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"Mattering" doesn't matter: An analysis of adult undergraduate persistence patterns

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"MATTERING" DOESN'T MATTER: AN ANALYSIS OF

ADULT UNDERGRADUATE PERSISTENCE PATTERNS

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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by

Terri Laskey Fauber

April 1996
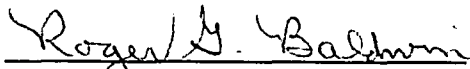
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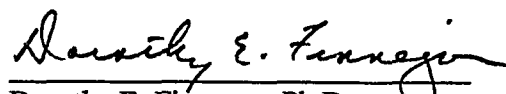
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Approved May 1996 by

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Chair of Doctoral Committee

Thomas J. Ward, Ph.D.

Dorothy E. Finnegan, Ph.D.

DEDICATION

With a shared vision... I dedicate this dissertation and degree to the many

women who juggle the demands of family, work, and education in pursuit of

their personal goals.

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With sincerity and much gratitude I thank the members of my Doctoral Committee, consisting of Dr. Roger Baldwin, who inspired and challenged me to persist and to Dr. Thomas Ward and Dr. Dorothy Finnegan for their endurance and guidance.

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ABSTRACT

A steady rise in the number of nontraditional students combined with high attrition has raised questions about whether postsecondary institutions have been effective in creating environments that facilitate adult student success. This concern led to the current study which investigates whether adult undergraduate perceptions of environmental support and responsiveness to student needs affects persistence patterns.

Tinto's (1993) Academic and Social Integration Model and Schlossberg, Lynch, and Chickerings' (1989) ecological perspective have guided this study. Students' perceptions play a critical role in their willingness to become engaged or involved in the educational environment and therefore affect persistence. Schlossberg, Lasalle, and Golecs' (1990) Mattering Scales were used to measure perceptions of the degree of mattering on five dimensions of postsecondary education; administration, advising, peers, multiple roles, and faculty. It was hypothesized that adult students who perceive the educational environment as a welcoming and supportive place will be more likely to persist toward obtaining their educational goals.

The population samples were drawn from a large urban doctoral granting university located in the southeast. An analysis of covariance was used to

X

determine whether the differences among mean scores (for each of the five mattering subscales) were statistically different. In addition, the test mathematically corrected for the extraneous variables of gender, age, marital status, number of dependents and hours of employment.

Results of this study indicate persistence of adult students is not affected by their perceptions of the educational environmental support and responsiveness to student needs (i.e. mattering). The lack of empirical evidence may suggest that the construct of mattering does not adequately conceptualize the environmental issues important to adult undergraduates or the Mattering Scales' instrument does not accurately operationalize the construct. However, gender differences and employment demands were covariates identified that influenced the degree of mattering perceived.

Creating a community that establishes a sense of mattering for adult students may not have the expected impact on persistence. Further research is indicated in the area of adult students' interaction with the educational environment and its subsequent effect on persistence.

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"MATTERING" DOESN'T MATTER: AN ANALYSIS OF ADULT UNDERGRADUATE PERSISTENCE PATTERNS

Chapter 1

Introduction to the Problem

Over the last few decades, higher education has witnessed a shift in its student population. A steady rise in the number of nontraditional adult student enrollments has permeated colleges and universities. As The National Center for Educational Statistics (1994) states, the population of students over the age of 25 grew 171 percent between 1970 and 1991, compared to a 31 percent increase of the under 25 student population.

The adult undergraduate will continue to comprise an increasingly larger percentage of the college student population. In 1991 adult learners composed approximately 45% of the fall enrollment in institutions of higher education (National Center for Education Statistics, U.S. Department of Education, 1994). The NCES (1994) predicts that by 1998 this population will increase another 7% compared to an increase of only 3% for the under 25 student population.

As a result of this demographic shift and the perceived differences in characteristics of the adult student population, there has been a wide spread call for institutional change to meet their needs and provide an environment for success. As stated in Williamson & Greenwood (1989) "Institutions must respond to their needs, removing barriers; instructors as well must create learning situations which encourage success for these [nontraditional] students" (p.77).

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Institutions have responded to this challenge for change in a variety of ways. Puryear and McDaniels (1990) conducted a survey during the fall of 1987 to investigate the current state of support services for nontraditional students at private four-year institutions in the Southeastern United States. According to the results, "many institutions have initiated a wide range of policies, programs, and services designed to meet specific needs unique to nontraditional students. Frequently reported services include night classes, designated centers or offices for nontraditional students, and adult degree programs" (p. 200).

Although institutions have initiated special services for this adult student population, critics continue to find fault with accommodation and assimilation of the adult population. "Institutional response to new student populations has often been inadequate and inappropriate. Colleges and universities have frequently attempted to fit nontraditional students into traditional programs and services" (Thon, 1984, p.28). "American colleges and universities must continue to make changes and improvements in order to provide optimum learning opportunities for the increasing numbers of reentry adults" (Polson, 1986, p. 18).

Miller (1989) has offered several suggestions for improving the environments for adult undergraduates, such as faculty development, to make professors more responsive to adults' needs, offering courses more appropriate to adults' time restraints, like weekends and distance learning, and providing opportunities for adult peer counseling. Identifying a person or office to serve as

an advocate for adult students and improving orientation services for older students, would also enhance services for the adult student (Thon, 1984).

What is not known is whether these institutional changes are effective in creating environments that improve the success rates of the adult student population. Numerous theories and models have been developed to identify variables that affect adult undergraduate success at degree completion. Yet, adult students pose unique problems to researchers. Although they share the same desire for a college education, adult students are different from the traditional student population. Adult learners "enter higher education at different points in their lives, present highly unique backgrounds and expectations for themselves as learners, and exit into very different life existences" (Kasworm, 1990, p. 366).

In addition, due to their vast array of experiences, multiple roles and external responsibilities, adult students are collectively a more complex population to study than traditional aged students.

> Other than the fact that they are older than traditional aged college students, they often appear to be extremely diverse in terms of their learning styles and academic goals. Also, the number and complexity of the roles and responsibilities of adult life places constraints on the amount of time and effort that adults can spend on their studies because each of these roles or responsibilities involves a continuing commitment of time and energy (Williamson & Greenwood, 1989, p.72,73).

As a result, empirical research on adult undergraduates has been more difficult.

Statement of the Problem

Researchers such as Astin (1975), Bean and Metzner (1985), state that adult students as a group are not as successful as the traditional aged population in obtaining a college degree. "In spite of the spectacular growth in nontraditional student enrollments, the likelihood of nontraditional students finishing a degree program is much less than for traditional students" (Bean & Metzner, 1985, p.487). In addition, Astin's (1975) research revealed that older students, especially women, were more likely to drop out of college than traditional aged students. There has been institutional change to accommodate the adult learner, yet these students tend to be less likely to obtain a degree. What variables contribute to this increased dropout rate? In an effort to shed light on this problem, adult learner theorists have drawn from the attrition literature on traditional aged students.

Persistence of traditional aged undergraduate students has been extensively researched throughout the years. Studies abound on what characteristics of the student and/or institution affect attrition. Pace (1980), Astin (1984) and Tinto (1993) have each developed well known models that attempt to explain the factors that contribute to students' development and success in higher education. Both Pace (1980) and Astin (1984) suggest that the amount of "quality of effort" or "student involvement" will determine whether students are successful in meeting the goals of a college education. According to Astin (1984), "Student involvement

refers to the quantity and quality of the physical and psychological energy that students invest in the college experience" (p. 307). Therefore, educational policies and practices will be more effective if they increase student involvement (Astin, 1984).

Pace (1980) also believes that "what a student gets out of college depends, at least to some extent, on what he or she puts in to it" (p. 10). Pace (1980) places responsibility for student outcomes and success on both the student and the institution. The institution provides opportunities for development and involvement, yet the student must allocate both time and effort towards these activities. "Some experiences surely do have greater potential for enhancing and development than others. And for the most part such experiences also require more effort" (Pace, 1980, p. 10).

Although these models have been extensively researched, it has been primarily with the traditional student population. Astin (1984) agrees that little is known about the involvement issue for the adult learner. He speculates that "academic involvement is far more important to adult learners than to late adolescent learners" (p. 93). This has not been confirmed in the literature. "Neither departing GPA nor returning GPA predicted retention, and GPA does not appear to have the same force in the retention of nontraditional students as it does for traditional students" (Shields, 1994, p. 20). In addition, "College grade

average, however, may be relatively less predictive of persistence for part-time and older commuter students than for their more traditional counterparts" (Bean and Metzner, 1985, p. 521).

Tinto (1993) has developed the "Academic and Social Integration Model" in researching undergraduate attrition. His model has been used extensively in studying the traditional student population and to some extent the nontraditional student population. Where Pace (1980) and Astin (1984) describe "Quality of Effort" and "Student Involvement", Tinto (1993) believes both academic and social integration are key to persistence for both traditional and nontraditional students. According to Tinto (1993), "The process of persistence in college is by extension, viewed as a process of social and intellectual integration leading to the establishment of competent membership in those communities. Conversely, departure from college is taken to reflect the unwillingness and/or inability of the individual to become integrated and therefore establish membership in the communities of the college" (p. 121). Tinto's integration theory has been applied to the adult student population, although with mixed results.

Bean and Metzner's (1985) theoretical model has been widely used in research on identifying variables key to adult undergraduate attrition. According to Bean and Metzner (1985), "The chief difference between the attrition process of traditional and nontraditional students is that nontraditional students are more affected by the external environment than by the social integration variables

affecting traditional student attrition" (p. 485).

Although Bean and Metzner (1985) identified the importance of external environmental variables, other researchers, including Schlossberg, Lynch and Chickering (1989), have stated that adult students' perception of the educational environment plays a key role in their continued enrollment. "We need to approach educational environments from an ecological perspective, to see our institutions as environments that have the potential for facilitating or hindering adult learning" (Schlossberg, Lynch, & Chickering, 1989, p.23).

According to Banning and Hughes (1986) the ecological perspective will guide institutions in their efforts to respond to student diversity. "Campus activities programs and, especially, involvement initiatives must seek to change the environment so that campus norms and values support student involvement and the sense that students matter" (Gonzalez, 1989, p.24).

If the concepts of involvement and social integration are extended to the adult student population, alternative definitions are needed. "Adult learners cannot be involved in the same way as their younger counterparts, however, Astin suggests that involvement contains a psychological as well as an activity dimension. Therefore, even though one is not physically involved in a setting full time, one can feel committed to the learning process" (Schlossberg, Lynch, Chickering, 1989, p. 29).

Many who work with adult learners have found that these nontraditional

students can be successful in an environment that reaches out and helps them develop a sense of community. In John Gardner's (1989) discussion about *Building Community*, he states, "We know that where community exists it confers upon its members identity, a sense of belonging, and a measure of security" (p. 73).

This concept of belonging is a theme emerging throughout research on students in higher education, especially as it relates to the nontraditional population. George Kuh (1991), in discussing *Involving Colleges*, states that "More important to encouraging involvement is creating a sense of belonging, a feeling on the part of students that the institution acknowledges the human needs of social and psychological comfort, and that they are full and valued members of the campus community" (p. 321). Jacoby's (1992) research focused on what the commuter student needs from the college environment and states, "Commuter students often feel unwanted, that they do not "belong" at the institution. In many cases colleges fail to provide adequate opportunities for commuter students to develop relationships with faculty, staff, and peers.... People rarely feel connected to a place where they have no significant relationship" (p. 31).

In addition, Rendon's (1994) research on first semester freshman, verified the importance of campus involvement and developing a sense of community. Unfortunately, the nontraditional student population was least likely to become involved on their own. "In essence, I learned that nontraditional students have not

acquired the skills to fully utilize the college. They usually feel like they don't belong" (Rendon, 1994, p.6). Throughout her interviews, students described "validating" experiences as central to their developing a sense of belonging. "What they remembered and became excited about were incidents when they experienced validation. Validation occurred when faculty, staff, friends, or family members actively reached out to them and affirmed them as being capable of doing academic work, as well as supported them in their academic endeavors and social development" (Rendon, 1994, p.6).

A sense of belonging, or validation, are concepts similar to mattering, as used by Schlossberg, Lynch, and Chickering (1989) in describing the needs of adult learners. "Another critical dimension for adult learners is their need to matter. Whether they are moving in, moving through, or moving on, they need to feel appreciated and noticed" (p. 21).

According to Rosenberg and McCullough (1981), "It is fair to conclude that mattering is a motive; the feeling that others depend on us, are interested in us, are concerned with our fate, or experience us as an ego-extension exercising a powerful influence on our actions" (p. 165). Rosenberg and McCulloughs' (1981) discussion of mattering originates from their research on adolescents. The researchers theorize that adolescents who perceive indifference from parents, feel as if they don't matter, are therefore more likely to exhibit negative aspects of mental health. "As far as the individual is concerned, the adolescent who feels he

matters little to his parents has lower self-esteem, is more depressed and unhappy, is more anxious and experiences other negative affective states, and is more likely to be delinquent" (Rosenberg & McCullough, 1981, p.179).

Mattering takes on greater significance when viewed from the perspective of community and social integration. For it not only acknowledges our dependence on others but also their dependence on us (Rosenberg & McCullough, 1981). "Mattering also is important for society, for it is a significant source of social cohesion. It is frequently held that one of the main forces binding people to society is their dependence on others. Humans cannot survive or even be truly human without other people. But perhaps equally important is others' dependence on us" (Rosenberg & McCullough, 1981, p.180).

Schlossberg (1989) extended this concept of mattering to her work with adult learners. "Clearly, institutions that focus on mattering and greater student involvement will be more successful in creating campuses where students are motivated to learn, where their retention is high and ultimately where their institutional loyalty for the short and long term future is ensured" (Schlossberg, 1989 p. 14). When adult students feel that they matter to the institution, they may persist more toward obtaining a degree.

Research Questions

Unanswered questions about adult undergraduate persistence remain. Is persistence of adult undergraduates affected by their perception of the educational

environment? "It is the daily interaction of the person with other members of the college in both formal and informal academic and social domains of the college and the person's perception or evaluation of the character of those interactions, and those that involve the student outside the college, that in large measure determine decisions as to staying or leaving" (Tinto, 1993, p. 136). Tinto's (1993) work suggests that students' perceptions of the educational environment play a role in their willingness to become engaged or involved in the learning experience. Collecting data on adult students' perception of the degree of mattering is one method toward understanding the complex interaction between students and the educational environment as it leads to persistence or departure from the university. The purpose of this study was to collect information from adult undergraduates in an effort to answer the following question. How do adult undergraduate persisters and nonpersisters differ in perception of their mattering to the educational environment? Mattering was measured on five dimensions of postsecondary education identified by Schlossberg, Lasalle and Golec (1990): administration, advising, peers, multiple roles and faculty. The following specific research questions guided the study:

1. Do adult undergraduate persisters and nonpersisters differ in their perception of the extent to which...

    a. campus policies and procedures are sensitive to adult student concerns?
    b. advisers and other information providers attend to their questions and concerns?

     c. they feel they belong on campus and are accepted as peers in the
        classroom?

     d. the campus acknowledges competing demands on their time?

     e. faculty members accept them in the classroom?

2. Do short and long term nonpersisters differ in their responses to the
    Mattering Scales?

3. When gender, age, marital status, number of dependents and hours of
    employment are controlled for, do persisters and nonpersisters vary
    in their responses to the Mattering Scales?

