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A Qualitative Meta-Analysis of Research on the Affective Growth of Undergraduate Commuter Students in Higher Education from 1978 to 1992

Michael S. Miller
Loyola University Chicago

LOYOLA UNIVERSITY OF CHICAGO

A QUALITATIVE META-ANALYSIS OF RESEARCH ON THE AFFECTIVE GROWTH OF UNDERGRADUATE COMMUTER STUDENTS IN HIGHER EDUCATION FROM 1978 TO 1992

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MICHAEL S. MILLER

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CHAPTER I

INTRODUCTION

For most of its 300 year history, American higher education has enrolled full-time, 18 to 24 year-old, resident students. However, since World War II, the demographic profile of college students has changed dramatically. Traditional resident students have been joined on the campus by increasing numbers of students who commute to higher education (Astin, 1984; Shor, 1987) and who bring to the campus needs and experiences much more diverse than the needs and experiences of traditional undergraduate resident students.

Traditional undergraduate resident students generally live in a college or university-owned residence hall managed by professional and student staff members who are under the direct supervision of the institution. These resident students are usually between 18 years old and 24 years old, have recently completed high school, are ready for the experiences of college, and are making career and life-style choices (Chickering, 1969). Their main focus is the role of being a full-time student.

They benefit from the close proximity of their housing arrangements and the other campus facilities. Class schedules, student activities, and faculty availability are usually designed to accommodate students who live on campus. A sense of belonging, purpose and community are steadfast amongst resident students.

The undergraduate commuter perspective in higher education is diverse. It includes students who are traditional-aged, nontraditional-aged, returning, full and part-

time. It also includes veterans, elders, married, single, ethnic (Slade & Jarmul, 1975) 18 to 24 year-olds who live off-campus with their parents, and students who live in rented apartments (Jacoby, 1989).

Undergraduate commuter students are such a diverse group of students that the only common characteristic that distinguishes them as a group is that they do not live in college or university owned housing. They are often identified within higher education as "adult," "nontraditional," "evening," "part-time," "returning," and/or "town" students. Many are first generation students whose past academic experiences have been difficult, second degree seekers, career changers, returning women, and minorities (Cross, 1976).

Undergraduate commuter students have many roles, conflicts, responsibilities and issues in addition to being students. Some of their issues may conflict with their roles as students, such as travelling to and from school, managing the multiple life roles of being a parent, employee and student, and committing to off-campus jobs, community organizations and families. These issues are typically not experienced by resident students.

For commuters, being a student is only one role among several (Jacoby, 1989). Commuters must move freely between the educational, home and work environments. Many have families and jobs which may interfere with studying. Because they do not reside on campus, they do not enjoy the same accessibility to college activities and services as resident students. Commuter students, due to the fact that they do not live on campus where activities are usually planned for resident students, have trouble developing a sense of belonging to the campus academic and social communities (Flanagan, 1976; Harrington, 1972).

Definitions of commuter students vary. The National Clearinghouse for

Commuter Programs (1987) defines commuter students as students who do not live in college or university owned housing. Variations of this definition identify commuters as students not under the direct supervision of the institution (Ward & Kurtz, 1969) and as anyone not living "in campus housing, fraternities, sororities, or in off-campus housing in an area immediately surrounding the campus" (Rhatigan, 1986, p. 4).

For purposes of this thesis undergraduate commuter students are defined as students attending four-year American institutions of higher education who do not live in college or university-owned housing and who were identified in the research cited for this study as living with parents or relatives, living in off-campus housing but not with parents or relatives, or were listed by the researchers as commuter students.

Understanding the commuter perspective in higher education is difficult. The population is simply too large and too heterogeneous to be viewed with the same constructs as resident students are viewed. Additionally, institutional arrangements tend to favor resident students. Chickering (1974) described this in his landmark study. He reported that significant differences exist between commuters and residents and that residence on a college campus contributes significantly to the personal and intellectual development of students. He also acknowledged that institutional variations must be considered when studying students.

Chickering's (1974) results were supported by Astin (1977). Astin indicated that the residence status of students attending higher education impacted their personal development. Students living in residence halls scored significantly higher on measures of personal and social development (Astin, 1977).

In comparison to resident students, commuters seem to experience slower development and less change (Astin, 1977; Chickering, 1974; Welty, 1976). They are less

likely to change developmentally on measures of degree aspiration, perceived competence, and ability to commit to long range goals, but they do change significantly on measures of intellectual competence (Chickering, 1974). Many researchers have concluded that the college experience contributes minimally to the personal development of commuter students (Arthur, 1977; Chickering, 1974; Demos, 1967; Dressel & Nisula, 1966; Flanagan, 1976; Garni, 1974; Harrington, 1972; Johnson, 1981; Schuchman, 1974; Trivett, 1974).

Since Chickering (1974) and Astin (1977), numerous researchers have attempted to understand the commuter perspective in higher education. Their efforts have been mainly through the documentation of specific sub-populations of students (Rhatigan, 1986; Stewart & Rue, 1983) and descriptions of programs that respond to the needs of these students (Jacoby, 1989). Overall, however, professionals in higher education are faced with limited research on the effects of commuting and the institutional environment on the personal development of these students. As Boyer (1987) stated, "Are living arrangements simply a convenience or do they contribute to collegiate goals?" (p. 212).

Researchers have vigorously reported that the development of students is greatly enhanced through involvement with various campus social agents, and that living on campus provides numerous opportunities for involvement (Astin, 1985; Pascarella, 1985b), but the efforts of investigators to document the effects of commuting, and the effects of commuting for different types of students across different types of institutions have been limited.

Few longitudinal studies have been done and no systematic theory on commuter students has been developed (Pascarella, Duby, Terenzini, & Iverson, 1983). Research lacks a uniform definition and a process for the systematic analysis of specific subgroups

(Slade & Jarmul, 1975). Additionally, a negative stereotype of commuter students is projected in higher education because researchers often compare commuters to residents rather than focusing specifically on commuter students.

Several reasons exist for the lack of systematic knowledge about commuter students. First, due to the diversity of the population, samples are often limited to students most accessible. Thus, researchers have often focused primarily on 18 to 24 year-old resident students. Second, researchers do not study commuters as a group because of the complex research designs needed to study such a diverse student population (Pascarella, 1985a). Finally, research has lacked a uniform definition and a process for the systematic analysis of specific subgroups (Slade & Jarmul, 1975).

Commuter students are and will continue to be a large part of American higher education. Jacoby (1989) stated that of all students enrolled in higher education, only two million, or 19 percent, reside on campus. The remaining 81 percent are commuters and include graduate students, undergraduates at four-year institutions and students enrolled in two-year institutions.

As enrollment trends change, the number of students who commute to higher education is expected to increase over the current 81 percent of all students. Currently, approximately 90 percent of students who attend urban institutions commute while 64 percent of students who attend non-urban institutions commute (Grobman, 1988).

The exact percentage of undergraduate students who commute to four-year institutions of higher education is uncertain. The National Center for Education Statistics (1989) indicated that in 1987, over 12.7 million students attended institutions of higher education. Approximately 1.4 million were attending graduate schools, 4.7 million students were attending two-year institutions and 6.5 million were undergraduates at four-

year institutions. Assuming that a majority of the 2 million resident students are enrolled as undergraduate students at four-year institutions, over 4 million undergraduate students commute to four-year institutions.

By the year 2000, the Carnegie Council on Policy Studies on American Education (1980) predicts a 23 percent decline in the enrollment of traditional-aged, 18 to 24 year-old undergraduate students who would typically occupy college residence halls. The National Center for Education Statistics (1989) projects a continued increase in the number of students over 25 years old who will enroll in higher education. These students generally commute to college (Jacoby & Girrell, 1981; Kuh & Sturgis, 1980).

In summary, commuter students comprise a significant portion of the student population in higher education. Professionals in higher education must continue to recognize this and to adjust to the fact that the resident student in higher education is not the norm. Research is necessary which documents the differences between types of commuter students. Policies and programs must be designed which ameliorate existing environmental factors that can interfere with the education of commuter students.

Research Objectives

Research published between 1978 and 1992 which reports on the affective growth and development of undergraduate commuter students attending four-year institutions of higher education was reviewed for this study. Only four-year institutions were reviewed, since impacts from small residential colleges (Feldman & Newcomb, 1969) and impacts from subcultures at large universities generally impact student development more than at two-year colleges (Rich & Jolicoeur, 1978). Additionally, students attending four-year institutions generally report more affiliative relationships with their institutions (Flanagan, 1976) and research indicates that student development is enhanced by attending four-year

rather than two-year institutions (Astin, 1985).

Research which reports on the affective development of commuter students and how their interaction with the environment influences their affective development will be documented. Four research objectives for this study are:

1. To describe research methodologies used by investigators who published studies between 1978 and 1992 on the impact higher education had on commuter students.
2. To identify, from the research literature (1978 to 1992), characteristics of undergraduate commuters students in four-year institutions of higher education.
3. To identify, from the research literature (1978 to 1992), affective developmental issues of undergraduate commuter students in four-year institutions of higher education.
4. To identify, from the research literature (1978 to 1992), environmental variables, both internal and external to the institution, which support and impede the affective growth of undergraduate commuter students in four-year institutions of higher education.

Limitations of the Study

Three limitations exist for this study. First, the study is limited to variables already analyzed and reported in the literature. Although this study provided new organization to those variables, it did not analyze any new variables.

Second, this study is limited to the samples of commuter students examined by the researchers. Most of the researchers studied commuter students as a homogeneous group and most used different criteria to identify the commuter students they studied. This study categorized commuter students according to Stewart and Rue's (1983)

classifications.

Finally, the scope of this study was to examine undergraduate commuter students attending four-year institutions of higher education. It does not directly address issues relevant to graduate students and students attending two-year institutions of higher education.

Overview of Thesis

This thesis is organized into five chapters. Chapter I has provided an introduction to the thesis. Chapter II will provide background on commuter students in higher education and a conceptual framework for understanding the affective development of students who attend college. Chapter III will present the research methodology used in this thesis. Data reported by researchers will be systematized and organized into a matrix. Chapter IV will review and analyze data collected from the studies and presented in the matrix. The data will be analyzed to determine whether institutional variables influence the affective development of undergraduate commuter students. Chapter V will discuss the results and present recommendations which professionals in higher education can use to promote the affective development of undergraduate commuter students.

CHAPTER II

REVIEW OF LITERATURE

This chapter consists of two sections. The first reviews literature on commuter students. The literature is presented in four different categories and will provide background information on undergraduate commuter students. The second section presents a conceptual framework for understanding the affective development of undergraduate students who attend higher education. A model described by Pascarella (1985a; 1985b) is presented to provide a context in which to view the interactions between undergraduate students, the institutions they attend and affective outcomes experienced by students.

Research on Commuter Students in Higher Education

The first part of this section examines the reasons why commuter students enroll in higher education. The second section examines why they commute. The third section presents categories of commuter students and systems used by researchers to identify and categorize them. Finally, the last section reviews the nature of commuter students including general characteristics, developmental issues and level of involvement on campus.

Why commuter students enroll in higher education. Students who commute to higher education choose to enroll for several reasons. Flanagan (1976) identified three main factors for commuters' institutional selection: low tuition costs, proximity to home, and employment opportunities in the immediate area. Career advancement is the

number one reason cited by commuter students for college attendance (Davila, 1985). Other reasons most often cited include vocational training, avocational training, gaining certification, and career related purposes (Lichtman, Bass, Ager, 1989).

Research has indicated that career development is the main reason older students cite for attending higher education (Kuh & Ardaiolo, 1979; Solmon & Gordon, 1981). Other research has indicated that personal development is the main reason cited by these students for attendance (Rawlins, 1979).

Why students commute. Students who commute to higher education choose to live off campus and commute for several reasons. They may choose to commute because the institution is near their home or apartment. Students may have to commute due to circumstances beyond their control. Jacoby (1983) cited specific reasons such as economic constraints coupled with cutbacks of federal student financial aid, parental pressure, family obligations and past academic performances. Researchers have reported that students tend to view off campus living as a less expensive means to higher education than living on campus (Bainium, 1983). Lack of university housing is often a factor.

