual teaching style evolves through the process of the examination and meshing of values, beliefs, attitudes, and behavior (Heimlich & Norland, 1994, p. 9).

Educational practice can be categorized as teacher-centered or learner-centered. The teacher-centered approach is the dominant teaching method in North America. The teacher-centered approach is closely related to the beliefs of B. F. Skinner. The teacher-centered approach assumes that learners are passive and react to stimuli in the environment. The teacher's role is to design an environment to produce a desired behavior from the learner. "Although a teacher-centered approach is widely practiced in adult education, the learner-centered approach is strongly supported in the field's literature" (Conti, 1998, p. 75).

The learner-centered approach focuses on the learner rather than the body of information. Content matter is

presented in a manner that is conducive to the students' needs and to help develop critical awareness of their feelings and values. The teacher trusts the students to take responsibility for their own learning. Trust is the central element in a learner-centered approach. The learner-centered approach is closely associated with the writing of Abraham Maslow and Carl Rogers. "A learner-centered approach assumes that people are naturally good and that the potential for individual growth is unlimited" (Conti, 1998, p. 76).

For a teacher to know if their teaching style makes a difference in a student's learning, they must first identify their teaching style and critically reflect upon their actions in the classroom related to their style (Conti, 1998, p. 76). The Principles of Adult Learning Scale (PALS) is an instrument that was developed to assess one's teaching style. Many studies have been done using this instrument.

In recent years, researchers have sought to combine the findings of adult learning research into some framework of central adult learning principles (Brookfield, 1986, p. 33). The central principles have been adjusted into several research instruments. The designers of the instruments believe they can be applied to examine the extent to which adult leaning principles are being used in any given practice setting (p. 34). The research related to teaching

styles in the field of adult education has evolved around the Principles of Adult Learning Scale (PALS). PALS has been used in numerous dissertations over the years. PALS has been used to examine the patient education practices of physical therapists in South Dakota (Karges, 2003), to describe the teaching styles of rehabilitation educators (O'Brien, 2001), to describe the teaching style of faculty of the Oklahoma Council on Law Enforcement Education and Training (CLEET) (McCoy, 2000), and to explore relationships among nursing program attributes, nurse faculties' personal attributes and preferences for learner-centered instruction (Papes, 1998).

CHAPTER 3

METHODOLOGY

Design

This study utilized a descriptive design and is quantitative in nature. Descriptive research requires collecting data to answer questions concerning the current status of the subject of the study (Gay & Airasian, 2000, p. 11). "A descriptive study determines and reports the way things are" (Gay, 1987, p. 189). A majority of the quantitative research conducted today is descriptive research. Data for descriptive research are mainly collected through questionnaires and are self-administered by those selected to provide data (p. 11).

This study investigated the unidentified areas of practices of adult learning principles and learning strategies of financial aid staff members in Oklahoma. On an administered survey the financial aid staff members reported demographic information, their practices of adult learning principles and their learning strategies.

Sample

A population is a group with similar characteristics that the researcher studies and would like for the results to be generalizable (Gay, 1987, pp. 102-103). The target population for this study was financial aid staff members of higher education institutions in Oklahoma. This population has approximately 220 members.

A sample is the number of people chosen from a target population so that they accurately represent the characteristics of the target population (Gay, 1987, p. 1). The sample consisted of 110 full-time staff members of various higher education institutions in Oklahoma. Seventy staff members were administered the paper version of the survey. The survey was also placed on the web where forty financial aid staff members completed it.

PALS

The Principles of Adult Learning Scale (PALS) was administered to the sample to determine their practices of adult learning principles. This instrument measures the frequency with which one practices teaching-learning principles that are described in the adult education literature. High scores on PALS demonstrates support for a learner-centered approach to teaching; low scores on PALS indicates support for a teacher-centered approach (Conti, 1998, pp. 76-77).

PALS is a 44-item survey that can be completed in approximately 10 to 15 minutes (Conti, 1998). The survey uses a 6-point Likert scale ranging from 0 to 5 with the options of: 0--Always, 1--Almost Always, 2--Often, 3--Seldom, 4--Almost Never, and 5--Never. The scores may range from 0-220. The mean for PALS is 146 with a standard deviation of 20. Scores can be interpreted by comparing it to the average score of the instrument.

Scores above 146 indicate a tendency toward the learner-centered mode while scores below 146 indicate support of the teacher-centered approach (p. 77).

The overall PALS scores can be divided into seven factors. Each factor contains a group of related items that pertain to a major component of teaching style and adult learning principles. The title of each factor reflects a mode in adult learning literature. Scores for each factor are calculated by adding up the points for each item in the factor. High scores in each factor display support of the learner-centered concept and lower scores indicate support of the opposite concept (Conti, 1998, p. 78). The seven factors in PALS are Learner-Centered Activities, Personalizing Instruction, Relating to Experience, Assessing Student Needs, Climate Building, Participation in the Learning Process, and Flexibility for Personal Development (pp. 77-80).

Validity

Validity is "the degree to which a test measures what it is intended to measure" (Gay, 1987, p. 554). Validity is the most important characteristic an instrument can possess (Gay & Airasian, 2000, p. 161). There are three major types of validity: content validity, criterion-related validity, and construct validity (p. 162). Pals is a valid and reliable instrument (Conti, 1998).

Construct validity is the most important form of

validity. It asks what the test is really measuring (Gay & Airasian, 2000, p. 167). "The construct validity of the items was established by the testimony of juries of adult educators" (Conti, 1982, p. 139). Two juries were used. One was made up of three adult education professors from Northern Illinois University. They analyzed the items, commented on the validity, and suggested improvements for various items (p. 139). The second jury consisted of 10 highly visible professors in the field of adult education and were geographically dispersed throughout the country. At least 78% of the jurors found the concepts of each item to be congruent with learning principles of adult education associated with the collaborative mode (p. 141).

Content validity is the degree to which a test measures what it is intended to measure (Gay & Airasian, 2000, p. 163). Content validity of PALS was established by field-tests with practitioners of adult basic education in full-time public school programs in Illinois (Conti, 1982). The field-testing was completed in two phases. Phase 1 consisted of three field-tests to identify items that discriminated between the supporters and non-supporters of each collaborative mode. Phase 2 tested 57 practitioners in six programs. The scores of the practitioners were calculated and analyzed. "Content validity was determined by Pearson correlations which measured the relationship between each individual item and the total score of each

participant" (Conti, 1982, p. 140). This produced a 44-item instrument.

Criterion-related validity is determined by relating performance on a test to performance on another criterion or test (Gay & Airasian, 2000, p. 622). Criterion-related validity was established by observing participants who scored two standard deviations above or below the mean on PALS and comparing their scores on the Flanders Interaction Analysis Categories (FIAC). The FIAC were determined through classroom observations. The FIAC was used as the external criterion because it is a valid system for measuring initiating and responsive classroom actions. Actions described by Flander's definitions of initiating are highly congruent with the collaborative mode characteristics (Conti, 1982, p. 140).

> Pearson correlations between PALS and each of the three possible FIAC ratio scores of teacher response ratio (TRR), teacher question ratio (TQR), and pupil initiation ratio (PIR) showed a positive correlation of .85 (TRR), .79 (TQR), and .82 (PIR). These high correlations statistically confirmed that PALS consistently measures initiating and responsive constructs and that PALS is capable of consistently differentiating among those who have divergent view concerning these constructs. (p. 142).

Reliability

Reliability refers to the dependability and trustworthiness of an instrument. It is the "degree to which a test consistently measures whatever it is measuring" (Gay & Airasian, 2000, p. 169). The test-retest method was

used to establish the reliability of PALS. The instrument was administered to 23 adult basic education practitioners in Chicago. The same instrument was re-administered to the practitioners after 7 days. The scores were compared by means of a Pearson correlation which yielded a reliability coefficient of .92 (Conti, 1982, p. 142).

ATLAS

The Assessing the Learning Strategies of AdultS (ATLAS) instrument was administered to the financial aid community to identify learning strategy preferences. ATLAS is an instrument designed to quickly identify learning strategies (Conti & Kolody, 1998, p. 109). ATLAS was chosen for this study because it is easy to administer and complete. It allows the learners and facilitator to quickly identify learning strategy usage patterns (p. 109).

ATLAS consists of five bound colored pages in a booklet format. The participants follow the flow chart type instrument through descriptive phrases that lead them to their learning strategy group. The participants are placed in one of the following learning strategy preference groups: Navigator, Problem Solver, or Engager.

ATLAS is a valid instrument for measuring the learning strategy preferences of adults in real-life learning situations (Conti & Kolody, 1998). The ATLAS instrument was based on the findings from the Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS) and has the same

validity as the SKILLS instrument (Conti & Fellenz, 1991).

"The process of establishing construct validity for ATLAS was to synthesize the results of the numerous research studies using SKILLS and to consolidate these results" (Conti & Kolody, 1999, p. 16). Thus, "the construct validity of ATLAS was established by reviewing the literature of studies actually using SKILLS in field-based research and by consolidating the similar data from many studies" (p. 18). The data of 3,070 cases from two studies were used in cluster analysis to identify three groups of learning strategy patterns (p. 17). These groups were named Navigators, Problem-Solvers, and Engagers.

Content validity for ATLAS was established using discriminate analyses to determine the exact strategies pattern used by each group when compared to other groups (Conti & Kolody, 1999, p. 19). Since multi-variate analysis was used to identify these groups, the items are arranged in ATLAS so that the participants cannot see other items that may appeal to them.

> Through this procedure, the respondents do not have access to the items that do not apply to them because they have identified themselves as belonging in another track. While ATLAS has only a few items, each item was based on the powerful multivariate procedure of discriminant analysis. Instead of using an approach which involves summing multiple attempts to identify a characteristic, ATLAS uses discriminant analysis to precisely describe the content for each item. (Conti, 1999, p. 19)

Criterion-related validity is "validity which is

determined by relating performance on a test to performance on another criterion" (Gay, 1987, p 543). Several studies have asked people to compare the results to the external criterion of their perceptions by asking people if the placement is accurate. Several studies show approximately 90% accuracy. "The current version of ATLAS correctly places approximately 70% of the respondents in their corresponding SKILLS group" (Conti, 1999, p. 19). Additional studies have indicated that the respondents of ATLAS determined that it was 90% accurate (Ghost Bear 2001; Willyard, 2000).

The test-retest approach was used to determine reliability of ATLAS. Examinations of ATLAS covered periods of time from one week to three weeks . ATLAS has a reliability of .87 (Ghost Bear, 2001).

Procedures

Several steps were taken to collect data for this research; these steps are diagramed in Appendix A. First, a survey was placed on the web and a message posted on the Oklahoma Association of Financial Aid Administrators' listserve. One week later a reminder was posted to that same listserve. However, on 40 responses were received through this process. Some respondents indicated they had difficulty accessing the survey due to institutional firewalls.

Because a sufficient number of surveys were not

collected via the Internet, plans were made to administer the survey at the state conference for Oklahoma financial aid administrators, but due to scheduling conflicts the surveys could not be completed at that time. To gather more responses, the surveys were then delivered and administered at the financial aid offices of Bacone College, East Central University, Oklahoma City University, Oklahoma Baptist University, Oklahoma State University-Oklahoma City, Oklahoma Christian College, Oral Roberts University, Rose State College, Southern Nazarene University, St. Gregory's University, Tulsa Community College, and University of Central Oklahoma.

CHAPTER 4

FINDINGS

Introduction

The data for this study were gathered from 110 staff members in the financial aid profession in Oklahoma. Data provided by Principles of Adult Learning Scale (PALS) instrument and the Assessing The Strategies of AdultS (ATLAS) instrument were used to provide a profile and data for statistical analysis of financial aid staff of Oklahoma higher education institutions.

Profile of Financial Aid Staff Members

Several demographic items were obtained from the survey. The financial aid administrators that participated in the study were predominately white females; well over four-fifths were females, and approximately four-fifths were white (see Table 1). Out of the 110 participants, 12 left their age blank; the mean age of the 98 that completed their age was 40.19 with a standard deviation of 10.29. The education level among the participants were 43% had a high school education, 38% percent had a bachelors degree, and 18% had a masters degree.

Financial aid offices in Oklahoma vary in size. They range from a small operation of two or three staff members to fairly large operations of 20 to 25 staff members. In the smaller operations they may do more generalist types of duties. For example: there may be a director and one

support staff. The support staff may be involved in awarding financial aid and counseling with students and a variety of other things.

Most of the respondents (95%) were from four and two year schools. Although this researcher did not physically travel to proprietary schools and career technology centers, six responses were obtained from them. Although data were not gathered on the size of the organizations in which the participants worked, over half of the financial aid staff members that participated in the survey were from a four year institutions and nearly one-third were directors or assistant directors, one-third professional staff, and one-third support staff. Almost three-fourths of them were responsible for training employees. Yet, only half of the ones doing the training were the supervisors of the staff members being trained.