This study will seek to answer some of the questions surrounding those

adults who persist at their educational goals and those who choose to depart from

the institution. It will also test the hypothesis of Schlossberg (et al., 1989) "that

adults who score high in mattering--that is, who feel noticed, appreciated, and

depended upon by their institutions will become and remain more involved in

higher education" (p. 29).

Theoretical Foundation

Because Tinto's (1993) Model of Academic and Social Integration has

been widely applied to the adult learner population, it will serve as the theoretical

foundation for this study. Tinto (1993) suggests that integration within the

college's communities is key to persistence in obtaining educational goals. "Our

model of persistence, is at its core, a model of educational communities that

highlights the critical importance of student engagement or involvement in the

learning communities of the college" (Tinto, 1993, p. 132). Tinto's (1993)

description of higher education institutions as a collection of communities suggest

that colleges and universities play a key role in nurturing students' commitment toward achieving their educational goals.

Institutions of higher education are not unlike other human communities, and the process of educational departure is not substantially different from the other processes of leaving which occur among human communities generally. In both instances, departure mirrors the absence of social and intellectual integration into the membership in community life and of the social support such integration provides. An institution's capacity to retain students is directly related to its ability to reach out and make contact with students and integrate them into the social and intellectual fabric of institutional life. It hinges on the establishment of a healthy, caring educational environment which enables all individuals, not some, to find a niche in one or more of the many social and intellectual communities of the institution (Tinto, 1993, p.204).

These communities play an integral role in providing the connectedness we need to grow, develop and succeed as social beings. Adult learners' perceptions may affect their ability to become involved or integrated within the educational environment and therefore factor into persistence.

Significance of Study

Enrollment management has become critical to the survival and vitality of colleges and universities approaching the twenty first century. Information is needed that will provide not only descriptive data about a large adult student population but will also offer some insight into how the interaction between students and the college environment play a role in their success. Many institutions are refocusing their retention efforts toward the adult student population. "As the adult learner comprises increasingly larger percentages of our student populations, colleges and university environments must continue to be modified in order to meet the special needs of this important group" (Polson, 1986, p.20). Knowledge about this population of students will enable institutions to respond more effectively to their needs. Enrollment managers must be able to "communicate to inform, motivate, and service these markets" (Williams, 1984, p. 69).

In addition to the information needed to better allocate resources, empirical research must add to the body of literature on the adult undergraduate population. "Past research literature on adult students in traditional undergraduate education has been highly divergent in form and substance. Often studies have suggested conflicting perspectives, value assumptions, and beliefs concerning the adult undergraduate within the higher education context" (Kasworm, 1990, p.363). An informative study using a qualitative meta-analysis methodology was conducted by

Kasworm (1990) and posed several questions surrounding the adult student on campus. One of her questions suggests research use a more ecological perspective on examining adult students and their interrelationships with the undergraduate experience and other key life roles. Kasworm (1990) asked, "How can we adequately capture the reality of a transactional relationship between adult students and the undergraduate institution" (p. 365)? Measuring student perceptions' is a means toward assessing this relationship between the educational environment and adult learners' success.

Several noted theorists, such as, Tinto (1993), Bean & Metzner (1985), and Schlossberg, Lynch, & Chickering (1989) have attempted to shed light on the attrition process for the adult student population. Empirical research is now needed to sift through and identify which variables are key to the educational success of adult learners.

Chapter 2

Related Literature

Because the literature is extensive on issues and concerns of the adult

learner, only those considered most relevant to this study will be discussed. The

following review presents the progression of adult learner literature from

characterizing their unique needs, to barriers that hinder success and subsequently

to the more current discussion of student involvement and campus ecology.

Characteristics of Adult Learners

Much of the early research on adult learners focuses around their unique

characteristics and needs as compared to the traditional aged population. Early

studies typically described the adult student population as more mature and

independent, spending less time on campus with family and or job responsibilities,

and primarily interested in academics when on campus (Thon, 1984). These

descriptions provide limited information about the interaction between the adult

learner and his or her educational environment. As a result, institutions of higher

education are not as adequately prepared to integrate these nontraditional students.

Researchers such as Kasworm (1980), went beyond the descriptive to more

informative studies that compared the traditional and nontraditional student

populations in terms of intellectual and psychological differences. Kasworm

(1980) completed a study that "explored the effects of differences in the

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intellectual and socio-emotional orientations of younger and older undergraduate students in a similar undergraduate university setting" (p. 37). Through this study and combined with other varied research and andragogical theory, she presented a typology of differential characteristics of younger and older undergraduates. According to this typology, older undergraduates bring independence, multiple external responsibilities, and a broad range of experiences from which to relate. "Older undergraduates have developed and utilized analytical, theoretical problem-solving skills. Learning has been experienced in a more interrelated pattern within the life processes as opposed to solely school-oriented activities. Lastly, older adults have made a conscious commitment among alternatives to return to the undergraduate environment" (Kasworm, 1980, p. 44). These differences may affect the interrelationship between the adult student and the undergraduate institution.

As a result of these studies comparing traditional and nontraditional aged students, calls for institutional change and adjustment to accommodate the growing nontraditional aged student population were forthcoming. Institutional changes are needed that not only vary the types of services offered or offer courses at more convenient times, but also include faculty development in the area of creating classroom environments that cultivates age integration. Faculty knowledge of innovative instructional strategies could "maximize and compliment the intellectual development of older students" (Kasworm, 1980, p.44).

Barriers to Participation

While studying the complexity of the adult student, many researchers began

to focus on what hindered or prevented adults from being successful at obtaining

their educational goals. Patricia Cross is known as a pioneer in research on adult

learners. In the early 1980s she was most successful at synthesizing the current

literature on adult learners. Of particular interest is her analysis of reasons why

adults do not participate in further learning. She has classified obstacles identified

by adults from several research studies into three categories: situational,

institutional, and dispositional barriers. Each of these categories further expose

the complexity of the adult as a learner. According to Cross (1981), situational

barriers are those which place restrictions on the individual within their daily life,

such as job, home responsibilities, lack of time and cost. Dispositional barriers

are more difficult to estimate accurately due to their personal nature. Attitudes

and self perceptions about academic ability or fears associated with adult learning

are not as socially acceptable as barriers as are cost or inconvenience. Lastly,

institutional barriers revolve around policies and procedures associated with the

learning environment, such as inconvenient schedules or locations, restricting

transfer or attendance policies and the overall bureaucratic nature of a college or

university. Cross (1981) states that institutional barriers ranked number two

behind situational barriers among the potential adult learners surveyed. As a result

of much of the research on barriers to adult learning, colleges and universities

began making institutional changes to accommodate this growing population. Unfortunately, what adult learners perceive may continue to pose barriers, whether real or not. "Surveys are intended to tell us what people perceive to be obstacles- which may have as much to do with lack of participation as actual barriers" (Cross, 1981, p. 104).

Involvement Theory

The quest for understanding college student attrition guided many researchers to begin viewing the institution as a community and examine this interactional relationship between the educational environment and its students.

Tinto's (1993) view of a college or university as a collection of communities and subcultures places responsibility on the institution to create policies and practices that will enable students to become integrated into the college system. "In the interactive system of a college, almost any institutional action, whether in admissions, counseling, advising, academic programs and classrooms, or student life, will eventually affect student persistence and will do so in often unintended and quite unexpected ways" (Tinto, 1993, p. 205).

Tinto's model (1993) draws from the work of Spady (1970), who utilized Durkeim's theory of suicide to provide "a fruitful vehicle for summarizing a large proportion of current research [on student attrition], and focusing future attention on the interaction between student attributes (i.e., dispositions, interests, attitudes, and skills) and the influences, expectations, and demands imposed by various

sources in the university environment" (Spady, 1970, p. 64). Spady (1970)

theorized that "both the academic and social systems of the university are regarded

as important frameworks from which the dropout process must be examined" (p.

64). Spady (1970) discussed intrinsic rewards both from the academic and social

systems of the institution as influencing institutional commitment and therefore the

decision to stay or leave. Intellectual development is an important component of

personal development and an important intrinsic reward in addition to the extrinsic

reward of grades. Whereas, "having attitudes, interests and personality

dispositions compatible with the attributes and influences of the environment" is

important, the establishment of close relationships will also provide for the

intrinsic rewards necessary for a stronger commitment to the institution (Spady,

1970, p. 77).

Using "Involvement Theory" as described by Tinto (1993), has provided a

more meaningful discussion of college student persistence. No longer are

researchers solely describing the characteristics of students and their needs. Now

they are studying students' interaction within the educational environment.

Persistence

Research using Tinto's (1993) Academic and Social Integration Model has

been well documented in the literature both with traditional and nontraditional

student populations, (Ashar and Skenes, 1993, Johnson & Pritchard, 1989,

Stoeker, Pascarella & Wolfle 1988, Bers & Smith 1991, Cleveland-Innes, 1994,

Mutter, 1992 and Shields, 1994). Stoeker, Pascarella and Wolfle (1988) completed one of the largest studies that supported Tinto's model. The researchers obtained data from respondents to the 1971 and 1980 Cooperative Institutional Research Program (CIRP) surveys. Persistence was defined as degree completion within the nine years of the study or enrollment in college at the time of the nine year follow up. Nonpersistence was defined as either not completing a degree or not being enrolled in college nine years later. Tinto's academic integration was defined as the sum of average undergraduate grades plus membership in a scholastic honor society. Participation in college plays, editing a school publication, president of one or more student organizations and knowing a faculty or administrator served as evidence of social integration. Statistical regression was utilized to analyze the data. Results suggest a causal relationship between the defined variables and persistence. "A national, 9-year, multi-institutional study supports Tinto's model of the persistence withdrawal process and suggests that the most important determinants of persistence are the students' academic and social integration at the institution" (p. 196).

Because Tinto's model takes on an interactionist perspective, the interaction between the student and the environment has an effect on whether the student chooses to remain in college. "His [Tinto's] contention that persistence-withdrawal behavior is largely the result of a longitudinal process of person-environment fit was generally supported by the data" (p. 205). Like Pace and

Astin, Tinto acknowledges that student precollege characteristics will influence

their interactions with the college experiences. "The student's predispositions and

experiences within the institutional environment lead to varying levels of academic

and social integration, the core concepts of Tinto's model" (p. 196). Subsequently,

academic and social integration will be most important collegiate determinants of

persistence (Stoeker, Pascarella, & Wolfle, 1988). Although this study was

conducted as a secondary analysis and age disregarded as a variable, the study's

longitudinal design presents convincing evidence to support Tinto's model.

Tinto's Academic and Social Integration Model (1993) also served as the

foundation for two studies addressing persistence within the community college

setting (Bers & Smith, 1991, and Mutter, 1992). Both studies administered

measuring devices that operationalized the constructs academic and social

integration. Bers and Smith (1991) embedded a 30-item scale developed by

Pasacrella and Terenzini (1980) into a student survey questionnaire. The items

comprising the scale appear to be more comprehensive and relevant than surveys

used in other studies. Mutter (1992) used a similar questionnaire that was

developed by Pascarella and Chapman's 1980 Project CHOICE study, although

information regarding the specific survey items was not discussed. Additionally,

both studies identified nonpersisters as not being enrolled at the time of data

collection.

Although both studies were similar in design, conclusions drawn differed.

Mutter (1992) found academic integration to be a significant factor in persistence. "Hours spent preparing classroom assignments and numbers of conversations with faculty, staff, or advisers may be associated with persistence or nonpersistence" (Mutter, 1992, p. 313). Whereas, "In general, factors of social integration played very little part in persistence or nonpersistence of the current and former students in the study" (Mutter, 1992, p. 313). In comparison, the Bers and Smith (1991) study revealed "students' Academic and Social Integration differentiated persisters from nonpersistence, although Social Integration made a larger contribution to group discrimination"(p. 551). Neither of the two studies discussed age as a significant source of variance. Research must continue that specifically speaks to the nontraditional population and therefore may offer more conclusive results.

Several studies have been conducted using Tinto's model, either exclusively with the adult nontraditional student population or in comparison with the traditional student population. Johnson & Pritchard (1989) compared retention risks for both traditional and nontraditional aged students. Interviews were conducted on a sample of students who did not re-enroll for the following spring semester. Students were questioned about their reasons for coming to the college and for not re-enrolling. The majority of the respondents, both traditional and nontraditional, cited job and personal reasons for not re-enrolling. Social involvement was measured by utilization of support services, such as math and writing lab, counseling and career centers. Although their research demonstrated

similar precollege characteristics and low social involvement for both traditional and notraditional students, adult students were more likely to stop-out. Younger students withdrew for academic reasons, whereas, "most nontraditional nonpersisters chose to leave school and were not forced to leave because of academic reasons" (p. 27). Limitations of the study were small sample size and age as the only variable distinguishing traditional and nontraditional student population. However, the study confirmed the importance of "integration into the college community" as important to retention efforts.

Cleveland-Innes (1994) evaluated Tinto's model with both traditional and nontraditional student populations in an effort to evaluate age-related characteristics and their impact on the decision to persist or withdraw. The researcher "singled out two characteristics that appear both to differentiate nontraditional-age students from traditional-age students and to potentially affect the factors that Tinto has outlined as critical to the attrition process: (1) the primacy of the student role, and (2) the quality of the student-faculty relationship.... The characteristics of nontraditional-age students, in differing degrees, create a different relationship with the postsecondary institution than that of the traditional-age students" (Cleveland-Innes, 1994, p. 426).

The sample was obtained by a random selection of ten degree-based, first-to-fourth-year courses. Individual students were asked to complete a survey instrument the researcher developed. The sample yielded unequal participants, 72

percent traditional aged and 28 percent nontraditional aged students. Dropouts were defined as those participants who were not enrolled one year after the initial data collection. Social integration was measured by the number of hours spent on campus per week, membership in campus organizations, friendships on campus, a peer interaction scale and faculty interaction scale. Academic integration was defined as self-reported GPA, an intellectual development scale and a faculty concern for student development scale. Regression analyses was completed on the resulting data.

Her results indicate that Tinto's integration model did not fully explain the attrition process for the sample groups. "Academic and social integration do not show direct effects on drop-out decisions for nontraditional-age students, but academic integration could be said to have an indirect effect on drop-out as it has a significant effect on commitment (Cleveland-Innes, 1994, p. 439). According to the results, "commitment was the only useful predictor variable" for nontraditional students (Cleveland-Innes, 1994, p. 424).

Because variables external to the institution were not accounted for in Cleveland-Innes (1994) study, the factors that directly impact commitment cannot be fully explained. In addition, further analysis of the research methodology is needed before concurring with the researcher's conclusions. Insufficient information on the measuring devices along with sampling intact classrooms, raises concern over the study's validity.

Shields (1994) applied Tinto's model exclusively to a sample of nontraditional students to examine the factors that affect retention, academic success, and progress. Interviews were conducted on a sample of nontraditional students who had not been enrolled for three consecutive semesters during their college careers. Retention was determined by current enrollment status. Tinto's social integration construct was measured by questions revolving around campus involvement. Utilization of campus resources such as the counseling center, library, career planning center and visits with faculty and academic advisor were regressed with enrollment status, returning GPA and progress, defined as number of credit hours completed. Neither background variables, academic integration nor external variables demonstrated any significant relationship to retention. Advisement was the only variable which appeared to affect enrollment status. "These findings suggest that for the nontraditional student academic advising is the primary means of institutional integration" (Shields, 1994, p. 22). The results of this study tend to support "Tinto's prediction (1987) that interaction within the institution (in this case, through academic advising) affects persistence" (Shields, 1994, p. 22). This study appears to be one of the most valid with the adult student population, although 27% of the sample already had a four-year degree.