Cross (1976) indicated that commuting may be the only choice for older students who are returning to college. Older students are attending college in increasing numbers due to societal emphasis on lifelong learning, career development, and as a result of successful marketing strategies of institutions of higher education (Shor, 1987). Older students do not generally return to college to experience the collegiality of the traditional student. Residential arrangements are not conducive to older students. Economic constraints and family obligations also dictate older students' living arrangements (Cross, 1976).

Categories and systems used to classify commuter students. Some researchers have studied commuter students without comparing them to resident students. These researchers have reported that commuters are a heterogeneous group composed of various subpopulations. Typologies are often used in these studies. Typologies result from emerging data trends (Patton, 1980) and tend to emphasize positive characterizations.

Schuchman (1974) listed five categories of commuter students. The largest group consisted of students who were the first in their families to attend college. The second largest group consisted of students who remained at home due to emotional ties with their families. The third group consisted of students who preferred an urban commuter campus over a residential campus. The fourth group consisted of students who experienced financial and/or academic difficulties which prevented them from enrolling at a residential college. The final category consisted of students who did not reside on campus because they had been denied housing or had chosen to live off campus (Schuchman, 1974).

Stewart and Rue (1983) identified three variables for classifying subpopulations: age, residential status and enrollment status. Age consisted of two components: traditional (18 to 24 years old) and nontraditional (over 24 years old). Residential status also consisted of two components. Dependent students live at home with a parent or relative. Independent students live in an apartment or college housing. Enrollment status included students who were either part-time or full-time. The interaction between the three categories yields eight distinct types of commuter students (Stewart & Rue, 1983): a) dependent, traditional, full-time; b) dependent, nontraditional, part-time; c) dependent nontraditional, full-time; d) dependent, traditional, part-time; e) independent, traditional,

full-time; g) independent, nontraditional, part-time; and h) independent, traditional, part-time.

Additionally, commuter students can be classified by institutional location (Stewart & Rue, 1983). Urban, suburban and rural locations attract different types of commuter students and have different impacts on attending students. Knowledge of specific institutional missions can provide insight into student needs (Stewart & Rue, 1983).

A second classification system was described by Rhatigan (1986). He proposed that commuter students could be categorized into specific subpopulations by creating couplets based on relevant characteristics and circumstances of an institution. Characteristics and circumstances could include age (e.g. traditional-aged students, 18 through 24, and nontraditional-aged students, over 24), race (e.g. black, white, Hispanic, Native American), goals (e.g. degree bound and other goals) and ability (e.g. high or low). The couplets are combined to form student profiles. For example, a subpopulation of commuter students might be: nontraditional-aged, black, degree bound and high ability.

General nature of commuter students. Chickering's 1974 book represents the major work on commuter students. Comparing commuters and residents, he reported results from two major analyses: a 1968 multiple regression analysis, which examined attitudes and behaviors of 5,351 randomly-selected students who responded to a follow-up questionnaire at the end of their freshman year; and a re-analysis of 169,190 responses to a 1969 survey of freshmen. The responses indicated differences between students who commute and students who live on campus. In general: a) parents of commuters had lower incomes and less education; b) commuters achieved lower high school grades and lower scores on aptitude tests; c) commuters' degree aspirations were lower; d) commuters were less interested in world affairs; e) commuters were less certain about

plans to pursue during college; f) commuters were less open to new experiences; g) commuters were less autonomous and less mature; and h) commuters were more concerned about financial matters and material success (Chickering & Kuper, 1971).

Other researchers have confirmed the results of Chickering's seminal work. Commuters are more likely to be employed and have family responsibilities than residents (Harrington, 1972; Kuh & Ardaiolo, 1979; Schuchman, 1974; Ward & Kurtz, 1969). Parents of commuters have been reported as less likely to have attended college (Astin, 1977; Baird, 1969; Drasgow, 1958; Flanagan, 1976). Solmon and Gordon (1981) reported that part-time, nontraditional-aged students had lower levels of parental education than full-time students.

New (1977), studying value differences between commuter and resident students, reported that commuters, "appear to be more practical and take a no-nonsense approach to affairs of life, especially matters pertaining to education" (p. 84). However, both Astin (1977) and Chickering (1974) reported that commuters are more likely to either leave college or not to complete a degree in four years. Other researchers have reported no difference between commuters and residents in regards to academic achievement (Foster, Sedlacek, & Hardwick, 1977; Graff & Cooley 1970; Ryan, 1970; Sauber, 1972).

Welty (1976) reported the differential impact of residence hall, off-campus and commuter living situations on students at a four-year state college. Students were studied for differences in pre-enrollment characteristics, and pretest to posttest changes on the Omnibus Personality Inventory (OPI). Residents reported sightly higher high school ranks and ACT scores than commuters. Residents also reported fewer siblings, parents with higher socioeconomic statuses, and fathers who were significantly more likely to be employed in professional occupations (Welty, 1976).

Regarding scores on the OPI, Welty (1976) reported significant differences between commuters and residents on the scales intellectual disposition, thinking introversion, estheticism, complexity, autonomy, and altruism. Posttest results yielded significant differences on each scale except autonomy. Analyzing the differences between commuters and residents, Welty (1976) reported that the differences were related to interactions of the living situations with a number of new college experience variables: satisfaction with faculty members, number of new college friendships made and amount of interaction with administrators.

Regarding differences between commuters and residents on affective characteristics and levels of involvement, Drasgow (1958) reported that commuters scored significantly lower on the American Council on Education Psychological Examination and Cooperative English tests, had fathers with less education and lower socioeconomic statuses, and worried significantly more about occupational possibilities, finances, harmony in the home, ability to concentrate, moodiness, and receiving unfair treatment. Stark (1965) reported that freshmen commuters had more problems with finances, living conditions, employment, home and family than did residents.

Two researchers, Prusok (1966) and Lindahl (1967), reported no problems hindering the development of commuter students and no differences between commuters and residents. Sauber (1972) reported that commuter and resident students encountered the same type and degree of difficulty in adjusting to higher education and academic performance regardless of where they lived. Baird (1969) reported that commuters and residents did not differ significantly on any variables, especially in educationally relevant areas.

Other researchers, though, note that commuter students are at a disadvantage,

especially when compared to resident students. Commuters have been associated with fewer opportunities for personal growth on campus (Astin, 1977; Chickering, 1974.). Flanagan (1976), summarizing previous research, reported that commuters who lived at home experienced internal conflicts, parental pressures, and peer relationships which cause social changes to occur more slowly than those in apartments who experienced changes similar to resident students (Flanagan, 1976).

Commuters have been associated with more general dissatisfaction with the college experience (Sinnett, Sachson, & Eddy, 1972). But, commuters were reported to have stronger feelings of identity with the college department or major and felt better prepared for future jobs and further education (Davis & Caldwell, 1977). Hardy and Williamson (1974) reported that commuter students were more satisfied with the institution's administration, but (Bishop and Snyder, 1976) later reported that commuter students experienced more conflict with the administration. Burtner and Tincher (1979) reported that commuters were less satisfied with their social lives.

Several researchers have reported on the health of commuter students and the stress they experience. Commuter students have reported lower self-esteem and more psychosomatic symptoms than resident students (Lundgren & Schwab, 1979). Graff and Cooly (1970), comparing commuter and resident students, reported that commuters had poorer mental health, were less mature concerning career goals and aspirations, were less satisfied with their chosen curriculum, perceived lower relevance regarding their course work, had less self-confidence, and had greater feelings of failure and insecurity. Conflicts with parents about values, dating, marital discord, employment strife, and problems with peers and neighbors all contribute to the stress commuter students experience (Cross, 1971; Flanagan, 1976; Harrington, 1972).

Commuters have also been reported as being less involved in the college experience. Astin (1977) and Chickering (1974) reported that commuters were less likely to engage in educational, social, and cultural experiences, and that they were less likely to interact with faculty and peers. Harrington (1976) reported that commuters arrange their schedules in order to spend a minimum amount of time on campus. Schuchman (1974) estimated that only 15 to 20 hours per week are spent by commuter students on campus. The limited time commuter students spend on campus can be attributed to obligations off-campus. Families and work hold higher priority for these students than college does (Andreas, 1983; Counelius & Dolan, 1974). Commuter students also tend to maintain high school and work friendships and often do not develop new friendships on campus (Goldberg, 1973). Bishop and Snyder (1976) reported that commuters rely on themselves for help more than they rely on others. This supports George's (1971) finding that commuters are more autonomous than residents.

Commuters who live at home and commuters who live in off-campus housing have been found to engage in similar activities, and as a group were found to differ from residents (Foster, Sedlacek, & Hardwick, 1977; Lea, Sedlacek, & Stewart, 1977a). On measures of demographic characteristics the two groups of commuters where found to differ, and as a group to differ significantly from residents (Lea, Sedlacek, & Stewart, 1977a). Commuters were not found to be more different from each other than they were from residents (Lea, Sedlacek, & Stewart, 1977a).

Age diversity (Chickering, 1974) must be considered when identifying characteristics and researching affective development of commuter students. Categorizing the age span, researchers have generally referred to two groups of students: traditional-aged, 18 through 24 years old, and nontraditional, over 24 years old. Hughes

(1983) summarized some of the key differences between traditional and nontraditional students. Traditional students are usually campus focused, have limited commitments, and learn through formal structures. Nontraditional students are usually not campus focused, have multiple commitments, and learn through informal structures (Hughes, 1983).

For traditional-aged students, late adolescence involves developing independence from one's previous background while maintaining and developing new relationships (Tyron, 1983). Students adjusting to college sometimes experience difficulties during the transition (DeCoster & Mable, 1981). Often, family ties are the source of difficulties for students (Kenny, 1987). For commuter students, the fact that they live at home means that the independence process, which is a normal developmental transition, does not occur or, more likely, is delayed (Kenny, 1987; Schuchman, 1974). This can result in developmental problems. Wilson, Anderson, and Flemming (1987) indicated that the delay of the separation process may mean problems with maturity, security, lower self-esteem, more need of autonomy, and less satisfaction in relations with parents.

Researchers have reported effects of the transition from late adolescence to early adulthood, and its relationship to independence and separation from parents. Lantz and McCrary (1955) found that the relationship between commuters and their parents was less mature than the relationship between residents and their parents. Commuters are more likely than residents to have more negative attitudes toward parents (Brown & Richtek, 1968), to experience conflicts with parents (Burnett, 1982) and are more likely to conform to parental expectations (Kysar, 1964). Schuchman (1974) reported that commuters are more likely than residents to be emotionally dependent on their parents. Commuters have reported that they feel less affection, communication, satisfaction, and

independence in relationships with parents (Sullivan & Sullivan, 1980).

Two differences between commuters and residents exist which account for developmental differences. First, because commuters miss the residential experience, they do not have the same opportunities for personal growth that resident students are offered (Chickering, 1974; Demos, 1967; Graff & Cooley, 1970; Stark, 1965). Second, due to their age-diversity, commuter students are at many different levels of adolescent and adult development (Andreas & Kubik, 1980). For traditional-aged students, most of whom are working through late adolescence and early adult developmental tasks, leaving home, in the emotional and the physical sense, is recognized as a normal developmental task (Erikson, 1959; Kenny, 1987). Traditional aged students during this time are also working on issues such as emotional and instrumental autonomy and identity development (Chickering, 1969). Non traditional-aged students are adjusting to competing personal and familial roles. All students are adjusting to new life experiences, competing intellectual and social demands, and differing family dynamics.

In summary, researchers have documented general characteristics of commuters and involvement they have with various campus academic and social agents. Some of the reasons students commute and reasons commuters attend higher education have been identified. Most of the research consists of comparison studies which examine commuters in relation to residents. Some studies are typologies which identify characteristics unique to commuter students which enable institutions to develop highly specific campus profiles.

Conceptual Framework

One role students affairs professionals serve is that of student development educator. Student development implies the application of theories and principles of human development by practitioners in higher eduction, "in learning, development, and

assessment that relate to the intellectual, emotional, cultural, moral, physical, interpersonal, and spiritual dimensions of student life" (Brown, 1989, p. 284). Student development, or growth, is a function of the student's interaction with the social system and structure of the institution.