Table 1. Frequency of Demographic Variables

Variable	Frequency	Percent
Gender		
Male	15	13.6
Female	95	864
Race		
African American	5	4.6
Hispanic	1	0.9
Native American	10	9.2
White	89	81.7
Other	4	3.7

Type of Institution		
4-year college	63	57.8
2-year college	40	36.7
Proprietary School	3	2.8
Career Technology Centers	3	2.8
Education		
High school	48	43.6
Bachelors	42	38.2
Masters	20	18.2
Years of experience		
1-5	51	42.3
6-10	23	28.8
11-15	12	11.6
16-20	12	11.5
21-28	6	5.9
Age		
21-25	7	7.1
26-30	13	13.3
31-35	16	16.4
36-40	15	15.4
41-45	15	15.3
46-50	11	11.2
51-55	13	13.3
56-62	8	8.0
Job Title		
Director	24	22.0
Asst. Director	16	14.7
Professional Staff	29	26.6
Support Staff	35	32.1

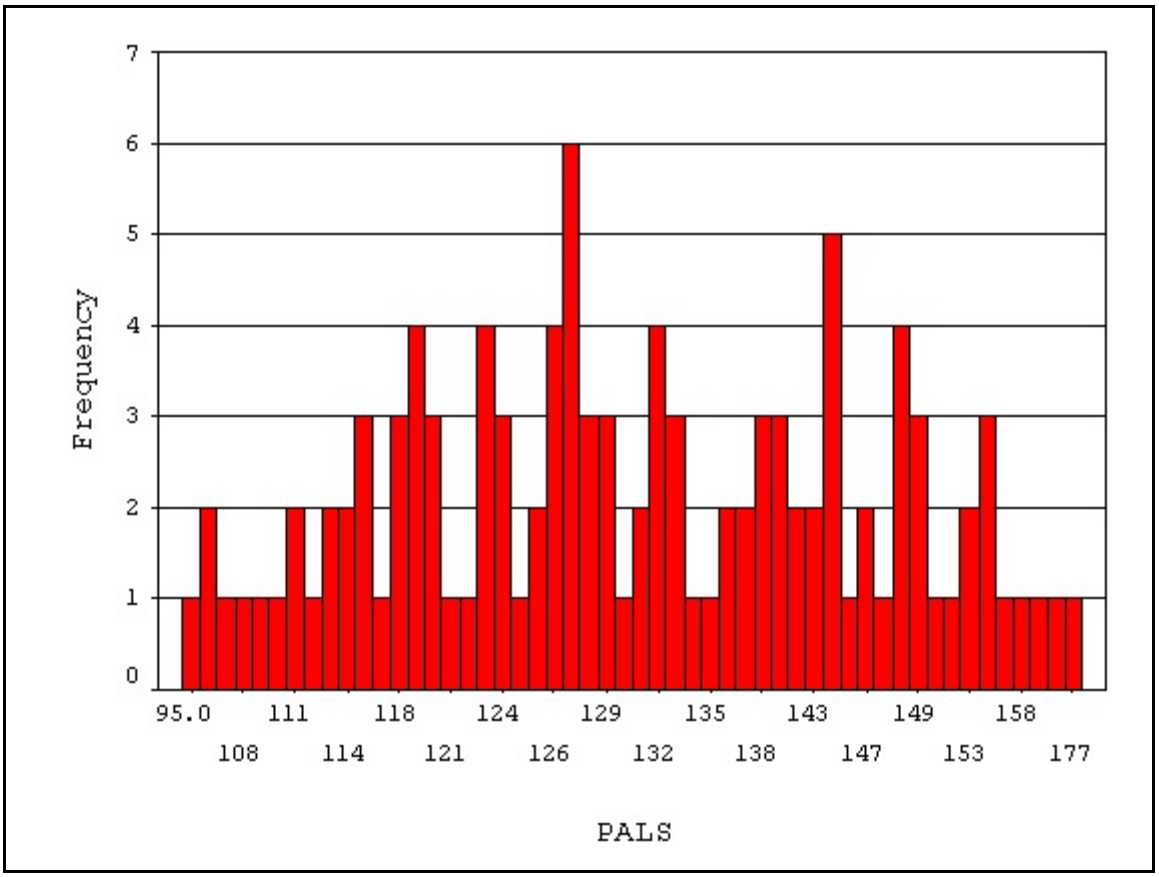
Other	5	4.6
Responsible for training		
Yes	79	72.5
No	30	27.5
Supervisor of those trained		
Yes	49	52.1
No	45	47.9

Practices of Adult Learning Principles

The Principles of Adult Learning Scale (PALS) instrument was administered to all participants of the study. Responses on the 44 items of the PALS determined the practices of adult learning principle of the 110 financial aid staff that participated in the study. PALS consists of 44 items that measure the frequency with which one practices teaching-learning principles described in the adult education literature. The total possible score is 220. The respondents indicated their answers on a Likert scale ranging from 0 to 5: 0--Always; 1--Almost Always; 2--Often; 3--Seldom; 4--Almost Never; 5--Never. High scores indicate support for a learner-centered approach to teaching-learning and low scores support a teacher-centered approach to teaching-learning (Conti, 1998, p. 77). The scores ranged form 95 to 177 for the financial aid staff members and had a mean of 131.4 with a standard deviation of 15.1 on the PALS (see Figure 1). The normative mean of PALS is 146 with a standard deviation of 20. The financial aid staff is nearly

three-fourths of a standard deviation below the normative mean. This implies that this group supports the teacher-centered approach.

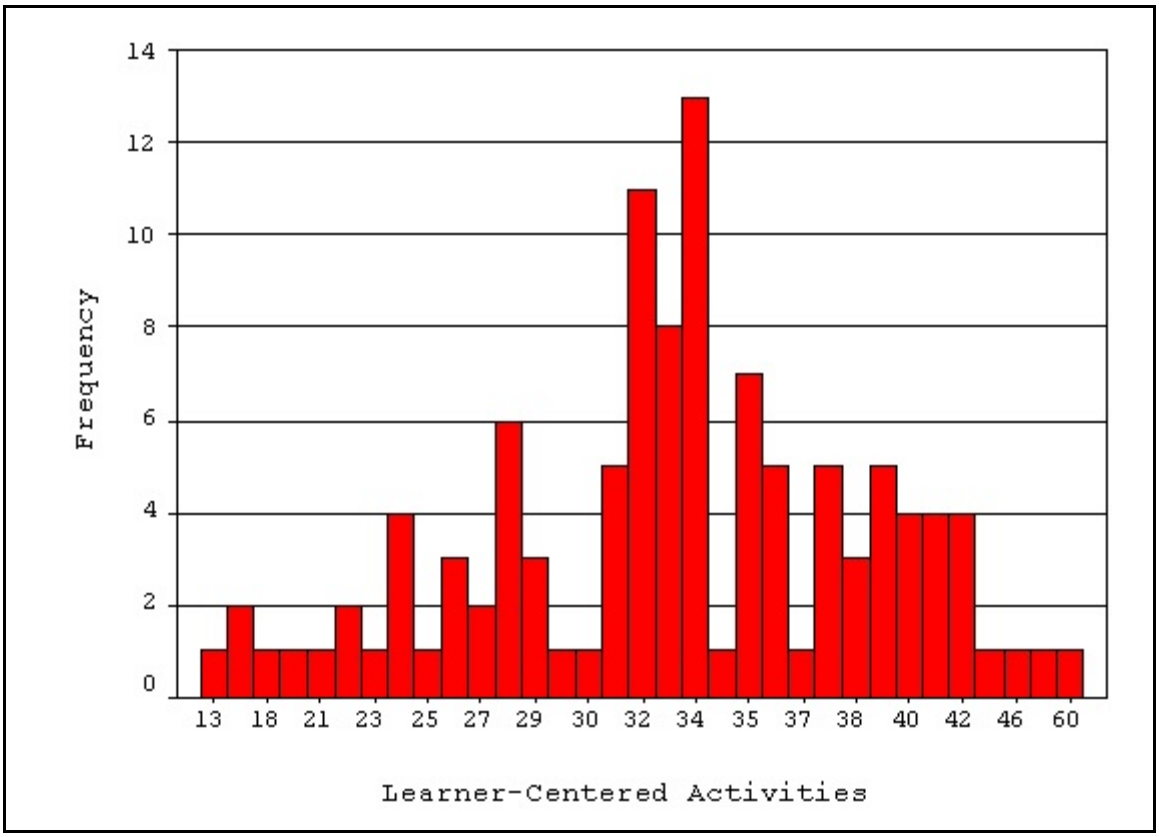
Figure 1: Frequency Distribution of Principles of Adult Learning Scale Scores



PALS scores can be divided into seven factors. Each factor contains a group of questions that pertain to a major component of adult learning. Factor 1 in PALS is "Learner-Centered Activities" (Conti, 1998, p. 78). This factor is made up of 12 negative items in the instrument. A low score on this factor demonstrates support of the teacher-centered mode. Those who support the teacher-centered mode prefer

testing over informal evaluation techniques and rely heavily on standardized test. The normative mean of PALS for factor 1 is 38 with a standard deviation of 8.3. The mean of the participants of the study was 33.0 with a standard deviation of 6.86 (see Figure 2). The participants are almost two thirds (60.7%) of a standard deviation below the average of PALS. This indicates that the financial aid staff supports teacher-centered mode related to evaluation.

Figure 2: Frequency Distribution of Learner-Centered Activities Scores



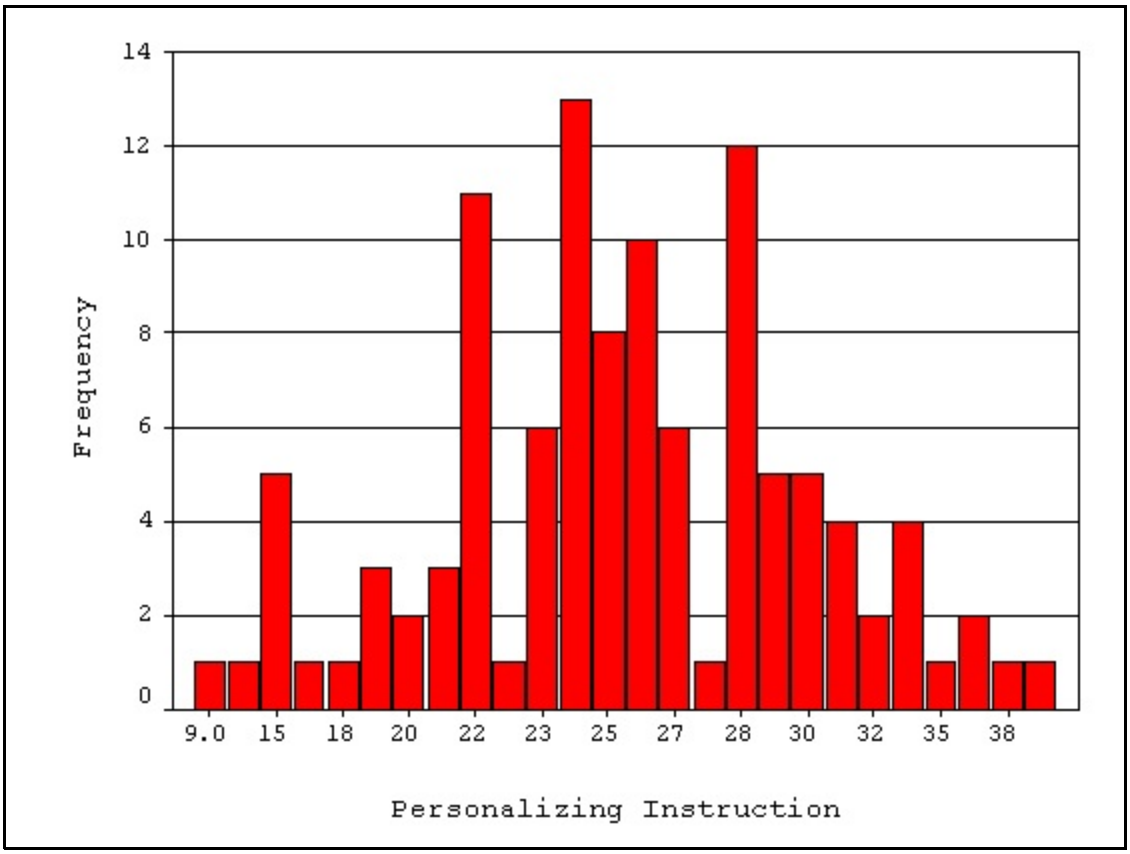
Factor 2 is "Personalizing Instruction." This factor includes six positive and three negative items. Those who

score high on this factor utilized a variety of things to personalize learning to meet the unique needs of each learner. Individual motives and abilities determine the learning objectives, and instruction is self-paced. Lecturing is a poor method for presenting material to adult learners. Rather a variety of methods and materials are used to present the subject matter. Factor 2 of PALS has a normative mean of 31 with a standard of 6.8. The study participants have a mean of 25.3 with a standard deviation of 5.1 (see Figure 3). They were over four-fifths (83.8%) of a standard deviation below the normative mean. This suggests that they support the teacher-centered teaching method related to ways of personalizing instruction.

Factor 3 is "Relating to Experience", and it consists of six positive items. A high score on this factor indicates that one takes a learner's prior experiences into account when planning learning activities and encourages the learners to relate their new learning episodes to their experiences. This can foster a learner to move from being dependent on others to being independent (Conti, 1998, p. 79).

Factor 3 of PALS has a normative mean of 21 with a standard deviation of 4.9. The participants of the study had a mean of 20.8 with a standard deviation of 4.7. Thus the financial aid staff is just about equal with the norm for PALS (see Figure 4).