Ashar and Skenes (1993) also applied Tinto's model to a group of nontraditional students. Dropout rates and academic and social measurement scores were computed for individuals attending 25 adult education classes. The

researchers acknowledged that using intact groups may limit the findings. Additionally, items from a routine student information questionnaire may not have accurately reflected the concepts of academic and social integration. Outside of the before mentioned limitations, the researchers concluded that "the social integration variable has a significant and positive effect on retention, whereas, academic integration as well as career integration do not have such an effect" (Ashar &Skenes, 1993, p. 98).

As indicated with the previous discussion, Tinto's Model (1993) has been widely supported by empirical research. Yet, the operational definitions for academic and social integration continue to remain elusive. Further research is needed to clarify the environmental variables that lead to persistence.

A more recent model of nontraditional student persistence has been proposed by MacKinnon-Slaney (1994) to guide counselors who work with adult learners. "The Adult Persistence in Learning (APIL) model focuses on personal issues of the individual adult learner, learning process issues, and environmental issues related to the particular institution to guide counseling services for adult learners" (MacKinnon-Slaney, 1994, p.268). Environmental issues such as "information retrieval, awareness of hindrances and opportunities and the compatibility of the student with the institutional environment all affect the climate for learning" (p. 272). "Educational environments that facilitate learning for adults are welcoming places" (p. 273). MacKinnon-Slaney (1994) confirms the

importance of a "facilitative environment" as presented by Schlossberg, Lynch, and Chickering (1989). Not only do "counselors play a key role in creating a climate of caring in the midst of a potentially rigid bureaucratic system", but they can also help "adults scrutinize the reality of themselves and the reality of the academic environment to adjust to the everyday challenges" (p. 273).

The APIL model suggests "that the successful persistence of adults in higher education is a complicated response to a series of issues" (p. 274). The APIL model (1994) concludes that the perceived institutional environment plays a key role in the persistence of adult undergraduates. Incorporating an ecological perspective in studying the institutional environment and its affect on persistence may yield new insight.

Campus Ecology

Schlossberg, Lynch and Chickering (1989) have developed an ecological approach towards increasing adult undergraduate retention. "The essence of the ecological perspective is that the onus cannot be placed on either the individual or the environment; rather human behavior is a continuous interaction between the two" (p. 23). "What we need now in higher education is a comprehensive, integrated approach to creating educational environments responsive to the diverse characteristics, conditions and needs of the adults trying to use the rich resources that higher education in the United States has to offer" (p. XIII).

These researchers have found that in order for adult undergraduates to be

successful policies and practices must be designed to assist the adult student as they move into, move through, and move out of higher education. "Environmental responses need to provide differential opportunities for involving adult learners-that is, for those entering to learn the ropes, for those moving through to hang in there, and for those moving on to disengage and reinvest" (Schlossberg, Lynch, & Chicerking, 1989, p.32). In addition to specific programs for adults at each stage of the educational process, creating a caring environment is essential for retention. "Our basic point is that all students should be treated as though they matter. They should be helped to create and sustain the best fit possible with the institution and make the best use possible of its resources" (Schlossberg, Lynch, & Chicerking, 1989, p. 221).

Gonzalez (1989) supports the concept of campus ecology and its importance to student involvement. In addition, "one important outcome is the creation of a community that establishes a sense of mattering for its members" (Gonzalez, 1989, p. 17). Mattering and a sense of community can result when institutions of higher education approach change from the ecological perspective.

Campus ecology adapts Lewin's supposition that behavior is a function of the interaction between the characteristics of the organism and the nature of the environment (Banning and Hughes, 1986). "To think ecologically is to consider how persons, settings, and events can become resources for the positive development of communities: to consider how the resources can be managed and

conserved; and to approach research so that the effort expended will be helpful to the preservation and enhancement of community resources" (Trickett, Kelly, and Vincent, 1985, p. 283). This concept is discussed in today's literature on the educational environment and its effect on its students. "Campus ecology theory (Banning and Kaiser, 1974) has reminded us of the importance of broadening student development theories to more fully include environmental issues" (Gonzalez, 1989, p. 18).

Banning and Hughes (1986) have further defined campus ecology to include all the environments that impact commuter students, both within and outside the campus . "Use of the ecological perspective has pointed out the diversity of the personal characteristics and the multiplicity of environments for commuting students. To the degree that behavior is an outcome of these two variables, then descriptions of commuting students' behavior should be equally complex" (Banning and Hughes, 1986, p. 19). Therefore, the challenge is to "work with commuting students to design their campus ecology so that the behavioral outcome is more involvement, awareness, satisfaction, and completion" (Banning and Hughes, 1986, p. 20). Adult learners comprise a large percentage of the commuter student population, and therefore will benefit from the ecological approach to student retention.

Banning and Hughes' (1986) assumptions underlining the ecological approach to college environments support Tinto's concept of integration into

educational communities as critical to involvement. "Because of the wide range of individual differences among students, fitting the campus environment to the students requires the creation of a variety of campus subenvironments" (Banning and Hughes, 1986, p. 21).

In an effort to evaluate campus ecology on student retention, Whiston (1989) conducted a study to discriminate environmental perceptions among persisters, nonpersisters, and faculty members. "The study's basis was that the campus environment has a substantial impact on student persistence and that students who are more congruent with the campus environment are more likely to continue their education in that ecological setting" (Whiston, 1989, p. 188). A random sample of freshmen yielded a response rate of 53 percent. Persisters composed 87 percent of the sample, with nonpersisters only composing 13 percent. All students in the sample were classified in good academic standing. In addition to the student sample, faculty perceptions of the educational environment were also measured. The Educational Testing Service's Institutional Functioning Inventory instrument was used to measure and compare the perceptions among the three groups. The instrument provided six scales, Intellectual-Aesthetic Extra curriculum, Freedom, Human Diversity, Concern for Improvement of Society, Concern for Undergraduate Learning, and Democratic Governance. A discriminant analysis using the Chi-Square statistic was performed on the survey data. Contrary to what was expected, "Students' perceptions, whether they stayed

or left the institution, were very similar, while faculty perceptions were different"
(Whiston, 1989, p.190). The study's design sheds doubt on the value of the
findings. The fact that only first semester freshmen were sampled, along with a
low response rate from the nonpersisters, and persistence defined as consecutive
semester enrollment, limits its generalizability. In addition, the operational
definitions of the educational environment in terms of the six survey scales, do not
appear consistent with the previous discussion of campus ecology. Therefore,
further research is needed that will better clarify the environmental variables and
be more consistent with the campus ecological perspective.

Summary

Literature on adult learners has evolved from the descriptive to more
comprehensive research. Recent studies suggest that decisions to remain or
withdraw from college are a result of the complex interaction between adult
learners and their internal and external environments. The studies included in this
review lend support to the supposition that adult learners' perceptions of the
educational environment play a key role in involvement and therefore affect their
willingness to persist toward educational goals.

What the literature base continues to be deficient of are consistent
conclusions drawn from valid and reliable studies. In addition, there is a need for
more clear and precise operational definitions of environmental variables and their
effect on persistence. The study that follows is an attempt to better define and

clarify environmental variables that may affect adult undergraduate persistence

and provide conclusions based on sound research methodology.

Chapter 3

Research Methodology

This study seeks information that will help to identify variables that have an effect on adults' achieving their educational goals. There is a need for further research that empirically tests the theoretical postulations concerning adult undergraduate persistence. This study compares persisters and nonpersisters in perception of their mattering to the educational environment.

A causal-comparative method was selected for this study because the behavior in question, persistence, could not be manipulated. "The causal-comparative method is aimed at the discovery of possible causes and effects of a behavior pattern or personal characteristic by comparing subjects in whom this pattern or characteristic is present with similar subjects in which it is absent or present to a lesser degree" (Borg & Gall, 1989, p. 537). The study compares people displaying different outcomes; persistence or nonpersistence, and examines whether they differ according to the predictor; mattering (Light, Singer, & Willet, 1990). Because both the predictor and outcome variables have already occurred, the research becomes a retrospective case-control study. Unlike prospective studies which move from predictor to outcomes, the retrospective study moves from outcomes to predictors.

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Research Questions

This study attempted to answer the following question. How do adult undergraduate persisters and nonpersisters differ in perception of their mattering to the educational environment? It was anticipated that the mean scores for each of the five Mattering Subscales would be significantly greater for adult undergraduate persisters than nonpersisters. Data was collected and analyzed to answer the following research questions.

1. Do persisters and non persisters differ in their perception of the extent to which...

   a. campus policies and procedures are sensitive to adult student concerns?

   b. advisers and other information providers attend to their questions and concerns?

   c. they feel they belong on campus and are accepted as peers in the classroom?

   d. the campus acknowledges competing demands on their time?

   e. faculty members accept them in the classroom?

2. Do short and long term nonpersisters differ in their responses to the Mattering Scales?

3. When gender, age, marital status, number of dependents and hours of employment are controlled for, do persisters and nonpersisters vary in their responses to the Mattering Scales?

Operational Definitions

Persisters- adult learners currently enrolled in an undergraduate degree program who are classified as senior status having achieved a minimum of 85 credits hours

Nonpersisters- adult learners previously enrolled in an undergraduate degree program, and not re-enrolled at the time of data collection

Short term nonpersistence- enrolled Spring 1995 and not re-enrolled Fall 1995

Long term nonpersistence- enrolled Spring 1994 and not re-enrolled Fall 1995

Adult learners- individuals meeting the minimum age of 25 when first enrolled at the institution, living off campus, and who are or have been enrolled in a baccalaureate degree program

Mattering- "a motive; the feeling that others depend on us, are interested in us, are concerned with our fate, or experience us as an ego-extension exercising a powerful influence on our actions" (Rosenberg & McCullough, 1981, p. 165).

Survey Instrument

Schlossberg (1990) and her colleagues have designed an instrument, the Mattering Scales, that operationalizes the construct mattering, in an effort to measure adult students' perceptions of their educational environment. The instrument is a campus ecology measure that assesses how well adult undergraduates feel they fit into the educational environment (Schlossberg, Lasalle & Golec, 1990). "You can compare different subgroups of adult learners, asking whether some groups feel they matter more than others. In addition, you can

determine if those high in mattering (i.e., those that feel the educational environment is responsive to their needs) have a lower dropout/stopout rate than those adult learners who score low on the mattering scales" (Schlossberg, et al., 1990, p.4).

The scale is subdivided into five dimensions of the higher education environment; administration, advising, peers, multiple roles and faculty. Following is a brief description of each of the scales as discussed in the Mattering Scale manual (Schlossberg, et al., 1990, p. 4):

a. The *Administrative* Subscale measures adult students' perceptions of the extent to which campus policies and procedures are sensitive to adult student concerns. High scorers may describe their campus policies as accommodating in terms of timing of class offerings, payment of fees, and registration scheduling. They may also report campus activities and student newspaper articles relevant to adult students' concerns.

b. The *Advising* Subscale measures adult students' perceptions of the extent to which advisors and other information providers attend to their questions and concerns. High scorers may describe positive experiences with faculty advisors who are available at convenient times and who appear interested in their concerns. They may also report a clear understanding of administrative rules and regulations and accessibility of administrative staff.

c. The *Peers* Subscale measures adult students' perceptions of the extent to which they feel they belong on campus and are accepted as peers in the classroom. High scorers may describe feeling comfortable in the classroom and a sense of camaraderie with other students. They may report a give and take relationship where their different strengths and weaknesses are as accepted as those of traditional aged students.

d. The *Multiple Roles* Subscale measures adult students' perceptions of the extent to which the campus acknowledges competing demands on their time. High scorers may describe rules and policies flexible enough to allow students to meet other responsibilities. They may report evening hours for administrative offices, options for part-time students, or some acknowledgement of their other responsibilities.

e. The *Faculty* Subscale measures adult students' perceptions of the extent to which faculty members accept them in the classroom. High scorers may describe a feeling of comfort in the classroom. They may report that they are treated equitably in comparison with traditional aged students. They may describe faculty members who are accepting of their life experiences and who welcome diversity in the classroom.

"The instrument is composed of a set of perceptual measures consisting of 45 items that generate five subscale scores. Respondents indicate whether they agree or disagree with items that describe their feelings about the institution at

which they enrolled. Items are scored on a 5-point scale, with 5 representing a high score on mattering" (Schlossberg, et al., 1990, p. 2). The survey instrument yields a set of five subscores to be reported individually. Internal consistency coefficients (Cronbach Alpha) for the five subscales ranges from .77 to .86 (Schlossberg, et al., 1990).

Two versions of the survey instrument were distributed to adult learners. Items composing each subscale were printed in both the present and past tense. The currently enrolled group completed the present tense version (Appendix A-1) and the previously enrolled groups completed the past tense version (Appendix A-2). In addition, biographical information was requested along with questions about motivation for returning and withdrawing from college. It was estimated that the entire survey instrument could be completed in approximately 20 minutes.

Educational Environment

The population samples were drawn from Virginia Commonwealth University, a large urban doctoral granting university located in the southeast. The state supported institution has approximately 21,000 undergraduates, graduate and health professions students with the greatest majority being commuter students. Undergraduates comprise slightly more than half of the student population.

The university houses two campuses, about two miles apart. The west campus consists primarily of traditional academic schools along with a wide variety of art and humanities programs. The east campus is comprised of

professional schools such as, The School of Medicine, Allied Health Professions, Pharmacy, and Nursing.

Adult undergraduates are admitted and processed in the same manner as the traditional student population. Once students are accepted in to a degree program, administrative procedures and academic advisement are conducted within each school. There are no special services or advocates for the adult learner population. Registration and advisement are designed equally for traditional and nontraditional students. Limited evening registration is available to all students enrolled. Occasionally, new adult students are offered special orientation seminars that will help them navigate the university's policies and procedures.

The university calendar operates on a semester schedule. A variety of day and evening courses are offered within each of the schools. Few courses are offered off campus or in alternative formats such as weekends or in condensed semesters.

Adult Undergraduate Population

The population of adult undergraduates from which the samples were drawn are described as over the age of 24 when first admitted to the university, enrolled in an undergraduate degree program while attending the institution, and living off campus. Adult learners taking graduate courses, job related courses, or personal enrichment courses outside of a degree program were not included in the study. Only those adult learners seeking a baccalaureate degree were included in

the population . Transfer students admitted to the university during the semester of data collection were also eliminated from the population. It is believed that these students have not been on campus long enough to provide relevant data about the educational environment.

940 VCU adult students met the above criteria and were currently enrolled in an undergraduate degree program at the time of data collection. 215 adult learners met the above mentioned criteria, were last enrolled during Spring 1995, and had not re-enrolled since that date. 150 adult learners met the specified criteria and were last enrolled during Spring 1994 and had not re-enrolled since that date.

