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Writing a needs assessment to determine the needs of the adult graduate student

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Writing a needs assessment to determine the needs of the adult graduate student

by

Linda Knight Thomson

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF ARTS

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TABLE OF CONTENTS

TABLE OF CONTENTS	ii
LIST OF TABLES.....	iv
INTRODUCTION	1
Purpose of Paper	1
Problem and Significance.....	1
Organization of Paper.....	3
CHAPTER I. ADULT LEARNING THEORY	5
Andragogical Learning Theory.....	5
Humanistic Learning Theory.....	8
CHAPTER II. MOTIVATION OF ADULT LEARNERS	11
Life Transition Factors.....	11
Psychological Factors	13
Educational Environment For Adult Learners	14
CHAPTER III. BARRIERS TO ADULT LEARNING.....	17
Situational, Institutional and Dispositional Barriers	17
Additional Studies on Barriers To Learning	21
Psychological Barriers	24
Barriers Specific to the Reentry Adult Student.....	24
Implication of Research on Barriers to Graduate Institutions.....	27
CHAPTER IV. NEEDS SPECIFIC TO THE ADULT GRADUATE EXPERIENCE.....	30
Barriers to Learning as Perceived by Graduate Students.....	30
Motivational Factors.....	32
Stress Resulting from the Graduate Experience.....	34
CHAPTER V APPLICATION OF RESEARCH TO GRADUATE PROGRAMS AND FACULTY.....	36
Application of Research to Institutions.....	36
Application of Research to Educators	40
CHAPTER VI. RATIONALE FOR NEEDS ASSESSMENT DOCUMENT.....	42
Selection and Organization of Survey Items	42
Survey Items Specific to Barriers to Adult Learning.....	45
Survey Items Specific to Institutional Barriers.....	45
Survey Items Specific to Situational Barriers.....	47

Survey Items Specific to Psychological and Dispositional Barriers	47
Survey Items Specific to Pedagogical Practices and Procedures	48
Graduate Orientation Programs	49
Cover Letter and Pre-test.....	49
BIBLIOGRAPHY	50
ACKNOWLEDGEMENTS.....	54
APPENDIX A. NEEDS ASSESSMENT DOCUMENT.....	55

LIST OF TABLES

Table 1. Perceived Barriers to Learning	19
Table 2. Percentage and Rank Ordering of Respondents Reporting Barriers.....	22
Table 3. Predominant Situational Barriers.....	33
Table 4. Predominant Institutional Barriers.....	33
Table 5. Predominant Psychosocial Barriers.....	33
Table 6. Research Sources of Barriers To Adult Learning.....	46

INTRODUCTION

Purpose of Paper

The purpose of this thesis project is to review theory and research on adult learners in order to a) combine theories for a new perspective for graduate school administration, and b) devise a needs assessment for newly enrolled adult graduate students.

Problem and Significance

Almost three-fourths of the students currently enrolled in graduate programs at Iowa State University (I.S.U.) are adult learners (25 and above). In addition almost one-half of the total graduate population is enrolled part-time. These statistics indicate that adult and nontraditional (part-time, commuter and reentry) adult students are a real and viable presence on the campus of Iowa State University. However, are Iowa State and similar universities throughout the country providing for the special needs of these adult students?

While I.S.U. sponsors a graduate orientation prior to the start of each Fall semester, only 50 to 60 students attended the 1992 program. This response represents only six to seven percent of the 752 newly enrolled graduate population. Furthermore, statistics on retention of graduate students are difficult to determine because graduate students do not traditionally go straight through graduate programs but drop in and out according to various financial, personal and career factors which may influence their lives.

Research on current graduate orientation programs is also limited because, although colleges and universities are gradually expanding their graduate programs, "many continue to

focus too little attention on orientating new graduate students after their arrival on campus" (Vickio and Tack 1989, 37).

Furthermore, according to the U.S. Bureau of the Census (1992), by the year 2000 the United States will be dominated by people in their middle years with the largest group comprised of 35 to 49 year olds (xii). In addition, members of the post-W.W.II Babyboomer explosion are now between 36 and 47 years old and are finding themselves in "fierce competition" for jobs (Cross 1991, 7). Also, the number of older students has been growing faster than the number of younger students. Between 1980 and 1990 the enrollment of persons 25 and over rose by 32 percent compared to the enrollment of younger student (under 25) which increased by only 2 percent. From 1990 to 1997 enrollment of persons 25 and over is projected to rise 16 percent (U.S. Department of Education, 163).

All of these statistics have dramatic implications for both business and education, which must attend to the needs of this dominant group. The phenomenon of this "New Majority" of adult learners (Holtzclaw 1988, 9) will have a direct effect upon current and future graduate programs for the following reasons:

- People whose promotion is blocked in one career may decide on a mid-career change.
- People whose job promotion is blocked may find satisfaction in other pursuits through leisure time learning for its own sake.
- Competitive labor conditions may force people to maintain current jobs and pursue education through part-time enrollment.
- Job competition will probably force older people who are in jobs and younger persons who want those jobs to gain a competitive edge through further education (Cross 1991, 7-8).

All of these factors, then, are major forces influencing future graduate programs throughout the country.

Therefore, the diverse and changing profile of the adult population is challenging the academic community to modify a system of education developed historically to meet the needs of young adults. Today, institutions must direct attention toward identifying the needs, concerns, strengths and interests of the nontraditional student (Wolvin 1991; Apps 1988; Holtzclaw 1988). Colleges and universities cannot continue with business-as-usual, given the increasing numbers of these older students returning to work on undergraduate and graduate degrees (Apps 1981, 11). Graduate institutions, then, must consider changes such as the following: more flexible admissions requirements that will take into consideration the adult student's prior learning in the world of work; orientation programs that honestly reflect the transitional adjustments that will be required of the adult graduate student; study skills workshops that will help the adult student adjust to the strenuous academic requirements of graduate school; more convenient parking availability and the streamlining of bureaucratic practices and procedures in order to alleviate some of the frustrations adults experience in the university environment over which they have no control.

Since the predominance of professional literature in the field of adult education appears to be limited to the needs of the adult undergraduate student, this thesis project will apply relevant material to the needs of the graduate adult learner. In addition, current research in other fields of discipline, i.e., psychology, sociology and communication, contain relevant information which will also be used in designing the needs assessment. Finally, this thesis project will incorporate research directly related to the adult graduate experience.

Organization of Paper

The major portion of this paper speaks to the graduate student as an adult learner since the graduate student enters the academic learning environment as an adult learner with needs

and concerns characteristic of the experiences, age, and maturity of this status. Specifically, Chapters 1 through 3 respectively discuss these topics: adult learning theory and methods for facilitating adult learning (chapter 1); adult motivational factors for learning (chapter 2); and barriers to adult learning (chapter 3).

In addition, adult graduate students also have a myriad of other complex needs and concerns specific to their gender, enrollment status (part-time, full-time) and entry status (number of years which have elapsed from previous academic experience). Furthermore, the experience of graduate school itself contributes to the adult student's perception of concerns viewed as problematic. Discussion of research relevant to these factors is addressed in Chapter 4.

Chapter 5 applies research on adult learners to graduate programs and includes suggestions for restructuring current programs to better accommodate the needs of the growing "new majority" of adult learners on campus.

Chapter 6 contains the rationale for the design of the assessment instrument and also addresses weaknesses within the assessment tool in regard to specific segments of the graduate population whose needs were not addressed because of the more general focus of the instrument. Appendix A contains the needs assessment document itself.

CHAPTER I.

ADULT LEARNING THEORY

Most authorities on adult education are in agreement on one premise: "Adults bring a variety of life experiences with them into a university setting, experiences which give them a unique perspective and sense of purpose not found in younger students" (Slotnick 1993, 4). Furthermore, experts are also in agreement that adults bring into the learning environment needs very different from those of their younger counterparts and possess unique concerns which may inhibit learning because of the additional life responsibilities they have as adults. However, research does not appear to specifically address the differences in learning styles between adult and young adult learners, but focuses, instead, on describing the adult learner (Apps 1988, 54). Just what learning theory best facilitates adult learning, then, has been debated extensively. Most experts, however, advance either the andragogical or humanistic learning theory as being most compatible with the environment of the adult learner, and Malcolm Knowles (1984a, 1984b) has come closest to defining the differences in learning styles between adult and young adult learners.

Andragogical Learning Theory

Malcolm Knowles (1984a, 1984b), long considered the pioneer authority on adult education, advances the andragogical learning theory which stresses the need to approach adult learners differently than the traditional pedagogical theory of teaching children. According to the andragogical model:

- The adult learner is self-directed.
- Adults enter into an educational activity with both greater volume and a different quality of experience than young adults.

- Adults become ready to learn when they experience a need to know something in order to perform more effectively.
- Adults are life-centered in their orientation.
- Adult learning is facilitated best when adults are motivated to learn by internal pressures such as self-esteem, self-confidence, recognition, a better quality of life, self-actualization (Knowles 1984a, 9-12).