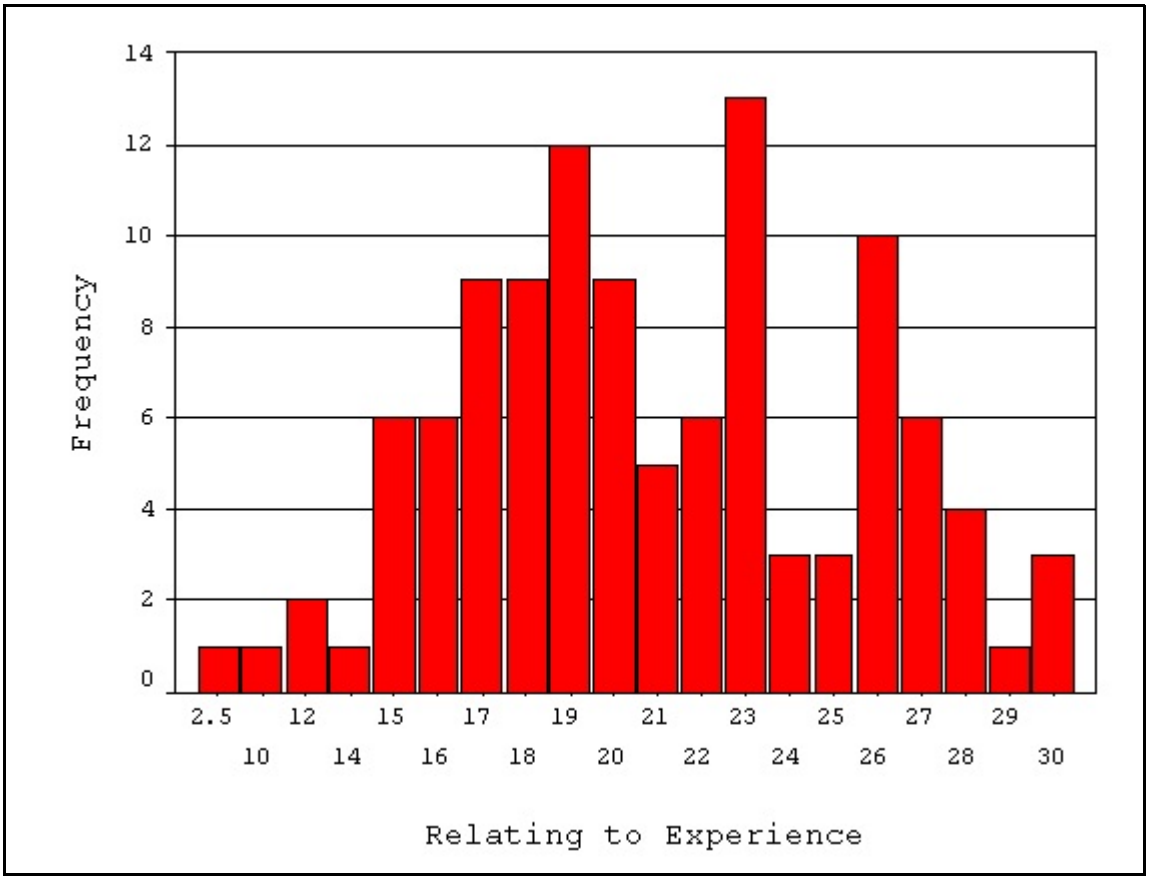
Figure 3: Frequency Distribution of Personalizing Instruction Scores



Factor 4 is "Assessing Students Needs", and it is made up four positive items. A high score on this factor demonstrates that financial aid personnel view learners as adults by finding out what the learners want and need to know. This is done by informal counseling and conferences with the individual learner (Conti, 1998, p. 79).

Factor 4 has a normative mean of 14 with a standard deviation of 3.6. The study participants have a mean of 14.2 with a standard deviation of 3.3. Thus, this group is just slightly higher than the norm (see Figure 5).

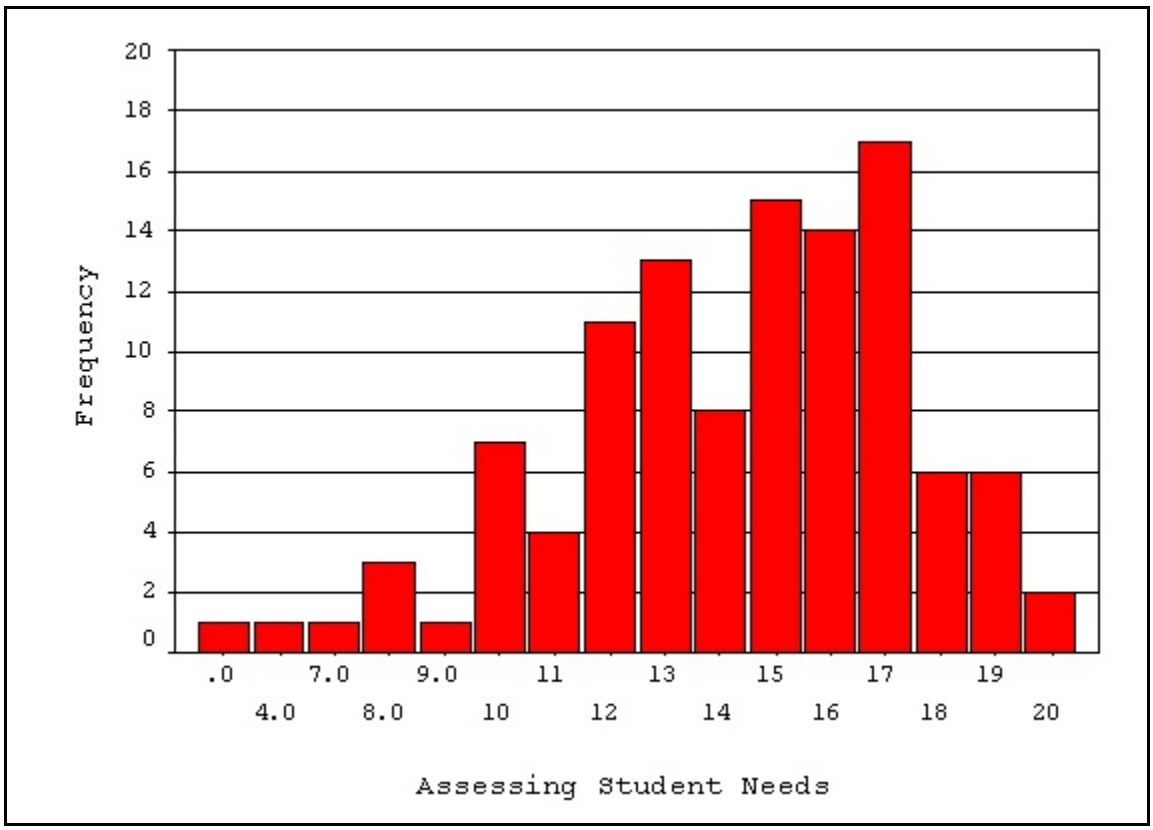
Figure 4: Frequency Distribution of Relating to Experience Scores



Factor 5 is "Climate Building", and it contains four positive items. High scores on this factor demonstrates that financial aid professionals are in favor of producing a friendly and informal atmosphere in the initial stages of a learning process. This helps promote discussion and interaction among the learners and eliminate barriers. The learners are encouraged to take risks and errors are accepted as a natural part of the learning process (Conti, 1998, p. 79). Factor 5 has a normative mean of 16 with a standard deviation of 3.0. The financial aid staff had a

mean of 15.7 with a standard deviation of 3.2 (see Figure 6). Thus, this group was slightly below the norm of PALS.

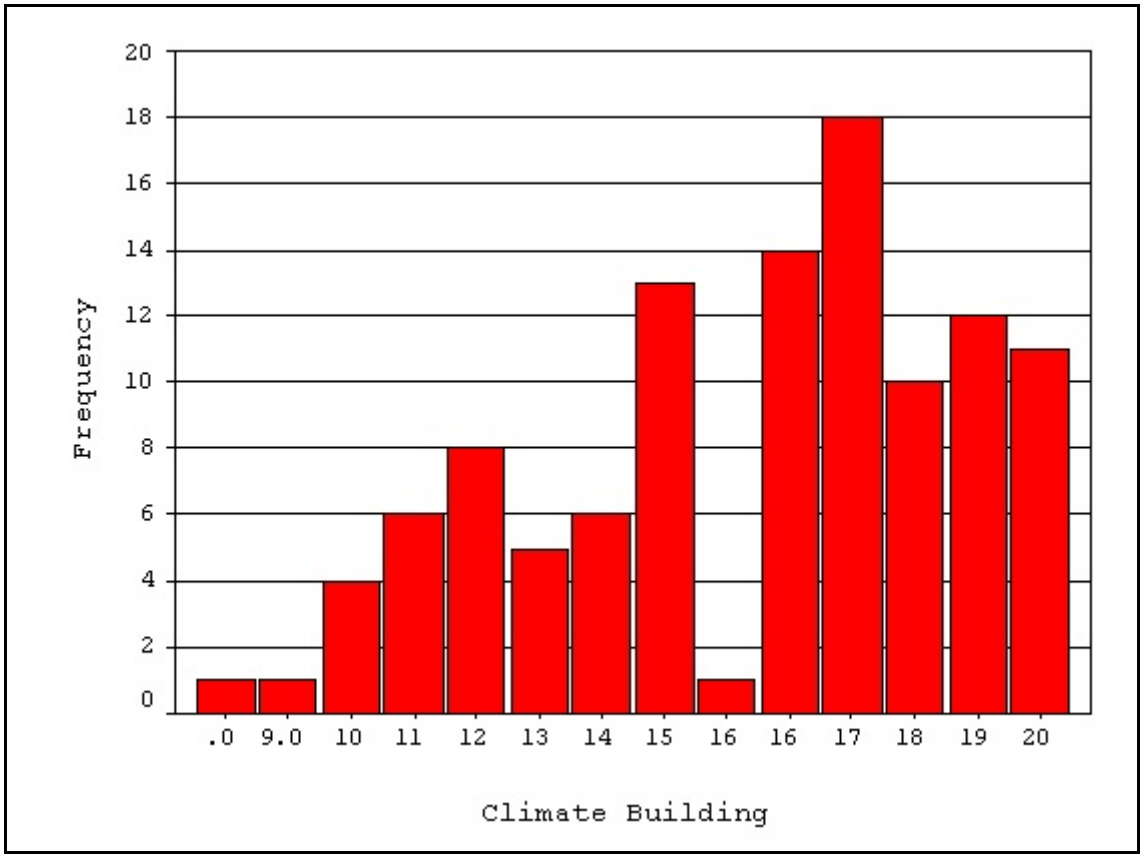
Figure 5: Frequency Distribution of Assessing Student Needs Scores



Factor 6 relates to the "Participation in the Learning Process." The factor focuses on the involvement of the student in determining the content of the material used and the evaluation method in a learning process. A high score on this factor demonstrates that the financial aid staff allows the learner to identify their own problems to be solved. High scores also indicate that the financial aid staff involves the learner in the evaluation process of the learning activity (Conti, 1998, p. 79). The normative mean

of Factor 6 is 13 with a standard deviation of 3.5. The 110 financial aid staff members had a mean of 13.1 with a standard deviation of 3.4 (see Figure 7). Again, the participants in the study were close to the PALS norm.

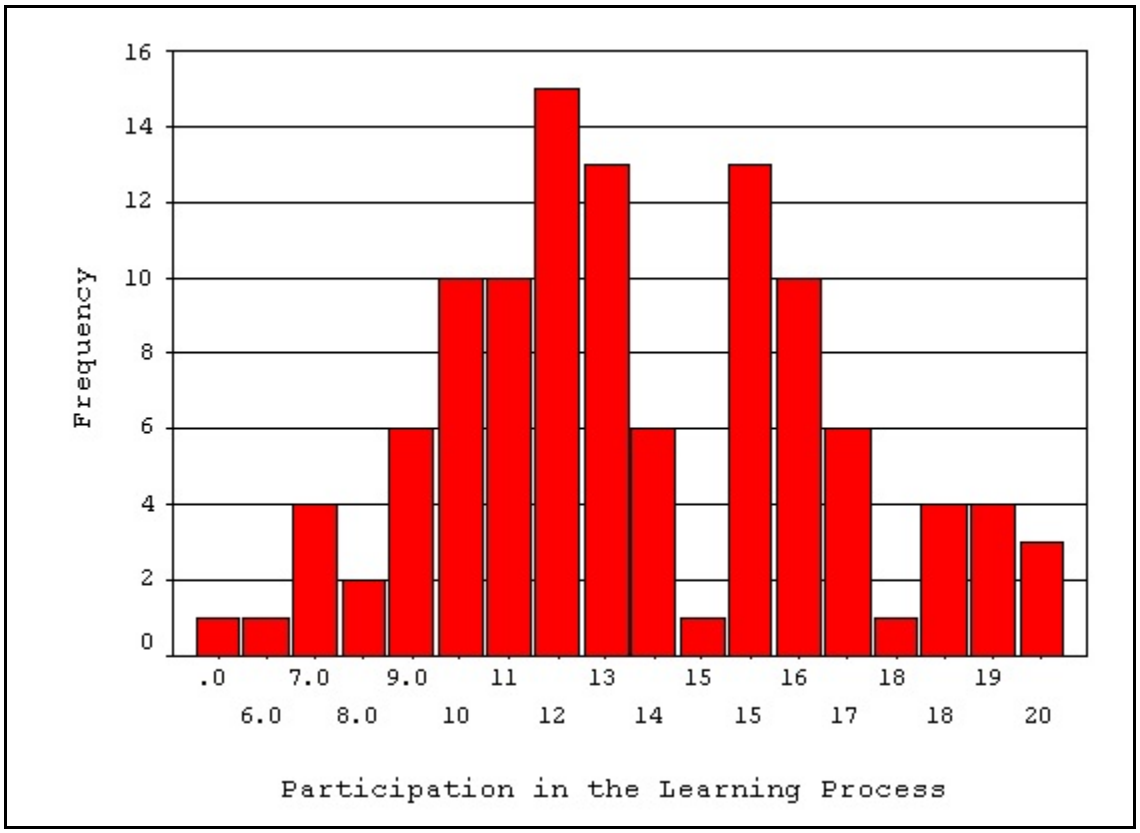
Figure 6: Frequency Distribution of Climate Building Scores



Factor 7 is related to "Flexibility for Personal Development." Factor 7 is made up of 5 negative questions that do not foster this principle. Therefore a low-score in this factor indicates belief that the teacher or trainer should provide knowledge instead of acting like a facilitator. A high score in this area indicates objection to this rigid format and the lack of sensitivity of the

individuals. One agrees that adjustments should be made to accommodate the changing needs of the learner (Conti, 1998, p. 80). Factor 7 has a normative mean of 13 with a standard deviation of 3.9. The participants of the study had a mean of 9.0 with a standard deviation of 3.7. The financial aid staff are one full standard deviation below the norm (see Figure 8).