One model to understand the process of student development during college has been described by Pascarella (1985a; 1985b). The model draws from work by Chickering (1969), Tinto (1975) and Lacy (1978). With this model, four major sources of influence help shape the effects of college attendance: 1) the pre-enrollment characteristics of students; 2) structural and organizational factors of the institution; 3) interactions between students and the primary agents of socialization on campus; and 4) interactions with the institution's academic network. Pre-enrollment characteristics are qualities students have at the time they matriculate. They include high school experiences, expectations of college attendance, and demographic characteristics (Hossler, 1984). Institutional factors are characteristics of a specific institution. Some include size, control, and selectivity (Hossler, 1984). The interactions students have with the academic and social networks of an institution impact their cognitive and affective growth during college (Pascarella, Smart, & Nettles, 1987). Student growth during college is represented in cognitive and noncognitive outcomes (Astin, 1977). Cognitive outcomes are higher-ordered mental processes such as reasoning, analysis, critical thinking ability, basic skills, career development, and academic achievement (Astin, Panos, & Creager, 1967). Research conducted on cognitive variables indicate that college attendance does affect cognitive development. Pascarella (1985c) provides a thorough review of issues and literature pertaining to cognitive outcomes.

Non-cognitive, or affective, outcomes are processes such as personality

characteristics, values, attitudes, beliefs, self-concept, drive for achievement, personal habits, mental health, citizenship, interpersonal relations and satisfaction with college (Astin, Panos, & Creager, 1967). Research conducted on affective outcomes generally supports the idea that attending college makes a difference in affective development. Astin (1977) and Feldman and Newcomb (1969) provide literature reviews pertaining to the affective outcomes of college attendance.

Pascarella (1985a) postulated that students' pre-enrollment characteristics, social integration and academic integration have direct influences on affective student development. Structural and organizational characteristics have indirect effects on affective student development. Student development is influenced through the direct effects structural and organizational characteristics have on social and academic integration factors.

Using data from the 1975-1977 Cooperative Institutional Research Program (CIRP), Pascarella (1985b) used longitudinal survey data from 5,162 students attending 74 four-year institutions of higher education to test for institutional effects on two affective measures: 1977 degree aspirations and 1977 intellectual/academic self-concept. His results indicated that structural and organizational characteristics have few direct impacts on affective student development. Their effects were mediated by socialization agents. Institutions with large enrollments, with high student to faculty ratios, and those which were publicly controlled had negative influences on student socialization with faculty and peers. Institutions with large enrollments and which were publicly controlled also had negative influences on academic integration. However, academic integration and social integration with peers had significant positive direct effects on the affective measures: 1977 degree aspirations and 1977 intellectual/academic self-concept (Pascarella, 1985b).

Similar results were reported for measures of self-concept (Pascarella, Smart, & Nettles, 1987) and for humanitarian/civic involvement values (Pascarella, Ethington, & Smart, 1988). The influences of an institution's structural characteristics on self-concept development were found to be mediated by students' collegiate experiences (Pascarella, Smart, & Nettles, 1987). Attendance at a large public university had no significant direct effects on self-concept measures while the social experiences of college had significant direct effects on social and interpersonal self-concept (Pascarella, Smart, & Nettles, 1987).

The development of students' humanitarian/civic involvement values also seem to be influenced by collegiate experiences. Pascarella, Ethington, and Smart (1978) reported that institutional selectivity had at best a trivial influence on the development of humanitarian/civic involvement values. They found the college experience variables of college grades, involvement in social leadership experiences and familiarity with faculty, have significant direct effect on the development of humanitarian/civic involvement values. Involvement in social leadership activities was found to have a particularly strong influence (Pascarella, Ethington, & Smart, 1988).

Astin (1977) questioned whether the outcomes students experience from college attendance are produced by the college experience or are a result of normal maturation. He stated that growth must be equated with impact. Hossler (1984) indicated that college attendance does enhance both cognitive and affective growth, but may vary according to specific institutional variables.

Some specific institutional variables have been identified as affecting growth. Hossler (1984) presented an overview of research findings which document the effects of faculty interaction, student peer cultures, residential nature, degree of institutional

selectivity, religious affiliation, size, and single-sex versus coeducation on development. In general, student growth is affected by the characteristics of an entering student and interactions the student has with specific environmental variables (Newman & Newman, 1978).

In summary, professionals in higher education have significant reasons for studying the characteristics of commuter students, their campus environments, and their involvement with the various academic and social agents of higher education. As the commuter student population increases to over the current 81 percent, professionals will witness student needs and experiences much more diverse than traditional-aged resident students. Further study of commuter students will provide professionals with the necessary information to respond appropriately to these students.

CHAPTER III

METHOD

This chapter reviews the method employed in this study. The concept of a conventional literature review and the research technique of meta-analysis are outlined. Procedures for identifying resources, recording, displaying and analyzing data are reviewed.

Conventional literature reviews infer empirical generalizations about substantive issues from a set of studies bearing directly on those issues (Feldman & Newcomb, 1969; Jackson, 1980). These conventional reviews provide order to the large amounts of data generated in specialized areas, summarize current knowledge and highlight unresolved issues (Tavaggia, 1974). A researcher doing a conventional literature review is comparing data generated from numerous sources and different methods. The goal is to increase generalizability while understanding how events and processes are influenced by specific contextual variations (Firestone & Herriott, 1983; Louis, 1982; Miles & Huberman, 1984). Literature reviews are especially beneficial for professionals in specialized fields, helping them to direct their efforts for maximum impact.

Meta-analysis is one method of organizing large amounts of information generated from literature reviews. A researcher using meta-analysis can systematically summarize results from research with the purpose of integrating the findings (Glass, 1976). Meta-analysis is an ordered but flexible process. Researchers arrange data (information generated from literature reviews) by establishing categories a priori and as the data are analyzed. Category headings assigned a priori are a result of what a researcher knows in

advance about a subject. Category headings that emerge from the data are a result of patterns or regularities that occur in the data (Guba, 1978). Categories are judged by how well the data assigned to them fits and how clear the differences between the categories are (Guba, 1978).

Data are assigned to the appropriate category and analysis takes place. Analysis includes a comparison of variables between studies and an interpretation of the relationship between variables (Wanous, Sullivan, & Malinak, 1989).

Procedures for Identifying Relevant Resources on Commuter Students

A bibliography of research on commuter students that dated back to 1950 was established. These studies provided information for understanding commuter students in the context of higher education since the end of World War II. Several collection methods were used: consultation with professional organizations such as the American College Personnel Association's Commission XVII on Commuter Programs, the National Clearinghouse for Commuter Programs, the National Association of Student Personnel Administrator's Commuter Task Force, the ACPA/NASPA 1987 National Conference in Chicago, a review of Higher Education Abstracts, a review of Dissertation Abstracts International, an on-line computer search, and studies cited in related research. Reference searches used the term "commuter student" as a major descriptor, and the following terms as secondary descriptors: affective, self-concept, values, beliefs, student experiences, student development and student satisfaction.

To analyze research pertaining to the affective development of undergraduate commuter students in American higher education, studies between January 1, 1978 and December 31, 1992, that met the following criteria were selected for analysis: a) studies which included undergraduate commuter students in American higher education;

b) studies conducted only at four-year institutions of higher education; c) studies reporting characteristics, developmental issues, satisfaction and/or needs; d) studies which indicated the students' place of residence in the title or design, or which contained the words "commuter institution" in the title. For example, Adelstein, Martinez, and Sedlacek's (1983) study, "Dimensions Underlying the Characteristics and Needs of Returning Women Students," reported characteristics and needs of returning students. The terms "commuter student" and "commuter institution" were not in the title, nor were they part of the research design. The study was excluded. In contrast, Sullivan and Sullivan's (1980) study, "Adolescent-Parent Separation," studied commuter students as part of the research design. The study was included.

After reviewing over 60 studies published between January 1, 1978 and December 31, 1992, 39 were determined to meet the criteria for analysis. Attempts were made to acquire all 39 studies, but not all were available. The accessible population of studies for this thesis became 35 (Cooper, 1982).

Materials and Definitions

Each study was assigned a reference number by alpha. A separate chart (source format) was used to record information from each study. The information from each chart was entered onto a word processing software, each saved as a separate file, and each bit of information was recorded on its own page. The information was printed onto 3" x 5" note cards, which became the cells for the matrix.

Three general categories of information from the research studies, students, institutional variables, and student outcomes were standardized as they were recorded. To address inconsistencies in the definitions of commuter students used by investigators, commuter students were standardized according to independent and dependent (Stewart

& Rue, 1982), unless the investigator reported no characteristics that allowed the researcher to discern type. In those cases, students are referred to as commuter students.

To address institutional variables, information recorded from the research was standardized according to categories described by Pascarella (1985b). Information was standardized as either pre-enrollment variables, organizational variables, interaction factors or outcomes.

To address student outcomes, Astin's (1977) categories of cognitive and noncognitive outcomes were used. Information such as academic achievement and basic skills were considered cognitive outcomes and were standardized as general characteristics. Information such as personality characteristics, self-concept, satisfaction and mental health were standardized as affective outcomes.

Procedure for Identifying, Recording and Analyzing Data

A meta-matrix (Miles & Huberman, 1984) was used to display the data for this study. A meta-matrix is a large chart which displays descriptive data from several sites in a standard format (Miles & Huberman, 1984). A meta-matrix consists of creating a reporting format, constructing source formats, constructing the meta-matrix, clustering and analysis (Miles & Huberman, 1984).

Creating a Reporting Format. Miles and Huberman (1984) describe the reporting format as questions a researcher wants to examine. For this study, the four research objectives were the issues or questions to be examined. An initial analysis of the four research objectives yielded three general categories: methodology, characteristics and institution. These categories were used to determine subcategories of information needed from each research study to address the research objectives. The subcategories for

methodology included: the date studied, purpose, mode, method (type, instruments used, statistical processes used and dependent variables), and sample characteristics (size, demographic characteristics, selection criteria and residential status of students participating). These variables provided insight into the time period the research was done, why there was an interest in studying commuter students, and the representativeness of the sample in relation to commuter students at large. The mode provided knowledge of the availability of literature pertaining to commuter students. The method provided insight into how the students were studied: the consistency of the data collection across different sites and time periods and the dependent variables studied by previous investigators.

Results reported by previous investigators which pertained to general and affective student characteristics, and interactions students had with the academic and social networks of their institutions were recorded to address the category characteristics. Both significant and strong results reported by the investigators were recorded. This information provided insight into both the nature of commuter students and in some cases, the direction of change. It was also consistent with Pascarella's (1985a; 1985b) model of institutional effects.

Institutional characteristics (name, location, control, institutional housing availability and size) were recorded to address the category institution. Institutional control and size were selected in accordance with the structural/organizational influences outlined by Pascarella (1985a; 1985b). This enabled patterns or trends pertaining to student characteristics that occurred to be correlated with specific environmental variables. Institutional location and housing availability were selected in accordance with Stewart and Rue's (1983) assertion that commuter students who attend urban commuter

institutions are different than other commuter students. The three general analytical categories and the subcategories were the basis for creating the source formats.

Constructing Source Formats. Source formats are charts a researcher uses to record information from the specific sources. They are designed to record information from each source in a consistent manner. The source formats for this thesis (see Appendix I) were established as follows. The three general categories: methodology, characteristics and institution were matched with a research objective. Methodology was matched with research objective one. The subcategories: date studied, purpose, mode, method, sample characteristics, selection criteria and residential status of students participating were arranged together on the source format.

Characteristics were matched with research objectives two and three. The subcategories: general and affective results reported by the researchers and sample characteristics were arranged together on the source format. Institution was matched with research objective four. The subcategories: name, location, control, institutional housing availability and size were arranged together on the source format.

The information selected from the studies and recorded onto the source formats was assigned to the categories by the researcher. Information recorded consisted of direct statements, quotations, significant results, and results that showed a strong direction. Appropriate numbers, journal names, dates, sample numbers, assessment instrumentation, institutional names and information, and statistical procedures were recorded.