Sample Selection

The VCU Office of Institutional Research and Evaluation provided three computer generated randomly drawn samples from the specified adult undergraduate population. Following is a description of each sample group.

a. The persisters included 120 (12.7 percent of the population) adult learners meeting the minimum age of 25 when first attending the university, currently enrolled in an undergraduate degree program and coded as senior status by having completed a minimum of 85 credit hours.

b. The short term nonpersisters included 140 (65 percent of the population) adult learners meeting the minimum age of 25 when first attending the university, enrolled in an undergraduate degree program during the spring semester of 1995

but not re-enrolled for the fall 1995 semester. These individuals voluntarily left the university in good academic standing.

c. The long term nonpersisters included 150 (100 percent of the population) adult learners meeting the minimum age of 25 when first attending the university, enrolled in an undergraduate degree program during spring semester 1994 but not re-enrolled as of fall 1995. These individuals voluntarily left the university in good academic standing.

The sample size for the nonpersister groups comprised more of their respective populations. It was anticipated that the nonpersisters would be less motivated to participate and therefore more difficult to obtain the required sample size for the statistical analyses.

Data Collection

On November 2, 1995, 410 individuals were sent a questionnaire to their home address. A transmittal letter (Appendix A-3) asking for their participation in the study was included with the survey instrument along with a stamped, self-addressed return envelope. One week following the initial mail out, a reminder postcard was sent to everyone in the three sample groups. On November 27, 1995 all nonrespondents were sent a new questionnaire and transmittal letter asking for their participation in the research study. Between December 12 and 16, 1995, nonrespondents in the nonpersister's group who could be contacted by telephone were called and asked to complete the questionnaire. Following are the response

rates for the mailings and telephone contacts.

Table 1

Sample	1st mailing	2nd mailing	Phone call	Returned	Total
Currently enrolled	52 (43%)	25	NA	0	77 (64%)
Enrolled Spring '95	48 (34%)	16	13	9	77 (55%)
Enrolled Spring '94	40 (27%)	15	NA	29	55 (37%)

Data Analysis

Along with descriptive and univariate statistics for each of the three

groups, the analysis of covariance was computed to determine whether the

differences between mean scores (for each of the five Mattering Subscales) was

statistically different. This statistical analysis provided a method of testing

whether there were any differences between the three groups with a single

probability associated with the test (Cody & Smith, 1991). Additionally, "the

statistical test mathematically corrects for any influences on the dependent variable

that are a function of extraneous factors" (DePoy & Gitlin, 1994, p. 120).

Gender, age, marital status, number of dependents, and hours of employment were

selected as covariates that might influence the results. As noted by Bean and

Metzner (1985), external responsibilities may have an even greater effect on adult

attrition than previously realized. Because this study collected information from

intact groups, it was important to control for any extraneous variables that might

affect the dependent variable, enrollment status.

Chapter 4

Analysis of Results

A detailed description of the three samples (currently enrolled, last

enrolled during Spring 1995, and last enrolled during Spring 1994) along with

their comparison to nonrespondents, VCU's population, the normed sample for the

Mattering Scales and the results of the analysis of covariance are presented in this

chapter. Interpretation, discussion and conclusions drawn, are presented in

chapter five.

Description of Samples

The following figure presents the response rates for the 410 total surveys

mailed to the three sample groups.

Figure 1

Response Rates

Currently Enrolled (77)   Last Enrolled Spring 1995 (77)   Last Enrolled Spring 1994 (55)

45
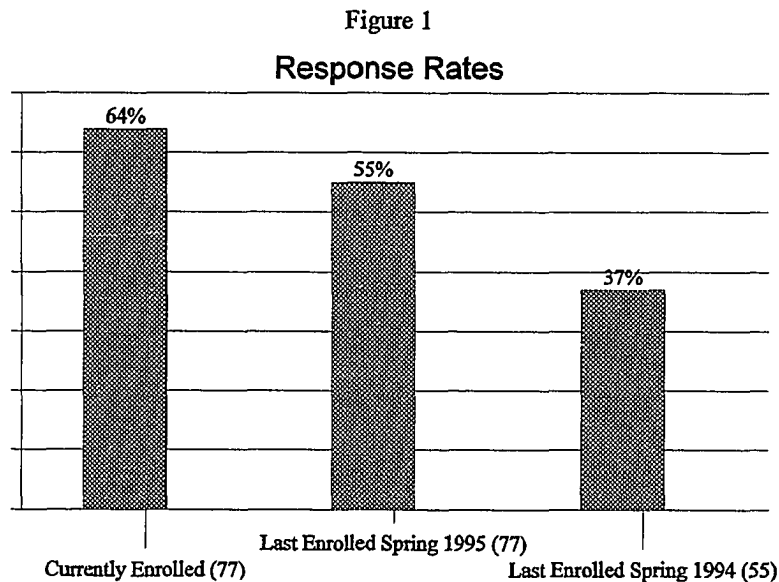
In addition, Table 2 presents demographic comparisons among the respondents of three sample groups.

Table 2 Sample Descriptions of Respondents

	Currently Enrolled N= 77	Last Enrolled Spring '95 N= 77	Last Enrolled Spring '94 N= 55
Gender: Female	67.5%	63.2%	62.3%
Male	32.5%	36.8%	37.7%
Race/ethnic			
White	78.7%	80.3%	88.7%
Black	8.0%	17.1%	5.7%
Hispanic	6.7%		
Asian	5.3%	1.3%	1.9%
Other	1.3%	1.3%	3.8%
Mean Age (SD)	37.5(7.7)	38.5(11.8)	38.0(6.8)
Marital Status			
Married	48.1%	58.4%	64.8%
Single	27.3%	22.1%	25.9%
Divorced	16.9%	14.3%	9.3%
Separated	6.5%	5.2%	
Attended Other Institution			
yes	93.5%	92.2%	88.9%
no	6.5%	7.8%	11.1%
# institutions attended			
1	42.3%	40.8%	38.3%
2	33.8%	39.4%	40.4%
3	16.9%	12.7%	10.6%
4	4.2%	2.8%	10.6%
5	1.4%	4.2%	
# credit hours elsewhere Mean (SD)	67.2(36.9)	69.2(48.3)	61.8(40.7)
Currently enrolled at other postsecondary institution?			
yes		22.4%	16.7%
no		77.6%	83.3%

Over 60% of respondents of all the sample groups were white women with the average age being 38 years. In addition, the majority are married and have attended at least one other postsecondary institution. A surprising statistic is the average number of credit hours completed at other institutions. Over 60 credit hours were earned elsewhere with standard deviations of at least 35 credit hours, indicating that many of these individuals have accumulated numerous credit hours before enrolling in the current institution. Lastly, over 75% of the nonpersisters are not currently enrolled at any other postsecondary institution.

Respondents vs. Nonrespondents

Because the response rates were low for the nonpersister samples (55% for last enrolled Spring '95 and 37% for last enrolled Spring '94), biographical data were obtained from the VCU Department of Institutional Research and Evaluation on the nonrespondents. The following Tables (3-5) compare characteristics of respondents and nonrespondents for each of the three sample groups.

Table 3   Currently Enrolled Sample

	Respondent	Nonrespondent
Gender		
Female	67.5%	63.8%
Male	32.5%	36.1%
Racial/ethnic		
White	78.7%	83.0%
Black	8.0%	17.0%
Hispanic	6.7%	
Asian	5.3%	
other	1.3%	
Age		
23-30	21.6%	40.4%
31-40	44.8%	36.2%
41-50	31.3%	19.2%
51-60	1.4%	4.3%
over 60	1.4%	
Cumulative GPA		
Mean (SD)	3.15 (.55)	3.30 (.59)

Table 4   Last Enrolled Spring 1995

	Respondent	Nonrespondent
Gender		
Female	63.2%	61.9%
Male	36.8%	38.1%
Racial/ethnic		
White	80.3%	76.2%
Black	17.1%	22.2%
Hispanic		
Asian	1.3%	1.6%
Age		
23-30	20.0%	42.9%
31-40	53.2%	44.4%
41-50	21.2%	9.5%
51-60	5.2%	3.2%
Cumulative GPA		
Mean (SD)	3.09 (.56)	2.94 (.59)

Table 5 Last Enrolled Spring 1994

	Respondent	Nonrespondent
Gender		
Female	62.3%	44.7%
Male	37.7%	55.3%
Racial/ethnic		
White	88.7%	83.0%
Black	5.7%	10.6%
Hispanic		
Asian	1.9%	2.1%
other	3.8%	4.3%
Age		
23-30	17.3%	61.7%
31-40	50.3%	29.8%
41-50	28.9%	7.5%
51-60	3.8%	1.1%
over 60		
Cumulative GPA		
Mean (SD)	3.03 (.63)	2.95 (.66)

The comparison between respondents and nonrespondents for both

currently enrolled and last enrolled during Spring 1995 yield similar

characteristics. Age is the only characteristic that appears slightly different for the

currently enrolled. The greatest proportion of nonrespondents is within the 23-30

year age range, whereas, the greatest proportion of respondents is between 31-40

years of age. For the sample last enrolled during Spring 1995, the greatest

percentage of respondents and nonrespondents are within the 31-40 year age

range. However, the respondents represent a greater spread in ages overall.

The greatest difference in characteristics between respondents and

nonrespondents is demonstrated for the sample last enrolled in spring 1994. A larger percentage of males did not respond to the survey when compared to the respondents. In addition, the greatest proportion (over 60%) of the nonrespondents were between the ages of 23-30. As demonstrated with the currently enrolled and last enrolled in spring 1995 samples, the respondents for the sample last enrolled in spring 1994 present a wider range of ages.

The mean cumulative grade point averages and standard deviations are similar for all the respondents and nonrespondents. For both samples of nonpersisters, the GPA for the respondents is slightly higher. Whereas, for the currently enrolled sample, the respondents' GPA is slightly lower when compared to the nonrespondents .

VCU's Population

Table 6 compares the three sample groups to the general student population enrolled at Virginia Commonwealth University during the Fall semester 1995.

Table 6 Population vs. Samples

	VCU's Population	Currently Enrolled	Last Enrolled Spring '95	Last Enrolled Spring '94
Gender: Female	60%	68%	63%	62%
Male	40%	33%	37%	38%
Ethnicity: White	72%	79%	80%	89%
Black	17%	8%	17%	6%
Other	11%	13%	3%	6%
Full-time	62%	51%		
Part-time	38%	49%	NA	NA

The three sample groups are relatively similar in terms of gender (mostly female), and ethnicity (mostly white) to VCU's student population. The sample of currently enrolled adult undergraduate students are more equally split between part-time and full-time enrollment as compared to VCU's total student population, who are enrolled more on a full-time than part-time basis.

Normative Population

Table 7 compares the demographic data between the current study's samples and the normative sample for the Mattering Scales.

Table 7 Norm population vs. samples

	Norm Sample	Currently Enrolled	Last Enrolled Spring '95	Last Enrolled Spring '94
Gender: Female	71%	67.5%	63.2%	62.3%
Male	29%	32.5%	36.8%	37.7%
Racial/ethnic				
White	87%	78.7%	80.3%	88.7%
Black	6%	8.0%	17.1%	5.7%
Hispanic	2%	6.7%		
Asian	1%	5.3%	1.3%	1.9%
other	1%	1.3%	1.3%	3.8%
Age: 23-30	35.2%	21.6%	20.0%	17.2%
31-40	38.9%	44.8%	53.2%	49.9%
41-50	19.8%	31.3%	21.2%	28.7%
51-60	5.2%	1.4%	5.2%	3.8%
over 60	1.0%	1.4%		
Married	54%	48.1%	58.4%	64.8%
Divorced/separ.	16%	23.4%	19.5%	9.3%
Single/widow	26%	28.6%	22.1%	25.9%

The comparison between the samples obtained for this study and the normative

sample yields similar characteristics. The majority in both groups are female, with

the greatest proportion being white. In addition, the greatest proportion (over

60%), are within the 23 to 40 year age range. Lastly, the largest proportion in both

groups are married with similar percentages in the single/widow category.

Additional Biographical Data

Additional information obtained from the three samples for this study are

included in the following table.

Table 8 Sample Descriptions

	Currently Enrolled	Last Enrolled Spring '95	Last Enrolled Spring '94
dependents < 18 years yes no	36.4% 63.6%	58.4% 41.6%	61.1% 38.9%
dependents > 18 years yes no	6.5% 93.5%	7.8% 92.2%	3.7% 96.3%
paid employment yes no	71.5% 28.6%	85.7% 14.3%	83.3% 16.7%
# hours employed/week mean (SD)	31.64 (13.1)	41.06 (10.6)	43.4 (12.6)
have BS degree yes no	22.1% 77.9%	20.8% 79.2%	18.5% 81.5%
credit hours completed @ VCU mean (SD)	68.56 (37.9)	47.64 (40.4)	41.63 (41.9)
Plan to re-enroll? yes no don't know	79.2% 14.3% 6.5%	51.3% 22.4% 26.3%	25.5% 41.8% 32.7%

The additional data obtained in Table 8 provides a more complete profile of the three groups. All of the samples reported some percentage as caring for dependents under the age of 18, although the currently enrolled sample demonstrated a smaller percentage. All three groups reported a high percentage engaged in paid employment, although both nonpersister groups reported a greater number of employment hours per week. The greatest proportion (over 75%) of respondents in all three groups did not have a bachelor's degree. The number of credit hours completed at the university was greater for the currently enrolled. Lastly, over 70% of the currently enrolled planned to re-enroll, whereas, half as many long term nonpersisters plan to re-enroll when compared to the short term nonpersisters.

Participants in the study were also asked about their primary motive for returning to college (Table 9).

Table 9 Primary Motivation for Returning

	Currently Enrolled	Last Enrolled Spring '95	Last Enrolled Spring "94
Improve current salary	2.6%	5.3%	1.8%
Improve opportunities in current job	13.0%	9.3%	12.7%
Change current job	22.1%	16.0%	20.0%
Become better informed	6.5%	4.0%	7.3%
Spend spare time productively	1.3%	1.3%	0%
Available finances	1.3%	1.3%	0%

| Obtain BS degree | 45.5% | 53.3% | 54.5% |
| Other | 7.8% | 9.3% | 3.6% |

The primary motive for returning to college for all three samples was to obtain a baccalaureate degree. Obtaining a BS degree was a motivator in more than 50% of both nonpersister samples, whereas only about 45% of the currently enrolled sample. The next primary motive was to "change current job", while "improve job opportunities" represented the third highest percentage in all three groups.

In addition, the survey questioned nonpersisters about the primary reason for not re-enrolling at VCU (Table 10).

Table 10 Primary Reason for Not Re-enrolling

	Last Enrolled Spring '95	Last Enrolled Spring '94
Decided not to change jobs	2.6%	0%
Too many other responsibilities	23.7%	36.4%
Financial resources not available	15.8%	10.9%
Academic expectations too high	0%	3.6%
Other	57.9%	49.1%

For both groups of nonpersisters, a variety of reasons were given for not re-enrolling. Of the items listed, the large proportion of both groups selected "too many other responsibilities" as the primary reason for not re-enrolling. Other reasons cited for not re-enrolling were primarily job related or to attend another college. Many individuals reported increased job responsibilities, traveling or

conflicts with scheduled course offerings as reasons for not re-enrolling.

Attending another institution, moved out of town, or personal and family

responsibilities were also identified as keeping them from re-enrolling.

Univariate Statistics for the Mattering scales

The following figure presents the mean scores for the five Mattering

Subscales. In addition, the figure includes scores for the Mattering Scales' norm

sample from four year institutions. Table 11 provides the mean scores and

standard deviations for the four samples.