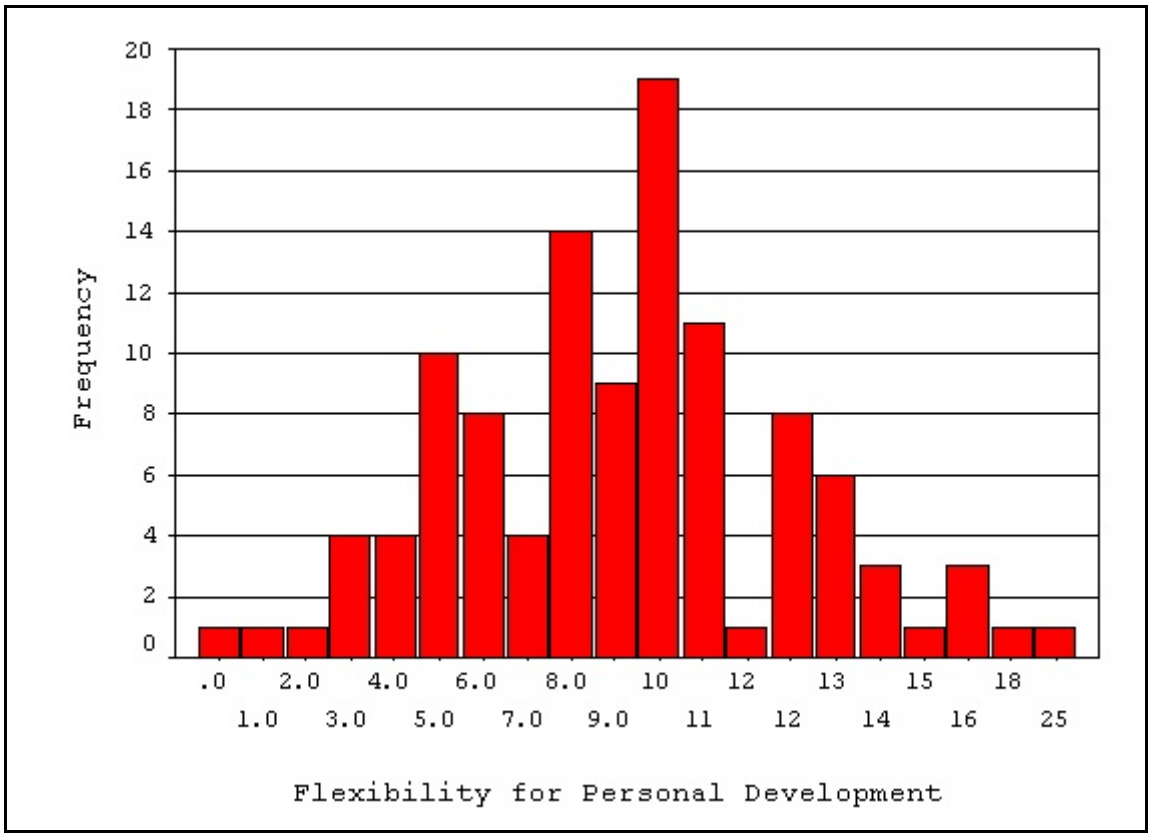
Figure 7: Frequency Distribution of Participation in the Learning Process Scores



Financial aid staff were below the normative mean on factor 1--Learner-Centered Activities, Factor 2--Personalizing Instruction, Factor 5--Climate Building, and Factor 7--Flexibility for Personal Development. They were

about equal with the norm on Factor 3-Relating to Experience and Factor 6-Participation in the Learning Process. They were slightly above the normative mean on Factor 4-Assessing Student needs. Almost all the factors have a bell-shaped distribution in the sample.

Figure 8: Frequency Distribution of Flexibility for Personal Development Scores



Learning Strategies Preferences

The 110 financial aid staff members that participated in the study were asked to identify their learning strategy preferences by completing the Assessing The Learning Strategies of AdultS (ATLAS) instrument. The participants

were almost equally distributed among the three learning preference groups: Navigator–33.3%, Problem Solver–36.2%, and Engager–30.5% (see Table 2). The financial aid staff were asked if they felt this was an accurate description of their learning styles. This question was inadvertently omitted from the paper version of the survey. Out of the 110 participants, 40 completed it on the Internet, and 93% felt that is was accurate for them. Of the 105 responses, 58 (55.2%) were in Subgroup 1, and 47 (44.8%) were in Subgroup 2.

Table 2. Observed and Expected Distribution of Learning Strategy Groups

Learning Strategy	Observed	Expected	Difference
Navigator	35	38.8	-3.3
Problem Solver	38	33.3	4.7
Engager	32	33.4	-1.4

A chi-square analyses was used to determine if there was a significant difference between the observed distribution of financial aid staff members and the expected learning strategies distribution for the norm group. The expected ATLAS distribution is 36.5% for Navigators, 31.7% for Problem Solvers, and 31.8% for Engagers. "A chi-square test compares the proportions actually observed in a study to the proportions expected, to see if they are significantly different. Expected proportions are usually the frequencies that would be expected if the groups are

equal, although occasionally they also may be based on past data" (Gay & Airasian, 2000, pp. 502-503). The learning strategies frequency distribution of the financial aid staff was not significantly different from the expected frequency (χ^2 = 1.01, df = 2, p = .60) (see Table 2).

A one-way analysis of variance (ANOVA) was used to investigate the relationship between the learning strategy preferences and the practices of adult learning principles among financial aid staff. Analysis of variance is a test to "determine whether there is a significant difference between two or more means at a selected probability level" (Gay & Airasian, 2000, p. 491). For these analyses, the financial aid staff members were grouped according to their learning strategy preference groups, and these groups were compared on the basis of their PALS scores.

Table 3: ANOVA of PALS Scores by Learning Strategy Preference

Variable	SS	df	MS	F	p
PALS Total Score					
Between	2574.3	2	1287.16	6.22	.003
Within	21108.31	102	206.94		
Climate Building					
Between	63.23	2	31.62	3.19	.045
Within	1011.33	102	9.92		
Personalizing Instruction					
Between	161.51	2	80.76	3.01	.054
Within	2734.61	102	26.81		

Flexibility for Personal Development					
Between	78.75	2	39.37	2.80	.065
Within	1432.24	102	14.04		
Learner-Centered Activities					
Between	175.01	2	87.51	1.82	.167
Within	4897.70	102	48.02		
Relating to Experience					
Between	72.51	2	36.26	1.67	.193
Within	2211.48	102	21.68		
Participation in the Learning Process					
Between	31.50	2	15.75	1.30	.277
Within	1235.23	102	9.92		
Assessing Student Needs					
Between	5.36	2	2.68	.23	.794
Within	1185.17	102	11.62		

Eight separate analyses of variance were run. One was for the total score on PALS, and one was run for each of the seven factor scores on PALS. Out of the eight ANOVAs, three had significant differences and five did not (see Table 3). The post hoc test using the Duncan procedure revealed that the Navigators ($\underline{M}$ = 125.3) scored significantly lower on the overall PALS scores than the Problem Solvers ($\underline{M}$ = 137.1); the score for the Navigators was over a half standard deviation lower than the Problem Solvers and put the Navigators over one full standard deviation below the norm on PALS. On Personalizing Instruction, the Navigators ($\underline{M}$ = 23.7) scored lower than the Problem Solvers ($\underline{M}$ = 26.6); the difference was nearly a half standard deviation lower for

the Navigators and placed the Navigators over a full standard deviation below the normative mean on this factor. For Climate Building, the difference was between the Engagers (M = 14.9) and the Problem Solvers (M = 16.6); the Engagers were nearly half a standard deviation lower than the Problem Solvers, who were near the norm for this factor.

Cluster Analysis

Cluster analysis was used to explore the data in order to find if natural groups exist among financial aid staff based on their practices related to the teaching-learning transaction.

> Cluster analysis is a powerful multivariate tool available to adult educators for inductively identifying groups which inherently exists in the data. Its power lies in its ability to examine the person in a holistic manner rather than as a set of unrelated variables. Once clusters are identified, other qualitative and quantitative techniques should be used to help name and describe the cluster. (Conti, 1996, p. 67)

Cluster analysis is a statistical procedure that can be used to identify homogeneous groups (Aldenderfer & Blashfield, 1984). Cluster analysis is a multivariate technique that examines the person as a whole and investigates all variables together as opposed to univariate techniques that examines a single variable in isolation (Conti, 1996, p. 68).

Hierarchical cluster analysis is a method commonly used for forming clusters. "In agglomerative hierarchical clustering, clusters are formed by grouping cases into

bigger and bigger clusters until all cases are members of a single cluster" (Norusis, 1988, p. B-73).

The objects are merged into clusters at various stages based on their similarities. Then at the next level of similarity, the cluster will split into two additional clusters, and this process continues until all objects are merged into a single group (Kachigan, 1991, pp. 269-270). The following occurs in the hierarchical cluster analysis:

> At the first step all cases are considered separate clusters: there are as many clusters as there are cases. At the second step, two of the cases are combined into a single cluster. At the third step, either a third case is added to the cluster already containing two cases or two additional cases are merged into a new cluster. At every step, either individual cases are added to clusters or already existing cluster are combined. Once a cluster is formed, it cannot be split; it can only be combined with other clusters. Thus, hierarchical clustering methods do not allow cases to separated from clusters to which they have been allocated. (Norusis, 1988, p. B-73)

Cluster analysis measures the similarities and differences between each pair of objects. There are four methods for measuring the similarities or differences. They are: (a) correlation coefficients, (b) Euclidean distances, (c) matching type measures of similarity, and (d) direct scaling of similarities (Kachingan, 1991, pp. 264-265). There are several types of cluster formation techniques, I used the Ward's method. The Ward's method is commonly used in the social sciences (Aldenderfer & Blashfiled, 1984, p. 43).

Cluster analysis was used to identify groups of financial aid personnel with similar practices of adult learning principles. An agglomerative hierarchical cluster analysis was computed using the 44 items of PALS with the 110 full-time financial aid personnel's responses. The Ward's method was used to join the groups into clusters. The best solution for describing the data was a 4-cluster solution. At the 4-cluster solution the financial aid staff were separated into groups of 32, 27, 12, and 38 based on their practices of adult learning principles.

Discriminant Analysis

Although cluster analysis is a powerful technique for identifying groups, additional information is needed to name and describe the clusters and to better understand the true meaning of them (Conti, 1996, p. 70). "Discriminant analysis is a statistical technique which allows the researcher to study the differences between two or more groups of objects with respect to several variables simultaneously" (Klecka, 1980, p. 7). Discriminant analysis is a tool used to identify the process that separated the clusters. This helps to describe clusters (Conti, 1996, p. 71). Discriminant analysis is used in the social sciences to distinguish between different groups of people and to identify the process that separates the groups (Conti, 1993, p. 91; 1996 p. 71). It is also known as a procedure for "identifying boundaries between groups of objects"

(Kachigan, 1991, p. 216).

Three separate analyses were done in this study to determine what separated the four identified clusters from each other. The diagram of the results of these analyses is in Appendix B. The four groups were from the clusters analysis. The four clusters separate into two separate clusters. At the two cluster solution they differ on learner-teacher centered. The discriminating variables were the 44 items on PALS.

The pattern of these findings are similar to those found by Hulderman (2003). In his study he found four groups that exists in the decision making styles of police officers. This study was also conducted at Oklahoma State University, as were several studies that used similar types of data analysis. In order for the results of the study to be compared and since the studies had the same advisor, the format has been written in a similar fashion.

The first discriminant analysis identified what separated the 110 financial aid staff at the 2-cluster level. One cluster contained 59 staff members and the other cluster contained 50 staff members. At the 2-cluster level, the financial aid staff were correctly classified with 89.9 accuracy using the Ward method. Of the cluster of 59, 52 were correctly classified and 46 of the cluster of 50 were accurately classified.

The structure matrix was used to determine what

separated the two clusters. The structure matrix contains correlations between the individual items in the analysis and the overall discriminant function that is produced in the analysis. From this matrix, "a structure coefficient tells us how closely a variable and a function are related" (Klecka, 1980, p. 31). When the coefficients are high, the items are very similar to the function. When the coefficients are low, the items are not like the function. The highest coefficients can be used to name the function (p. 31). This naming identifies the process that separates the groups in the analysis (Conti, 1996, p. 71). This is a multivariant process; consequently, the variables must be looked at collectively, and the name should reflect the interaction of the variables with the high correlations.

For the analysis at the 2-cluster level, a cutoff level of .3 was used for determining which items to include in the naming process. Using a structure coefficient of .3, questions 15, 22, 23, 25, 31, 42, and 43 of the Principles of Adult Learning Scale (see Table 4) discriminated between the two clusters. All of the items focus on the learner and thus reflect a learner-centered approach to teaching. The average scores for these items for the cluster of 59 were lower than the average scores from the cluster of 50. Because of this, the cluster of 59 was labeled Teacher-Centered, and the cluster of 50 was labeled Learner-Centered.

One important element of a discriminant analysis is how accurately the discriminant function produced in the analysis can predict the correct placement of participants in their group. In a descriptive discriminant analysis, a person's group membership is known before the analysis is conducted. The participants are put into these groups, and the discriminating variables are used to create a discriminant function that can be used for either describing the group or for predicting group membership of others in the future. In this analysis, it was known from the cluster analysis that 59 participants were in one group and 50 were in the other group. The classification table for the analysis tells how many participants were correctly placed in their original group using the discriminant function generated by the analysis. "The overall percentage of cases classified correctly is the sum of the number of cases classified correctly in each group divided by the total number of cases" (Norusis, 1988, p. B-26). The overall accuracy rate for the classification of cases in this analysis was 89.9% with 52 of the 59 in the Teacher-Centered group and 46 of the 50 in the Learner-Centered group classified correctly.

Table 4: Structure Matrices for 2-Cluster Level and for Each of Its Clusters

No.	Corr.	Item
Clusters of 59 and 50		
43	.523	I help students relate new learning to their prior experiences.
31	.393	I plan activities that will encourage each student's growth from dependence on others to greater independence.
15	.386	I allow students to participate in making decisions about the topics that will be covered in class.
22	.361	I accept errors as a natural part of the learning process.
23	.358	I have individual conferences to help students identify their educational needs.
42	.358	I use different materials with different students.
25	.351	I help my students develop short-range as well as long-range objectives.
Cluster of 59 with Groups of 32 and 27		
27	.475	I avoid discussion of controversial subjects that involve value judgements.
21	.344	I use what history has proven that adults need to learn as my chief criteria for planning learning episodes.
26	.338	I maintain a well-disciplined classroom to reduce interferences to learning.
Cluster of 50 with Groups of 12 and 38		
13	.230	I get a student to motivate himself/herself by confronting him/her in the presence of classmates during group discussions.
26	.222	I maintain a well-disciplined classroom to reduce interferences to learning.
31	-.215	I plan activities that will encourage each student's growth from dependence on others to greater independence.