Malcolm Knowles (1984b) believes that the andragogical model best facilitates adult learning. This model assumes that the adult learning environment draws upon many resources other than the teacher. These resources include peers, members of the community, materials, and media resources.

The andragogical classroom design consists of seven elements. The first of these is climate setting. Adults learn best in a climate of mutual respect, collaborativeness, mutual trust, supportiveness, openness and authenticity, pleasure, and humaneness.

The second element is mutual planning. Adults learn best in a climate where learners are involved in the decision-making process with regard to what is learned. Knowles believes that adult learners will take "ownership" for learning if involved in the planning of the activity.

The third element of classroom climate is to involve participants in diagnosing their own learning needs. In diagnosing learning needs, one has to be aware that problems often arise in determining the learner's felt needs and the needs society ascribes for them. For example, a student may say he/she needs to learn public speaking skills because society recognizes and values good speakers. In reality, however, the student may actually need reading skills but for various reasons, does not advance this desire.

The fourth element of adult learning is to involve the learners in formulating learning objectives. Again, adult learners are more likely to feel committed to a task if they have input in deciding the tasks.

Element five is to involve learners in learning plans. Knowles advocates learning contracts as excellent facilitators of adult learning.

Element six places emphasis on the importance of the teacher in helping learners carry out learning plans. Literature on adult learners, without exception, emphasizes the vital role of instructors in facilitating adult learning. The role the instructor plays in the academic life of an adult student encompasses more than the traditional expectations of content instruction. Teachers should also be mentors, advisors, advocates, models and facilitators for their adult students (Miller 1989; Knowles 1984a and 1984b; Apps 1981; Cross 1981).

The final element in Knowles's design of how adults learn best is to involve learners in evaluating their learning. In an attempt to move away from teacher-centered classrooms to more student-centered learning, classrooms must become less authoritarian and patriarchal and more collaborative.

While Knowles's andragogical model is very comprehensive, experts agree that no one model is a panacea. The adult learning environment must incorporate numerous elements, and instructors must keep in constant communication with their adult learners and their respective needs. Backus (1984) asserts that "very few studies have created experimental situations to test the validity of the andragogical premises set out by the adult education theorists" (11).

A study by Beder and Darkenwald (1982) on differences between teaching adults and pre-adults supports Knowles's theory that adults have distinctive learning characteristics. Their findings suggest that adults are "more motivated, pragmatic, self-directed, and task oriented than pre-adults" (142). However, even though these researchers felt their findings supported andragogical assumptions, the study results do not demonstrate that "classroom practices differ sharply as a function of student age" (153).

Humanistic Learning Theory

Nevitt Sanford (1980) is one of many educators calling for a humanistic approach in regard to the adult learner. Sanford suggests that universities need to return to a more humanitarian climate, similar to the university atmosphere prevalent prior to WWII. According to Sanford the climate and structure of graduate schools today is very different from the more human communities prior to WWII.

The general climate today is one of competitiveness among universities, between departments in a given university, and between sub-groups and individuals within the same department.... Students today come from a greater diversity of backgrounds... and have a greater variety of motives for going to graduate school. During the 50s and 60s, students learned the economic benefits of advanced degrees. Students became competitive and engaged in an unrelenting contest for grades and good evaluations, thought by them necessary for acquiring the best jobs after graduation. (79)

Consequently, notes Sanford, while students still have a thirst for knowledge, their main priority is preparation for a job. As a result of this fierce competitiveness student community, support and friendship have declined.

Sanford advocates a return to an academic culture within the university which values the humanity of the students. Since the major goal of education is helping individuals develop his/her fullest potential, "all aspects of the college and university should be evaluated in terms of the degree to which they favor or hamper the attainment of this goal, whether for student or professors who teach them" (129-130).

According to Sanford's humanistic approach to adult learning, the ideal university would exhibit the following characteristics:

1. A human community, in which trust, justice and care are fundamental values.
2. The humanity of a university would be expressed in its care for its assistant professors as well as for its students.

3. A professor's job is to teach, do research, take part in campus affairs, give service to the larger community, but not necessarily all of the above.
4. Teaching is organized by divisions and departments, but not necessarily the same departments or all departments now found in large universities.
5. The norm is for professors to try to understand students and help them do and become what they are capable of becoming.
6. Entering graduate students are treated as if they were already full members of the academic community, on the assumption that various hurdles in the way of advanced degrees will eventually be overcome.
7. Deans and others in authority search for better ways to organize teaching and search for knowledge in an attempt to confront the human and social problems of today (130-134).

Apps (1981) also advocates a humanistic approach and supports Sanford's assertion that the structure and values of today's universities and colleges need to be redirected to meeting the needs of adult learners:

The emphasis today on specialization and competition has deemphasized the humanities and neglected problem-solving skills, overlooked the development of good writing and speaking skills. (85)

Advocates of the humanistic approach to adult learning also suggests that adult students need a curriculum that allows for the diversity and wide-ranging needs of the adult learner (Sanford 1980, Apps 1988). Furthermore, Cross (1991) believes the term "lifelong learning" has lost its initial "revolutionary" implications here in the United States. As illustration, Cross defines the term as adopted by the UNESCO General Conference in 1976:

The term "lifelong education and learning"...denotes an overall scheme aimed both at restructuring the existing education system and at developing the entire educational

potential outside the education system; in such a scheme men and women are the agents of their own education. (9)

Cross emphasizes that in keeping with the UNESCO definition of lifelong learning, the Commission on Non-traditional study (1973) stated:

[Lifelong learning] puts the student first and the institution second, concentrates more on the former's need than the latter's convenience, encourages diversity of individual opportunity rather than uniform prescription and deemphasizes time, space and even course requirements in favor of competence and, where applicable, performance. (9-10)

Most educators, then, are in agreement on the need for restructuring current university programs to accommodate the "quiet revolution" taking place on our university campuses in respect to the adult learner. In order to create a learning environment which is responsive to adult learners, educators suggest that institutions today must adopt an academic approach to adult learning which values the humanity of the individual and encourages their diversity. Backus (1984) advocates a number of instructional practices and strategies for facilitating adult learning. Through a pre-assessment process, for example, institutions would gain insight into the goals of adult graduate students who usually enroll in courses with preconceived needs and learning outcomes they hope to achieve (14). Backus also notes that adult students prefer interactive classroom techniques that involve group problem solving and opportunities to practice or apply what they learn. Institutions should also assist adult students in assessing their needs; setting specific, measurable goals; selecting appropriate resources; and identifying evaluation criteria (14).

CHAPTER II.

MOTIVATION OF ADULT LEARNERS

Adult students approach a learning environment with a myriad of human concerns, expectations and motivations which influence their ability to learn. Research on factors which influence adults to engage in learning appears to be limited to a few classic studies. This lack of research is surprising since knowing why adults learn is essential in determining a learning environment which is conducive to adult learning. Perhaps research is limited in the area of motivational factors because it is assumed that adults are highly motivated learners since they *choose* to engage in learning.

Life Transition Factors

Without exception, however, research indicates that adults enter a learning environment because of some past, present or future change in their lives (Apps 1988, Chudwin and Durant 1981, Aslanian and Bricknell 1980, Mezinow 1989, Cross 1981).

One of the most comprehensive studies of the motivational factors influencing adult learning was undertaken by Aslanian and Brickell (1980). This study is quantitatively significant because researchers interviewed almost 2000 adult Americans, twenty-five years of age and older, regarding the causes and timing of adult learning. Study results indicate that 83 percent of the learners surveyed describe some life transition as a reason to learn. The remaining 17 percent surveyed indicate they learned for other reasons, i.e., learning was a satisfying activity; learning kept them mentally challenged; learning gave them a chance to be with other adults (49-50).

In regard to specific life transitions which motivate adult learning, researchers found that these transitions could be classified into seven life areas: career, family, health, religion,

citizenship, aesthetics and leisure. The majority of adults interviewed gave career transitions as reasons for learning with 56 percent responding to this factor, and 16 percent cited transitions in family life as motivators. In order of significance after career and family transitions were leisure activities with a 13 percent response; aesthetics with 5 percent and general health with 5 percent. Only 4 percent of the respondents mentioned religion as a motivational force, and only 1 percent gave citizenship status as a reason for deciding to learn (53-55).

Because Aslanian and Brickell (1980) found that career transitions were the greatest motivational factor for adult learning, they also determined that these career changes fell into three categories: (1) moving into a new job; (2) adapting to a changing job; (3) advancing in a career (66).

Furthermore, these researchers also determined that the primary family events which triggered adult learning included the following: marriage, pregnancy, children moving through school, divorce, relocation, a new home, increase in family income, directive from family or friend, rising cost of living, injury or illness of family member, retirement of a spouse, death of a family member (72).