Upon completion of recording the information from the research studies onto the source formats, a preliminary analysis of the data was done. Through this analysis, it became evident that all of the information recorded pertained to research objective one,

in addition to the subcategories of information that were originally assigned to research objectives two, three and four. This information was next used to develop the meta-matrix.

Construction of the Unordered Meta-matrix. The information contained on the source formats was used to construct the meta-matrix. A meta-matrix is a differential arrangement of the source formats (Miles & Huberman, 1984). Information recorded on the source formats is systematized and arranged so it can all be viewed at once.

The meta-matrix for this study was constructed by assigning the studies reviewed to rows and arranging the data from the source formats into columns. Data were transferred from the source formats to 3" x 5" index cards and arranged in the same order that the data appeared on the source formats. The meta-matrix consisted of each study to be reviewed arranged as rows and the data collected from each study arranged as columns. The data were clustered as methodology, characteristics and institution.

The meta-matrix provided the researcher a means to view all the data to determine further subcategories of data, patterns of data and trends in the data that occurred over time. The information on the meta-matrix was summarized and analyzed by subcategory and across categories.

A refined version of the meta-matrix is depicted as Table 1. This display was built after the continued analysis and standardization of the data. The fourteen variables selected to address the four research objectives are arranged on Table 1 according to the three analytical categories: methodology, characteristics and institution. A description of the standardization of the variables follows: 1. The code number assigned to each study. 2. The author and date the study was published. 3. The date(s) the students were sampled (some studies contained students from more than one academic year). 4. Two types of purposes emerged from analysis of the data. Research done with the purpose of

TABLE 1

REPORTED DATA FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION

		Methodology							Characteristics	Institution			
# 1	Author & Date Published2	Date Studied3	Purpose 4	Mode 5	Type 6	Inst 7	Sample (N)8	Res Status9	Characteristics 10	Control 11	Location 12	Size 13	Housing 14
1.	Bainum (1983)	1982	R	D	+	D	200	D	A,B,C	1	U	L	C
2.	Bare (1983)	1982	P	E	+	D	2,392	C/S	D	Large Eastern University			
3.	Burtner & Tincher (1979)	1978	P	E	C	D	1,258	D,R,I	A,B,C,D	1	R	M	R
4.	Copeland-Wood (1986)	1985	P	E	+	D	174	C/S	B,C,D	1	S	L	R
5.	Desler (1987)	1983/84	R	P	L	D	623	C/S	A,B,C	1	U	L	C
6.	Foster, Sedlacek, & Hardwick (1978)	N/A	P	J	C	D	N/A	D,I,R	A,B,C,D	1	U	L	R
7.	Haggerty (1985)	75 76 77 78	R	D	+	D*	724	C/S	A,C,D	1	U	L	C

Notes:
1 Computer code number
2 Author and Date Published
3 Date(s) sample(s) questioned: __ = years of sample, - = sample taken throughout year, / = Initial/Follow-up
4 Purpose: R = retention, P = student profile
5 Mode: D = dissertation, E = ERIC document, P = presentation, J = professional journal, B = book
6 Type: + = crossectional, C = comparison (commuter/resident), L = longitudinal, E = experimental
7 Instrumentation: S = standardized instrument, D = survey instrument developed for the purposes of the study
8 Sample N: Final number of participants
9 Residential status: D = home with parents, I = off-campus apartment, R = resident, C/S = off-campus/not specific
10 Characteristics: A = pre-enrollment, B = involvement, C = general, D = affective
11 Institutional Control: 1 = public, 2 = private
12 Location: U = urban, R = rural, S = suburban
13 Institutional Size: L = large, M = medium, S = small
14 Institutional Housing: C = commuter, R = residential

* University Records

TABLE 1 (Continued)

REPORTED DATA FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION

		Methodology						Characteristics		Institution			
# 1	Author & Date Published2	Date Studied3	Purpose 4	Mode 5	Type 6	Inst 7	Sample (N)8	Res Status9	Characteristics 10		Control 11	Location 12	Size 13	Housing 14
8.	Hallenbeck (1978)	N/A	P	J	C	S	331	D,I,R	D		1	R	L	R
9.	Johnson (1981)	1977	P	D	+	D	111	D,I	A,B,C,D		1	R	L	R
10.	Keller (1980)	1978	P	D	E	D	58	D	B		1	R	L	R
11.	Kuh & Ardaiolo (1979)	N/A	P	J	C	D	240	R,C/S	A,B,C	a) b)	N/A N/A	R U	S L	R C
12.	Kuh & Sturgis (1980)	1979	P	J	C	S	771	R,C/S	B,D	a) b)	N/A N/A	R U	S L	R C
13.	LeMoal (1980)	N/A	P	D	LC	S	207	R,C/S	A,C,D		2	N/A	N/A	R
14.	Liu & Jung (1980)	1977	P	J	+	D	782	C/S	C,D		1	U	L	C

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TABLE 1 (Continued)

REPORTED DATA FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION

		Methodology							Characteristics	Institution			
# 1	Author & Date Published2	Date Studied3	Purpose 4	Mode 5	Type 6	Inst 7	Sample (N)8	Res Status9	Characteristics 10	Control 11	Location 12	Size 13	Housing 14
15.	Lundgren & Schwab (1979)	N/A	P	J	C	D	142	D,R	D	1	U	L	R
		N/A	P	J	C	D	437	D,R	D	1	U	L	R
16.	Marecks (1985)	1982-83	P	D	E	S	133	D	B,C,D	1	U	L	C
17.	Marron & Kayson (1984)	1983	P	J	EC	S	142	D,R	D	N/A	N/A	N/A	R
18.	McClain & Sartwell (1983)	1981 1982	R	E	C	D	116	R,C/S	C	1	R	M	R
19.	Metzner (1983)	1982	R	D	+	D	1,382	C/S	A,B,C	1	U	L	C
20.	Nelson (1981)	N/A	P	D	C	D	859	R,C/S	A,B,C	2	N/A	N/A	R
21.	Pascarella (1985b)	1975/77	P	J	CL	S	4,192	R,C/S	A,C,D	100 Public & Private Institutions			

Notes:
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4 Purpose: R = retention, P = student profile
5 Mode: D = dissertation, E = ERIC document, P = presentation, J = professional journal, B = book
6 Type: + = crossectional, C = comparison (commuter/resident), L = longitudinal, E = experimental
7 Instrumentation: S = standardized instrument, D = survey instrument developed for the purposes of the study
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9 Residential status: D = home with parents, I = off-campus apartment, R = resident, C/S = off-campus/not specific
10 Characteristics: A = pre-enrollment, B = student involvement, C = general, D = affective
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TABLE 1 (Continued)

REPORTED DATA FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION

		Methodology							Characteristics	Institution			
# 1	Author & Date Published2	Date Studied3	Purpose 4	Mode 5	Type 6	Inst 7	Sample (N)8	Res Status9	Characteristics 10	Control 11	Location 12	Size 13	Housing 14
22.	Pascarella (1984)	1975/77	P	J	CL	S	4,191	D,C/S	A,B,C,D	100 Public & Private Institutions			
23.	Pascarella, Duby, & Iverson (1983)	1979/80/80	R	J	L	S	213	C/S	A,B,C,D	1	U	L	C
24.	Pascarella, Duby, Miller, & Rasher (1981)	1976/77	R	J	L	S	2,903	C/S	A,C	1	U	L	C
25.	Pascarella, Duby, Terenzini, & Iverson (1983)	1979/80	P	J	L	S	269	C/S	B,D	1	U	L	C

Notes:
1 Computer code number
2 Author and Date Published
3 Date(s) sample(s) questioned: __ = years of sample, - = sample taken throughout year, / = Initial/Follow-up
4 Purpose: R = retention, P = student profile
5 Mode: D = dissertation, E = ERIC document, P = presentation, J = professional journal, B = book
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14 Institutional Housing: C = commuter, R = residential

TABLE 1 (Continued)

REPORTED DATA FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION

		Methodology						Characteristics	Institution			
# 1	Author & Date Published2	Date Studied3	Purpose 4	Mode 5	Type 6	Inst 7	Sample (N)8	Res Status9	Characteristics 10	Control 11	Location 12	Size 13	Housing 14
26.	Rich & Jolicouer (1978)	1975/76	P	B	LC	S	2,016	R,C/S	B,C,D	12 Colleges & Universities in California			
27.	Schoeneman (1983)	N/A	P	J	C	S	39	R,D	B	N/A	N/A	N/A	R
28.	Selby & Weston (1978)	N/A	P	J	C	D	183	R,I	B,D	2	U	L	R
29.	Shaver & Duhon (1984)	N/A	P	E	+	D	25	C/S	B,C,D	1	R	M	R
30.	Simono, Wachowiak, & Furr (1984)	1982	P	J	C	D*	448	R,D,I	C	1	R	L	R

Notes:
1 Computer code number
2 Author and Date Published
3 Date(s) sample(s) questioned: __ = years of sample, - = sample taken throughout year, / = Initial/Follow-up
4 Purpose: R = retention, P = student profile
5 Mode: D = dissertation, E = ERIC document, P = presentation, J = professional journal, B = book
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* University Records

TABLE 1 (Continued)

REPORTED DATA FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION

		Methodology							Characteristics	Institution			
# 1	Author & Date Published2	Date Studied3	Purpose 4	Mode 5	Type 6	Inst 7	Sample (N)8	Res Status9	Characteristics 10	Control 11	Location 12	Size 13	Housing 14
31.	Stafford & Pate (1979)	1975/76	P	E	CL	D	317	R,D,I	A,B,D	1	R	L	R
32.	Sullivan & Sullivan (1980)	1976	P	J	CE	D	399	R,D	A,B,D	N/A	N/A	N/A	N/A
33.	Trathen (1984)	1981/82	P	D	E	D/S	56	C/S	B,D	1	R	M	R
34.	Tyron (1983)	1981-82	P	E	C	D*	345	C/S,R	B	2	U	L	R
35.	Wilson, Anderson, & Flemming (1987)	N/A	P	J	C	D	115	C/S,R	D	N/A	N/A	N/A	N/A

Notes:
1 Computer code number
2 Author and Date Published
3 Date(s) sample(s) questioned: __ = years of sample, - = sample taken throughout year, / = Initial/Follow-up
4 Purpose: R = retention, P = student profile
5 Mode: D = dissertation, E = ERIC document, P = presentation, J = professional journal, B = book
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7 Instrumentation: S = standardized instrument, D = survey instrument developed for the purposes of the study
8 Sample N: Final number of participants
9 Residential status: D = home with parents, I = off-campus apartment, R = resident, C/S = off-campus/not specific
10 Characteristics: A = pre-enrollment, B = student involvement, C = general, D = affective
11 Institutional Control: 1 = public, 2 = private
12 Location: U = urban, R = rural, S = suburban
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14 Institutional Housing: C = commuter, R = residential

* University Records

predicting student withdrawal behavior, student attrition or retention was categorized as retention studies. Research done with the purpose to identify characteristics of commuter students was categorized as profile studies. They included academic plans, direct and indirect environmental influences, degree of involvement, and general characteristics such as career plans, educational plans, political views, student satisfaction, psychological adjustment, family systems, personal problems, counseling, separation behavior (from parents), social interaction, student development, self-concept, and self-esteem. Codes for each category are: R = retention, P = general student profile. 5. The mode of the study was classified as: D = dissertation, E = ERIC document, P = presentation, J = professional journal and B = book. 6. The type of the study was classified as: + crossectional study (commuter students only), C = comparison study (commuter students versus resident students), L = longitudinal study and E = experimental. 7. The instrumentation used in the study was classified as: S = standardized instrument and D = survey instrument developed for the purpose of the study. 8. The sample(N) is the final number of respondents, including parents (if surveyed) and control groups (if used). 9. The residential status of sample was classified as residents, off-campus, home owners, commuter students living at home with parents or relatives, commuter students living off-campus and married commuters living at home. To systematize the data, the terms used by Stewart and Rue (1983) to identify students were used here. Students were listed as resident (living in institutional housing), independent (living off-campus in an apartment or own home), dependent (living with a parent or relative), or general (commuter students, but not specified by the researchers). Codes for each category are: R = resident, I = independent, D = dependent and C/S = general commuter student. 10. Student characteristics were arranged as pre-enrollment variables, students' involvement

with campus social and academic networks, general traits and affective traits. Table 1 lists only types of characteristics reported in each study. Specific characteristics are described in Chapter III. Student pre-enrollment characteristics included high school rank, high school grade point average, parents' level of education, students' expectations from college, socioeconomic status, degree plans, civil concerns and general expectations. Interactions students had with their environments were further categorized as: institutional departments, programs, structures, and services, faculty, peers and extracurricular activities. General characteristics included: traits specific to commuter students who either persisted or withdrew from an institution, general characteristics for all commuter students, reasons commuter students attended higher education, reasons commuter students chose to commute and needs. Affective characteristics included: satisfaction, identification with the institution, psychological factors, and needs. On Table 1, studies reporting results are coded as: a = Student characteristics, b = Students' interactions with the campus environment, c = General characteristics, and d = Affective characteristics. 11. Institutional control was classified as: 1 = public, 2 = private. 12. Location was classified as: U = urban, R = rural, S = suburban. 13. Institutional size was classified as: L = large (10,000 +), M = medium (5,000 - 10,000), S = small (less than 5,000). 14. Institutional housing was classified as: C = commuter, R = residential. Regarding the institution, information was recorded if the researcher stated it. If not, and if the location of the study was cited, Barron's Guide to Colleges and Universities (1990) was used.