"Once a cluster is formed, it cannot be split; it can only be combined with other clusters" (Norusis, 1988, p. 14). Four clusters were combined to make the two-level cluster. A group of 32 and 27 were combined to create the

cluster of 59. Groups of 12 and 38 combined created the cluster of 50.

The second discriminant analysis determined what separated the two groups of 32 and 27 that made up the group of 59; this was the Teacher-Centered group. The financial aid personnel were correctly classified with 98.3% accuracy. In the cluster of 32, 31 were accurately classified. In the cluster of 27, all 27 were accurately classified. The structure matrix was examined to identify what separated the two groups. Using a minimum structure coefficient criteria of .3, items 21, 26, and 27 (see Table 4) discriminated between the two groups. These items deal with upholding established standards. The average scores of the items among the group of 32 were lower than the scores of the group of 27.

The group of 32 almost always avoids discussion, uses what history has proven adults need, and maintains a disciplined classroom. For this group, the individual is not the important thing. Instead, the content and structure dominate; rules are rules. The group of 32 were named Regulators.

The group of 27 sometimes get into controversial conversations and sometimes use what history has proven. If they do not use what history has proven then they use the individuals and they maintain some control but not total control. Rules are guides. The group of 27 were named

Flexers.

The third discriminate analysis was examined to see what discriminated within the group of 50 financial aid personnel. The group of 50 is made up of one group of 12 and one group of 38. The financial aid personnel were 100% correctly classified in this analysis. Using a minimum structure coefficient criteria of .2, items 13, 26, and 31 of PALS discriminated between the two groups (see Table 4). Of these items, two are positive, and one is negative. Thus, the negative item is interpreted in the opposite direction of the other two for each group. These items are negative items, and the concepts in them deal with personal development as a person moves from dependence to independence. The group of 38 scored higher on the positive items than the group of 12.

These two groups differ in their views of independence. The group of 12 will confront people in front of a group in order to challenge them. However, they are strongly opposed to imposing discipline in the group implying that this is a personal matter of self-discipline. The group of 12 was named Challengers.

The group of 38 avoid confrontation with a consciousness toward maintaining individual dignity and self-respect, therefore, putting the focus on the individual opposed to the group. Sometimes in learning situations it is necessary to have a little control and direction to the

group activities by facilitating. The group of 38 was named Counselors. Thus, the Challengers challenge people for self-direction while the Counselors focus facilitating them.

Groups and Teaching Style

An analysis of variance was run on the four cluster groups for teaching style as measured by PALS scores. The groups were made up of the four clusters (Regulators, Flexers, Challengers, and Counselors) and teaching style. A separate analysis was run for the total score and each factor. Significant differences were found on all (see Table 5).

Table 5: ANOVA of PALS Scores by Clusters

Source	SS	df	MS	F	p
PALS Total Score					
Between	12876.35	3	4292.12	39.77	0.000
Within	11331.84	105	107.92		
Learner-Centered Activities					
Between	1740.68	3	580.23	22.85	0.000
Within	2666.56	105	25.40		
Personalizing Instruction					
Between	832.93	3	277.64	14.74	0.000
Within	1978.05	105	18.84		
Relating to Experience					
Between	1083.51	3	361.17	37.99	0.000
Within	998.34	105	9.51		
Assessing Student Needs					
Between	407.59	3	135.86	23.66	0.000
Within	602.83	105	5.74		

Climate Building					
Between	294.55	3	98.18	17.22	0.000
Within	598.50	105	5.70		
Participation in the Learning Process					
Between	389.68	3	129.89	18.30	0.000
Within	745.13	105	7.10		
Flexibility for Personal Development					
Between	478.19	3	159.40	21.00	0.000
Within	796.85	105	7.59		

On several PALS factors the Regulators and Flexers joined together and Challengers and Counselors joined together. Factor 2 there were two groups: the Regulators (M = 24.4) and the Flexers (M = 21.6) formed one group, and the Challengers (M = 28.3) and Counselors (M = 28.2) formed the other. The Regulators and the Flexers were approximately half a standard deviation below the normative mean. The Challengers and the Counselors were one standard deviation below the normative mean.

Factor 3 also had two groups, the Regulators (M = 19.3) and the Flexers (M = 17.0) formed one group, and the Challengers (M = 24.8) and Counselors (M = 24.2) formed the other. The Regulators and Flexers were approximately two-thirds of a standard deviation below the normative mean. The Challengers and Counselors are approximately two-thirds of a standard deviation above the normative mean.

On Factor 6 there were three groups: the Flexers (M = 11.4) and the Regulators (M = 11.8) formed one group, the

Counselors (M = 14.5) formed one group, and the Challengers (M = 17.1) formed the third. The Flexers and Regulators were slightly under two-thirds of a standard deviation below the normative mean. The Counselors were a little less than one-half of a standard deviation above the normative mean, and Challengers were slightly above one standard deviation above the normative mean.

Factor 1 had two groups: the Challengers formed one group and the Regulators, Flexers, and Counselors formed the other. The Challengers were nearly two standard deviations below the normative mean. The Regulators, Flexer, and Counselors were nearly half and standard deviation below.

Factor 4 had three groups. The Flexers (M = 11.7) formed one group, the Regulators (M = 13.8) fromed a group, and the Challengers (M = 17.7) formed a group. The Flexers were slightly more than a half of a standard deviation below the normative mean. The Regulators were almost equal to the normative mean. The Challengers were slightly more than one standard deviation above the normative mean.

Factor 5 had three groups. The Flexers (M = 13.3) formed one group, the Regulators (M = 15.5) formed a group, and the Challengers (M = 17.8) formed the other group. The Flexers were one standard deviation below the normative mean. The Regulators were just slightly below the mean and the Challengers were one-third of a standard deviation above the mean.

Factor 7 had two groups: the Challengers (M = 5.3) and the Regulators (M = 6.8) formed one group and the Counselors (M = 10.5) and the Flexers (M = 10.6) formed the other group. The Challengers and the Regulators were one and a half of a standard deviation below the normative mean. The Counselors and the Flexers were slightly more than three-fourths of a standard deviation below the normative mean.

Groups and Learning Strategies

Chi-square analysis was used to examine the relationship between the four groups and learning strategy preferences. The contingency table for this analysis consisted of the four groups from the cluster analysis (Regulators, Flexers, Challengers, and Counselors) and the three ATLAS groups (Navigators, Problem Solvers, and Engagers). There were no significant differences in the distribution of the participants within the groups (χ^2 = 4.92, df = 6, p = .56) (see Table 6).

Table 6: Distribution of Financial Aid Groups by Learning Strategy Preference

Groups	Navigators	Prob. Sol.	Engagers	Total
Regulators	13	11	8	32
Flexers	10	8	7	25
Challengers	5	3	4	12
Counselors	7	16	12	35
Total	35	38	31	104

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

Paying for a college education is one of the most costly expenditures that many Americans can encounter. College has become less affordable for the average American family. This is due to continuing rising tuition that outpaces the household income (Bovbjerg, 2000). Financial aid is one of the main means for subsidizing the costs of one's education.

Financial aid professionals are in need of constant training due to the large number of rules and regulations that govern financial aid programs and because these rules are changing all the time. Financial aid professionals function as adult educators in a informal setting. They are constantly dealing with a wide range of students and with their individual need and situations. In this process, they are responsible for delivering and disbursing funds without violating the regulations. In order for financial aid professionals to stay current with this complex profession, they need to apply adult learning principles and the concept of learning how to learn.

Therefore, the purpose of this study was to describe the practices of adult learning principles that financial aid administrators possess and to describe their learning strategies. Data for the study were gathered using the

Principles of Adult Learning Scale and Assessing the Learning Strategies of AdultS. The data were collected by administering the surveys to 110 financial aid personnel at Oklahoma colleges and universities.

Summary of the Findings

The findings of this study related to demographic variables, practices of adult learning principles, learning strategies, and groups of learners. The sample of financial aid personnel resemble the state population of financial aid personnel. The sample was mostly white females around the age of 40 with 10 years or less years of experience in the financial aid profession. The practices of adult learning principles were measured using the Principles of Adult Learning Scale. The financial aid professionals had a mean score of 131. This placed them almost three-fourths of a standard deviation on the teacher-centered side of the normative mean for the Principle of Adult Learning Scale.

The learning strategies of the financial aid personnel were identified by Assessing The Learning Strategies of AdultS instrument. They were almost evenly distributed between the three learning strategies of Navigators, Problem Solvers, and Engagers. A chi-square analysis revealed that the learning strategy distribution of financial aid professionals was not significantly different from the expected distribution.

The relationship between the adult learning principles

and ATLAS were investigated. Differences among the ATLAS groups were found on the overall scale, Factor 2-Personalizing Instruction, and Factor 5-Climate Building. The differences on the overall PALS and Factor 2 scores were between the Navigators and the Problem Solvers. The differences on Factor 5 were between the Engagers and Problem Solvers.

A cluster analysis was conducted to explore for natural groups among the respondents. Four groups were found. They were named the Counselors, Challengers, Regulators, and Flexers. An analysis of variance revealed that the four groups differed on all seven factors of the Principles of Adult Learning Scale.

Adult Learning Principles

> As a group, financial aid officers tend to be teacher centered.
>
> Although financial aid officers tend to be teacher-centered, they are eclectic in recognizing the factors of the need to adequately assess student needs, utilize their experiences, and involve the learner in the process.

These conclusions relate to the univariant analysis. The practices of adult learning principles of financial aid personnel tend to be more teacher-centered or doing pedogogical types of things. Pedagogy is the art of teaching children. The teacher determines what the learner needs to know. In pedagogy the leaner is submissive and dependent upon the teacher (Knowles, 1980). Financial aid personnel should be doing more andragogical types of things,

such as taking the learners' needs and past experiences into consideration and providing an environment conducive to learning. This includes helping people move to greater self-direction and becoming independent learners (Knowles, 1980). In a democracy, people are responsible for their own actions and taking care of their finances. The clients of financial aid offices are young adults at a career or life-changing age. They are attempting to get an education so they can go out and make a difference in society. Managing and taking care of their finances is an important part of that, and financial aid professionals can play a major role in this.

Financial aid professionals profess to be helping students with these issues, yet as a group they have a teacher-centered approach toward teaching. When it comes to helping students move toward the learner-centered concept of self-direction, there is a conflict between what financial aid officers say and how they carry out their duties as financial aid professionals. If they are really going to help students take responsibility for their own learning and actions, then they need to adopt a more learner-centered approach.

This concept of learner-centered approach also carries over to the professional development of financial aid staffs. As professionals, financial aid personnel need to develop into more self-directed, independent learners. To

do this, adult learning principles need to be applied when training staff members. According to their Principles of Adult Learning Scale scores, the field of financial aid is heavily on the teacher-centered side of the mean, which indicates a support of Behaviorist ideas, and that position makes it more difficult to introduce adult learning principles which are based on the twin pillars of andragogy and self-directed learning (Merriam, 2001). The people doing the training need to be aware of what the needs of the people are and assess those needs; this action is an adult learning principle.

The financial aid profession is an organization, and all organizations should be learning organizations. Learning organizations are "organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge, 1990, p. 3). As business becomes more complex and dynamic, work must become more "learningful" (p. 4). It is no longer sufficient to have one person learning for the organization. It is not possible for the person at the top of the organization to learn everything and convey orders to everyone else. Organizations that will excel in the future will be ones that discover how to tap people's commitment and capacity to learn at all levels in an organization (p.

4). The financial aid community tends to be teacher-centered when it comes to learning-teaching transactions. They are on the teacher-centered side of issues and especially on factor--7 Flexibility for Personal Growth. One must be more on the leaner-centered side to accomplish a learning organization. One should be flexible to meet the changing environment and content of the financial aid profession.

Learning Strategies

> Financial aid draws from the general population in terms of the learning strategies of the people that are in the profession.

Financial aid personnel in the study were distributed nearly equally in learning strategy preferences according to the Assessing The Learning Strategies of AdultS instrument. The financial aid staff reflected the general population in terms of how they approach learning tasks. This is congruent with the multi-facets of the field.

Financial aid is a very multi-facet operation. It consists of receptionists, counselors, technical support personnel, and record clerks. The front line staff are the people the general public first sees and of whom they ask questions. Counselors also deal with the students' needs and issues as well as all of the paper work that goes into the awarding process of each financial aid package which requires a clean paper trail for auditors. Technical support staff members have to know how to get the Department

of Education's software to interact with local software. They also do much troubleshooting when things do not communicate properly. Financial aid staff members also have to keep individual records on all applicants for each year they receive financial aid. Almost every area of financial aid requires knowledge of thousands of rules and regulations set by the federal government as well as the institutional policies. Failure to comply with these requirements can result in financial liabilities for the institution or even termination of Title IV programs (www.chessconsulting.org). The entire financial aid office should be aware of the regulation and keep up to date on the changes and new rules. If the staff members were self-directed learners, that would be very beneficial to the organization.

Financial aid is a general function of different types of functions and not a specialty all to itself. Therefore, it is a generalist type of organization with many diverse situations and needs. All the studies done with universities have shown an equal distribution of learning strategies among the participants. Turman (2001) described the learning strategies of adult learners in an MBA program at a private college. Hinds (2001) studied the African-American community. Pinkins (2001) and Armstrong (2001) looked at the international situation. All these studies found a general distribution of the learning strategies within the group. Three of these studies were universities

and one was a church. These are natural organizations that exist in a community that are generalist in nature and do not have any special message.