Aslanian and Brickell conclude from their study that more than 80 percent of adults learn because their lives are changing. However, there are definite differences in the personal characteristics of those who learn because of the specific kinds of life transitions experienced by them, and these differences can be summarized as follows:

- Men learn more often than women because of career changes, while women learn more often because of family, leisure or health transitions.
- Adults under the age of 65 learn chiefly because of career transitions, while adults over 65 learn chiefly because of leisure and family transitions.

- Adults who are single, married or divorced learn mainly because of career, while widowed persons learn mainly because of leisure or family activities.
- Adults who have attended four-year colleges learn most often for their careers while adults who have attended high school or two-year colleges learn most often for other reasons - primarily for reasons regarding family and leisure activities.
- As income rises, adults learn more often for career reasons.
- Workers and students learn primarily to make career transitions, while homemakers and retired persons learn primarily to make leisure and family transitions.
- As occupational levels rise, adults learn more often for career reasons (Aslanian and Brickell 1980, 97).

A similar study by Slotnick and others (1993) support Aslanian and Brickell's findings that "adult students enter college primarily for reasons related to career" (46-47).

Psychological Factors

In addition to specific life transitions, research also indicates that psychological factors contribute to an adult's motivation to learn. Studies show that adults are most frequently motivated to learn by a desire to use or apply knowledge or skills (Evans 1989; Slotnick and others 1993). Evans (1989) asserts that adults enter college with a very special kind of personal motivation, and they are, therefore, concerned about the usefulness of what they are trying to learn (28). Adults want to take action and continue their learning project in the hope of using the learning in a pragmatic way. Grissom (1992) believes that adults learn quickly "because they have stronger reasons for learning" (16).

Houle (1961) studied twenty-two men and women who were exceptionally aggressive learners in order to discover why these learners were so motivated. His results are considered the single most influential motivational study of that time (Cross 1981, 82-83).

All of the adults in Houle's study had "goals which they wished to achieve, found the process of learning enjoyable or significant, and all felt learning was worthwhile for its own sake" (15).

Houle's study isolated three subgroups of learners:

- Goal-oriented learners: Adults who use learning to gain specific objectives, i.e., solutions to problems.
- Activity-oriented learners: Adults who engage in learning primarily for the sake of the activity itself.
- Learning-oriented learners: Adults who pursue learning for its own sake. These adults have a fundamental desire to know (Houle 1961, 15-16).

One major finding of Houle's case study of adult learners is that the amount of formal schooling of the adult learner influences participation in educational activities more than any other factor (71). This finding is also supported by Holzclaw (1988). However, Houle also advances his belief that there is no simple answer to the complex question of why some people become continuing learners: "Each person is unique and his/her actions spring from a highly individualized and complex interaction of personal and social factors" (80).

Furthermore, while many adults will respond to some external motivators--better job, increase in pay--research has shown that the more powerful motivators for adult learning are internal--i.e., self-esteem, recognition, better quality of life, greater self-confidence and self-actualization (Warren 1968, 22; Knowles 1984a, 12).

Educational Environment For Adult Learners

Understanding how adults learn and why they learn is an essential component of establishing an educational environment for adult learners. For example, research has shown that the primary reason adults return to college is job-related. Therefore, institutions should offer a curriculum that takes into account the career concerns of adult learners. Adults are

also motivated to learn by transitions in family life. Counseling centers with trained personnel should be available to help adults with these personal life transitions. A systematic needs assessment with a focus on adult learners may be one way to start a planning process for adult curriculum needs (Miller and Daloz 1989).

Research also documents the adult learner's high level of motivation and commitment to personal educational goals. Therefore, experts advocate an institutional approach to adult learners that is less structured and more compatible with the adult's maturity and life experiences. Holtzclaw (1988) recommends more flexible admissions practices which provide adults the opportunity to pursue degree programs in spite of poor previous academic records. According to Holtzclaw, "There's strong evidence that the key to success for adult students, whether or not they are admissible by traditional standards, lies in their high level of motivation and commitment to personal educational goals" (9).

Universities must also provide programs that reach adults where they are, organized around activities in which adults are already engaged, programs that don't require adults to adapt themselves to the usual academic ways of doing things (Sanford 1980, 218). Miller and Daloz (1989) believe that institutions need to recognize the adult learner's previous job experiences--learning acquired through work and life. They advocate the portfolio assessment process where the adult student documents his or her prior learning and submits this to a panel of experts for credit recommendations (31). Wolvin (1991) also calls for institutions to establish "learner-centered environments" because adults come to the classroom with a wealth of experience and with job-related skills and needs (10). Miller (1989) suggests that institutions need to provide support systems specifically designed to help the adult student adjust to academic life. Wolvin suggests a dual approach to adult learners in which institutions offer special programs for adult students in addition to access to the regular curriculum. Research also overwhelmingly advocates that institutions help faculty members

learn how to work effectively with adult learners (Miller 1989; Grissom 1992). For example, institutions should provide for their faculty members seminars which specifically focus on the needs of adult students.

Therefore, institutions committed to educating the adult learner need to realize that adults are unique and complex learners and, as such, require more varied teaching and learning styles. In addition, educators need to understand why adults seek to learn and build curriculums around these motivational factors:

Clearly education for adults has burst explosively from its physical boundaries, and learning is acknowledged to reside within the individual rather than in the buildings and professors of the ivied halls. Once learning is perceived as a characteristic of the learner rather than an offering of the provider, attention is shifted from teaching to learning. It is that shift that will revolutionize education. (Cross 1991, 8)

CHAPTER III.

BARRIERS TO ADULT LEARNING

In addition to motivational factors, the adult student also brings into the learning environment a complexity of personal concerns. Puryear (1988) notes that while professionals are aware that the developmental needs of adults differ from those of traditional students, often administrators and faculty are unresponsive to the special needs of the adult learner or are not "alert to the barriers that must be overcome if adults are to fulfill their career or life goals through continued education" (13).

While literature in regard to these personal factors is extensive, its primary focus is on what adult learners perceive as barriers or deterrents to learning (Byrd 1991; Cross 1981; Evans 1989; Valentine and Darkenwald 1990; Slotnick and others 1993; Malbry and Hardin 1992; Gallagher and others 1992). Therefore, what we know about the personal needs and concerns of the adult learner is primarily limited to studies regarding barriers to learning.

Situational, Institutional and Dispositional Barriers

Patricia Cross (1981), noted expert on the adult learner, was one of the first to examine barriers or obstacles which prevent or hamper adults from learning. Furthermore, current research on barriers to learning appear to be variations of Cross's initial research.

Cross classifies these barriers as: Situational, those arising from life situations, i.e., lack of money, death in the family, job promotion; Institutional, those practices and procedures of an institution which discourage adults from participating in learning, i.e., admissions requirements, inconvenient course scheduling; and Dispositional barriers, those related to the adult learner's attitude and self-perception, i.e., lack of self-esteem, fear of failure, lack of self-confidence (98).

As the basis for her discussion on barriers to learning, Cross used a comprehensive survey conducted by Abraham Carp, Richard Peterson and Pamela Roelfs (1974) for the Commission on Non-Traditional Study. The purpose of this survey was to describe in detail the potential market for adult learning and to analyze the learning activities of adults already engaged in learning (Byrd 1990, 22). This survey is considered significant in a discussion of deterrents to adult learning because it is a synthesis of information from across 30 state and national surveys concerning barriers to learning. The Carp, Peterson and Roelfs Survey is also the basis for numerous other studies on barriers to adult learning which will be discussed in this chapter. Table 1 represents the results of the Carp, Peterson and Roelfs survey.

In summarizing her analysis of barriers to learning based upon the Carp, Peterson and Roelfs survey, Cross notes that Situational barriers appear to be the strongest deterrents to adult learning and include such high priority concerns for adult learners as cost, lack of time, home and job responsibilities, lack of child care, and difficulty with transportation.

However, researchers make a distinction between men and women in regard to the barrier of cost. Single women with children are particularly challenged by cost factors. Because of child care expenses, independent females with children who are also part-time students have school-related costs that are approximately 15 percent higher than those of similar male students, and the proportion of their educational needs met by financial aid is lower than it is for nontraditional male students (Malbry and Hardin 1992, 3). Furthermore, men and minorities receive more outside aid from their employers and the government. Among actual learners public funding supports adult education for about one-third of the minority learners, while employers are supporting educational costs for about one-third of adult males. This leaves white females the only population subgroup represented in which a majority of learners are supporting educational costs from their own family funds (Cross 1981,

Table 1. Perceived Barriers to Learning

Barriers	Percent of Potential Learners
Situational Barriers	
Cost, including tuition, books, child care, etc.	53
Not enough time	46
Home responsibilities	32
Job responsibilities	28
No child care	11
No transportation	8
No place to study or practice	7
Friends or family don't like the idea	3
Institutional Barriers	
Don't want to go to school full time	35
Amount of time required to complete program	21
Courses aren't scheduled when I can attend	16
No information about offerings	16
Strict attendance requirements	15
Courses I want don't seem to be available	12
Too much red tape in getting enrolled	10
Don't meet requirements to begin program	6
No way to get credit or a degree	5
Dispositional Barriers	
Afraid I'm too old to begin	17
Low grades in past, not confident of my ability	12
Not enough energy and stamina	9
Don't enjoy studying	9
Tired of school, tired of classroom	6
Don't know what to learn or what it would lead to	5
Hesitate to seem too ambitious	3

Source: Adapted from Carp, Peterson, and Roelfs, 1974. (Cross 1981, 99).