Clustering and Analysis. The information displayed within each subcategory on the meta-matrix was clustered and displayed using summary tables. Summary tables are listings of data arranged by specific variables. Arranging and summarizing the data in this

manner yield distinct units of analysis (Miles & Huberman, 1974). Summary Tables 2 through 14 were built and used to address research objective one. Summary tables were also used to display data to address research objectives two and three. The general and affective characteristics of commuter students are displayed on Tables 15 through 22.

Table 24, an effects matrix, was used to address research objective four. An effects matrix displays data to illustrate changes or differentiated outcomes (Miles & Huberman, 1974). Data displayed on the meta-matrix were analyzed across categories to determine relationships between affective growth and institutional characteristics. These relationships were displayed in Table 24.

Chapter IV contains an analysis of all the data as they relate to the four research objectives. Summary tables, an interpretation of each subcategory of data and the effects matrix are reviewed.

CHAPTER IV

RESULTS

This chapter presents the results of this study. Research highlights are stated and a detailed analysis of each research objective is presented. Summary tables that display data along with an effects matrix are included.

Thirty-five research studies were reviewed and data relevant to address the four research objectives for this study were recorded, systematized and analyzed. Initial analyses of the data yielded three general categories: methodology, characteristics and institution. These three categories were further divided into subcategories. Information from the 35 research studies that fit the subcategories was recorded and displayed on a meta-matrix. Further analysis and synthesis resulted in information to address the four research objectives.

Research Highlights

An analysis of the meta-matrix yielded the following highlights:

1. Most of the research was conducted and published prior to 1985.
2. Most of the research was conducted with the objective to profile commuters.
3. Only eleven studies were done with the intent to document the affective characteristics of commuter students.
4. More than half of the studies compared commuter students to resident students.
5. Only a few of the studies were longitudinal or experimental in nature.
6. Most of the research studies examined commuter students as a homogeneous entity. Investigators who examined subpopulations or provided specific definitions of the commuter students they studied often used the categories described by Stewart and Rue (1983).
7. The characteristics investigators reported generally fall into the categories: pre-enrollment variables, involvement with various campus agents, general (which includes cognitive) and affective.
8. The affective characteristics reported by investigators include: satisfaction with

attendance, needs, identification with the institution of choice and general development.

9. Most of the research was done on commuter students who attend public, residential universities with over 10,000 students.
10. The parents of commuter students, in general, have not attended higher education.
11. Commuters generally score lower on academic aptitude tests than residents.
12. Commuter and resident students have similar initial degree goals.
13. Commuter students are less involved and have fewer positive interactions on campus than residents.
14. Commuter students who live at home with parents identify more with their parents and have less autonomy than other students.
15. Researchers have focused more on the programmatic needs of commuter students than on their psychological needs.
16. Commuter students are generally less satisfied with their higher education experience than other students.
17. Investigators examined the variable satisfaction and cited affective variables at public, urban, large and residential institutions most often.
18. Generalizing the results of studies to all commuter students is difficult due to the different types of commuter students who attend different types of institutions.
19. The institutional variables control, location, size and housing availability each had positive and negative influences on the affective development of commuter students.

Research Objective One

Research methods used by investigators who published studies between 1978 and 1992 on the impact higher education had on undergraduate commuter students are listed in Tables 2 through 14. These data include relevant dates, objectives, designs, sample characteristics, types of results reported and types of institutions studied. Summary tables are used to display the data.

Table 2 and Table 3 are time-ordered listings of the research studies reviewed. Table 2 displays the research according to the date it was published. Table 3 displays the research according to the date(s) the investigators surveyed their subjects.

Three time clusters emerged from the data. Between 1978 and 1981, 13 research studies were published and at least 20 investigators surveyed commuter students. Between 1981 and 1985, 16 research studies were published and at least 10 researchers

TABLE 2

SUMMARY TABLE: TIME ORDERED LISTING OF SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY DATE PUBLISHED

Range of Dates	Studies
Pre 1981	Burtner & Tincher (1979)
	Foster, Sedlacek, & Hardwick (1978)
N = 13	Hallenbeck (1978)
% = 36	Keller (1980)
	Kuh & Ardaiolo (1979)
	Kuh & Sturgis (1980)
	LeMoal (1980)
	Liu & Jung (1980)
	Lundgren & Schwab (1979)
	Rich & Jolicouer (1978)
	Selby & Weston (1978)
	Stafford & Pate (1979)
	Sullivan & Sullivan (1980)
1981 - 1984	Bainum (1983)
	Bare (1983)
N = 16	Johnson (1981)
% = 47	Marron & Kayson (1984)
	McClain & Sartwell (1983)
	Metzner (1983)
	Nelson (1981)
	Pascarella (1984)
	Pascarella, Duby, & Iverson (1983)
	Pascarella, Duby, Miller, & Rasher (1981)
	Pascarella, Duby, Terenzini, & Iverson (1983)
	Schoeneman (1983)
	Shaver & Duhon (1984)
	Simono, Wachowiak, & Furr (1984)
	Trathen (1984)
	Tyron (1983)
1985 - 1992	Copeland-Wood (1986)
	Desler (1987)
N = 6	Haggerty (1985)
% = 17	Marecks (1985)
	Pascarella (1985b)
	Wilson, Anderson, & Flemming (1987)

TABLE 3

SUMMARY TABLE: TIME ORDERED LISTING OF SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY DATE OF SAMPLE

Range of Dates	Date	Studies
N/A		Nelson (1981)
		Schoeneman (1983)
N = 4		Shaver & Duhon (1984)
% = 3		Wilson, Anderson, & Flemming (1987)
Pre 1981	1978	Burtner & Tincher (1979)
	N/A	Foster, Sedlacek, & Hardwick (1978)
N = 20	N/A	Hallenbeck (1978)
% = 57	75 77	Haggerty (1985)
	76 78	
	1977	Johnson (1981)
	1978	Keller (1980)
	N/A	Kuh & Ardaiolo (1979)
	1979	Kuh & Sturgis (1980)
	N/A	LeMoal (1980)
	1977	Liu & Jung (1980)
	N/A	Lundgren & Schwab (1979)
	75/77	Pascarella (1985b)
	75/77	Pascarella (1984)
	79/80/80	Pascarella, Duby, & Iverson (1983)
	76/77	Pascarella, Duby, Miller, & Rasher (1981)
	79/80	Pascarella, Duby, Terenzini, & Iverson (1983)
	75/76	Rich & Jolicouer (1978)
	N/A	Selby & Weston (1978)
	75/76	Stafford & Pate (1979)
	1976	Sullivan & Sullivan (1980)
1981 - 1984	1982	Bainum (1983)
	1982	Bare (1983)
N = 10	83/84	Desler (1987)
% = 29	82 - 83	Marecks (1985)
	1983	Marron & Kayson (1984)
	81	McClain & Sartwell (1983)
	82	
	1982	Metzner (1983)
	1982	Simono, Wachowiak, & Furr (1984)
	81/82	Trathen (1984)
	81-82	Tyron (1983)
1985 - 1992	1985	Copeland-Wood (1986)
N = 1		
% = 3		

surveyed commuter students. During the third time period, 1985 to 1992, only six research studies were published and only one investigator surveyed commuter students.

All of the research studies were dated, but a number of them did not indicate when the subjects were sampled. Some research studies used the same sample for more than one study and some used more than one sample for the same study. Ten of the research studies did not indicate when subjects were surveyed. However, six of these: Foster, Sedlacek, and Hardwick (1978), Hallenbeck (1978), Kuh and Ardaiolo (1979), LeMoal (1980), Lundgren and Schwab (1979) and Selby and Weston (1978) were listed on Table 3 as pre-1981 because of their publication dates. The four research studies not listed on Table 3 are Nelson (1981), Schoeneman (1983), Shaver and Duhon (1984) and Wilson, Anderson and Flemming (1987).

Some of the research studies used the same sample population for more than one study while some of the research used more than one sample for the same published study. Pascarella (1985b) and Pascarella (1984) used the same sample population of students while Lundgren and Schwab (1979) reported the results of two studies. Both Pascarella studies used samples of students provided by data from the Cooperative Institutional Research Project (CIRP). Both studies had different objectives. Pascarella (1984) examined the effects of living on-campus on college outcomes while Pascarella (1985b) examined the effects of living arrangements on intellectual and interpersonal self concept. Lundgren and Schwab (1985) reported the results of two studies on the self-esteem of students who live at home and commute to higher education. They did not include dates that the sample population was surveyed.

Some of the research studies sampled subjects at different times throughout the course of the investigation. In Table 3, different symbols are used to distinguish between

research designs. A slash is used to indicated studies that were longitudinal or experimental. A dash is used to indicate studies that collected data at various times throughout an academic year. Dates listed in vertical format indicate studies where data were collected from samples from more than one year.

Pascarella, Duby and Iverson (1983) issued their first questionnaire during 1979, their follow-up questionnaire in the spring of 1980, and they verified enrollment in the fall of 1980. Trathen (1984) was the only investigator to issue a pre-test in the fall and a posttest in the spring of the same academic year.

Two research studies collected data throughout an entire academic year. Tyron (1983) used intake cards from the campus counseling center to determine the types of issues for which commuter students sought assistance. Marecks (1985) sampled commuter students who worked either on-campus or off-campus during the 1982-1983 academic year.

Some of the research studies reported retention rates for commuter students from one year to the next. Haggerty (1985) surveyed over 724 students during the years 1975, 1976, 1977 and 1978. Students completed an initial survey and institutional records were later reviewed to verify attendance. McClain and Sartwell (1983) sampled 116 freshmen from the fall terms 1981 and 1982. Students were tracked to determine their persistence at the institution.

Note that only 17 percent of the research on commuter students attending institutions of higher education was published between 1985 and 1992. The low volume of research published during this time period is underscored by the information in Table 3. Only one study, Copeland-Wood (1986), surveyed students between 1985 and 1990. The commuter students she studied were all over 24 years old.