Groups of Financial Aid Officers

Four distinct groups exist within the financial aid community based on the practices of adult learning principles.

Financial aid officers interact with clients in four distinct ways.

Challengers and Counselors are needs-based and focus on people.

Flexers and Regulators are rules-based and focus on regulations.

Financial aid officers approach clients differently than they approach learning.

Distinct Groups

Four distinct groups were found among the financial aid administrators in the cluster analysis, and these groups give clarity to the respondents' scoring on Principle of Adult Learning Scale. The four groups were a group of 32 named the Regulators, a group of 27 named the Flexers, a group of 38 named the Counselors, and a group of 12 named the Challengers. The grouping can help explain the teaching styles preferences of the participants.

The Regulators fit the typical description of Behaviorists. In Behaviorism, the teacher is in charge of the curriculum and is viewed as an "environmental controller or behavioral engineer" (Elias & Merriam, 1995, p. 88). This fits in with the professional judgement issue in

financial aid. Skinner refers to Behaviorists as environmental engineers, people who control the environment by conditions and rules. Financial aid professionals control the financial and educational destiny of many students. Since financial aid professionals are given the opportunity to use "professional judgement", some will take that opportunity to help students with special circumstances, and some will not provide this service, perhaps to avoid an audit citation or because they feel the rules are not subject to interpretation or not flexible. The Challengers and Counselors have some things in common. They both work with groups of people to get them to think critically about their actions and the consequences of them. However, the Challengers and Counselors differ when it comes to confronting people.

The Challengers will challenge students and co-workers for self-direction, while the Counselors act as a facilitator for them. The Challengers fit the characteristics of Myles Horton. Myles Horton would challenge people in group meetings, and group meetings were used to get the group to think where the group was going and to think critically about their actions and the consequences of them. He would not impose discipline on the group. Instead, he would let the people come from the ground up and discover that. However, the maximum was of always pushing for what Freire calls critical consciousness.

Myles Horton was the founder of Highlander. Highlander was a school known as a social justice school. The focus of Highlander was to help people discover their "seed of fire". "Highlander's role is the help them learn from their own experiences and to show them how they can continue their learning process-to help them grow as people and to become democratic leaders of others." The teaching method at Highlander is a hands-off facilitating one. The educators resist telling the learners what to do and let the people take control over their lives. The teachers help the learners understand and see that they can do so. "This means that Highlander trusts individuals to make their own decisions regarding what actions are the 'right' actions to take to transform their reality." Pablo Freire came from a university background but shared many of the same philosophies as Horton on social change and empowerment of the people (http://sover.net/~niliacus/a&h/highlandtour.htm).

Myles Horton worked with groups and got people to critically question their role and got the dynamics of the group working. It is up to the group to discipline itself and not for the researcher to come in and discipline. The ultimate goal is empowerment. It is critical reflection for empowerment.

The Counselors are facilitators for a group. They have more of a Carl Rogers and Malcolm Knowles approach.

Consequently, they would avoid confrontation with a consciousness toward maintaining individual dignity and self-respect. Therefore, they put the focus on the individual as opposed to the group. Sometimes in learning situations it is necessary to get a little control and direction for the group activities by facilitating.

Groups and Learning Principles

The Counselors and the Challengers were grouped together on Factor 2, 3, and 6 of the Principles of Adult Learning Scale (PALS). On Factor 2--Personalizing Instruction, the Counselors (M=28.2) and Challengers (M=28.3) are on the teacher-centered side even though they generally support a leaner-centered approach. In this area, they are taking into consideration both societal and students needs. Financial aid is a very regulated field that has rules and regulations and is very controlled. These groups are working in this controlled environment, and while honoring the rules, they are also taking the societal and student needs into consideration somewhat. This is in contrast to the Flexers and Regulators whose PALS scores indicate that they do not feel that the students' needs are important in the process; rule are rules.

The Counselors and Challengers are like the Progressives. "When individual and social action are the goals, the role of teacher involves a more active partnership with the learner" (Darkenwald & Merriam, 1982,

p. 57). The Flexers and Regulators are more like the Behaviorist approach where the teacher is the controller and is very structured, using a systems approach (p. 66).

The Challengers and Counselors score high on Factor 3--Relating to Experience and support taking students' experience into consideration when trying to find various types of funding. For example, some students may qualify for a certain type of scholarship based on their ethnicity, but they have pasted the deadline for the scholarship. The Challengers or Counselors might direct the students on how to possibly find other types of financial assistance that may apply to them, whereas the Regulators and Flexers may tell the student that they are sorry they missed the deadline and provide no further guidance.

Scoring low on Factor 6--Participation in the Learning Process, the Regulators and Flexers give the students fewer options than the Challengers and Counselors in how to apply and complete the processes of financial aid. The Challengers and Counselors would be more accommodating and offer more options in how to apply for aid. For example, the Challengers and Counselors would offer the student choices of filing the Free Application For Federal Student Aid (FAFSA) via the web, through the paper version, or even by having the financial aid office file it for them.

Regarding Factor 4--Assessing Students Needs and Factor 5--Climate Building, the Flexers are not very flexible when

it comes to assessing the students needs or having a comfortable, non-threatening climate. They do not focus on the student; instead, they are focused on the situation. The Challengers and Counselors are adamant about assessing the students' needs and providing an inviting environment for the student. The Regulators are eclectic when it comes to assessing students' needs and climate building.

For Factor 1--Learner Centered Activities, the Challengers have a firm set of teacher beliefs about how to evaluate students. The Regulators, Flexers, and Counselors are somewhat more on the learner-centered side. For example, If a student appeals their financial aid suspension because they fell below the standards of satisfactory academic progress, the qualitative and qualitative guidelines set by the institutions, the Challengers may be less likely to release them from suspension whereas the Regulators, Flexers, and Counselors may give a little more consideration on evaluation and may release them.

For Factor 7--Flexibility for Personal Development, the Regulators and Flexers are oriented toward following the rules, and the Challengers and Counselors are oriented to change the rules.

Groups and Learning Strategies

Each of the four groups uncovered by the cluster analysis has distinct characteristics. The Regulators are focused on the rules and structure; these dominate rather

than a person's needs. The Flexers are also focused on the rules, but based on the situation examine other alternatives. The Challengers also examine the situation but then generate alternatives for new action. The Counselors focus on the individual and their relationship with that person.

These characteristics have some features in common with the characteristics of the learning strategy preferences. Navigators are focused learners who emphasize structure and seek efficiency. Problem Solvers generate alternatives and seek to find new and creative solutions to problems. Engagers emphasize their relationships with others in the learning process and value highly personal interactions. This combination of characteristics suggests that Regulators would be disproportionally Navigators, Flexers would be disproportionally Navigators and Problem Solvers, Challengers would be disproportionally Problem Solvers, and Counselors would be disproportionally Engagers. However, this is not the case. For each of the learning strategy groups, the participants are almost equally distributed among the four distinct groups of financial aid officers. Just as the ATLAS groups tend to be fairly equally distributed in the general population and just as learning strategy preferences are not related to demographic characteristics, each group of financial aid officers is made up of all of the learning strategy groups. Thus, while

each learning strategy group approaches learning in a specific pattern, this does not carry over into how they interact with their clients. For example, while the Regulator's desire for structure and order for dealing with clients is compatible with the Navigator's desire for structure in the learning situation, it does not prevent either Problem Solvers or Engagers from being Regulators and interacting with clients in a structured way. This is similar for the other three groups of financial aid officers. Thus, care should be taken not to confuse the characteristics of interacting with clients with the characteristics of how one approaches learning.

Recommendations

Financial aid personnel tend to be an overall teacher-centered group. Financial aid is a very regulated area that deals with tax payers' money and is governed by the federal government. There are rules that must be followed. The teacher-centered approach is consistent with this overall characteristics of the field. Many in the field, such as the Regulators, are asking, "How do I carry out the rules," and they do not question if the rules are right. However, there are diverse needs and services that need to be addressed by financial aid officers in the process of carrying out these rules.

Because there are four distinct groups, teams can be developed among financial aid workers. These teams can have

the functions within the office diversified and spread out among people that are most qualified for it. This can increase the professionalism among the group. "When a team becomes more aligned, a commonality of direction emerges, and individuals' energies harmonize. There is less wasted energy" (Senge, 1990, p. 243).

One approach to forming teams could be to look at the functions within a financial aid office and place people and train people based upon their characteristics. The Challengers are the ones that challenge the systems. Perhaps they should be doing the tasks of visiting with the students and determining if they meet the qualifications or are an exception to the rules. They also should be the ones involved in voicing opinions to change some the regulations. The Counselors should be visiting with the students and possibly be the front line staff because their focus is on individuals while maintaining their dignity and self-respect. The Regulators and Flexers would be viable candidates for regulation specialists. Their strengths would be making sure that the office is always in compliance with the federal rules and regulations and following their institutional policy and procedures. Their weakness would be that they are rules dominate over the students individual needs and would not be a good candidate for the front line staff.

When it comes to committees such as an appeal committee

for students appealing their financial aid suspension, there should be a mixture of the four groups. For example, there should be a counselor to listen to the student's reasons for going on suspension, a Challenger to maybe challenge the student and committee on their decisions, a Regulator to try to keep the committee to remember the rules, and a Flexer would be beneficial to take all aspects into account, keeping in mind that the rules are rules but making occasional exceptions.

According to PALS the field of financial aid is heavily teacher-centered when it comes to learning, and that position makes it more difficult to introduce adult learning principles. The people doing the training need to be aware of what the needs of the people are and assess the needs, which is an adult learning principle. For training or professional development conferences, it must be remembered that when the topic is the rules and how one must obey the rules, this is only addressing about one-fourth of the population. Rules-are-rules are the last thing that the Challengers want to talk about. They are more interested in the social implications of the rules. The Counselors are interested in what they can do for the individual and how can they relate to them. The Flexers are interested in how they can adjust the rules to different situations. As a community, financial aid personnel need to work together, and the training needs to appeal to each of the four groups.

Since technology and issues affecting the financial aid community are constantly changing, there is a need for continual training. One should be aware of one's learning strategies and adult learning principles. A basic understanding of learning strategies can provide opportunities for a more productive and effective staff and organization.

Several studies were done and found an equal distribution in learning strategy preferences. These studies were from natural organizations that are generalist in nature and do not have a special message. Financial aid is generalist in nature. It makes sense that it has an equal distribution of learning strategy preferences and draws from all types from the general population. So when it comes to training, each learning strategy needs to be addressed. Learning strategies are techniques that adults use daily to deal with learning situations as they arise (Fellenz & Conti, 1989, p. 7). Being aware of the different learning strategies will also help the financial aid staff deal with not only learning and keeping up with the rules, regulations and policies, but it will also be useful when working with one's co-workers and when interacting with the students.

The people doing the training for the organization should become aware of the trainees' learning strategies. This will allow them to be more productive in presenting the

material to be taught by being able to present it in a manner that will appeal to all three learning strategies.

When professionals become aware of adult learning principles such as learning-how-to learn they can become life-long learners. When professionals have a repertoire of knowledge, then they become "reflective practitioners". Reflective practitioners are able to take an indeterminate situation and turn it into a familiar and unambiguous situation. They are able to do so by using something familiar in their repertoire (Cervero, 1990, p. 44). Collins (2001) uses the metaphor getting the right people on the bus and of getting the people in the right seats. By getting the correct people doing the training with the appropriate knowledge of learning strategies and adult learning principles and by the use of differentiated staffing based on the four groups that were found, a financial aid organization can go from "good to great".

Additional Research

Because financial aid is a multi-faceted occupation, there should be further study on the learning strategies of the different job duties of personnel. For example, should there be more Engagers for the front line staff or more Problem Solvers doing the technical things.

When new financial aid staff members are hired, they should be given the ATLAS so that the person doing the training can adjust the teaching style to accommodate this.

An additional study would be to identify people that are in the four groups of Counselors, Flexers, Challengers, and Regulators and interview them to get characteristics and actions related to them. An ATLAS-like instrument can be developed to identify the group to which a person belongs. The items from this study could be used to develop such an instrument. Interviews could then be held with each group to determine their training needs and preferred learning styles. The interviews could also explore factors that help and hinder each group on the job.