100; Chudwin and Durrant 1981, 115). Therefore, in almost all surveys, women are more likely to mention cost as a barrier to learning than males.

In regard to Dispositional barriers, Cross also notes that these barriers are far more important than survey response indicates because many adults will not admit that fear of failure or lack of ability prevents them from engaging in the learning process. According to Cross, "It is far more socially acceptable to say one is too busy to participate than to say one is not interested" (106-107).

Sharon Byrd (1990) also examined barriers to education as perceived by nontraditional adult students (age 25 and over). Byrd selected thirty nontraditional students from six postsecondary institutions in the Mid-South and asked respondents to rate barriers to learning activities on a scale of one to five as experienced by them. One meant that the barrier was not a concern and five meant that it was of overwhelming concern to them. Barriers were classified using Cross's categorization in the Carp, Peterson and Roelf's study--Situational, Institutional and Dispositional (Byrd 1990, 27).

The results of Byrd's study determined that not enough time and the amount of time required to complete a program were reported by 94.1 percent and 93.3 percent of the nontraditional students in this study respectively. Cost was also perceived as a significant barrier by 93.2 percent of the respondents in the study (47-48). Byrd also found that 63 percent of the respondents had problems with attendance requirements and classes being scheduled at inconvenient times (49).

Furthermore, this study indicates that 39.8 percent of the respondents felt that a lack of information was a barrier and that 21.8 percent of the adult learners had problems meeting entrance requirements. Byrd notes that while the percentage responding to "meeting entrance requirements" is low compared to other barriers, it is still large enough to require the attention of institutions (49). Byrd's study supports Cross's conclusions that situational barriers are

most frequently reported by nontraditional students. According to Byrd the ten most frequently reported barriers from all categories are the following: 1. Lack of time; 2. Time to complete the program; 3. Cost; 4. Home responsibilities; 5. Not enough energy; 6. Job responsibilities; 7. Attendance requirements; 8. Scheduling problems; 9. Tired of studying; 10. Tired of attending school (55).

Byrd also notes that more situational and dispositional barriers were reported by nontraditional students who were parents, and the intensity of barriers increased as the number of children increased (49). Also, students employed full-time reported more problems in surmounting the institutional barriers than those who were not employed to any extent (55).

Byrd suggests that situational and dispositional barriers are the most difficult for a postsecondary institution to reduce. However, changes can be made to lessen their impact upon the adult student. For postsecondary institutions, the institutional barriers are the most easily reduced. However, "reduction of these barriers requires a strong commitment from the institution" (56).

Table 2 represents the results of Byrd's study on barriers to learning perceived by nontraditional adult learners.

Additional Studies on Barriers To Learning

Similar studies concerning barriers to learning have also been undertaken by numerous other researchers. Slotnick and others (1993) found that the lack of time to balance home, work and family was the greatest concern for adult students.

This finding was also supported by Chudwin and Durrant (1993) who conclude that "Both men and women share several common problems upon returning to school: pressure of time and how to balance work, family and school" (115). Ann D. Puryear (1988) found that adult students experience role conflict attempting to be students and still managing other

Table 2. Percentage and Rank Ordering of Respondents Reporting Barriers

Rank Order	"yes"	"no"	Barrier
1	94.1	5.9	Time
2	93.3	6.7	Time to complete
3	93.2	6.8	Cost
4	84.0	16.0	Home responsibility
5	78.2	21.8	Not enough energy
6	73.1	26.9	Job responsibility
7	63.0	37.0	Attendance requirements
7	63.0	37.0	Scheduling problems
8	61.3	38.7	Tired of studying
9	58.0	43.0	Tired of attending
10	51.3	48.7	No place to study
11	49.6	50.4	Courses not available
12	49.2	50.8	Past low grades
13	47.1	52.9	Too much red tape
14	43.0	57.0	No way to get credit
15	39.8	60.2	Not enough information
16	38.7	61.3	Feeling too old
17	36.1	63.9	No child-care
18	34.7	65.3	Don't want to go full-time
19	34.5	65.5	Afraid to appear too ambitious
20	31.9	68.1	Don't know what to learn
21	26.9	73.1	Family doesn't like
22	23.5	76.5	No transportation
23	21.8	78.2	Don't meet requirements

Source: Byrd, 1990, 62-63.

responsibilities: "It is difficult [for adults] to choose between long-standing commitments to family, friends, church, and civic activities and the new demands of the classroom" (14).

Puryear's conclusions were also supported by Malbry and Hardin (1992). These researchers note that adult students who are also spouses, parents, employees, and children to older parents have their own set of demands and responsibilities in addition to those of the classroom. According to Puryear "Each of these roles provides a unique set of responsibilities pulling the student away from time needed for academic pursuits" (3).

Adults are also concerned about the lack of family support in their endeavor to return to school. Malbry and Hardin (1989) found that

often family members do not understand the effort it takes to be a student. Family members may be inconvenienced because a parent or spouse is enrolled in college courses. Family members may be asked to take on responsibilities around the home. In addition, family members may view the campus environment as confusing and new and fear that the experience may change a loved one. (11)

The barrier of a lack of family support is particularly stressful for adult women because they have traditionally been the nurturers of family members and define themselves in the context of human relationships (Gilligan 1982, 17).

Research also specifically addresses procedural or institutional barriers, barriers that are created by institutions. Malbry and Hardin (1989) note that

Since colleges [and universities] have designed their procedures and policies to meet the needs of traditional students, officials may not understand that these procedures not only make enrollment by adult students difficult, but impossible. (8)

For adult students institutional barriers include such issues as concerns about transfer of credit from previous courses, credit for life experiences, and academic alternatives. As indicated by research many colleges and universities do not design schedules to meet the needs of nontraditional students. The researchers emphasized that most adult part-time students have different needs requiring flexible scheduling arrangements. Many, because of work schedules or family obligations, can only schedule evening classes or weekend classes.

When adult students find that no courses are offered during the limited time they can arrange work and family schedules, they receive a message from the institution. That message is that they are not wanted. (9)

In summary, the research discussed above indicates that situational and dispositional barriers appear to be the strongest deterrents to adult learning. Within these two categories, adults who desire to learn indicate that a lack of time to balance family and school,

educational costs, transportation problems, and a lack of child care are the greatest obstacles to learning. In addition adult students also indicate that institutions impose barriers through admissions and attendance requirements, and scheduling and transportation problems.

Psychological Barriers

In addition to the barriers discussed above, research also documents specific psychological barriers experienced by adult learners. Evans (1989) advances the idea that new learning is threatening to adults because of the following:

Older students have many beliefs in place; their self images are well formed; they have invested in and successfully lived by their values. When learning starts, growth starts. One of the risks of new learning is that becoming exposed to new experiences and seeing things in new ways may modify or undermine some of the old values, or provoke unintended changes in career aspirations, personal values, and family relationships. (28)

Slotnick and others (1993) also found that adult students mentioned a lack of self-confidence as being a major deterrent for learning. Furthermore, as Malbry and Hardin (1992) note, "Many adult learners suffer from low self-esteem because previous failures haunt them and they feel isolated because their lives and commitments lie outside of campus. Campus life is secondary to getting a degree" (12-13). Puryear (1988) identifies the adult's fear of failure, of not being able to keep up intellectually, as a deterrent to adult learning (13).

Barriers Specific to the Reentry Adult Student

Research on the reentry student--those students twenty-five and older who have been out of school three years or more--has important implications to graduate programs since a significant number of these students are not only adults but also reentry students. While these students have special needs as adult learners, many are also further challenged because they have been absent from the traditional academic setting from many years.

Reentry shock is a common experience of adult reentry students. According to Evans (1989), one element of reentry shock is "infantilization" which he describes as a transitional

experience where the adult patterns his/her current school experience after childhood school experiences:

Going back to school makes kids of us all, even if we have raised several children who themselves have gone to college. It makes us feel like children....We go back to earlier experiences to remember what school was like or what it was supposed to be like. It is incredible how dependent and passive we can become and how much we can lose touch with the competencies , skills, and resources that we've spent years developing. (28)

The reentry adult learner also faces many transition difficulties in regard to academic study skills. Lack of concentration is one problem. Most reentry adults come from work experiences where "interruptions are usual and often" (Apps 1981, 45). Uninterrupted time is an exception for reentry adults, and finding time to concentrate on studies is a major problem.