TABLE 4

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY RESEARCH OBJECTIVES FOR STUDYING COMMUTER STUDENTS

Research Objective	Study
Retention	Bainum (1983)
	Desler (1987)
N = 7	Haggerty (1985)
% = 20	McClain & Sartwell (1983)
	Metzner (1983)
	Pascarella, Duby, & Iverson (1983)
	Pascarella, Duby, Miller, & Rasher (1981)
Student Profile	Bare (1983) *
	Burtner & Tincher (1979) *
N = 28	Copeland-Wood (1986)
% = 80	Foster, Sedlacek, & Hardwick (1978)
	Hallenbeck (1978) *
	Johnson (1981)
	Keller (1980)
	Kuh & Ardaiolo (1979)
	Kuh & Sturgis (1980)
	LeMoal (1980)
	Liu & Jung (1980)
	Lundgren & Schwab (1979) *
	Marecks (1985)
	Marron & Kayson (1984) *
	Nelson (1981)
	Pascarella (1984)
	Pascarella (1985b) *
	Pascarella, Duby, Terenzini, & Iverson (1983) *
	Rich & Jolicouer (1978)
	Schoeneman (1983)
	Selby & Weston (1978) *
	Shaver & Duhon (1984)
	Simono, Wachowiak, & Furr (1984)
	Stafford & Pate (1979)
	Sullivan & Sullivan (1980) *
	Trathen (1984)
	Tyron (1983) *
	Wilson, Anderson, & Flemming (1987) *

* Research studies with affective characteristics as part of the objective - N = 11

Table 4 is a summary listing of the objectives stated in the research studies. Two general categories of objectives were cited in the research: retention and profiles. Seven of the studies examined the persistence and withdrawal behavior of commuter students. Behaviors were reported for different types of commuter students attending different types of institutions. The 28 remaining research studies were conducted to identify commuter student characteristics.

Commuter students were not the primary target population in all 35 research studies. Investigators comparing commuter and resident students usually focused their efforts on residents. In these studies, commuter students usually lived at home with their parents or relatives.

The affective development of commuter students was not a major objective for the investigators. Only 11 of the studies included affective variables such as student satisfaction, psychological adjustment, family systems and personal adjustment as part of the stated objective. These research studies are marked with an asterisk in Table 4.

None of the research studies were conducted with the same objective. Dependent variables for studies that profiled students were either stated in the objective or in the research design. Some of these studies provided insight into minority students (Shaver & Duhon, 1984), parent-student separation (Sullivan & Sullivan, 1980), individual adjustment and family systems (Wilson, Anderson & Flemming, 1987), and opportunities for involvement (Burtner & Tincher, 1978).

All of the retention studies examined different sets of dependent variables. Some of the research profiled students while others attempted to establish documentation for causal models. Bainum (1983), for instance, investigated the influences of the interactions first time nonresident freshmen students had with families, closest companions and the

college environment. Desler (1987) and Pascarella, Duby and Iverson (1983) examined students in relation to determining the explanatory effects of retention models.

Table 5 is a summary listing of the five types of sources in which the resource studies were published. Nine of the studies were dissertations available through University Microfilms International. Sixteen of the studies were published in professional journals. Since Astin's 1977 study comparing commuter and resident students, only one book, Rich and Jolicouer (1978), documenting a major research project that includes commuter students was published. Seven studies were available through ERIC Document Reproduction Services. Desler (1987) was obtained at the 1987 ACPA/NASPA conference in Chicago, Illinois.

Eleven different professional journals were used to publish the research studies. Journals represented by this sample of research studies include: Journal of National Association of Women Deans Administrators and Counselors, NASPA Journal, Research in Higher Education, Journal of College Student Development, Youth and Society, Psychological Reports, The Review of Higher Education, Social Behavior and Personality, Journal of College and University Student Housing and Developmental Psychology. Three research studies were published in Research in Higher Education and five studies were published in the Journal of College Student Development.

The research studies reviewed here were represented by a wide variety of sources. While dissertations were difficult to obtain, professional journals and ERIC documents were readily available. Variables analyzed from the selection of studies reviewed here did not seem to relate to any specific type of resource nor to any specific journal.

Table 6 is a summary listing of the methodologies employed in the research studies reviewed. Four categories of methodologies were evident from the studies:

TABLE 5

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY SOURCES OF SELECTED STUDIES

Sources	Studies
Dissertation N = 9 % = 3	Bainum (1983) Haggerty (1978) Johnson (1981) Keller (1980) LeMoal (1980) Marecks (1985) Metzner (1983) Nelson (1981) Thrathen (1984)
Journal N = 17 % = 48	Foster, Sedlacek, & Hardwick (1978) Hallenbeck (1978) Kuh & Ardaiolo (1979) Kuh & Sturgis (1980) Liu & Jung (1980) Lundgren & Schwab (1979) Marron & Kayson (1984) Pascarella (1985b) Pascarella (1984) Pascarella, Duby, & Iverson (1983) Pascarella, Duby, Miller, & Rasher (1981) Pascarella, Duby, Terenzini, & Iverson (1983) Schoeneman (1983) Selby & Weston (1978) Simono, Wachowiak, & Furr (1984) Sullivan & Sullivan (1980) Wilson, Anderson, & Flemming (1987)
Book N = 1 % = 3	Rich & Jolicouer (1978
ERIC Document N = 7 % = 20	Bare (1983) Burtner & Tincher (1979) Copeland-Wood (1986) McClain & Sartwell (1983) Shaver & Duhon (1984) Stafford & Pate (1979) Tyron (1983)
Presentation N = 1 % = 3	Desler (1987)

TABLE 6

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY METHODOLOGY EMPLOYED

Methodology	Study
Comparison	Burtner & Tincher (1979)
	Foster, Sedlacek, & Hardwick (1978)
	Hallenbeck (1978)
	Kuh & Ardaiolo (1979
	Kuh & Sturgis (1980)
	LeMoal (1980)*
	Lundgren & Schwab (1979)
	Marron & Kayson (1984)*
N = 20	McClain & Sartwell (1983)
% = 48	Nelson (1981)
	Pascarella (1985b)*
	Pascarella (1984)*
	Rich & Jolicouer (1978)*
	Schoeneman (1983)
	Selby & Weston (1978)
	Simono, Wachowiak, & Furr (1984)
	Sullivan & Sullivan (1980)*
	Stafford & Pate (1979)*
	Tyron (1983)
	Wilson, Anderson, & Flemming (1987)
Longitudinal	Desler (1987)
	LeMoal (1980)*
	Pascarella (1985b)*
N = 9	Pascarella (1984)*
% = 21	Pascarella, Duby, & Iverson (1983)
	Pascarella, Duby, Miller, & Rasher (1981)
	Pascarella, Duby, Terenzini, & Iverson (1983)
	Rich & Jolicouer (1978)*
	Stafford & Pate (1979)*
Experimental	Keller (1980)
	Marron & Kayson (1984)*
	Marecks (1985)
N = 5	Sullivan & Sullivan (1980)*
% = 12	Trathen (1984)
Cross-sectional	Bainum (1983)
	Bare (1983)
N = 8	Copeland-Wood (1986)
% = 19	Haggerty (1985)
	Johnson (1981)
	Liu & Jung (1980)
	Metzner (1983)
	Shaver & Duhon (1984)

* Two methodologies employed; N = 42

cross-sectional, comparison, longitudinal and experimental. Seven of the studies, LeMoal (1980), Pascarella (1985b), Pascarella (1984), Rich and Jolicouer (1978), Stafford and Pate (1979), Sullivan and Sullivan (1980) and Marron and Kayson (1984), were classified as more than one type and were listed twice in Table 6.

Studies were classified as cross-sectional if they sampled commuter students and were not comparison, longitudinal or experimental. Eight of the research studies were classified as cross-sectional and each provided insight into commuter students. Bainum (1983) reported on the persistence and withdrawal behavior of dependent commuters while Johnson (1981) reported characteristics of dependent and independent commuters. Data reported by the other studies were generalized to commuter students. Bare (1983), Liu and Jung (1980), Metzner (1983), Copeland-Wood (1986) and Shaver and Duhon (1984) all documented commuter student characteristics. Metzner (1983) and Haggerty (1985) examined persistence and withdrawal behavior.

Nineteen of the studies compared commuter students to residents. Each of these studies provided information about both groups of students with residents used as the standard. For example, Sullivan and Sullivan (1980) reported that students who live in residence halls, in comparison to students who live at home with parents, exhibited increased affection, communication and independence.

Nine of the research studies were longitudinal. Desler (1987) examined retention at an urban commuter campus. She examined the effects of pre-enrollment variables, goals, work, integration and commitment to students' continued enrollment from 1983 to 1984. Pascarella, Duby, Terenzini and Iverson (1983) examined the impact of faculty on student development at a commuter institution. Students were issued an initial survey in 1979 and a follow-up survey in 1980. Dependent variables included student

pre-enrollment characteristics, student faculty interactions, college experiences and personal development.

Two additional longitudinal studies were conducted to study the retention of students at an urban commuter institution. Pascarella, Duby and Iverson (1983) studied the relationship of pre-enrollment characteristics and student involvement with continued enrollment from 1979 to 1980. Pascarella, Duby, Miller and Rasher (1981) examined pre-enrollment characteristics and GPA with continued enrollment from 1976 to 1977.

Five of the longitudinal studies were also comparison. LeMoal (1980) attempting to determine if place of residence is a factor in effecting specific and measurable changes in college freshmen, examined the results of 207 commuter and resident students on two administrations of the Omnibus Personality Inventory (OPI). Students attending freshmen orientation were issued the instrument, with a follow-up administration taking place three months later.

Studying the impact of residential living versus off-campus living, Pascarella (1984; 1985b) used data he obtained from the 1975 administration of the Cooperative Institutional Research Program (CIRP) survey sponsored by the American Council on Education. The follow-up data for both studies were collected in 1977. Over 100 public and private colleges and universities were included in the sample.

Rich and Jolicouer (1978), investigating the effects of various aspects of the academic environment on students' satisfaction, personal development, value orientation, religious orthodoxy and sociopolitical orientation, examined the results of 2,016 students who completed the Inventory of College Activities (ICA). The initial survey was done in the fall of 1975, with the follow-up issued during the winter of 1976. Results were reported for students attending 12 colleges and universities in California.

Finally, Stafford and Pate (1979), studying changes that occur during the freshman year, issued a survey to students in the fall of 1975 and the spring of 1976. Results were reported for both commuter and resident students on changes in educational plans, career goals, political views, and participation in college activities.

Five of the research studies were experimental. Three of the studies were strictly experimental. Keller (1980) examined the impact of collegiate experiences on freshman commuter students at Bowling Green State University during spring, 1978. Students in the treatment group reported significant impacts experienced during their first term. The number of impacts and the polarity of the impacts (positive or negative) were examined for effects on term grade point average.

Trathen (1984) investigated the impact of a limited residence hall experience on freshman commuter students. The treatment group consisted of commuter students who resided in the residence hall during the week prior to their first enrollment. The control group consisted of commuter students choosing not to live in the residence hall during the same time period. Both groups were later compared on their involvement with campus events.

Marecks (1985) issued a pre-test and a posttest to investigate the differences among four groups of freshman commuting students. The groups were determined by the variables enrollment status (persist and withdraw) and work status (on-campus and off-campus). Students were issued part two of the College Student Questionnaire (CSQ) after agreeing to participate in 1983. The posttest consisted of a check of fall, 1984 enrollment status.

Two of the experimental studies were also comparison. Both contained data that pertained to dependent commuter students. Sullivan and Sullivan (1980), studying the

separation that takes place between adolescents and their parents, surveyed white high school males and their parents. The subjects were issued a precollege survey in the spring of the students' last semester of high school and a postcollege entrance survey in the fall, one month after departure for college. The data were reported according to living status and test scores.

Marron and Kayson (1984) divided students into 16 groups according to year in college, living status and gender. Their purpose was to investigate self-esteem and the amount of life change students experienced over a 12-month period. All of the participants completed a self-esteem and college experience survey.

Table 7 is a summary listing of the survey instruments used in the research studies. Twenty-three studies used surveys developed by the investigators for their particular study. Thirteen research studies used standardized instruments. Trathen (1984) used both a standard and a developed survey. Three studies, Haggerty (1985), Simiono, Wachwoiak, and Furr (1984) and Tyron (1983), assessed university records for demographic information about their samples.

Eight different standardized instruments were used to collect information about samples. Survey data collected through the Cooperative Institutional Research Program (CIRP) were used by Pascarella (1984, 1985b) and Pascarella, Duby, Miller and Rasher (1981). Both Pascarella studies used data collected from the 1975 sample. Pascarella, Duby, Miller and Rasher (1981) used data collected from the 1976 sample. The data for all three studies were collected from 100 public and private institutions across the United States.