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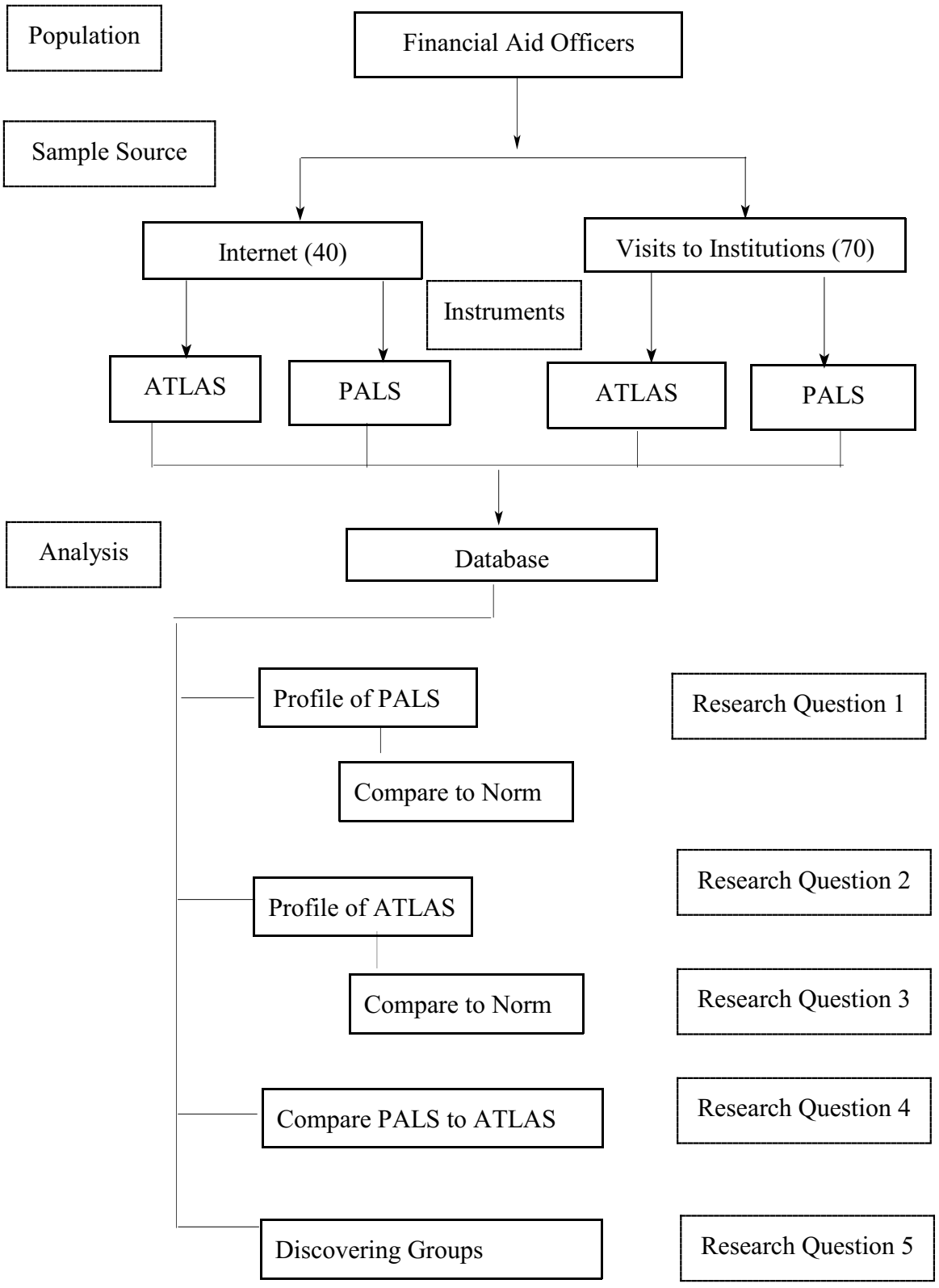
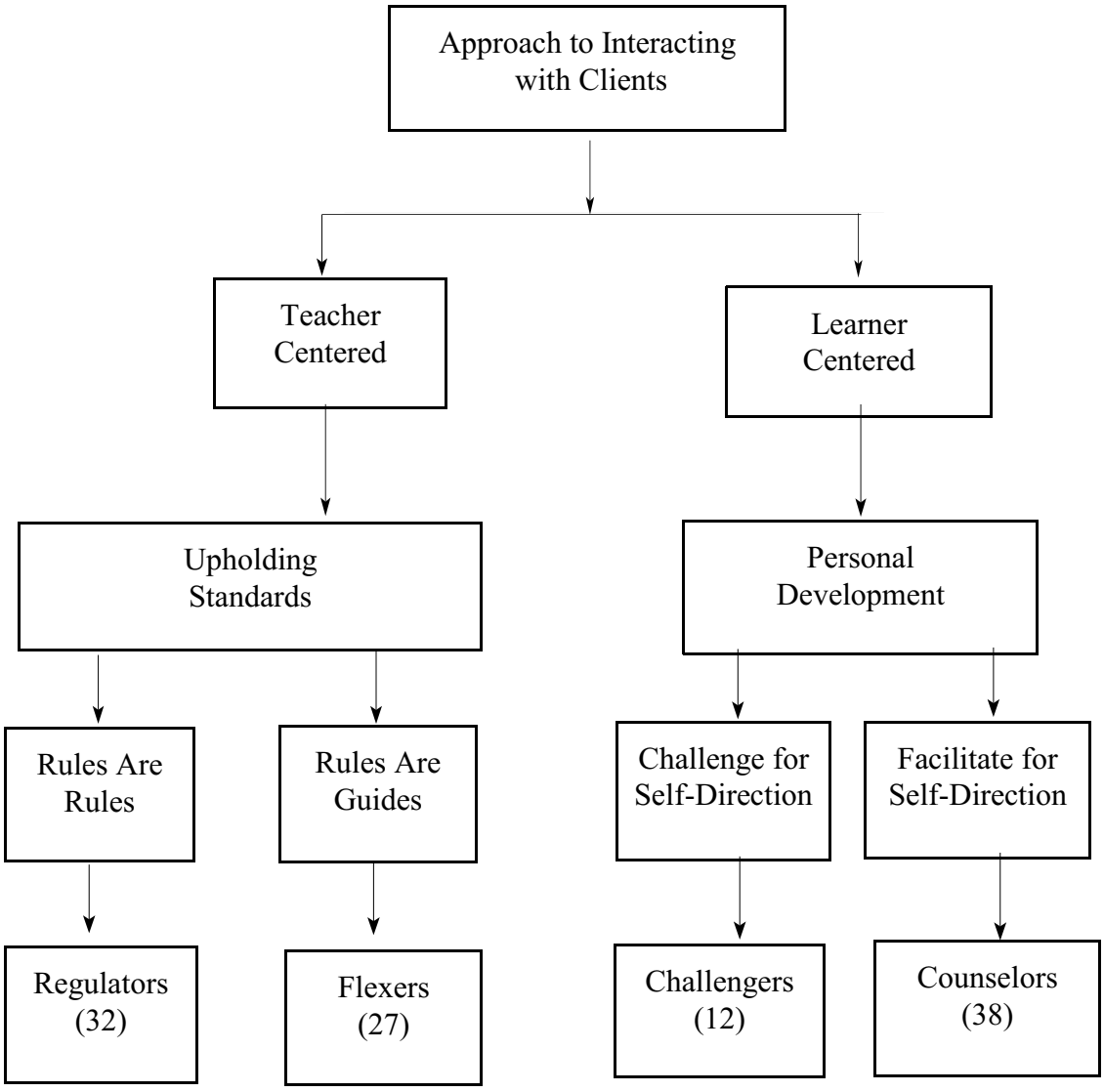
Appendix A:
Diagram of Study


Population
Financial Aid Officers
Sample Source
Internet (40)
Visits to Institutions (70)
Instruments
ATLAS
PALS
ATLAS
PALS
Analysis
Database
Profile of PALS
Research Question 1
Compare to Norm
Research Question 2
Profile of ATLAS
Compare to Norm
Research Question 3
Compare PALS to ATLAS
Research Question 4
Discovering Groups
Research Question 5

Appendix B:
Diagram of Results
of Discriminant Analyses


Approach to Interacting with Clients
Teacher Centered
Learner Centered
Upholding Standards
Personal Development
Rules Are Rules
Rules Are Guides
Challenge for Self-Direction
Facilitate for Self-Direction
Regulators (32)
Flexers (27)
Challengers (12)
Counselors (38)

Appendix C:
Instruments

Principles of Adult Learning Scale

Directions: The following survey contains several things that a facilitator of adults might do in a formal training situation. You may personally find some of them desirable and find others undesirable. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. Circle 0 if you always do the event; circle number 1 if you almost always do the event; circle number 2 if you often do the event; circle number 3 if you seldom do the event; circle number 4 if you almost never do the event; and circle number 5 if you never do the event. If the item **does not apply** to you, circle number 5 for never. Complete all 44 items.

Always	Almost Always	Often	Seldom	Almost Never	Never
0	1	2	3	4	5

1. The trainer should allow trainees to participate in developing the criteria for evaluating their performance in a training session.	0 1 2 3 4 5
2. The trainer should use disciplinary action when it is needed.	0 1 2 3 4 5
3. The trainer should allow older trainees more time to complete assignments when they need it.	0 1 2 3 4 5
4. The trainer should encourage trainees to adopt middle-class values.	0 1 2 3 4 5
5. The trainer should help trainees diagnose the gaps between their learning goals and their present level of performance.	0 1 2 3 4 5
6. The trainer should provide knowledge rather than serve as a resource person.	0 1 2 3 4 5
7. The trainer should stick to the instructional objectives that were written at the beginning of a training session.	0 1 2 3 4 5
8. The trainer should participate in the informal counseling of trainees.	0 1 2 3 4 5
9. The trainer should use lecturing as the best method for presenting the subject material to adult trainees.	0 1 2 3 4 5
10. The training area should be arranged so that it is easy for trainees to interact.	0 1 2 3 4 5
11. The trainer should determine the learning objectives for each trainee.	0 1 2 3 4 5
12. The trainer should plan units which differ as widely as possible from the trainees' socio-economic backgrounds.	0 1 2 3 4 5
13. The trainer should motivate the trainees by confronting them in the presence of their coworkers.	0 1 2 3 4 5
14. The trainer should plan learning episodes to take into account the trainees' prior experiences.	0 1 2 3 4 5

15. The trainer should allow trainees to participate in making decisions about the topics that will be covered in the training session.	0 1 2 3 4 5
16. The trainer should use one basic teaching method because most adults have a similar style of learning.	0 1 2 3 4 5
17. The trainer should use different techniques depending on the trainees being trained.	0 1 2 3 4 5
18. The trainer should encourage dialogue among the trainees.	0 1 2 3 4 5
19. The trainer should use written formal evaluations to assess the degree of growth in learning for the trainee rather than to indicate new directions for future learning for the trainee.	0 1 2 3 4 5
20. The trainer should utilize the many competencies that most adults already possess to achieve their training objectives.	0 1 2 3 4 5
21. The trainer should use what history has proven that adults need to learn as the chief criteria for planning learning episodes.	0 1 2 3 4 5
22. The trainer should accept errors as a natural part of the learning process.	0 1 2 3 4 5
23. The trainer should have individual conferences to help trainees identify their educational needs.	0 1 2 3 4 5
24. The trainer should let each trainee work at the trainee's own rate regardless of the amount of time it takes the trainee to learn a new concept.	0 1 2 3 4 5
25. The trainer should help the trainees develop short-range as well as long-range learning objectives.	0 1 2 3 4 5
26. The trainer should maintain a well-disciplined learning environment to reduce interference's to learning.	0 1 2 3 4 5
27. The trainer should avoid discussion of controversial subjects that involve value judgements.	0 1 2 3 4 5
28. The trainer should allow the trainees to take periodic breaks during the training session.	0 1 2 3 4 5
29. The trainer should use methods that foster quiet, productive, desk work.	0 1 2 3 4 5
30. The trainer should use tests as the chief method of evaluating the trainees.	0 1 2 3 4 5
31. The trainer should plan activities that will encourage each trainee's growth from dependence on others to greater independence.	0 1 2 3 4 5
32. The trainer should gear the instructional objectives for the training session to match the individual abilities and needs of the trainees.	0 1 2 3 4 5

33. The trainer should avoid issues that relate to the trainee's self-concept.	0 1 2 3 4 5
34. The trainer should encourage trainees to ask questions about the nature of their society.	0 1 2 3 4 5
35. The trainer should allow trainees' motives for participating in continuing education to be a major determinant in the planning of learning objectives.	0 1 2 3 4 5
36. The trainer should have the trainees identify their own problems that need to be solved.	0 1 2 3 4 5
37. The trainer should give all trainees the same assignment on a given topic.	0 1 2 3 4 5
38. The trainer may use materials that were originally designed for students in elementary and secondary schools.	0 1 2 3 4 5
39. The trainer should organize adult learning episodes according to the problems that the trainees encounter in everyday life.	0 1 2 3 4 5
40. The trainer should measure a trainee's long-term learning by comparing the trainee's total achievement in the training session to that trainee's expected performance as measured by established standards.	0 1 2 3 4 5
41. The trainer should encourage competition among the trainees.	0 1 2 3 4 5
42. The trainer should use different materials with different trainees.	0 1 2 3 4 5
43. The trainer should help the trainees relate new learning to their prior experiences.	0 1 2 3 4 5
44. The trainer should include units about problems of everyday living.	0 1 2 3 4 5

About You

The following information will help us better understand the information that you provide us.

Gender:
____Male
____Female

Age: ____

Education: Please select your highest level of formal education.
____High School Diploma
____Bachelor's Degree
____Master's Degree
____Doctorate

Race:
____African American
____Asian
____Hispanic
____Native American
____White
____Other

Work Place:

How many years of experience do you have in financial aid (round off to a full year)?
____

Which best describes your position?
____Director
____Associate/Assistant Director
____Professional Staff
____Support Staff
____Other: _____

Are you responsible for training new staff ?
____Yes
____No

If you are responsible for training new staff, are you the supervisor of those that you train?
____Yes
____No

Which best describes the type of institution in which you work?
____4-year college or university
____2-year college
____Proprietary school
____Vocational-technical school

Describe the type of training that you have experienced in the last year.

Describe the type of training that your organization conducts regularly.