Reentry adult students, like their traditional counterparts, also have problems with reading and writing skills (Slotnick 1993, Cross 1981). Many students must master how to read more effectively and efficiently the extensive lists of required reading for courses. Reentry adults also don't have unlimited time for reading. In regard to writing, "many of the returning adult students have been in jobs or work where written communication may not have been incorporated" (Apps 1981, 45-46).

In addition to academic problems, reentry adults are also faced with bureaucratic rules, regulations and campus routines which are frustrating experiences to the adult who has been in control of his/her life in the world of work. Reentry adults don't know how "the system" works as do their younger counterparts. They've forgotten the "shortcuts" they once knew as undergraduates. They also soon learn that it's not the same campus today compared to when they attended school:

They are overwhelmed by red tape associated with admissions requirements, course selection and registration, so the entire process of returning to the campus can be, and usually is, a bewildering experience. (Apps 1981, 45)

Internal barriers also inhibit the reentry adult learner. Miller (1989) notes that returning adult students perform many primary roles in addition to that of student, i.e., worker, homemaker, parent, professional, civic volunteer etc. (Miller 1989, 70). Evans (1989) found that outside of the classroom, many adults feel competent as a mother, teacher, father, worker. However, inside the classroom, the adult feels out-of-control, helpless and inept:

There is discord between the adult self-image of competence outside of the classroom and the student image of incompetence and inferiority. The teacher is seen as the expert and the student hopes to be given a share of the knowledge. (28)

In regard to the learning environment conducive to the reentry student, Jerold W. Apps (1981) found that:

The returning student's learning approach is more often informal. Unlike the younger traditional student who has been in formal school situations continuously, the returning adult learner often has been away from traditional classroom settings for many years. They have spent years learning but these learning experiences have been informal: community meetings, radio, t.v., newspaper, magazines, church and volunteer work. This learning is often unstructured. (44)

Research has also found that reentry adult students as a whole have problems with authority, especially with the academic relationship between the adult and his/her instructor (Miller 1989; Apps 1981). There is a perceived tension between the adult student and the instructor as authority figure. Therefore, the relationship between the instructor and the adult student is a very different one than the one between the instructor and traditional student. Reentry students tend to be "more argumentative, question material presented, sort and filter material that is presented through their own life experiences and reject some on the basis of that kind of criteria" (Apps 1981, 48-49). However, dealing with authority appears to be a less serious problem for men than women (Chudwin and Durrant 1981).

Implication of Research on Barriers to Graduate Institutions

Therefore, educators conclude that based upon the diverse needs and characteristic anxiety of adult students in the educational setting, enhancement of self-concept and self-esteem should be a primary concern of institutions that educate the adult student (Meyer 1991, 8). For example, institutions should provide counseling services staffed by professionals who are specifically trained to help adult students in their transition to academic life. Malbry and Hardin (1992) believe that institutions must deal with the complex emotional issues facing adult learners as they experience the life change of becoming a student (2).

Educators also emphasize the importance of instructors in their role as facilitators of self-concept and self-esteem in adult learners, and the important role these educators have in fostering the development of potential in the adult student and enhancing opportunities for success (Goplerud 1980; Backus 1984; Miller 1989; Mallinckrodt and Leong 1992).

Research also points to student concerns about improving study skills, learning test-taking strategies and acquiring time management skills. Slotnick and others (1993) note that adults are concerned that their math and writing skills are too rusty to provide them with an adequate base for a successful college experience (75). In an extensive survey of both graduate and undergraduate student concerns conducted by the Counseling Center Staff at the University of Pittsburg (Gallagher, Golin, and Kelleher 1992), researchers found that overcoming procrastination and problems with public speaking anxiety were the most prevalent personal concerns of students with 52 percent and 42 percent of students reporting high or moderate need for help with these problems (303).

As is evidenced from the research discussed above, the adult learner is a unique individual influenced by a myriad of personal concerns and needs, and each adult brings a unique set of factors into the learning environment. However, certain assumptions can be made concerning the adult learner from the common themes prevalent in the above studies:

- Most adults view a lack of time as a significant barrier to learning (time to spend with family and complete academe programs).
- Cost of education is a concern for both men and women; however, single women with children are particularly challenged by this factor.
- Balancing school, home and job responsibilities is a problem for both men and women; however, women again perceive this barrier as a particularly serious problem.
- Many adults experience a lack of self-confidence in their ability to succeed in school.
- Many adults also fear failure in not being able to keep up intellectually.
- Adults experience role conflict in attempting to be students and still manage other responsibilities.
- Adults view institutional bureaucratic procedures as barriers to learning, i.e., inconvenient course scheduling, parking and admission requirements.
- Many adults feel they lack adequate study skills.

Institutions committed to educating adult learners must identify what their respective students perceive as barriers to learning. Once this information is obtained through a needs assessment, it should be prioritized and immediately addressed.

Research indicates that institutional barriers are the most easily remedied by institutions. Once a barrier has been defined in this area, efforts should be made to redesign institutional procedures to accommodate the adult learner. Barriers identified as situational or dispositional are the most difficult to address because they involve personal considerations of the adult learner themselves. However, institutions can review current research regarding the needs of adult students and design a needs assessment to identify prominent concerns of adult students. Current research suggests that certain barriers appear to be of concern to most adult

students. For example, a lack of time to balance home and school responsibilities appears to be a primary concern of most adult students. Therefore, institutions should suggest to faculty that course requirements and expectations be reasonable and appropriate in consideration of the busy adult.

In addition, the financial cost of education is a major concern to many adult students. Institutions should, therefore, consider restructuring current financial aid procedures and practices to reflect the unique concerns of adult students. Trained personnel should be available to provide adults the most efficient, advantageous and appropriate financial aid packages.

Adults also experience a lack of self-confidence and self-esteem when they enter the academic environment. A fear of failure is a major adult concern. Faculty members need to be made aware of the important role they play in helping adults build self-confidence and self-esteem. Positive reinforcement and mentoring of adults by faculty is essential in helping adult learners adjust to academic life.

Finally, while it is not possible for institutions to eliminate all of the barriers to adult learning, they must at least begin identifying who their adult students are and what problems and concerns they bring into the learning environment. A needs assessment is the first step in this process. In addition, once these needs and concerns have been identified, they must then be prioritized and addressed according to degree of concern and capabilities of the institution to accommodate the need. Institutions committed to educating students must address the needs and concerns of all their students in order to insure that the educational environment is conducive to learning.

CHAPTER IV.

NEEDS SPECIFIC TO THE ADULT GRADUATE EXPERIENCE

While adult graduate students possess unique characteristics and needs as adult learners, they also come into the institutional learning environment with needs specific to the graduate experience. According to Goplerud (1980), "For many people, admission to graduate school marks the beginning of a period of major, unavoidable life changes and of high risk for physical and psychological problems" (283). Research specific to the adult graduate experience is also surprisingly and disappointingly absent from professional literature. Similar to research on adult students in general as discussed in Chapter 3, most of the literature on the graduate student also appears to be limited to studies on barriers to learning. Although these studies appear to overlap, those relevant to the graduate student support research on the adult student in general while also addressing additional factors specific to the graduate school experience. However, with graduate enrollment on the rise, and larger numbers of adults returning to university campuses, it is imperative to more thoroughly and aggressively address the concerns of this significant force of adult learners. Further research is definitely needed on the needs of adult graduate students.

Barriers to Learning as Perceived by Graduate Students

While incoming graduate students share with their undergraduate counterparts a fear of the unknown as a new student adapting to a new environment, in the case of graduate students, these fears may be compounded by numerous factors. One such factor is the lack of understanding about the differences between graduate and undergraduate education. Many graduate students believe that they will risk their emotional and physical health in meeting exceedingly high academic standards. Many also fear failure because of these high academic

expectations and the additional challenges of teaching and research responsibilities. The adult learner has a particular concern over potential isolation because of age (Vickio and Tack 1989, 38). Furthermore the part-time graduate student also has additional concerns in regard to balancing the strenuous demands of academic requirements and job responsibilities (Miller 1989, 70).

Most of these concerns are addressed in a comprehensive study conducted by Daniele Flannery and Jerold Apps (1987). Researchers examined the barriers to learning experienced by persons twenty-five years and older returning to graduate school after at least three years out of school. The ninety-one participants involved in the study were newly enrolled University of Wisconsin (Madison) graduate students in the School of Education and the College of Agricultural and Life Sciences.

The twenty-five item perceived barriers to learning instrument used by Flannery and Apps was constructed from an initial pool of thirty-five items and represented three categories of barriers: Institutional, Situational and Psychosocial. The instrument drew upon previous work done by Apps (see chapter 5: Barriers to Learning). **Institutional** barriers were defined as those practices and procedures which discourage an adult from participating, i.e., admissions requirements, course scheduling etc. **Situational** barriers were those factors which come from circumstances of an individual's life situation at any given time, i.e., job and family responsibilities, distance one must travel to attend school and skill-related barriers. **Psychosocial** barriers included two dimensions. The psychological dimension refers to internal factors such as one's attitudes, beliefs and values, or one's sense of self-esteem, i.e., feeling too old to learn etc. The sociological dimension refers to the external factors which may influence one's life, i.e., socioeconomic pressures from friends and family not to attend school, past school experiences etc. (2).