Figure 2
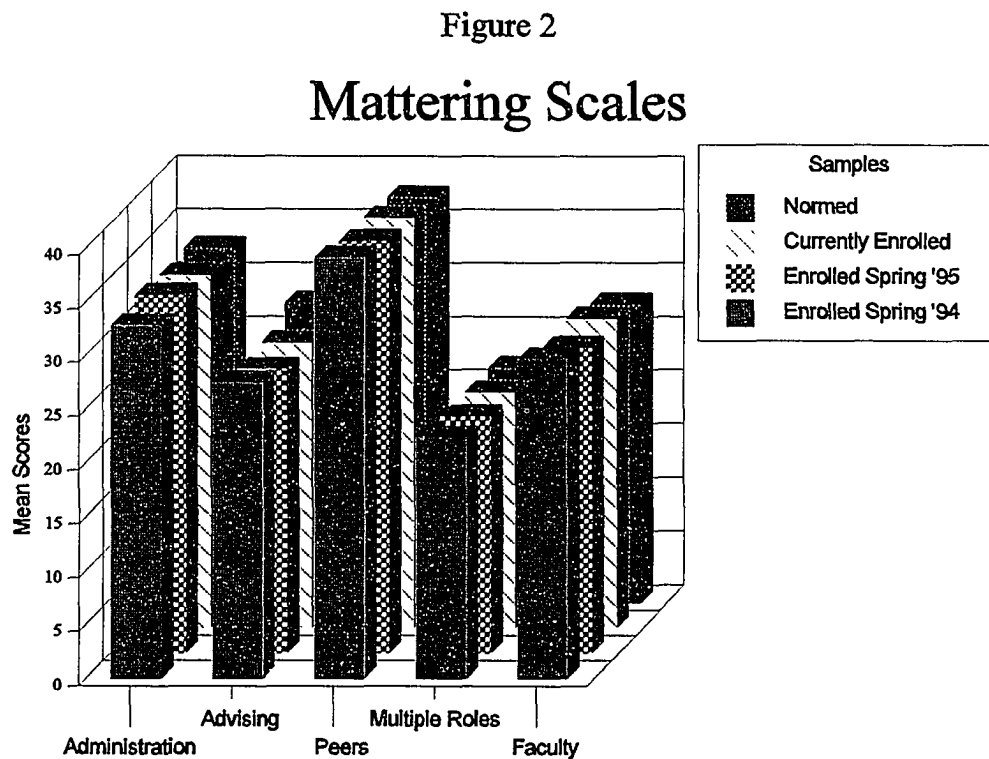
Mattering Scales

Table 11 Mattering Scales

Subscales	Range of Mattering Scores low/middle/high	Norm mean (SD)	Currently Enrolled	Last Enrolled Spring '95	Last Enrolled Spring '94
Administra-tion	32 / 36 / 40	33.04 (4.13)	32.91 (5.03)	33.39 (5.25)	32.90 (5.20)
Advising	12 / 24 / 36	27.97 (2.58)	26.57 (5.34)	26.43 (4.77)	27.58 (5.85)
Peers	23 / 33 / 43	37.84 (3.30)	38.22 (6.79)	38.41 (6.09)	39.25 (6.51)
* Multiple Roles	35 / 21 / 7	21.90 (2.08)	21.96 (4.30)	22.10 (4.01)	22.44 (4.68)
* Faculty	36 / 24 / 12	27.84 (2.12)	28.88 (4.68)	28.46 (4.88)	29.74 (5.12)

* items scored in reverse

In comparing the current study's samples to the norm sample, the mean

scores for each of the sample groups appear similar (Table 11). Mean scores of

the three groups obtained for this study are slightly higher to the mean scores of

the norm sample for the Mattering Subscales of Peers, Multiple Roles, and

Faculty. Except for the group last enrolled in spring '95, the mean scores for the

remaining two samples are slightly lower when compared to the norm sample for

the Administration scale. The current study samples' mean scores are all slightly

lower when compared to the norm sample for the Advising scale.

The Range of Mattering Scores in Table 11 represents the minimum,

middle, and maximum possible scores for each of the subscales. Note the items on

the Multiple Roles and Faculty Subscales are scored in reverse meaning, a low

score indicates a high degree of mattering and a high score indicates a low degree of mattering.

Research Questions

In this section, each of the research questions is restated along with its null hypothesis. Because several extraneous variables have been discussed as having the potential to bias the results, the analysis of covariance was computed to test for significance. The F-ratio and probability are presented for each of the five subscale mean scores and covariates. Due to missing responses for some of the questions, the sample size for the subscales analyzed varies.

Administration Subscale

Table 12 Factorial Design

Enrollment Status	N	missing
Currently Enrolled	68	9
Last Enrolled Spring '95	64	13
Last Enrolled Spring '94	47	8

Total n = 179, Total missing = 30

1. Do persisters and nonpersisters differ in their perception of the extent to which campus policies and procedures are sensitive to adult student concerns?

Independent variable: perceptions of administration

Null hypothesis-   Ho: M1 = M2 = M3

The mean scores on the Administrative Subscale are equal for persisters and nonpersisters.

Table 13 Administration Scale

Source	DF	Type III SS	Mean Square	F Value	Pr >F
Enrollment Status	2	42.67	21.33	0.78	0.459
Gender	**1**	**111.30**	**111.30**	**4.08**	**0.045***
Age	1	49.11	49.11	1.80	0.181
Marital Status	1	0.00009	0.00009	0.00	0.999
Total number of Dependents	1	5.85	5.85	0.21	0.644
Older dependent	1	1.33	1.33	0.05	0.825
Total hours of employment/week	1	55.42	55.42	2.03	0.156

*p<.05

The F-ratio (Table 13) does not demonstrate any significant difference among the mean scores for all three groups. Therefore, the null hypothesis cannot be rejected. Persisters and nonpersisters do not significantly differ in their perception of the extent to which campus policies and procedures are sensitive to adult student concerns.

The analysis of covariance did however demonstrate a significant covariate, gender (Table 13). Gender appears to be significantly different among the three groups. In an effort to further evaluate the relationship between gender and the mean scores on the administration subscale, an analysis of variance was computed (Table 14).

Table 14 Gender with Administration Subscale

Source	DF	Type III SS	Mean Square	F Value	Pr>F
Gender	1	103.06	103.06	3.84	0.052

The analysis of variance demonstrates an F-ratio approaching significance (Table 14). Table 15 shows the total mean score for the male respondents was higher than the total mean score for the women respondents on the administration subscale.

Table 15 Mean Score by Gender

	N	Mean Score
Male	68	34.1
Female	111	32.5

Advising Subscale

Table 16 Factorial Design

Enrollment Status	N	missing
Currently Enrolled	76	1
Last Enrolled Spring'95	72	5
Last Enrolled Spring'94	53	2

Total n = 201, Total missing = 8

2. Do persisters and nonpersisters differ in their perception of the extent to which advisers and other information providers attend to their questions and concerns?

Independent variable: perceptions of advising

Null hypothesis-   Ho: M1 = M2 = M3

The mean scores on the Advising Subscale are equal for persisters and

nonpersisters.

Table 17 Advising Scale

Source	DF	Type III SS	Mean Square	F Value	Pr >F
Enrollment Status	2	35.40	17.70	0.61	0.545
Gender	1	26.35	26.35	0.91	0.342
Age	1	1.63	1.63	0.06	0.813
Marital Status	1	3.54	3.54	0.12	0.727
Total number of Dependents	1	7.34	7.34	0.25	0.616
Older dependent	1	19.91	19.91	0.69	0.409
Total hours of employment/week	1	47.81	47.81	1.65	0.201

The F-ratio (Table 17) does not demonstrate any significant difference

between the mean scores for all three groups. Therefore, the null hypothesis

cannot be rejected. Persisters and nonpersisters do not significantly differ in their

perception of the extent to which advisers and other information providers attend

to their questions and concerns.

Peers Subscale

Table 18 Factorial Design

Enrollment Status	N	missing
Currently Enrolled	69	8
Last Enrolled Spring'95	68	9
Last Enrolled Spring'94	49	6

Total n = 186, Total missing = 23

3. Do persisters and nonpersisters differ in their perception of the extent to which they feel they belong on campus and are accepted as peers in the classroom?

Independent variable: perception of acceptance as peers

Null Hypothesis-   Ho: M1 = M2 = M3

The mean scores on the Peers Subscale are equal for persisters and nonpersisters.

Table 19 Peers Scale

Source	DF	Type III SS	Mean Square	F Value	Pr >F
Enrollment Status	2	10.35	5.18	0.13	0.880
Gender	**1**	**200.65**	**200.65**	**4.96**	**0.027***
Age	1	69.73	69.73	1.72	0.191
Marital Status	1	0.851	0.851	0.02	0.885
Total number of Dependents	1	10.07	10.07	0.25	0.619
Older dependent	1	8.82	8.82	0.22	0.641
Total hours of employment/week	1	3.37	3.37	0.08	0.773

*p<.05

The F-ratio (Table 19) does not demonstrate any significant difference among the mean scores for all three groups. Therefore, the null hypothesis cannot be rejected. Persisters and nonpersisters do not significantly differ in their perception of the extent to which they feel they belong on campus and are accepted as peers in the classroom.

The analysis of covariance did demonstrate a significant covariate, gender. Gender appears to be significantly different among the three groups. In an effort to evaluate further the relationship between gender and the mean scores on the peers subscale, an analysis of variance was computed (Table 20).

Table 20 Gender with Peers Subscale

Source	DF	Type III SS	Mean Square	F Value	Pr>F
Gender	1	207.98	207.98	5.26	0.023*

*p<.05

The analysis of variance demonstrates a significant F-ratio (Table 20). Table 21 shows the total mean score for the male respondents was higher than the total mean score for the women respondents on the Peers subscale.

Table 21 Mean Score by Gender

	N	Mean Score
Male	67	39.9
Female	119	37.7

Multiple Roles Subscale

Table 22 Factorial Design

Enrollment Status	N	missing
Currently Enrolled	71	6
Last Enrolled Spring '95	66	11
Last Enrolled Spring '94	46	9

Total n = 183, Total missing = 26

4. Do persisters and nonpersisters differ in their perception of the extent to which

the campus acknowledges competing demands on their time?

Independent variable- acknowledgement of multiple roles

Null Hypothesis-   Ho: M1 = M2 = M3

The mean scores on the Multiple Roles Subscale are equal for persisters and

nonpersisters.

Table 23 Multiple Roles Scale

Source	DF	Type III SS	Mean Square	F Value	Pr >F
Enrollment Status	2	15.90	7.95	0.44	0.644
Gender	1	23.47	23.47	1.30	0.256
Age	1	0.26	0.26	0.01	0.904
Marital Status	1	0.61	0.61	0.03	0.854
Total number of Dependents	1	4.39	4.39	0.24	0.623
Older dependent	1	63.60	63.60	3.53	0.621
Total hours of employment/week	**1**	**90.01**	**90.01**	**4.99**	**0.027***

*p<.05

The F-ratio (Table 23) does not demonstrate any significant difference among the mean scores for all three groups. Therefore, the null hypothesis cannot be rejected. Persisters and nonpersisters do not significantly differ in their perception of the extent to which the campus acknowledges competing demands on their time.

The analysis of covariance did demonstrate a significant covariate, employment hours. Employment hours per week appears to be significantly different across the three groups. In an effort to evaluate further the relationship between employment hours and the scores on the Multiple Roles Subscale, a Pearson correlation coefficient was computed (Table 24).

Table 24 Employment Hours with Multiple Roles Subscale

	Currently Enrolled	Last Enrolled Spring '95	Last Enrolled Spring '94
R	**-0.38**	0.08	-0.10
p > R	**0.0009***	0.53	0.52

*p<.05

The correlation analysis demonstrates a negative or inverse relationship between total employment hours and the multiple roles scores for the currently enrolled sample. As total employment hours goes up, the scores on the Multiple Roles Subscale go down.

Faculty Subscale

Table 25 Factorial Design

Enrollment Status	N	missing
Currently Enrolled	70	7
Last Enrolled Spring'95	65	12
Last Enrolled Spring'94	50	5

Total n = 185, Total missing = 24

5. Do persisters and nonpersisters differ in their perception of the extent to which faculty members accept them in the classroom?

Independent variable- faculty acceptance

Null Hypothesis-   Ho: M1 = M2 = M3

The mean scores on the Faculty Subscale are equal for persisters and nonpersisters.

Table 26 Faculty Scale

Source	DF	Type III SS	Mean Square	F Value	Pr >F
Enrollment Status	2	15.08	7.54	0.30	0.743
Gender	1	7.25	7.25	0.29	0.593
Age	1	1.01	1.01	0.04	0.842
Marital Status	1	5.75	5.75	0.23	0.634
Total number of Dependents	1	13.85	13.85	0.55	0.460
Older dependent	1	23.85	23.85	0.94	0.333
Total hours of employment/week	1	0.475	0.475	0.02	0.891

The F-ratio (Table 26) does not demonstrate any significant difference between the mean scores for all three groups. Therefore, the null hypothesis cannot be rejected. Persisters and nonpersisters do not significantly differ in their perception of the extent to which faculty members accept them in the classroom.

Because gender was a significant covariate for two of the Mattering Subscales, a Chi-Square test was computed to determine the statistical significance of the observed differences in gender for each of the samples (Table 27) and the overall respondents (Table 28).

Table 27 Enrollment Status by Gender

	N	X^2	$p>X^2$
Currently Enrolled	77		
Last Enrolled Spring '95	76	0.49	0.79
Last Enrolled Spring '94	53		

Table 28 Respondent Sample by Gender

	N	X^2	$X^2<P$ Value
Survey Sample	410	2.18	$2.18<5.99$
Respondent Sample	206		

The observed frequencies of males versus females did not differ from what was expected.

6. Do short and long term nonpersisters differ in their responses to the mattering scale?

Null Hypothesis-   Ho: M2 = M3

Short and long term persisters do not differ in their responses to the mattering scale.

As presented in the above discussion, the mean scores did not vary between short and long term nonpersisters. Therefore, the null hypothesis cannot be rejected. Short and long term persisters do not differ in their responses to the five mattering subscales.

The statistical analysis of the three samples did not yield any significant differences in respondents' perception of their mattering to the educational environment. Because the biographical comparison of the three groups revealed that approximately 20% of each sample had a bachelors degree, further statistical analyses were computed. In addition, some of the nonpersisters stated they were enrolled at other institutions at the time of data collection. Because the focus of this research is on individuals who are or had been pursuing their first baccalaureate degree, those individuals who have a degree along with those currently enrolled at another institution were eliminated from the groups for the second analysis of covariance.

The F-ratios, probabilities, and only those covariates that are significant are presented for all of the mattering subscales (Table 29).

Table 29 True Persisters and Nonpersisters

	Administration	Advising	Peers	Multiple Roles	Faculty
Type III SS	19.00	39.34	59.83	6.57	26.41
Mean Sq	9.50	19.67	29.91	3.29	13.21
F value	0.38	0.75	0.72	0.19	0.56
Pr>F	0.682	0.476	0.49	0.829	0.575
Covariate **F value** **(pr > F)**	**Employment hours** **4.53** **(0.036**	**Employ. hours** **5.47** **(0.021)**		**Employ. hours** **6.60** **(0.011)**	

*p<.05

The F-ratio (Table 29) does not demonstrate any significant differences in the five mean scores for those individuals without a baccalaureate degree, nor currently enrolled at any other postsecondary institution.