Pascarella, Duby and Iverson (1983) and Pascarella, Duby, Terenzini and Iverson (1983) used the American Council on Education's Incoming Student Survey. Both studies

used the same sample population of new students from fall, 1979. The data were collected from a large, urban, commuter institution.

Hallenbeck (1978), studying student satisfaction, examined the responses of 331 students to the College Student Satisfaction Questionnaire (CSSQ), Form C. Residence, dependent and independent students were sampled from a large, public, rural institution. Kuh and Sturgis (1980) examined students' responses to the College and University Environment Scale (CUES). They compared the perceptions different students have of a commuter and a residential campus.

The Omnibus Personality Inventory (OPI) was used by LeMoal (1980) to examine whether place of residence effected change in college freshmen. Marron and Kayson (1983), studying the self-esteem and life changes of college students, examined the results of student responses to an amended version of the Coopersmith's Self-Esteem Inventory. To assess change, the investigators also used the College Schedule of Recent Experiences.

Twenty-three instruments were developed by investigators for use in their research. All of these instruments included demographic information. A section of the method was used to describe the instruments and most were appended.

Table 8 is a summary listing of the final sample size reported in each research study. The figures listed represent all the subjects from which usable data were collected. This includes control groups, resident students and parents.

Review of the figures reported in the research yields four clusters: 25 to 213, 240 to 448, 623 to 859 and 1,258 to 4,191. Each cluster, except for the last one, is represented by sets of approximately 200. The last cluster includes research studies that reported final samples of over 1,000. Foster, Sedlacek, and Hardwick (1978) did not report a final sample size. Lundgren and Schwab (1979) reported the results of two

studies, both used different samples of students. The results of their first study, which pertained to the self-esteem of commuter students, was based on the results of 142 subjects. Their second study, which pertained to self-esteem and psychosomatic symptoms reported by commuter students, was based on 437 subjects.

Further analysis of the sample sizes reported by the research yield two patterns: samples from a group of institutions and samples from specific institutions. Three studies reported data from a group of institutions. Pascarella (1984, 1985b) used a national sample while Rich and Jolicouer (1978) used a sample obtained from institutions of higher education in California.

TABLE 7

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION
BY INSTRUMENTATION EMPLOYED

Instrumentation	Study	
Developed	Bainum (1983)	McClain & Sartwell (1983)
	Bare (1983)	Metzner (1983)
N = 23	Burtner & Tincher (1979)	Nelson (1981)
% = 66	Copeland-Wood (1986)	Selby & Weston (1978)
	Desler (1987)	Shaver & Duhon (1984)
	Foster, Sedlacek, & Hardwick (1978)	Simono, Wachowiak, & Furr (1984)**
	Haggerty (1985)**	Stafford & Pate (1979)
	Johnson (1981)	Sullivan & Sullivan (1980)
	Keller (1980)	Trathen (1984)*
	Kuh & Ardaiolo (1979)	Tryon (1983)**
	Liu & Jung (1980)	Wilson, Anderson, & Flemming (1987)
	Lundgren & Schwab (1979)	
Standardized	Hallenbeck (1978)	Pascarella, Duby, Terenzini, & Iverson (1983)
	Kuh & Sturgis (1980)	
N = 13	LeMoal (1980)	Rich & Jolicouer (1978)
% = 34	Marecks (1985)	Schoeneman (1983)
	Marron & Kayson (1984)	Trathen (1984)*
	Pascarella (1985b)	
	Pascarella (1984)	
	Pascarella, Duby, & Iverson (1983)	
	Pascarella, Duby, Miller, & Rasher (1981)	

* Researchers used developed and standardized instrumentation
** University records

TABLE 8

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY SAMPLE SIZE

Range of Sample Size		Sample Size	Study
25 - 213		25	Shaver & Duhon (1984)
		39	Schoeneman (1983)
		56	Trathen (1984)
	N = 15	58	Keller (1980)
	% = 43	111	Johnson (1981)
		115	Wilson, Anderson, & Flemming (1987)
		116	McClain & Sartwell (1983)
		133	Marecks (1985)
		142	Lundgren & Schwab (1979)*
		142	Marron & Kayson (1984)
		174	Copeland-Wood (1986)
		183	Selby & Weston (1978)
		200	Bainum (1983)
		207	LeMoal (1980)
		213	Pascarella, Duby & Iverson (1983)
240 - 448		240	Kuh & Ardaiolo (1979)
		269	Pascarella, Duby, & Iverson (1983)
		317	Stafford & Pate (1979)
	N = 8	331	Hallenbeck (1978)
	% = 23	345	Tyron (1983)
		399	Sullivan & Sullivan (1980)
		437	Lundgren & Schwab (1979)*
		448	Simono, Wachowiak, & Furr (1984)
623 - 859		623	Desler (1987)
		724	Haggerty (1985)
		771	Kuh & Sturgis (1980)
	N = 5	782	Liu & Jung (1980)
	% = 14	859	Nelson (1981)
1,258 - 4,191		1,258	Burtner & Tincher (1979)
		1,382	Metzner (1983)
		2,392	Bare (1983)
	N = 7	2,903	Pascarella, Duby, Miller, & Rasher (1981)
	% = 20	4,191	Pascarella (1984)
		4,192	Pascarella (1985b)
		2,016	Rich & Jolicouer (1978)

* Figure includes two studies

Both studies by Pascarella (1984, 1985b) reported the results from the same sample population. Pascarella (1985b), using data he obtained from (CIRP), reported the results of 4,192 students assessed on measures of intellectual and interpersonal self-concept. Pascarella (1984) also reported the results of 4,191 students on measures of the impact of residential living on involvement with various college experiences. Rich and Jolicouer's (1978) sample consisted of 2,016 students who responded to the Inventory of College Activities (ICA).

Table 9 displays the place of residence of the students sampled in each research study. Research is arranged on Table 9 according to how the investigators identified the sample. Fifteen of the research studies identified students by typology. These are labeled heterogeneous. Twenty of the research studies identified commuters as a general group. These are labeled homogeneous.

For purposes of uniformity and identification, the classification system described by Stewart and Rue (1983) was used to label subpopulations of commuter students. Students who lived at home with parents were labeled "dependent." Students living in off-campus housing, married students not living at home, and students who owned their own homes were labeled "independent." The sample was labeled "commuter students" in cases where the investigators did not specify the nature of the students.

Table 10 is a summary listing of student characteristics and outcomes reported in the research studies. For purposes of this study, all demographic information about commuter students and outcomes reported by the investigators were analyzed and assigned to one of three categories: student pre-enrollment characteristics, student involvement variables and general characteristics. The category general characteristics was sub-divided into affective characteristics and general characteristics.

TABLE 9

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY RESIDENCE OF STUDENTS SAMPLED

Heterogeneous	
Bainum (1983)	Dependent
Burtner & Tincher (1979)	Dependent, Independent, Resident
Foster, Sedlacek, & Hardwick (1978)	Dependent, Independent, Resident
Hallenbeck (1978)	Dependent, Independent, Resident
Johnson (1981)	Dependent, Independent
Keller (1980)	Dependent
Lundgren & Schwab (1979)	Dependent, Resident
Marecks (1985)	Dependent
Marron & Kayson (1984)	Dependent, Resident
Pascarella (1984)	Dependent
Schoeneman (1983)	Dependent, Resident
Selby & Weston (1978)	Independent, Resident
Simono, Wachowiak, & Furr (1984)	Dependent, Independent, Resident
Stafford & Pate (1979	Dependent, Independent, Resident
Sullivan & Sullivan (1980)	Dependent, Resident
Homogenous	
Bare (1983)	
Copeland-Wood (1986)	
Desler (1987)	
Haggerty (1985)	
Kuh & Ardaiolo (1979)	
Kuh & Sturgis (1980)	
LeMoal (1980)	
Liu & Jung (1980)	
McClain & Sartwell (1983)	
Metzner (1983)	
Nelson (1981)	
Pascarella (1985b)	
Pascarella, Duby, & Iverson (1983)	
Pascarella, Duby, Miller, & Rasher (1981)	
Pascarella, Duby, Terenzini, & Iverson (1983)	
Rich & Jolicouer (1978)	
Shavor & Duhon (1984)	
Trathen (1984)	
Tyron (1983)	
Wilson, Anderson, & Flemming (1987)	

Notes (Categories based on Stewart & Rue (1983):

* Dependent = Commuter students who live at home with parents or relatives
* Independent = Commuter students who live in off-campus housing, but not with parents or relatives
* Resident = Students who live on campus

Student pre-enrollment characteristics included high school rank, high school grade point average, students' expectations of college, socioeconomic status, degree plans, civil concerns and general expectations. Sixteen of the research studies reported various types of pre-enrollment characteristics of commuter students.

Student involvement variables included interactions students had with institutional departments, programs, services, faculty, peers and extracurricular activities. Twenty-two of the research studies reported on commuter students' involvement with their environment.

General characteristics included reasons for attendance, academic information, age and employment status. Twenty-four of the research studies reported various types of general characteristics.

Affective characteristics included self-esteem, satisfaction, needs and identification with the institution. Twenty-three of the research studies reported various types of affective characteristics. Further analysis of pre-enrollment characteristics, student involvement variables, general characteristics and affective characteristics is addressed in the sections which describe research objectives 2 and 3.

Table 11, Table 12, Table 13 and Table 14 are summary listings of structural variables from the institutions cited in the research studies. Table 11 separates the studies by institutional control. Table 12 separates them by location. Table 13 separates them by size of enrollment. Finally, Table 14 separates them by housing availability.

TABLE 10

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION - RESULTS REPORTED BY ASSIGNED CATEGORY

Study	Types of Characteristics Reported in the Study			
	a	b	c	d
1. Bainum (1983)	X	X	X	
2. Bare (1983)				X
3. Burtner & Tincher (1979)	X	X	X	X
4. Copeland-Wood (1986)		X	X	X
5. Desler (1987)	X	X	X	
6. Foster, Sedlacek, & Hardwick (1978)	X	X	X	X
7. Haggerty (1985)	X		X	X
8. Hallenbeck (1978)				X
9. Johnson (1981)	X	X	X	X
10. Keller (1980)		X		
11. Kuh & Ardaiolo (1979)	X	X	X	
12. Kuh & Sturgis (1980)		X	X	
13. LeMoal (1980)	X		X	X
14. Liu & Jung (1980)			X	X
15. Lundgren & Schwab (1979)				X
16. Marecks (1985)		X	X	X
17. Marron & Kayson (1984)				X
18. McClain & Sartwell (1983)			X	
19. Metzner (1983)	X	X	X	
20. Nelson (1981)	X	X	X	
21. Pascarella (1985b)	X		X	X
22. Pascarella (1984)	X	X	X	X
23. Pascarella, Duby, & Iverson (1983)	X	X	X	X
24. Pascarella, Duby, Miller, & Rasher (1981)	X		X	
25. Pascarella, Duby, Terenzini, & Iverson (1983)		X		X
26. Rich & Jolicouer (1978)		X	X	X
27. Schoeneman (1983)			X	
28. Selby & Weston (1978)		X		X
29. Shaver & Duhon (1984)		X	X	X
30. Simono, Wachowiak, & Furr (1984)			X	
31. Stafford & Pate (1979)	X	X	X	X
32. Sullivan & Sullivan (1980)	X	X		X
33. Trathen (1984)		X		X
34. Tyron (1983)		X		
35. Wilson, Anderson, & Flemming (1987)				X

a = Student pre-enrollment characteristics
b = Student involvement with campus academic and social agents
c = General characteristics
d = Affective characteristics

TABLE 11

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY CONTROL OF INSTITUTION SAMPLED