Study results also indicated that the major barriers to learning by older graduate students returning to school were the following (listed in order of seriousness of the problem: 1. Increase in stress; 2. Parking in and around campus; 3. Balancing family and school time; 4. Balancing job and school time; 5. Spending time with immediate family. (7) Ninety percent of the returning students noted "increase in stress" as a barrier to learning and 33 percent perceived this increase as a serious or very serious barrier (8).

The second most serious barrier to learning for adult graduate students in the study was parking, i.e., limited number of meters available on campus, possibility of getting tickets. Researchers noted that problems with parking were most frequently mentioned by women "probably in the context of safety issues" (9).

Balancing family and school, and job and school respectively were the third and fourth most seriously perceived barriers to learning by graduate students. Researchers indicated that interestingly "full and part-time employed persons as well as full and part-time students were very similar in their perceptions of this variable" (9). The fifth most serious barrier was spending time with immediate family.

Researchers also found that returning adult students during the first semester noted a number of specific institutional problems: Forty-five percent cited problems with registration procedures, financial aid, and teaching approaches used by instructors (11).

Tables 3, 4, and 5 respectively indicate study results of the Apps and Flannery survey of 91 University of Madison graduate students. Numbers indicate degree of perceived problem in percent.

Motivational Factors

In regard to motivational factors for returning to graduate school, Flannery and Apps found that 84 percent of respondents said they returned for an advanced degree for career-related reasons (61 percent for new job skills and 33 percent to improve current job skills).

Five percent returned to "broaden their professional capabilities and the remaining eleven percent had returned for intellectual growth or simply because it was convenient (6).

Flannery and Apps believe that survey results have significance for graduate schools because "the more clearly the returning adult student can be described, the better the potential for complex model building in the effort to understand the adult returning student" (1).

Table 3. Predominant Situational Barriers

Situation	No Problem	Somewhat	Serious/Very Serious
Job Time	24	47	29
Family time	32	38	30
Immediate Family	31	50	19
Time with friends	37	44	19
Concentration	26	57	17
Exam-taking	35	53	12

Numbers indicate degree of perceived problem in percent.

Table 4. Predominant Institutional Barriers

Situation	No Problem	Somewhat	Serious/Very Serious
Parking	44	25	31
Obtaining Financing	39	32	29
Registration Procedures	54	27	19

Numbers indicate degree of perceived problem in percent.

Table 5. Predominant Psychosocial Barriers

Situation	No Problem	Somewhat	Serious/Very Serious
Child Acceptance	75	25	0
Spouse Acceptance	67	27	6
Younger Students' Acceptance	81	14	5

Numbers indicate degree of perceived problem in percent.

Stress Resulting from the Graduate Experience

Research in the field of psychology has also specifically addressed the issue of stress resulting from the life-change experience of entering graduate school (Goplerud 1980; Descutner and Thelen 1989; Mallinckrodt, Leong and Kralj 1989; Mallinckrodt and Leong 1992). Graduate student stress is precipitated by many factors such as expectations for success in the academic environment and fears of diminished control over the graduate environment (Descutner and Thelen 1989, 60-61).

Research also suggests that life-change stress among graduate students differs significantly for men and women. In a study of how sex differences influence life-change stress and stress symptoms in graduate students, Mallinckrodt, Leong and Kralj (1989) found women generally reported more stressful life changes than did men and that "these differences might be the result of two interrelated factors: role conflict and increased stress stemming from interpersonal concerns relating to the ethic of care" (335). For example, "increased difficulty with a 'job' and 'job duties interfered with academic work' were reported, respectively, by 31 percent and 23 percent of women but only 3 percent and 12 percent, respectively, of men" (335). Researchers concluded that these differences are attributable to the multiple role demands of employment, academics, and family upon women coupled with expectations that they fulfill all these roles perfectly (335).

Problems meeting deadlines for papers and conflicts balancing time for academic and social pursuits were the most frequently reported stressful events for both men and women (Mallinckrodt, Leong and Kralj 1989, 337).

Research also documents that many graduate students also experience stress in managing the additional challenge of assuming teaching and research responsibilities (Vickio and Tack 1987, 1).

Findings from such studies also point to the importance of social support through faculty mentoring and counseling services to help students handle the stress of the graduate experience (Goplerud 1980; Mallinckrodt and Leong 1992). Students who had "preexisting social networks on entering graduate school, or who quickly developed support in the school milieu, fared much better than their socially isolated colleagues" (Goplerud 1980, 288). Furthermore, the most effective sources of social support for graduate students are their families and peers, and faculty in their academic departments (Mallinckrodt and Leong 1992).

Once again studies emphasize the vital role faculty members play in helping students adjust to the stressful experience of graduate school. The more students interacted with faculty members in a positive way, both inside and outside the classroom, the less likely they were to experience health and emotional problems during the first six months of graduate school (Goplerud 1980).

New graduate students are particularly dependent on faculty since they are just learning their new social roles and possess few alternate sources of support:

As dominant figures in the social setting, faculty also provide entering students with vital day-to-day feedback that students use to set priorities, assess their performance, and gauge their aptitude for work. (Goplerud 1980, 288)

The conclusion might be made, then, that the most critical resource of a graduate institution is its faculty (Committee of the National Science Board 1969, 166).

Research also indicates that part-time commuter students also need a sense of community (Reisman, Lawless and Robinson 1983). In a survey of 146 graduate students who worked days and were enrolled in evening classes, a majority of respondents—92 percent—indicated an interest in having opportunities to associate with other students enrolled in the programs and with faculty (50). Sixty percent of respondents also indicated the need for advisor availability, the posting of office hours, and more career counseling (50).

CHAPTER V.

APPLICATION OF RESEARCH TO GRADUATE PROGRAMS AND FACULTY

The complex needs of adult graduate students and the current practice of structuring graduate schools on models predicated on traditional principles of the young adult student challenges universities to reexamine current graduate programs and investigate ways to meet the needs of this ever-growing graduate population.

Application of Research to Institutions

Research overwhelmingly indicates that significant numbers of older students are returning to graduate institutions and that these students enter the academic environment with needs and concerns very different from their traditional counterparts. Therefore, institutions need to consider the validity of restructuring current programs to better accommodate the special needs of this growing population of adult learners.

Applying research on adult learners to graduate school evidences that adults need help in their transition to academic life and graduate institutions must address this issue at the beginning of the adult's graduate school experience. Therefore, a separate and comprehensive orientation program should be designed and implemented specifically for newly enrolled adult graduate students. Graduate institutions must be prepared to help graduate students in their transition to academic life from the very beginning of the graduate school experience. An orientation program can help reduce student fears and concerns about the graduate experience by giving a realistic perspective on graduate school. During this orientation program, adult students should have counselors, advisors, faculty, and financial aid personnel available to them to answer questions and concerns. Students should also be made fully aware of

institutional practices and procedures such as parking regulations, registration procedures and academic expectations.

Bowling Green State University (BGSU), a university demographically analogous to Iowa State University, has a comprehensive, multifaceted orientation program for newly enrolled graduate students that should serve as a model for similar graduate institutions. The following are just a few of the components included in BGSU's five day orientation program for newly enrolled graduate students:

1. Sessions on teaching techniques plus workshops on testing and grading.
2. Sessions on the roles of research in graduate education and other smaller workshop sessions on such topics as the role and responsibilities of the research assistant.
3. Workshops on topics of stress management, personal relationships, career planning and money management.
4. An organizational fair to integrate graduate students more fully into the university and surrounding community.
5. A departmental program component in which students become acquainted with faculty and other graduate students.
6. Social programming where students socialize throughout the five day event.
7. Orientation of spouses and partners of new graduate students. (Vickio and Tack 1987, 5-7)

Another vital area where research on adult learners also applies is graduate admissions procedures. Because adult learners bring a variety of life experiences into the academic setting, institutions should adopt more flexible admissions requirements which reflect and acknowledge the adult learner's prior learning rather than relying on traditional assessment

measures, modeled on the younger student. Portfolio assessment is one way for adult students to document their own learning.

Application of research on adult learners to graduate learners also indicates that graduate institutions must address those specific concerns that adult students bring into the learning environment and which inhibit adult learning. First and foremost, institutions committed to adult learners must know who their adults are and what needs and concerns they have as learners. A needs assessment is the first step toward determining the needs of adult learners. Once these needs are identified, institutions must then address those which emerge as most significant in facilitating adult learning.

This special assessment of all adult graduate learners should become an ongoing institutional process that extends into the curriculum in the form of a comprehensive graduate student assessment program. In such a program students are tested, evaluated, given career guidance and study skills training. This program should be available to both graduate students and potential graduate students and would help students identify needed academic skills, appropriate course work, and career goals.