The data analysis does demonstrate a significant covariate, employment hours. There is a significant difference in employment hours per week for persisters and nonpersisters on the administration, advising and multiple roles scales. It is worth noting that gender was not identified as a significant covariate for any of the Mattering Subscales when the samples were adjusted.

Analysis of significant covariate

Descriptive statistics and the Pearson correlation coefficient were computed to determine the strength of the relationship between total employment hours for each of the three adjusted samples and the three Mattering Subscales,

Administration, Advising and Multiple Roles (Table 30).

Table 30 Employment Hours with Mattering Scales

	N	Employment Hours Mean (SD)	Administration R (p)	Advising	Multiple Roles
Currently Enrolled	**60**	**26.4(17.9)**	**-0.404 (0.002)***	**-0.308 (0.017)***	**-0.378 (0.003)***
Last Enrolled Spring '95	43	35.0(16.8)	0.026 (0.878)	0.117 (0.472)	-0.093 (0.565)
Last Enrolled Spring '94	35	38.6(20.5)	0.051 (0.776)	-0.239 (0.174)	-0.131 (0.462)
Missing[1]	65	26.8(20.2)	0.132 (0.328)	0.128 (0.327)	0.112 (0.404)

*p<.05
[1]group with a BS degree and/or currently enrolled in another postsecondary institution

The correlation analysis (Table 30) reveals a negative or inverse relationship between total employment hours and three Mattering Subscales for the currently enrolled group. As employment hours go up, the scores on Administration, Advising and Multiple Roles scales go down. Or, as employment hours decrease, the scores on the three subscales increase. No correlation or relationship was found in the remaining groups for total employment hours and the three mattering subscales .

<u>Summary</u>

Overall, persisters and nonpersisters are relatively similar in characteristics when compared to nonrespondents, VCU's general student population, and the normed population for the Mattering Scales.

No significant differences in the three sample mean scores were found on any of the five Mattering Scales. However, gender and total employment hours appear to be significant covariates. Further statistical analysis on the adjusted samples revealed an inverse relationship between total employment hours and mean scores for the Administration, Advising and Multiple Roles Subscales for the currently enrolled sample. A Chi Square test was computed and found observed frequencies of men and women respondents among the three sample groups was as expected.

Several respondents shared personal experiences concerning being an older student at VCU. Limited options for the adult student in completing courses was the primary source of frustration for many of those who are not currently enrolled. Because these students have outside jobs, they found it difficult to complete required courses when they are only offered during the day.

In addition, several currently enrolled students expressed concern over the institution's lack of accommodation and assimilation of its adult population. While many experiences shared are of a positive nature, several individuals vividly expressed their frustration at being a nontraditional student.

Chapter 5

Conclusion

Summary of the Research Problem and Design

Over the last few decades the adult student population in postsecondary institutions has increased substantially. Large numbers of adults enrolling in higher education following World War II, the need for a more educated work force, and the changing roles of women, have each contributed to this population growth (Bean and Metzner, 1985). In addition, financial restraints have necessitated colleges and universities to clearly define their student markets. For many institutions, the adult student population has become a significant market to pursue. "Projections for smaller numbers of 18- to 23-year old caused many administrators to believe that institutional survival depended on finding nontraditional students to replace the loss of traditional ones" (Bean and Metzner, 1985, p. 486). As a result, enrollment managers have identified this nontraditional group as having the potential to significantly impact both the distribution of resources, as well as retention efforts.

Institutional response to this adult population varies, anywhere from integrating adults with the traditional student population, to providing separate nontraditional degree programs and special adult advocates who assist adult students in navigating the educational system (Puryear and McDaniels, 1990).

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Therefore, postsecondary institutions range on a continuum from low to high in their response to and integration of these nontraditional students. As the number of adult student increases, the search to understand their impact on and interaction with postsecondary institutions continues. The goal of this study was to determine whether enrollment status of adult undergraduates is affected by their perception of the educational environment.

Researchers such as Bean and Metzner (1985), Polson (1986), Schlossberg, Lynch and Chickering (1989), and Kasworm (1990) continue to debate the effectiveness of colleges and universities in meeting the needs and integration of the adult student population. Concern about high attrition has raised questions about whether postsecondary institutions are effective in creating environments that improve the success rates of adult students. In addition, the complexity of adult students, in terms of their varied life experiences and circumstances, has hindered research efforts and subsequently provided conflicting conclusions. Kasworm's (1990) meta-analysis of the adult education literature suggests "the study of adult undergraduates should reflect a continuum as opposed to a dichotomy of categories or characteristics" (p. 364).

Student involvement theories have been widely used in research pertaining to the adult student population. Key issues that are believed to affect adult undergraduate persistence include, but are not limited to, integration within the college community, perception of the educational environmental, and the pull from

adults' external environmental responsibilities. Concepts related to the educational involvement of adult students, such as a sense of belonging and validating experiences, are similar to Schlossberg's et al., (1989) concept of mattering. Schlossberg et al., (1989) employs the ecological perspective in identifying institutional variables that affect adult students' perception of their mattering. Tinto's (1993) work on attrition suggests that students' perceptions of the educational environment do have a role in their willingness to be involved in the educational community.

Tinto's (1993) Academic and Social Integration Model along with Schlossberg's et al.,(1989) ecological perspective have guided this study. Information from adult undergraduates was collected and analyzed to determine whether persisters and nonpersisters differ in perception of their mattering to the educational environment. A causal comparative design was used to compare three sample groups on a dependent variable, enrollment status, and examine to what extent they differed on the independent variable of mattering. It was anticipated that the mean scores for each of the five Mattering Subscales would be significantly greater for adult undergraduate persisters than for nonpersisters. Those adults who feel the educational environment is supportive and responsive to their needs would be more likely to persist toward achieving their educational goals.

The population targeted for this study was adult undergraduates currently or

previously enrolled at a large doctoral granting university located in the southeast.

Criteria for all sample selections of students included: over the age of 24 when

first enrolled at the university, enrolled in an undergraduate degree program while

attending the institution, and living off campus. Adult students classified as

undecided majors, and/or who had transferred to the institution during the time of

data collection, were eliminated from the study. Three samples (currently

enrolled, short, and long term nonpersisters) were randomly selected from the

individuals meeting the above criteria. The Mattering Scales survey instrument

was mailed to the home address of each individual. Table 31 presents the

distribution and response rates of the three samples.

Table 31   Sample Distribution and Response Rates

	Currently Enrolled	Last Enrolled Spring 1995	Last Enrolled Spring 1994
Target Population	940	215	150
Sample Population Surveyed	120	140	150
Resultant Sample	77	77	55
Response Rate	64%	55%	37%

The samples were compared on several demographic characteristics

(gender, age, GPA etc.) to the institution's student population, nonrespondents and

the Mattering Scales' normative population. Demographic comparisons suggest

the samples were representative of the target population and the survey

instrument's normative population.

Because the response rates were low for the nonpersisters, demographic comparisons were also made between the respondents and nonrespondents. The respondents and nonrespondents of the currently enrolled sample differed only slightly in terms of age. The greatest proportion of nonrespondents were younger, between the ages of 23-30 years, as compared to a greater proportion of the respondents being between the ages of 31-40 years.

In comparing the nonpersister groups, respondents and nonrespondents from the sample last enrolled during Spring 1995 (short-term nonpersisters) were more similar in characteristics. For the sample last enrolled during Spring 1994 (long-term nonpersisters), the greatest variance between respondents and nonrespondents was in age and gender. The respondents were primarily female, while nonrespondents were primarily male. In addition, 50% of the respondents were between the ages of 31-40 years, whereas 60% of the nonrespondents were between the ages of 23-31 years.

The comparisons demonstrate that the respondents and nonrespondents of both currently enrolled and last enrolled during Spring 1995 are similar on several demographic characteristics. Although gender and age appear to be different between respondents and nonrespondents for the sample last enrolled during Spring 1994, neither gender nor age were found to be distributed unevenly among the samples.

The analysis of covariance was computed to determine whether the differences between mean scores (for each of the five Mattering Subscales) were statistically significant. In addition, the ANCOVA mathematically corrected for the extraneous variables of gender, age, marital status, number of dependents and hours of employment. The results of the statistical analyses do not support the anticipated outcome. Adult undergraduate persisters and nonpersisters do not significantly differ in perception of their mattering to the educational environment. The construct mattering may influence adult undergraduates' involvement within the educational community, but according to this study it is not sufficient to affect the decision to persist or withdraw. Further analysis of the adjusted samples did reveal total employment hours as a significant covariate for the currently enrolled group.

Summary of the Findings and Interpretation

Data presented for the Mattering Scales' normative sample were obtained from non-traditional aged students enrolled in 16 four year colleges. Because analysis of subscale intercorrelations suggest that a total instrument score is not interpretable (Schlossberg, et al., 1990), each Mattering Subscale is discussed individually to summarize the findings and provide an interpretation.

Administration Subscale

Summary of findings: Persisters and nonpersisters did not differ in their perception of campus policies and procedures. However, in comparing the sample

mean scores to the maximum score available on this scale, respondents from all three groups perceived a lower degree of mattering on administration. The Administration Subscale addressed areas related to timing of class offerings, payment of fees, registration scheduling, and the relevancy of campus activities and student newspaper articles to adult students. Although the F-ratio does not demonstrate any significant differences in the three mean scores, gender was identified as a significant covariate. An analysis of variance was computed by gender on the Administration Subscale and showed that men scored higher than women. The F-ratio for the mean scores between males and females approaches significance at the alpha of 0.052. A Chi Square test was computed and found observed frequencies of men and women respondents as expected.

Interpretation: The bureaucratic nature of colleges and universities can be a source of frustration for any student. Institutions are guided by their policies and procedures to ensure an atmosphere of equity, consistency and expectation. As noted by Cross (1981), adult students cite institutional barriers as hindering accomplishment of their educational goals. In addition, Ryder, Bowman and Newman (1994) supported the literature on adults' perceptions of institutional barriers. Their research results rated financial problems as first among adult student concerns. In addition, "complaints [about staff and administrative problems] focused on the lack of procedural information, inter-office mix-ups and run-arounds, and staff knowledge and disorganization" (Ryder et al., 1994, p.10).

According to this study, perceptions of the administration's policies and procedures do not significantly vary between those who persist and those who depart from the university. The content comprising the items on the administration scale may not accurately reflect the issues and concerns of adult students. For example, the relevancy of campus activities and student newspaper articles appear not to be as important to adult students as financial problems. The sample mean scores are consistent with the normative mean scores on rating administration low in perceived mattering, indicating that campus policies and procedures are a source of frustration to adult students.

Additionally, finding gender differences in this study coincide with the perceptual differences between men and women discussed in current adult education literature. Through in-depth interviews of reentry adult women, Fleishman's (1992) research supports Gilligan's (1982) theory that "women see and interpret their world through connection with others whereas men see themselves and their world through separation" (p.77). Fleishman (1992) recommends that more emphasis should be placed on the adjustment of women to the campus environment. "University bureaucracy and large campus environments can also be overwhelming and contribute to her feeling of 'marginality'" (Fleishman, 1992, p. 81). An adult female's desire for a sense of belonging and community affects her environmental perceptions and therefore her ability to successfully navigate the educational system. The items contained on the administration scale may not

adequately reflect issues analogous to belonging, isolation and the concept of mattering.

Advising Subscale

Summary of findings: Persisters and nonpersisters do not differ in their perception of advisers and other information providers. In addition, none of the covariates were identified as significant among the three groups. The Advising Subscale assesses experiences with faculty advisors in terms of availability and demonstration of their interest and concern towards the adult student. Also, knowledge and understanding about administrative rules and regulations along with accessibility of individuals who could answer their questions are examined.

Interpretation: Information providers within the college or university have enormous responsibility to provide not only the opportunity, but also a variety of methods, to communicate. Banning and Hughes' (1986) discussion of campus ecology suggests the most effective method for providing information to adult students is intracurricular in contrast to cocurricular and extracurricular for residential students. "If the commuting student's experience is limited mainly to time spent in the classroom, there are serious implications for designing student information and development programs" (Banning and Hughes, 1986, p.19).

In addition to providing information about financial support, participants in Ryder's et al. (1994) study identified academic advising as the second most reported problem. "Students expressed great concern, ...about what they termed

'non-receptive and inadequate advising'. Also tied to this were instructors' attitudes toward advising nontraditional students" (p. 10). Interestingly, the mean scores for the normative and current study's samples were slightly higher than the scale's mean score. Therefore, this indicates the perceptions of availability and concern expressed from advisors and accessibility of information providers was positive. Contrary to the previous discussion, these perceptions of communication practices were not able to differentiate between persisters and nonpersisters. The results of this study may indicate the items composing the advising scale do not accurately reflect the problematic issues expressed by adult students.

Peers Subscale

Summary of findings: Persisters and nonpersisters did not significantly differ in their perception of the extent to which they feel they belong on campus and are accepted as peers in the classroom. The Peers Subscale addressed issues related to age integration in the classroom and adult students' perception of the overall fit within the educational institution. The perceptions measured determine whether the classroom atmosphere is encouraging for adult students to speak out, classmates respond positively to adult students' experienced based approach to education, and the overall feeling is of being welcome.

Gender was identified as a significant covariate for the Peers Subscale. An analysis of variance was computed by gender on the Peers Subscale. The F-ratio for the scores was significantly different in that males scored higher than

the females. Additionally, a Chi Square test was computed and found observed frequencies of male and female respondents as expected.

Interpretation: Contrary to the expected outcome, classroom experiences did not significantly differ among the three sample groups. Although, the respondents in this study did show a higher degree of mattering (~ 17%) on the Peer Scale than the scale's middle score, indicating positive peer relationships in the classroom for the participants in this study.

As demonstrated with the Administration Subscale, gender differences within the Peers scores verify perceptual differences discovered between men and women about their educational experiences. "There is strong support for the hypothesis that women and men adult students will exhibit divergent perceptions of relationship dimensions of the classroom social environment" (Beer and Darkenwald, 1989, p. 35). Evan's (1985) discussion of *Women's Development Across the Life Span* reflects issues relevant to gender differences in environmental perceptions. "Women's strong relational orientation provides a solid rationale for the use of group experiences [within the educational setting] to facilitate development. Women are influenced by others and receive support and encouragement from them" (p. 22). As a result of their work with a diverse group of reentry women, researchers Clinchy, Belenky, Goldberger, and Tarule (1985) have developed the Connected Education Model for women. "We believe that most women want and need an education in which connection is emphasized over

separation, understanding and acceptance over judgement and assessment, and collaboration over debate" (Clinchy et al., 1985, p. 44). As expressed by one of the interview participants in Clinchy's et al. study "...fellow students have made her realize that the knowledge she has gained through her life experiences 'is important and real and valuable'" (1985, p. 31). The current study's finding of women scoring significantly lower than men on the Peer interaction scale, suggests the absence of connectedness for this female population.

<div style="text-align:center">Multiple Roles Subscale</div>

Summary of findings: Persisters and nonpersisters did not differ significantly in their perception of the extent to which the campus acknowledges competing demands on their time. The Multiple Roles Subscale focuses on issues about time restraints in completing courses, flexibility of course offerings, and role conflicts.

The statistical analysis did demonstrate total employment hours as a significant covariate. Further statistical analysis of the adjusted samples revealed a negative or inverse relationship between employment hours and the scores on the Multiple Roles Subscale for the currently enrolled group. The correlation coefficient was not significant for the two groups of nonpersisters.