— Thank You—

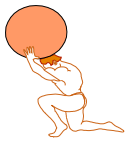
ATLAS™

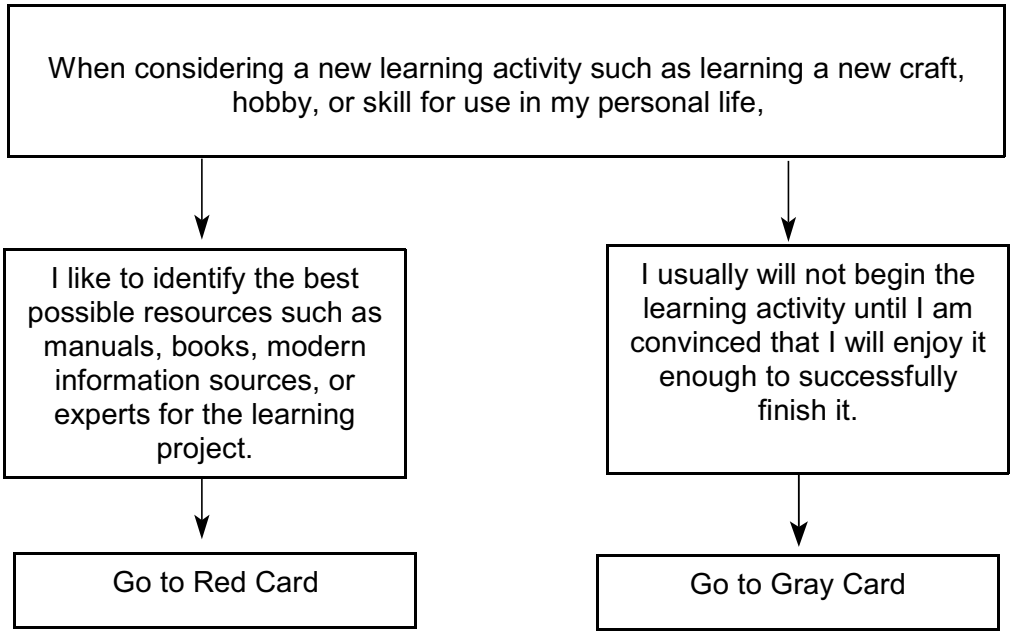
Assessing **T**he **L**earning **S**trategies of **A**dult**S**

ATLAS

(*A*ssessing *T*he *L*earning Strategies of *A*dult*S*)

Directions: The following colored cards have statements on them related to learning in real-life situations in which you control the learning situation. These are situations that are **not** in a formal school. For each one, select the response that best fits you, and follow the arrows to the next colored card that you should use. Only read the cards to which you are sent. Continue this process until you come to the Groups of Learners sheet. Along the way, you will learn about the group in which you belong. Follow the arrow to start.





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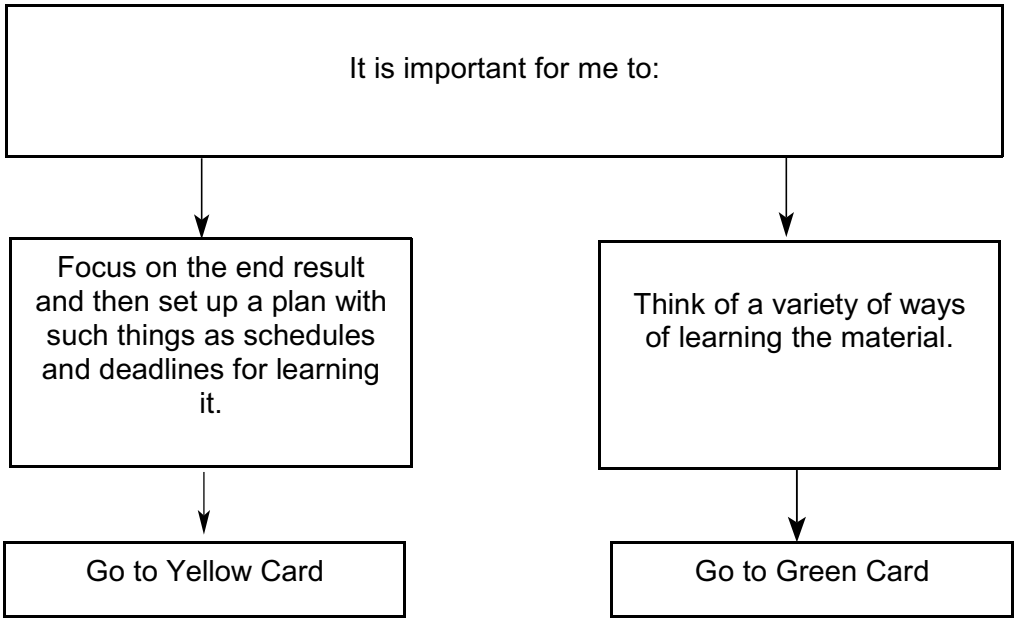
Page 1



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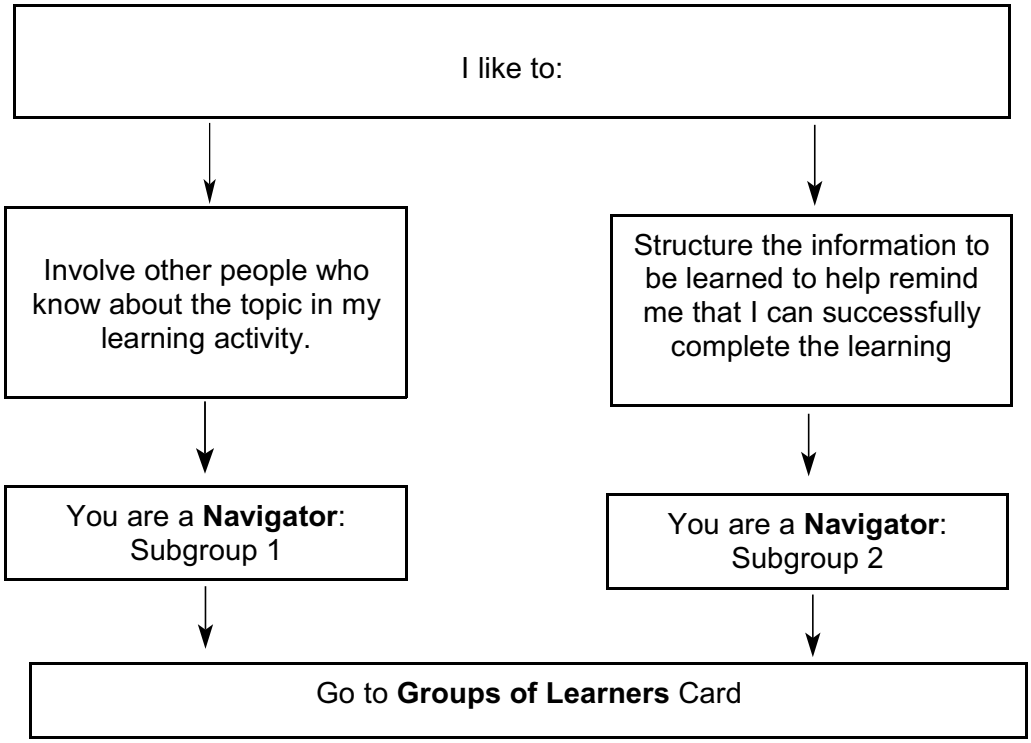

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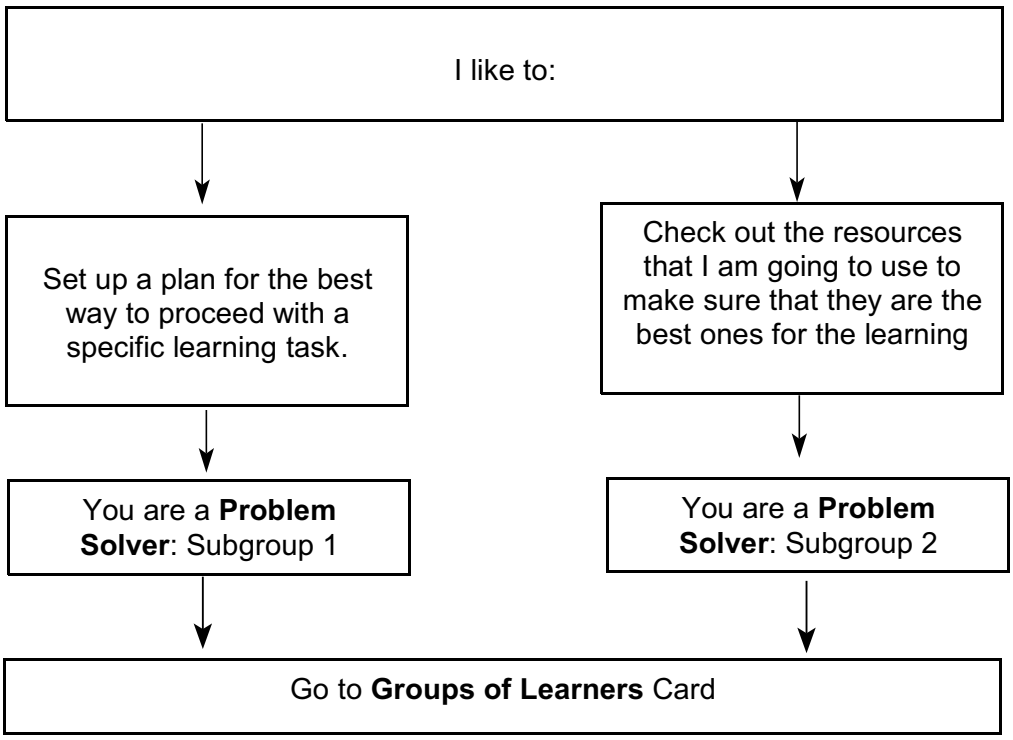
Page 3



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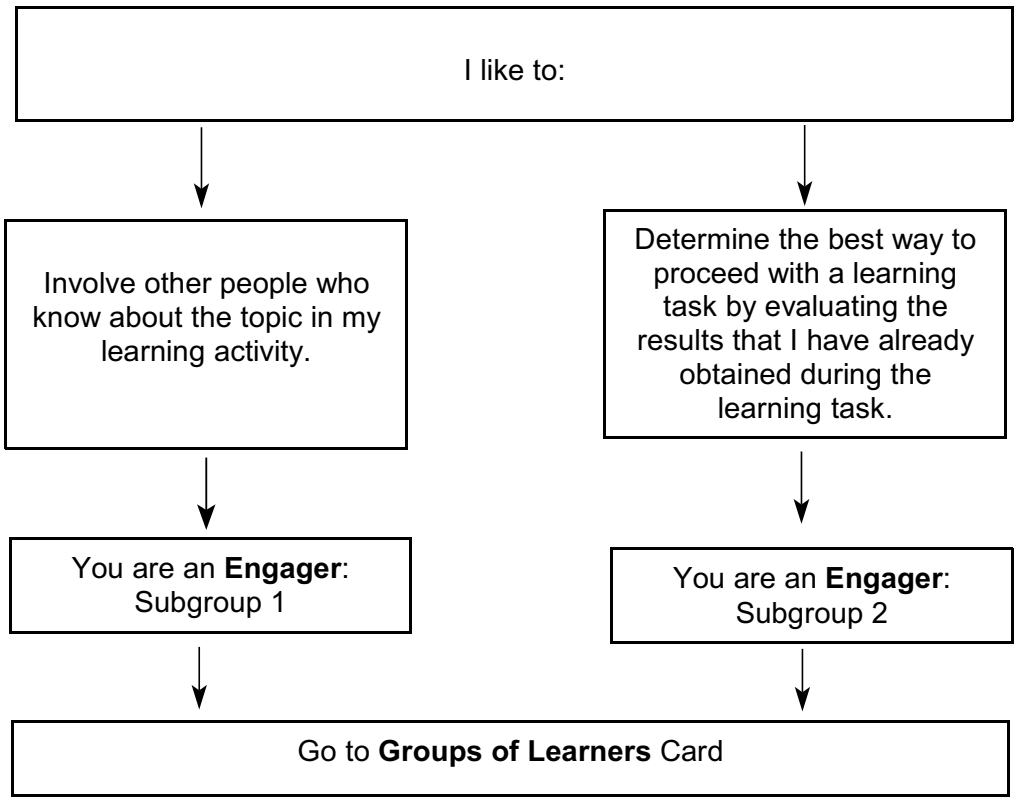
Page 4



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Page 5

Navigators

Description: Focused learners who chart a course for learning and follow it. Subgroup 1 likes to use human resources while Subgroup 2 is more concerned with the organization of the material into meaningful patterns.

Characteristics: Focus on the learning process that is external to them by relying heavily on planning and monitoring the learning task, on identifying resources, and on the critical use of resources.

Instructor: Schedules and deadlines helpful. Outlining objectives and expectations, summarizing main points, giving prompt feedback, and preparing instructional situation for subsequent lessons.

Problem Solvers

Description: Learners who rely heavily on all the strategies in the area of critical thinking. Subgroup 1 likes to plan for the best way to proceed with the learning task while Subgroup 2 is more concerned with assuring that they use the most appropriate resources for the learning task.

Characteristics: Test assumptions, generate alternatives, practice conditional acceptance, as well as adjusting their learning process, use many external aids, and identify many of resources. Like to use human resources and usually do not do well on multiple-choice tests.

Instructor: Provide an environment of practical experimentation, give examples from personal experience, and assess learning with open-ended questions and problem-solving activities.

Engagers

Description: Passionate learners who love to learn, learn with feeling, and learn best when actively engaged in a meaningful manner. Subgroup 1 likes to use human resources while Subgroup 2 favors reflecting upon the results of the learning and planning for the best way to learn.

Characteristics: Must have an internal sense of the importance of the learning to them personally before getting involved in the learning. Once confident of the value of the learning, likes to maintain a focus on the material to be learned. Operates out of the Affective Domain related to learning.

Instructor: Provide an atmosphere that creates a relationship between the learner, the task, and the teacher. Focus on learning rather than evaluation and encourage personal exploration for learning. Group work also helps to create a positive environment.

Appendix D:
Institutional Review Board Approval

Oklahoma State University
Institutional Review Board

Protocol Expires: 11/17/2004

Date: Tuesday, November 18, 2003 IRB Application No ED0454

Proposal Title: Continuing Professional Development and Financial Aid Administrators

Principal Investigator(s):

Teri A Cochran
1009 Francis Ave.
Tahlequah, OK 74464

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved *

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact me in 415 Whitehurst (phone: 405-744-5700, colson@okstate.edu).

Sincerely,

Carol Olson, Chair
Institutional Review Board

*NOTE: On Consent to Participate form, the zip code for Stillwater, OK is 74078.

VITA

Teri A. Cochran

Candidate for the Degree of

Doctor of Education

Thesis: PRACTICES OF ADULT LEARNING PRINCIPLES AND LEARNING STRATEGIES OF FINANCIAL AID ADMINISTRATORS IN OKLAHOMA

Date of Degree: May, 2005

Major Field: Occupation and Adult Education

Biographical:

Education: Bachelors of Business Administration, Northeastern State University (1995), Masters of Science, Northeastern State University (1999).

Experience: 10 years experience in Financial Aid

Professional Memberships: National Association of Financial Aid Administrators, Oklahoma Association of Financial Aid Administrators.