Adults also enter the learning environment with concerns about academic program costs and the bureaucratic procedures involved in applying for financial aid. Therefore, institutions need to establish a special financial aid service for adult students. This service should be staffed by qualified personnel who will assist students in obtaining the best financial package available with the least amount of hassle.

Adult students are also concerned about their lack of skills in meeting the new academic challenges of graduate school. Therefore classes and workshops should be implemented for those adult students needing help in the areas of reading, writing, research, computers, math and study skills.

Counseling/advising services are also an essential aspect of a successful graduate program. Graduate students have numerous personal concerns as students and these concerns need to be addressed if learning is to be successfully facilitated. Adult students fulfill many roles in addition to that of a student and as such experience stress in trying to balance work, home and school responsibilities. Students should have access to trained personnel skilled in the areas of stress management, family relations, and interpersonal relationships.

Child care is also a primary concern to adult learners, particularly reentry adult women, and institutions need to begin planning for facilities that will provide child care for adult students.

Application of research on adult learners to graduate learners also indicates the need for graduate institutions to implement more flexible course schedules in order to accommodate the busy graduate student. Therefore, graduate programs must determine the curriculum needs of students and schedule classes during both days and nights to answer these needs. Offices and staff also need to be available to the evening student who does not have access to these sources during the day.

Attempts should also be made to form day and evening support groups for graduate students. Many adult students feel isolated from campus life. Many commute to campus and are not a part of the normal campus routine. Student support groups are essential in helping students adjust successfully to academic life.

Institutions also need to review parking facilities to insure that adult students have adequate and accessible parking. Parking and transportation problems are a primary concern to adult students, and a factor which is often overlooked by institutions where a majority of the students walk to classes from residence facilities.

The importance of faculty members in helping graduate students adjust successfully to academic life cannot be overemphasized. Therefore, institutions need to educate faculty

members concerning the very special learning characteristics of the adult student. Faculty workshops on such topics as adult learning theory, classroom procedures and practices for adult students, barriers to adult learning, and mentoring adult students would be appropriate institutional offerings for all instructors of adult students.

Finally, application of research on the adult graduate student for this thesis project clearly indicates that graduate institutions need to reassess their current approach to graduate education.

Application of Research to Educators

The application of this research project on adult learners for pedagogy/andragogy is significant. Because adults approach learning differently than their younger counterparts they require learning approaches which accommodate these differences. While practicality dictates that teachers cannot redesign entire course objectives because of one adult learner in a class of 16 traditional students, as teachers we are obligated to reach all of our students. Furthermore, if demographic projections hold true, educators will see ever-growing numbers of adult students in their respective classrooms, and those instructors of graduate students will have a majority of adult students in their respective classrooms. Therefore, in order to deal with this quiet revolution of adult learners, educators must first and foremost examine who their students are and what needs they bring into the classroom setting. Since research suggests that adult learners bring a variety of life experiences into the classroom, educators should use these experiences as a basis for at least some learning objectives.

Second, the majority of adult learners are primarily career-oriented. Course objectives should, therefore, include goals and objectives that will be practical and useful to the adult in the real world of work.

Third, adults have tremendous demands upon their time because most fulfill other roles in addition to that of student. Instructors need to insure that course expectations and

requirements honestly reflect course learning needs. Furthermore, teacher feedback and assessment of the adult's progress should be timely and constructive. Many adults are insecure about their academic abilities and instructors need to be sensitive to these concerns and address them throughout the semester.

In consideration of adult learning theory, the classroom atmosphere should be non-threatening and supportive with an emphasis on student-centered activities facilitated through small group discussion and collaboration.

Because adult students are self-directed and goal-oriented, adult learning is better facilitated when the instructor and student work together on learning goals and discuss graduate school expectations.

Finally, application of research for this thesis project clearly and overwhelmingly indicates the vital role educators have in helping adult students succeed both academically and personally within the graduate environment. The human factor of establishing a supportive relationship with adult students cannot be overemphasized. While students must work to meet the strenuous academic requirements of graduate school and use their time valuably, instructors must also make the effort to "be there" for their students. An approachable, supportive, caring and helpful instructor is worth more than any text, or volumes of exercises, handouts or research papers.

CHAPTER VI.

RATIONALE FOR NEEDS ASSESSMENT DOCUMENT

The Needs Assessment document is the final product of this research project on adult graduate learners (see Appendix for the complete assessment instrument). This document will help universities assess the needs of adult graduate students for both orientation and retention programs.

Because research on adult graduate students appears to be limited to Flannery and Apps's (1987) study on barriers to learning and psychological studies that address graduate student stress, this needs assessment instrument is a synthesis of research on adult postsecondary learners and application of that synthesis to adult graduate learners. Furthermore, this synthesis of theory and its application to adult graduate students will fill in current gaps which exist on the needs of adult graduate students and offer a new perspective on graduate learners for graduate school administration.

Because of the need to design an instrument which will produce a significant response, the Needs Assessment is not lengthy. While the document does address the major psychological factors that are concerns to the adult graduate student, i.e., stress, lack of self-confidence, to insure an adequate response rate, it omits minor psychological factors such as differences in life-change stress between men and women, and stress resulting from meeting paper deadlines and taking exams. The Needs Assessment also omits the numerous problems experienced by international students in their cultural transition to an American campus.

Selection and Organization of Survey Items

The information obtained from this needs assessment will provide graduate institutions with a new focus on graduate adult learners by establishing that these adults have needs very

different from those of their traditional counterparts. Identifying the specific factors that affect graduate adult learning will also provide graduate institutions a basis from which to reevaluate existing programs and the rationale for devising new programs that more accurately and adequately reflect the needs of this growing population of graduate adult learners.

The educational mission of graduate institutions, then, must include the needs of all its students. With graduate enrollment on the rise and with ever-increasing numbers of adults entering graduate school, universities must reexamine their current attitude toward graduate education with its emphasis on the young adult learner and direct their attention instead to the needs of this new majority on campus--the adult graduate student.

The selection and organization of items for this survey instrument correspond to the specific areas of research addressed in this thesis project and, by application, emerge as most relevant to the concerns of adult graduate learners. Questions 1 through 5 provide important demographic information concerning newly enrolled graduate students and will give graduate institutions a general profile of the adult graduate learner in terms of age, education, marital status, employment status, and ethnic background.

Question 6 asks graduate students to indicate if they are reentry students. If student responds yes, Question 7 asks the student to indicate the number of years since the last formal educational experience: 3-10 years, 11-15 years, 16-25 years, or over 25 years. This item was selected because research indicates that reentry students are a significant component of graduate populations and have special needs when they have been absent from the traditional academic setting for many years. Various researchers found these learners had specific problems with instructor authority, academic study skills, bureaucratic rules and regulations, and campus routines (Miller 1989; Apps 1981; Evans 1989; Slotnick and others 1993; Cross 1981; and Chudwin and Durrant 1981).

Item 8 asks employment status. This item was selected because research on adult barriers to learning indicates that balancing academic requirements and job responsibilities is a major concern of adult learners (Cross 1981; Byrd 1990; Miller 1989; Flannery and Apps 1987; and Puryear 1988).

Item 9 asks marital status. This item appears on the survey because numerous researchers found that the primary concern of adult learners was a lack of time to balance school and family. Furthermore, research indicates that the intensity of this problem is in proportion to the degree the factor of family impacts upon the adult student's life, i.e. marital status, adult parent responsibilities etc. (Byrd 1990; Cross 1981; Slotnick and others 1993; Puryear 1988; Malbry and Hardin 1989; and Flannery and Apps 1987).

Item 10 asks if the student commutes to campus 30 minutes or more. This item was selected because commuter students are a significant component of graduate populations. Reisman, Lawless and Robinson (1983) found that commuter students indicated a need for opportunities to associate with other students and advisor availability.

Item 11 asks the graduate student to indicate the primary reason for attending graduate school. This item was selected because various researchers found that life transitions are the main motivational factors for adults to enter a learning environment. Research also indicates that these transitions fall into the categories of career, family, leisure, aesthetics, and status associated with obtaining a degree (Aslanian and Brickell 1980). Furthermore, researchers also found that career transitions are the greatest motivational factor for adult learning (Aslanian and Brickell 1980; Slotnick and others 1991; Flannery and Apps 1987). This information will help graduate institutions provide an educational environment conducive to graduate adult learning--one that is responsive to those specific factors which motivate adults to enter graduate school. Institutions can then consider the need to restructure current graduate programs to ones predicated on the motivational factors of their graduate adult

learners. Such programs would include implementing career counseling centers, curricula that reflect the career needs of the graduate adult learner, and faculty in-service on the motivational factors that influence graduate adult learning.