Interpretation: The multiple roles adults manage while attending college is a prominent characteristic that distinguishes them from traditional-aged students. Adults experience role conflict due to their external responsibilities and the sacrifices they make to attend college. "They [adult students] are more likely than

the typical beginning college student to be married, to have children at home, to live off campus, and/or to be employed while attending college" (Tinto, 1993, p. 76).

It is an interesting finding that external responsibilities appear to be just as diverse for those currently enrolled as for those who did not re-enroll. Additionally, the normative and study samples' mean scores were lower than the Multiple Roles middle score. These findings suggest that the study's population sample is representative of adult students and while adult students perceive low mattering in institutions' awareness of competing demands on their time, it is not adequate to differentiate persisters from nonpersisters.

Although no significant difference in the mean scores was found among the three sample groups, when total employment hours increased, multiple roles scores for the currently enrolled sample decreased. As expected, for those adult students involved in juggling both work and education, the more hours worked the less they perceive the campus as being aware of the competing demands made on their time. Research with both traditional and nontraditional students suggests employment has a negative effect on persistence. Tinto's (1993) research indicates "employment not only limits the time one has for academic studies, it also severely limits one's opportunities for interaction with other students and faculty. As a consequence, one's social integration as well as one's academic performance suffers" (p. 64). Results of this study support the negative impact of employment

demands on perceptions of mattering to the educational environment.

Faculty Subscale

Summary of Findings: Persisters and nonpersisters do not significantly differ in their perception of the extent to which faculty members accept them in the classroom. This Subscale addressed issues of how adults perceived the professor's ability to deal with age integration in the classroom. How did faculty interpret adult students' assertiveness, respond to experience-based comments and call on adult students to participate in class discussions?

Interpretation: Adult learner literature proposes that because adults' educational experiences are primarily centered within the classroom setting, it is important that faculty be sensitive to the needs and learning differences between traditional and nontraditional students. "A climate that is not appropriate for adults will not facilitate learning or lead to satisfaction with the learning experience" (Beer and Darkenwald, 1989, p.33).

Results of the Faculty Subscale analysis demonstrates the study's sample is representative of the target population and suggests adult students perceive low mattering from interactions with faculty. It is interesting to note that the mean scores on the Faculty Subscale for the samples in this study are higher (~20%) than the scale's middle score. Because the scale items were scored in reverse, this indicates a low perception of mattering from faculty interactions. Although the current study was unable to validate the importance of the classroom environment

to adult persistence.

True Persisters and Nonpersisters

Because nearly 20% of each sample contained individuals with a baccalaureate degree and/or who were enrolled in another postsecondary institution at the time of data collection, further statistical analyses were computed. The currently enrolled sample was adjusted by eliminating those individuals who were working towards a second baccalaureate degree. For the two nonpersister samples, respondents were eliminated who had a baccalaureate degree and/or were enrolled in another institution at the time of data collection.

Summary of Findings: When the analysis of covariance was computed on the three adjusted samples, none of the five Mattering Subscales presented any significant differences in their mean scores. Therefore, for those persisters and nonpersisters without a baccalaureate degree and those nonpersisters not currently enrolled in another postsecondary institution, perceptions of perceived mattering to the educational environment did not differ. Additionally, each of the three adjusted sample mean scores were similar to the mean scores of the original samples.

As in the previous analysis, total employment hours was demonstrated as a significant covariate, yet for three subscales The negative influence of employment is reflected in the low mattering scores of first time adult degree seekers on three subscales, Administration, Advising and Multiple Roles Subscale.

The institution's regulations, responsiveness, flexibility and awareness of life circumstances are issues addressed throughout the items comprising these three subscales. Further statistical analysis supported the previous findings. The Pearson correlation coefficient demonstrated an inverse relationship between employment hours and the three subscales for the currently enrolled sample.

Interpretation: Eliminating those participants who either had a degree or were concurrently enrolled in another institution more accurately reflects the population targeted for this study. This second analysis further validates the finding that the perception of mattering is not significantly different between persisters and nonpersisters. Although, when adult students have to manage increasing demands on their time, such as with employment, perceptions of the educational environmental support will be lower.

Research on the traditional student population has disclosed the negative influence of outside employment on student performance and persistence (Tinto, 1993, Astin, 1975). Additionally, it has been hypothesized that increasing employment demands negatively affect the nontraditional student population (Bean and Metzner, 1985). For those individuals managing both work and education, this study confirmed the negative influence of increasing work demands on perception of their mattering to the educational environment. What this study's findings failed to demonstrate was a relationship between employment hours and patterns of enrollment. Inconclusive findings on the relationship between

employment and persistence have also been presented in the literature.

Balunas (1986) conducted a study with community college students and found no relationship among hours worked on GPA or persistence. A community college setting, mean age of participants as 19 years, and defining nonpersistence as not re-enrolling the next consecutive semester limits the study's conclusions. In addition, Fjortoft (1995) studied first year pharmacy students and found working students performed and persisted as well as nonworking students. The purpose of Fjortoft's study was to "estimate the effect of college student employment on students' levels of social and academic integration, professional and institutional commitment, academic achievement and persistence" (1995, p. 5). "The results indicated that the set of independent variables: individual characteristics, financial aid, and employment status explained a small, but significant amount of the variance in two of the four measures of social and academic integration (peer group interaction and academic development). However, the results indicated that employment had no relationship to students' level of social and academic integration" (Fjortoft, 1995, p. 8). Although Fjortoft's (1995) research sampled individuals from several four year institutions, nonpersistence was also defined as not re-enrolling the next consecutive semester.

Hanniford and Sagaria (1994) completed a longitudinal study that assessed degree progress and completion of previously surveyed individuals following a six year lapse between 1979 and 1986. In comparing degree plans identified by

participants in a 1979 survey to their enrollment status in 1986, findings suggest a negative relationship between employment and degree completion. "Individuals who worked full time are more likely to be active students than to have completed degrees" (Hanniford and Sagaria, 1994, p. 19). Interruption and slowing of academic progress is typical of adult undergraduates (especially women) when managing multiple roles (Robertson, 1991). While full time employment may lengthen the time necessary to complete a degree, Hanniford and Sagaria's findings may imply more about the commitment of adult students to continue progress toward degree completion.

Short and Long Term Nonpersisters

Summary of findings: Short and long term nonpersisters did not differ in their responses to the five mattering subscales. Statistical analysis did not reveal any differences in perceptions between the two groups.

Interpretation: The findings suggest that asking individuals to recollect about their experiences as an adult student were not influenced by the amount of time passed. Individuals who were not re-enrolled for one semester shared similar perceptions in comparison to individuals not re-enrolled for three consecutive semesters.

Implications of the Findings

This study suggests that persistence of adult students is not significantly affected by their perceptions of the educational environment. The findings do not support Schlossberg's et al. (1989) contention that the degree of mattering perceived by adult undergraduates influences their decisions to stay or depart from the university. The lack of empirical evidence to support the relationship between mattering and persistence leads to two plausible conclusions. One being the construct of mattering is not effective in explaining decisions to stay or withdraw and two, the Mattering Scales instrument does not adequately operationalize the construct of mattering.

Several researchers (Banning and Hughes, 1986, Gonzalez, 1989, and Schlossberg et al., 1989) have proposed that the campus ecological perspective is important to understanding the interaction between adult students and the educational environment. While others have suggested that validating experiences (Rendon, 1994) and creating a sense of belonging and community (Fleishman, 1992) assist adult students in their educational success. "Clearly, validation helped to change student attitudes, from believing they would fail to acknowledging they could succeed; from thinking no one cared to understanding someone wanted to see them succeed" (Rendon, 1994, p. 9). Also, "Educational environments that facilitate learning for adults are welcoming places" (Mackinnon-Slaney, 1994, p. 273).

If the concepts of validation and a sense of belonging are important environmental issues, then the construct of mattering may also have value to involvement and integration of adult students. Although, its impact on adult undergraduate persistence remains to be validated.

An alternative explanation for this study's findings is that the items comprising the Mattering Scales do not adequately operationalize the construct of mattering. Comparison of the normative and current study samples clearly demonstrates the respondents' representativeness of adult students enrolled in four year post secondary institutions. If the concept of mattering is an important environmental variable, then operational definitions of mattering on the survey instrument are not valid. However, four of the five subscales (administration, advising, peers, and multiple roles) do provide information in support of adult education literature concerning gender differences and the negative effects of employment.

Gilligan's (1982) research on life-span development of women proposes "women perceive and construe social reality differently from mean and that these differences center around experiences of attachment and separation, life transitions that invariably engage these experiences can be expected to involve women in a distinctive way" (p. 171). Several studies have confirmed gender differences in adult education. Beer and Darkenwald's (1989) conducted a study using Moo's Classroom Social Environment Scale to compare adult men and women students.

Items composing the Involvement and Affiliation Subscales of Moo's instrument are similar in concept to the items in the Mattering Scales. "Women students perceive the classroom social environment to be more affiliative and perceive a greater degree of involvement in the classroom than do men students" (Beer and Darkenwald, 1989, p. 35). Additionally, Fleishman's (1992) qualitative study concluded "most crucial to their [adult women students] success was their ultimate ability to establish meaningful relationships on the campus. While having classroom friends of both traditional and nontraditional age was satisfying and contributed to their sense of belonging, of far more importance was having an effective relationship with the professor" (p. 80).

For the current study, the Peers Subscale was the only perception scale that showed men scored significantly higher than women. Perhaps the female students desired a more encouraging and welcoming classroom atmosphere than they perceived. Finding gender differences on the Peers mattering subscale, reflects positively on the scale's ability to differentiate the environmental perceptions between men and women. Although, a relationship between the Peer's mattering scores and persistence patterns could not be established.

Bean and Metzner's (1985) review of the attrition literature found evidence to support a negative relationship between employment hours and student persistence. The negative relationship found among employment hours and the three subscales (Administration, Peers, and Multiple Roles) for the currently

enrolled sample confirms employment's negative affect on perceptions of environmental responsiveness and support. What we do not know from the nonpersisters is the number of hours worked while enrolled in college and whether employment demands could have influenced their perceptions of mattering and subsequent decision to withdraw. When nonpersisters were asked about the primary reason for not re-enrolling, the greater proportion of both groups cited a variety of reasons, with some relating to their job. Therefore, the discussion surrounding the effect of employment hours is limited to the currently enrolled group. Because the relationship found is inverse, employment hours has a negative effect on perceptions of mattering for three of the five environmental subscales. These findings confirm that adult students who manage multiple roles perceive the environment as less responsive and supportive of their needs. Contrary to the suspected negative impact of external variables, both persisters and nonpersisters indicated similar outside responsibilities. As a result, this study failed to find a direct relationship between perceived mattering and adult undergraduate persistence. As discussed previously, the effect of employment on degree completion has not been fully explained.

What several researchers (Fjortoft, 1995, Hanniford and Sagaria, 1994, and Mackinnon-Slaney, (1994) have discovered is that adult students who are committed to their educational goals are capable of overcoming many perceived environmental barriers. "Life circumstances that we expected to impact may

actually interfere less with persistence than with the initial decision to return to college. Once adults have made a commitment to return, many are motivated to juggle multiple roles" (Hanniford and Sagaria, 1994, p. 21). In addition, Fjortoft (1995) found no relationship between work and persistence, but did conclude that "students have learned to work with the competing demands on their time and are successful college students" (p. 9)

In comparing older to younger undergraduates, adult students "are independent beings, who have sought out undergraduate education because of their own interests and concerns" (Kasworm, 1980, p.41). "Adults usually attend college with a clear purpose in mind. They are in classes because they want to be there"..."adults usually pay their own way, and they want value for their money" (Richter-Antion, 1986, p. 60). Evaluating educational environments in terms of their ability to develop institutional and goal commitment may be more meaningful to adult undergraduate persistence than the construct of mattering.

Limitations of the Study

The research design used in this study is a retrospective or ex post facto method because the outcome, enrollment status, has already occurred. The purpose of this type of study is to look back at variables that may have caused the outcome, such as the degree of mattering perceived. Unreliable memory recollection due to the passage of time is a problem associated with this type of study.

Because the Mattering Scales are designed to be used on adults currently enrolled in higher education institutions, asking individuals to recall their experiences may have affected the results. Individuals who have not been enrolled for a period of time may not remember their perceptions accurately. This problem was anticipated during the study's design. Short term and long term nonpersisters were surveyed to assess whether the passage of time had an effect on their memory recollections. Although the analysis between these two samples did not reveal any significant differences in their mean scores, inaccurate recollections for the nonpersister samples cannot be discounted.

In addition to inaccurate recollection, labeling those who departed from the institution as nonpersisters may not accurately reflect their intent. Nonpersistence indicates a more permanent status away from higher education. Adult learners who depart from the institution may be stopouts for a period of time and re-enroll at a later date. Unfortunately, this difficulty will plague any research study concerning persistence. Because nonpersistence cannot truly be determined within a reasonable time frame, it limits the study's conclusions.

Low response rates for the nonpersisters also limits conclusions based on the findings. Although the respondents and nonrespondents were compared on several demographic characteristics and found to be similar, due to their low response rate it is unwise to assume nonrespondents would have similar perceptions of the educational environment.

Lastly, perceptions of the educational environment were assessed in an effort to imply the strength of adult student involvement and integration as proposed by Tinto (1993). The construct of mattering may not accurately conceptualize the environmental variables that impact an adult student's decision to persist or withdraw. Alternatively, the items comprising the Mattering Scales may not operationalize the true meaning of mattering.

As with any educational research, limitations caution sweeping generalizations based on the results. However, empirical research can begin the process of clarifying the complex interrelationship between adult learners and the educational environment. This study was unable to validate the relationship of mattering to adult undergraduate persistence.

Educational research should contribute to the field of knowledge in an effort to make recommendations for policy and practice. This study's inconclusive findings fail to provide clear guidance on which to base future policy and practice, although the results do provide a foundation for further investigation into adult undergraduate persistence.

Suggestions for Future Research

Because the results of this study lack any evidence to suggest a causal relationship between mattering and persistence, research must continue. Further study of environmental variables is needed to explore the causes of adult undergraduate persistence. Institutional and goal commitment, financial support,

and validating experiences with faculty are just a few of the important environmental factors suggested throughout the literature on adult student attrition.

Similar research designs measuring alternative perceptions of environmental support or institutional response to the special needs of adult students may lead to a better understanding of the environmental impact on involvement and persistence. Additionally, continued investigation into employment's effect on the educational progress of adult students is recommended.

An alternative method to a retrospective design would be to measure perceptions of currently enrolled adult students and determine their enrollment status at a future date. This longitudinal design would eliminate the problem of inaccurate recollection. Although, problems inherent to this design include, the difficulty of tracking participants in the original sample and also losing individuals as a result of the study's length of time.

More effective follow up methods to improve the response rates for the nonpersisters would strengthen the study's generalizability. Such large numbers of nonrespondents could affect the results. Increasing the number of survey mailings or reminder postcards, telephone contact to all nonrespondents and providing a small incentive, such as money or a token, may improve the response rates.

Additionally, the scope of this study is limited to one postsecondary institution. Virginia Commonwealth University is unique in its urban setting. Its diversity in student population, types of programs offered, and attracting mostly

commuter students differs it from smaller residential colleges or those with limited types of programs. Collecting data from a variety of types of postsecondary institutions may either validate the findings of this study or offer alternative conclusions.

Perceptual measures are limited by respondents recall ability and desire to be honest. Combining a perceptual study with measures of observed behavior may provide a more accurate portrayal of the interaction between adult students and the educational environment.

Lastly, there is much to gain from conducting research studies with a qualitative design. The rich stories adult undergraduates are willing to share about their educational experiences and perceptions would provide a depth of analysis not accomplished through quantitative methods.

Appendix A-1

MATTERING SCALES

Part 1: For each of the following statements, please circle the number corresponding to the response which best describes your feelings as a student at Virginia Commonwealth University.

		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1.	The university's policy of transfer credits penalizes non-traditional students	1	2	3	4	5
2.	My advisor doesn't seem to remember things we have discussed before	1	2	3	4	5
3.	I will have a hard time finishing my degree because of time limits on completing course requirements	1	2	3	4	5
4.	The administration seems to consider adult student priorities as important as traditional student priorities	1	2	3	4	5
5.	I get support from my classmates when I need it	1	2	3	4	5
6.	My questions seem to put faculty members on the defensive	1	2	3	4	5
7.	The faculty and administrators are sensitive to my other responsibilities	1	2	3	4	5
8.	I sometimes feel alone and isolated at the university	1	2	3	4	5
9.	The administrative rules and regulations are clear to me	1	2	3	4	5
10.	My professors interpret assertiveness as a challenge to their authority	1	2	3	4	5
11.	The administration sets things up to be easy for them, not the students	1	2	3	4	5
12.	It's hard for me to go back to the school environment	1	2	3	4	5
13.	If my advisor didn't know the answer to my questions, I'm sure he or she would seek out the answers	1	2	3	4	5
14.	The classroom atmosphere encourages me to speak out in class	1	2	3	4	
15.	I feel my classmates react positively to my experience and knowledge	1	2	3	4	5

		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
16.	My professors seem to recognize the younger students but not me	1	2	3	4	5
17.	I don't have time to complete the administrative tasks this institution requires	1	2	3	4	5
18.	There has always been someone on campus who could help me when I had a question or problem	1	2	3	4	5
19.	I feel like I fit in my classes	1	2	3	4	5
20.	The administration offices are not open at times when I need them	1	2	3	4	5
21.	The administration makes efforts to accommodate adult students	1	2	3	4	5
22.	I have a good relationship with my younger classmates	1	2	3	4	5
23.	Sometimes I feel out of date in the classroom	1	2	3	4	5
24.	The university does not commit enough resources to off-campus courses	1	2	3	4	5
25.	There has always been an advisor available to talk with me if I need to ask a question	1	2	3	4	5
26.	My classmates would help me catch up to the new technologies if I needed it	1	2	3	4	5
27.	My experience-based comments are accepted by my professors	1	2	3	4	5
28.	It takes too long to register or correct registration problems	1	2	3	4	5
29.	Administrative staff are helpful in answering my questions	1	2	3	4	5
30.	Fellow students don't seem to listen to me when I share my life experiences	1	2	3	4	5
31.	Unless I have another student my age in class, no one really understands how hard it is to be here	1	2	3	4	5
32.	The university offers alternatives to the traditional semester-length course (like weekends)	1	2	3	4	5
33.	I have had adequate opportunities to get to know fellow students	1	2	3	4	5
34.	Campus rules and regulations seem to have been made for traditional-age students	1	2	3	4	5
35.	My age sometimes gets in the way of my interactions with fellow students	1	2	3	4	5

36. Some of the jokes my professors tell make me feel
uncomfortable ....

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Stron Agre
36.	1	2	3	4	5
37. Classes are offered at times that are good for me	1	2	3	4	5
38. As an adult student, I feel welcome on campus	1	2	3	4	5
39. The desks weren't made for adults	1	2	3	4	5
40. I feel my activities fees are spent in a way that is meaningful to me	1	2	3	4	5
41. My advisor has office hours at times that I am on campus	1	2	3	4	5
42. Departmental rules sometimes make my goals difficult or impossible	1	2	3	4	5
43. The school newspaper doesn't discuss adult student issues	1	2	3	4	5
44. My professors sometimes ignore my comments or questions	1	2	3	4	5
45. I sometimes feel my professors want me to hurry up and finish speaking	1	2	3	4	5

Part 2: Please provide the following information about yourself:

1. What is your present enrollment status?
   ☐¹ Full-time student (12 credits or greater)
   ☐² Part-time student (Less than 12 credits)

2. How many credit hours have you completed at VCU? _____
   (approximate if unsure)

3. How many credit hours have you completed at other institutions?
   ☐⁰ **NEVER ATTENDED ANOTHER INSTITUTION**
   ☐¹ Less than 50
   ☐² 51 - 100
   ☐³ 101 - 120
   ☐⁴ 121 or more

4. What was your **primary** motivation for returning to college? (Check only one)
   ☐¹ To improve salary within my current job
   ☐² To improve opportunities in my current job
   ☐³ In order to change my current job
   ☐⁴ To become a better informed person
   ☐⁵ To meet new and interesting people
   ☐⁶ To spend my spare time more productively
   ☐⁷ Financial resources available
   ☐⁸ Other (specify _____)

5. Do you plan to re-enroll at VCU next semester?
    ☐¹ Yes
    ☐² No

6. What is your racial or ethnic background?
    ☐¹ Black, Non-Hispanic
    ☐² White, Non-Hispanic
    ☐³ Hispanic
    ☐⁴ American Indian or Alaskan Native
    ☐⁵ Asian or Pacific Islander
    ☐⁶ Non-resident Alien
    ☐⁷ Other

7. What is your gender?
    ☐¹ Female
    ☐² Male

8. What is your age? _____

9. What is your marital status?
    ☐¹ Married
    ☐² Single
    ☐³ Divorced
    ☐⁴ Separated
    ☐⁵ Widowed

10. Are you engaged in paid employment?
    ☐¹ Yes, full-time
    ☐² Yes, part-time
    ☐³ No (Go to question 11)

    If YES:

    10a. How many hours on average do you work at your job each week?
         ☐¹ Less than 10 hours
         ☐² 11 - 20 hours
         ☐³ 21 - 30 hours
         ☐⁴ 31 - 40 hours
         ☐⁵ 41 or more hours

    10b. Do you work on campus?
         ☐¹ Yes
         ☐² No

11.   Do you have dependents under the age of 18?
    ☐¹ Yes, How many? _____
    ☐² No

12.   Are you caring for an older parent or relative in your home?
    ☐¹ Yes, How many? _____
    ☐² No

Please add any additional comments on a separate page

THANK YOU FOR COMPLETING THIS SURVEY!

Appendix A-2

MATTERING SCALES

Part 1:For each of the following statements, please circle the number corresponding to the response which best describes your feelings as a student at Virginia Commonwealth University.

		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1.	The university's policy of transfer credits penalizes non-traditional students	1	2	3	4	5
2.	My advisor did not seem to remember things we had discussed before	1	2	3	4	5
3.	I had a hard time finishing my degree because of time limits on completing course requirements	1	2	3	4	5
4.	The administration seemed to consider adult student priorities as important as traditional student priorities	1	2	3	4	5
5.	I got support from my classmates when I needed it	1	2	3	4	5
6.	My questions seemed to put faculty members on the defensive	1	2	3	4	5
7.	The faculty and administrators were sensitive to my other responsibilities	1	2	3	4	5
8.	I sometimes felt alone and isolated at the university	1	2	3	4	5
9.	The administrative rules and regulations were clear to me	1	2	3	4	5
10.	My professors interpreted assertiveness as a challenge to their authority	1	2	3	4	5
11.	The administration set things up to be easy for them, not the students	1	2	3	4	5
12.	It was hard for me to go back to the school environment	1	2	3	4	5
13.	If my advisor didn't know the answer to my questions, I'm sure he or she would have sought out the answers	1	2	3	4	5
14.	The classroom atmosphere encouraged me to speak out in class	1	2	3	4	5
15.	I felt my classmates reacted positively to my experience and knowledge	1	2	3	4	5

		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Stron Agre
16.	My professors seemed to recognize the younger students but not me	1	2	3	4	5
17.	I didn't have time to complete the administrative tasks this institution required	1	2	3	4	5
18.	There had always been someone on campus who could help me when I had a question or problem	1	2	3	4	5
19.	I felt like I fit in my classes	1	2	3	4	5
20.	The administration offices were not open at times when I needed them	1	2	3	4	5
21.	The administration made efforts to accommodate adult students	1	2	3	4	5
22.	I had a good relationship with my younger classmates	1	2	3	4	5
23.	Sometimes I felt out of date in the classroom	1	2	3	4	5
24.	The university did not commit enough resources to off-campus courses	1	2	3	4	5
25.	There had always been an advisor available to talk with me if I needed to ask a question	1	2	3	4	5
26.	My classmates would have helped me catch up to the new technologies if I needed it	1	2	3	4	5
27.	My experience-based comments were accepted by my professors	1	2	3	4	5
28.	It took too long to register or correct registration problems	1	2	3	4	5
29.	Administrative staff were helpful in answering my questions	1	2	3	4	5
30.	Fellow students didn't seem to listen to me when I shared my life experiences	1	2	3	4	5
31.	Unless I had another student my age in class, no one really understood how hard it was to be there	1	2	3	4	5
32.	The university offered alternatives to the traditional semester-length course (like weekends)	1	2	3	4	5
33.	I had adequate opportunities to get to know fellow students	1	2	3	4	5
34.	Campus rules and regulations seemed to have been made for traditional-age students	1	2	3	4	5
35.	My age sometimes got in the way of my interactions with fellow students	1	2	3	4	5

| 36. | Some of the jokes my professors told made me feel uncomfortable .... | 1 | 2 | 3 | 4 | 5 |

		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Stron Agre
37.	Classes were offered at times that were good for me .	1	2	3	4	5
38.	As an adult student, I felt welcome on campus	1	2	3	4	5
39.	The desks weren't made for adults	1	2	3	4	5
40.	I felt my activities fees were spent in a way that was meaningful to me	1	2	3	4	5
41.	My advisor had office hours at times that I was on campus	1	2	3	4	5
42.	Departmental rules sometimes made my goals difficult or impossible	1	2	3	4	5
43.	The school newspaper didn't discuss adult student issues	1	2	3	4	5
44.	My professors sometimes ignored my comments or questions	1	2	3	4	5
45.	I sometimes felt my professors wanted me to hurry up and finish speaking	1	2	3	4	5

Part 2: Please provide the following information about yourself:

1. What was your **primary** motivation for returning to college? (Check only one)
   - ☐1 To improve salary within my current job
   - ☐2 To improve job opportunities in my current job
   - ☐3 In order to change my current job
   - ☐4 To become a better informed person
   - ☐5 To meet new and interesting people
   - ☐6 To spend my spare time more productively
   - ☐7 Financial resources available
   - ☐8 Other (specify _____)

2. What is your **primary** reason for not re-enrolling? (Check only one)
   - ☐1 Satisfied with my current job
   - ☐2 Decided not to change current job
   - ☐3 Life too complicated right now
   - ☐4 Not enough spare time
   - ☐5 Financial resources not available
   - ☐6 Academic expectations too high
   - ☐7 Other (specify _____)

3.   How many credit hours have you completed at VCU? _____
     (approximate if unsure)

4.   Are you currently enrolled in another educational institution?
     ☐¹   Yes
     ☐²   No

5.   How many credit hours have you completed at other institutions?
     ☐⁰   **NEVER ATTENDED ANOTHER INSTITUTION**
     ☐¹   Less than 50
     ☐²   51 - 100
     ☐³   101 - 120
     ☐⁴   121 or more

6.   Do you plan to re-enroll at VCU within the next year?
     ☐¹   Yes
     ☐²   No

7.   What is your racial or ethnic background?
     ☐¹   Black, Non-Hispanic
     ☐²   White, Non-Hispanic
     ☐³   Hispanic
     ☐⁴   American Indian or Alaskan Native
     ☐⁵   Asian or Pacific Islander
     ☐⁶   Non-resident Alien
     ☐⁷   Other

8.   What is your gender?
     ☐¹   Female
     ☐²   Male

9.   What is your age? _____

10. What is your marital status?
     ☐¹   Married
     ☐²   Single
     ☐³   Divorced
     ☐⁴   Separated
     ☐⁵   Widowed

11. Are you engaged in paid employment?
- [ ]¹ Yes, full-time
- [ ]² Yes, part-time
- [ ]³ No (Go to question 12)

If YES:
11a. How many hours on average do you work at your job each week?
- [ ]¹ 10 hours or less
- [ ]² 11 - 20 hours
- [ ]³ 21 - 30 hours
- [ ]⁴ 31 - 40 hours
- [ ]⁵ 41 or more

12. Do you have dependents under the age of 18?
- [ ]¹ Yes, How many? _____
- [ ]² No

13. Are you caring for an older parent or relative in your home?
- [ ]¹ Yes, How many? _____
- [ ]² No

Please write any additional comments on a separate page

THANK YOU FOR COMPLETING THIS SURVEY!

Appendix A-3

November 2, 1995

Dear Adult Learner,

You have been selected to participate in a research study about how adult college students perceive the educational environment. There is an interest in learning more about the different ways in which adult learners feel they matter - to whom, under what circumstances, and what this means to them. We want to examine various aspects of the college environment and determine their relationship to educational progress. Your thoughtful response will help Virginia Commonwealth University better meet the needs of its adult student population.

Because you represent an important group of adult learners, your opinion will contribute significantly toward our understanding of the adult learner's perception of the college educational environment. Please allow 20 minutes out of your busy schedule to complete this survey.

Please complete the enclosed survey before November 20, 1995 and return it in the enclosed stamped, addressed envelope. Your responses will be completely confidential and no one other than I will have access to the individual surveys. The identification number on the survey will be used for follow up mailings only. Data from the returned surveys will be combined and the results of the study will be reported only in aggregate form. If you have any questions, please call me at 828-9104 or Roger Baldwin (Professor, College of William and Mary) at 221-2322. Thank you for your contribution.

Sincerely,

Terri L. Fauber
Assistant Professor

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CURRICULUM VITAE

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Educational Background

September 1991 - May 1996, College of William and Mary, Williamsburg, Virginia, Doctor of Education

September 1987 - May 1991, College of William and Mary, Williamsburg, Virginia, Education Specialist in Higher Education

March 1983 - March 1985, Louisiana Tech University, Ruston, Louisiana, Masters of Arts in Human Relations and Supervision

September 1980 - May 1982, University of Texas Health Science Center at Dallas, Texas, Bachelors of Science in Allied Health Education

July 1974 - June 1976, Anne Arundel General Hospital School of Radiologic Technology, Annapolis, Maryland, Certification in Radiography, (ARRT #129108)

Professional Experience

June 1985 - Present, Assistant Professor in Department of Radiation Sciences, Medical College of Virginia/ Virginia Commonwealth University, Richmond, Virginia

August 1982 - May 1985, Instructor of Radiologic Technology, Northeast Louisiana University, Monroe, Louisiana

July 1982 - August 1982, Radiography Clinical Instructor, El Centro College, Dallas, Texas

May 1981 - June 1982, Radiographer and Assistant to Orthopedic Surgeon, M.G. Andreassian, M.D., Dallas, Texas

January 1979 - March 1981, Radiographer in Cardiac Catheterization Lab, Medical City Hospital, Dallas, Texas

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