Survey Items Specific to Barriers to Adult Learning

Information from this section on barriers to adult learning will give graduate institutions new insight into those problems and concerns that inhibit adult learning and a new perspective from which to view graduate adult education. With this new perspective graduate institutions can begin to reevaluate existing programs (based on the needs of the traditional student) and devise new programs that reflect the unique learning needs of the adult graduate student.

Items 1-25 on page 2 of the Needs Assessment specifically address those concerns which emerge from research as most significant and problematic to adult learners. These items are the result of the application of research on barriers to adult learning. Table 6 contains the specific research sources for each of the items of the Barriers to Learning section of the survey.

A rating system employing numbers between 1-4 was used to establish areas and degree of concern for each of the listed items. A selection system of numbers 1-4 assures that respondents will carefully consider the degree of the perceived problem before making a choice because there is no specific middle range in the selection process. Finally, a numerical rating system also assures verifiable and accurate results.

Survey Items Specific to Institutional Barriers

The needs assessment will identify those specific institutional barriers that adult graduate students indicate are most problematic and which research documents as the most easily remedied by graduate institutions. These institutional barriers include such concerns as admissions and attendance requirements, time to complete academic program, research and teaching responsibilities, bureaucratic rules, regulations,

Table 6. Research Sources of Barriers To Adult Learning

Item	Source
1. Cost of education	Chudwin and Durrant 1981; Byrd 1990; Cross 1981;
2. Admissions requirements	Malbry and Hardin 1989; Byrd 1990; Cross 1981; Wolvin 1992, Miller and Dalos 1989
3. Lack of time to balance home, school and job responsibilities	Byrd 1990; Cross 1981; Malbry and Hardin 1989; Puryear 1988; Flannery and Apps 1987; Chudwin and Durrant 1981; Miller, 1989
4. Time to complete academic program	Byrd 1990; Cross 1981
5. Attendance requirements	Cross 1981; Byrd 1990
6. Class scheduling	Byrd 1990; Cross 1981
7. Child Care	Malbry and Hardin 1992; Byrd 1990; Cross 1981
8. Stress	Flannery and Apps 1987; Miller 1989; Byrd 1990; Mallinckrodt, Leong, and Kralj 1989; Goplerud 1980; Descutner and Thelen 1989
9. Family doesn't approve	Flannery and Apps 1987; Malbry and Hardin 1989; Gilligan 1982
10. Feel too old to compete academically	Byrd 1990; Cross 1981
11. Tired of studying	Byrd 1990; Cross 1981
12. Lack of self-confidence	Byer 1991; Evans 1989; Slotnick and others 1993; Malbry and Hardin 1992; Meyer 1991
13. Research and teaching responsibilities	Miller 1989; Vickio and Tack 1989
14. Parking requirements	Flannery and Apps 1987
15. Lack of study skills	Slotnick and others 1993; Cross 1981; Apps 1981
16. Finding uninterrupted time.	Apps 1981; Flannery and Apps 1987
17. Bureaucratic rules, regulations, and procedures.	Cross 1981; Byrd 1990; Flannery and Apps 1987; Malbry and Hardin 1989
18. Classroom procedures	Apps 1981; Chudwin and Durrant 1981
19. Courses not applicable	Byrd 1990; Cross 1981
20. Courses not available	Byrd 1990; Cross 1981
21. Feeling isolated from others.	Vickio and Tack 1989; Reisman, Lawless and Robinson 1983
22. Classroom teaching techniques.	Miller 1989; Apps 1981
23. Advisor Availability	Backus 1984; Miller 1989; Goplerud 1980; Mallenckrodt and Leong 1992; Committee of the National Science Board 1969
24. Availability of career counseling	Myer 1991; Malbry and Hardin 1992
25. Adequate orientation to university and procedures, classroom procedures and practices, and courses not available or applicable.	Vickio and Tack 1987

By determining the specific areas and degree of concern that impact upon graduate adult learners, graduate institutions can begin to focus on how to address these needs.

For example, graduate institutions can offer more flexible admissions requirements that give credit to the adult student's prior learning experiences; adequate and accessible parking; special graduate advisory services to assist the adult in planning and achieving academic goals; expanded evening and weekend course offerings to accommodate the adult's busy schedule; streamlined procedural requirements in consideration of the adult's lack of discretionary time; and a comprehensive curriculum that reflects the student's career goals.

Survey Items Specific to Situational Barriers

This needs assessment will also identify those situational barriers that adult learners perceive as problematic such as a lack of time to balance school, home and job responsibilities, inadequate child care, cost of education, time to complete academic program, lack of study skills, and finding uninterrupted time to study. Institutions can then begin to address these concerns by examining ways to help the adult cope with these problems. With the above information institutions could consider providing adult/advising services staffed by skilled personnel in the areas of family and interpersonal relations, and time management and financial planning services. Institutions could also consider implementing a comprehensive assessment program of the adult student's academic skills and providing professionally staffed learning centers to help students succeed academically. Institutions must also consider the need for implementing facilities that provide child care if their students indicate a serious need for such.

Survey Items Specific to Psychological and Dispositional Barriers

The needs assessment will also identify those psychological and dispositional barriers that adult graduate students perceive as problematic. These barriers include such concerns as feeling a lack of self-confidence, too old to compete academically, isolated from other students, tired of studying, and stress resulting from the graduate school experience, i.e.

research, teaching, and academic responsibilities. The frequency and degree of such concerns will again indicate the need for institutions to provide counseling/advising services to help adults overcome these barriers to learning. Furthermore, institutions need to determine their responsibility in helping the adult student succeed in graduate school and devise the means by which they can do so.

Survey Items Specific to Pedagogical Practices and Procedures

The assessment instrument will also identify the graduate student's need for instructor/advisor availability and effective pedagogical practices and procedures. This information will indicate the role the graduate instructor plays in helping the adult student succeed both academically and personally in graduate school. Institutions then need to adequately prepare faculty members for their pedagogical responsibilities as instructors of graduate students. Research documents that adults approach learning differently than do their younger counterparts, and as such, require learning approaches which accommodate these differences. Furthermore, graduate adult learners have needs and concerns specific to their age, maturity, life experiences and various roles they fulfill in addition to that of student. Finally, adults lack self-confidence in their ability to succeed in graduate school. Educators of adult students also need to understand the vital role they have as mentors of adult students. More than any other factor, instructors are instrumental in helping adults succeed in graduate school.

Therefore, graduate institutions need to provide faculty workshops that address such factors as adult learning theory, classroom procedures and practices that facilitate adult learning, and barriers that inhibit adult learning. Institutions also need to provide an effective instructor/student mentoring program that will insure the adult graduate student has the psychological and academic support needed to succeed in graduate school.

Graduate Orientation Programs

The needs assessment will identify the importance of a comprehensive orientation program that introduces the newly enrolled adult student to the graduate school experience. Such an orientation program would give the adult student an overview of the opportunities, responsibilities, expectations, requirements, and procedures of graduate school, based upon an institutional perspective responsive to the needs and concerns of the adult graduate learner. Therefore, such a program would be the culmination of a new institutional focus on and commitment to adult graduate education.

Finally, this thesis project will provide graduate administrations with the rationale for the inception and implementation of graduate programs specifically designed on the needs of the adult graduate student.

Cover Letter and Pre-test

This document will be accompanied by a cover letter explaining the survey's purpose and emphasizing the confidential nature of all information obtained from participants. In addition this instrument will be pre-tested to assure that survey items accurately reflect the needs and concerns of graduate adult populations.

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APPENDIX A.

NEEDS ASSESSMENT DOCUMENT

Directions: Please indicate if any of the items listed below have been a problem or concern to you during your graduate school experience at ISU by ranking these items on a scale from 1-4 as follows:

	1	2	3	4
	Not a Problem	Problem but not difficult	Moderately difficult	Very difficult problem
1. Cost of education	1	2	3	4
2. Admissions requirements	1	2	3	4
3. Lack of time to balance home, school and job responsibilities	1	2	3	4
4. Time to complete academic program	1	2	3	4
5. Attendance requirements	1	2	3	4
6. Class scheduling	1	2	3	4
7. Child care	1	2	3	4
8. Stress	1	2	3	4
9. Family doesn't approve	1	2	3	4
10. Feel too old to compete academically	1	2	3	4
11. Tired of studying	1	2	3	4
12. Lack of self-confidence in ability to succeed	1	2	3	4
13. Research and teaching responsibilities	1	2	3	4
14. Parking requirements	1	2	3	4
15. Lack of study skills	1	2	3	4
16. Finding uninterrupted time to study	1	2	3	4
17. Bureaucratic rules regulations, & procedures	1	2	3	4
18. Classroom procedures and practices	1	2	3	4
19. Courses not applicable	1	2	3	4
20. Courses not available	1	2	3	4
21. Feeling isolated from other students	1	2	3	4
22. Classroom teaching techniques	1	2	3	4
23. Advisor availability	1	2	3	4
24. Availability of career counseling	1	2	3	4
25. Adequate orientation to university	1	2	3	4