Control	Study	
Public	Bainum (1983)	Pascarella (1984)*
	Burtner & Tincher (1979)	Pascarella, Duby, &
	Copeland-Wood (1986)	Iverson (1983)
	Desler (1987)	Pascarella, Duby, Miller, &
N = 24	Foster, Sedlacek, & Hardwick (1978)	Rasher (1981)
	Haggerty (1985)	Pascarella, Duby,
	Hallenbeck (1978)	Terenzini, & Iverson
	Johnson (1981)	(1983)
	Keller (1980)	Shaver & Duhon (1984)
	Liu & Jung (1980)	Rich & Jolicouer (1978)*
	Lundgren & Schwab (1979)	Trathen (1984)
	Marecks (1985)	Shaver & Duhon (1984)
	McClain & Sartwell (1983)	Simono, Wachowiak, &
	Metzner (1983)	Furr (1984)
	Pascarella (1985b)*	Stafford & Pate (1979)
Private	LeMoal (1980)	Rich & Jolicouer (1978) *
	Nelson (1981)	Selby & Weston (1978)
N = 7	Pascarella (1985b)*	Tyron (1983)
	Pascarella (1984)*	

* Both public and private institutions included in the sample

TABLE 12

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY LOCATION OF INSTITUTION SAMPLED

Location	Study	
Urban Setting	Bainum (1983)	Metzner (1983)
	Desler (1987)	Pascarella, Duby, &
	Foster, Sedlacek, &	Iverson (1983)
	Hardwick (1978)	Pascarella, Duby, Miller, &
	Haggerty (1985)	Rasher (1981)
N = 15	Kuh & Ardaiolo (1979)*	Pascarella, Duby,
	Kuh & Sturgis (1980)*	Terenzini, & Iverson
	Liu & Jung (1980)	(1983)
	Lundgren & Schwab (1979)	Selby & Weston (1978)
	Marecks (1985)	Tyron (1983)
Rural Setting	Burtner & Tincher (1979)	McClain & Sartwell (1983)
	Hallenbeck (1978)	Shaver & Duhon (1984)
N = 11	Johnson (1981)	Simono, Wachowiak, & Furr (1984)
	Keller (1980)	Stafford & Pate (1979)
	Kuh & Ardaiolo (1979)*	Trathen (1984)
	Kuh & Sturgis (1980)*	
Suburban Setting	Copeland-Wood (1986)	
N = 1		

* Two Institutions of Higher Education Sampled

TABLE 13

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY SIZE OF INSTITUTION SAMPLED

Range of Institutional Size	Study	
Less than 5,000	Kuh & Ardaiolo (1979) *	Kuh & Sturgis (1980) *
N = 2		
5,000 - 10,000	Burtner & Tincher (1979)	Shaver & Duhon (1984)
	McClain & Sartwell (1983)	Trathen (1984)
N = 4		
10,000 (+)	Bainum (1983)	Lundgren & Schwab (1979)
	Bare (1983)	Marecks (1985)
	Copeland-Wood (1986)	Metzner (1983)
	Desler (1987)	Pascarella, Duby, & Iverson (1983)
N = 22	Foster, Sedlacek, &	Pascarella, Duby, Miller, & Rasher
	Hardwick (1978)	(1981)
	Haggerty (1985)	Pascarella, Duby, Terenzini, &
	Hallenbeck (1978)	Iverson (1983)
	Johnson (1981)	Selby & Weston (1978)
	Keller (1980)	Simono, Wachowiak, & Furr (1984)
	Kuh & Ardaiolo (1979)*	Stafford & Pate (1979)
	Kuh & Sturgis (1980)*	Tyron (1983)
	Liu & Jung (1980)	

* Two Institutions of Higher Education Samples by the Researchers

TABLE 14

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY HOUSING OF INSTITUTION SAMPLED

Type of Institution	Study	
Commuter Institution	Bainum (1983)	Marecks (1985)
	Desler (1987)	Metzner (1983)
	Haggerty (1985)	Pascarella, Duby, & Iverson (1983)
	Kuh & Ardaiolo (1979)*	Pascarella, Duby, Miller, & Rasher (1981)
N = 11	Kuh & Sturgis (1980)*	Pascarella, Duby, Terenzini, & Iverson (1983)
	Liu & Jung (1980)	
Residential Institution	Burtner & Tincher (1979)	Marron & Kayson (1984)
	Copeland-Wood (1986)	McClain & Sartwell (1983)
	Foster, Sedlacek, &	Nelson (1981)
	Hardwick (1978)	Schoeneman (1983)
N = 20	Hallenbeck (1978)	Selby & Weston (1978)
	Johnson (1981)	Shaver & Duhon (1984)
	Keller (1980)	Simono, Wachowiak, & Furr (1984)
	Kuh & Ardaiolo (1979)*	Trathen (1984)
	Kuh & Sturgis (1980)*	Stafford & Pate (1979)
	LeMoal (1980)	Tyron (1983)
	Lundgren & Schwab (1979)	

* Two Institutions of Higher Education Samples by the Researchers

The identification of institutional variables was done by two different methods. Some studies reported some or all of the four institutional characteristics. Other studies listed the name of the institution. In these cases Barron's Guide to Colleges and Universities, 1990 edition was used to identify institutional characteristics.

Inaccuracies in these data may exist due to institutional changes since the investigators first began their studies. However, since most of the institutions are public, few changes probably occurred for any of the first three characteristics listed. One institution, University of Illinois at Chicago, did not have housing facilities when the research cited was done.

Of the research studies citing institutions, 22 were public, four private, 15 urban, 11 rural and one suburban. Twenty-two of the institutions enrolled over 10,000 students while four enrolled between 5,000 and 10,000. Two of the institutions enrolled fewer than 5,000 students. Eleven of the institutions were identified as commuter while 21 were residential.

The following institutions were cited in the research studies: University of Pittsburgh, Auburn University, Pennsylvania State University, University of Illinois at Chicago, University of Maryland at College Park, Kent State University, Indiana University in Bloomington, Bowling Green State University, Salem State College in Massachusetts, University of Southern California, McNeese State University, University of North Carolina at Charlotte, North Carolina State University, Bloomsburg State College and Fordham University.

Four of the studies did not state any information about their institutions while four studies used general terms or more than one institution. Marron and Kayson (1984) and Schoeneman (1983) did not list any institutional characteristics, but because resident

students were part of their studies, it was discernable that their institutions were residential. No institutional information could be obtained for Sullivan and Sullivan (1980) and Wilson, Anderson, and Flemming (1987). Bare (1983) cited the study as taking place at a large Eastern commuter institution. Pascarella (1984, 1985b) and Rich and Jolicouer (1978) obtained data from a compilation of institutions.

Note that all the private institutions were residential and all the commuter campuses were large and located in urban areas. Not all urban institutions, though, were commuter. Both samples surveyed by Lundgren and Schwab (1979) were from the same institution.

Research Objective Two

Research studies published between 1978 and 1992 and the characteristics of undergraduate commuter students identified by investigators are listed in Tables 15 through 20. Three categories of characteristics: pre-enrollment, student involvement, and general emerged from the research. The category general was further divided into general and affective characteristics. Tables 15 through 20 are described in this section along with an analysis of the categories pre-enrollment, student involvement, and general characteristics. Analysis of the affective characteristics of undergraduate commuter students is included in the next section of this chapter.

Tables 15 through 20 present characteristics of undergraduate commuter students as per categories of pre-enrollment variables, student involvement and general characteristics. Each of these categories were further analyzed and divided into subcategories. Subcategories for pre-enrollment variables included parents education, prior academic achievement and expectations from college attendance. Investigators reporting student pre-enrollment characteristics are listed in Table 15.

TABLE 15

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDCUATION BY STUDENT PRE-ENROLLMENT CHARACTERISTICS

N = 16

Bainum (1983)
Burtner & Tincher (1979)
Desler (1987)
Foster, Sedlacek, & Hardwick (1978)
Haggerty (1985)
Johnson (1981)
Kuh & Ardaiolo (1979)
LeMoal (1980)
Metzner (1983)
Nelson (1981)
Pascarella (1985b)
Pascarella (1984)
Pascarella, Duby, & Iverson (1983)
Pascarella, Duby, Miller, & Rasher (1981)
Stafford & Pate (1979)
Sullivan & Sullivan (1980)

(Pre-enrollment variables include high school rank, high school grade point average, parent's level of education, students' expectations from college, socioeconomic status, degree plans, civil concerns and expectations)

TABLE 16

STUDIES REPORTING SUBPOPULATIONS OF COMMUTER STUDENTS IN HIGHER EDUCATION ARRANGED BY THREE PRE-ENROLLMENT VARIABLES

	Parents Education	Prior Academic Achievement	Expectations from Attendance
D	Burtner & Tincher (1970) Foster, Sedlacek, & Hardwick (1978)	Bainum (1983) Foster, Sedlacek, & Hardwick (1978) Stafford & Pate (1979) Sullivan & Sullivan (1980) Stafford & Pate (1979)	Burtner & Tincher (1979) Foster, Sedlacek, & Hardwick (1978) Johnson (1981) Pascarella (1984)
I	Burtner & Tincher (1979) Foster, Sedlacek, & Hardwick (1978)	Foster, Sedlacek, & Hardwick (1978) Stafford & Pate (1979)	Burtner & Tincher (1979) Foster, Sedlacek, & Foster, Sedlacek, & Hardwick (1978) Johnson (1981) Stafford & Pate (1979)
C/S	Desler (1987) Kuh & Ardaiolo (1979) LeMoal (1980) Metzner (1983) Nelson (1981) Pascarella (1985b)	Desler (1987) Haggerty (1985) Pascarella (1985b) Pascarella, Duby, & Iverson (1983) Pascarella, Duby, Miller, & Iverson (1983)	Desler (1987) Haggerty (1985) LeMoal (1980) Nelson (1981) Pascarella (1985b) Pascarella, Duby, & Iverson (1983) Pascarella, Duby, Miller, & Rasher (1981)

D = dependent student living at home with parents or relatives
I = independent student living off-campus, but not with parents or relatives
C/S = students not identified by the researchers as either dependent or independent

Table 16 lists investigators who reported characteristics according to the subpopulation of commuter student. Stewart and Rue's (1982) typology was used to identify commuter student groups for dependent and independent commuters for all tables. The general category commuter student was used when investigators did not specify the subpopulation of commuter students sampled.

Subcategories for student involvement included influence and involvement with peers and faculty. Influences were defined as factors or events that affected or influenced commuter students. Involvement was defined as actions or events taken or not taken by commuter students. Investigators reporting student involvement variables are listed in Table 17. Table 18 lists investigators who reported involvement variables according dependent, independent and commuter student groupings.

Subcategories for general characteristics included demographic, employment status, enrollment status, reasons for commuting and reasons for attendance in higher education. Investigators reporting general characteristics are listed in Table 19. Table 20 lists investigators who reported general characteristics according dependent, independent and commuter student groupings.

TABLE 17

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY STUDENT INVOLVEMENT

N = 22

Bainum (1983)
Burtner & Tincher (1979)
Copeland-Wood (1986)
Desler (1987)
Foster, Sedlacek, & Hardwick (1978)
Johnson (1981)
Keller (1980)
Kuh & Ardaiolo (1979)
Kuh & Sturgis (1980)
Marecks (1985)
Metzner (1983)
Nelson (1981)
Pascarella (1984)
Pascarella, Duby, & Iverson (1983)
Pascarella, Duby, Terenzini, & Iverson (1983)
Rich & Jolicouer (1978)
Selby & Weston (1978)
Shaver & Duhon (1984)
Stafford & Pate (1979)
Sullivan & Sullivan (1980)
Trathen (1984)
Tyron (1983)

TABLE 18

STUDIES REPORTING INVOLVEMENT OF THREE SUBPOPULATIONS OF COMMUTER STUDENTS IN HIGHER EDUCATION WITH VARIOUS CAMPUS ACADEMIC AND SOCIAL AGENTS ARRANGED BY TWO CATEGORIES OF STUDENT INVOLVEMENT

	Influences	Involvement with Peers and Faculty
D	Bainum (1983)	Bainum (1983)
	Johnson (1981)	Burtner & Tincher (1979)
	Schoeneman (1983)	Foster, Sedlacek, & Hardwick (1978)
	Sullivan & Sullivan (1980)	Johnson (1981)
		Keller (1980)
		Marecks (1985)
		Pascarella (1984)
		Stafford & Pate (1979)
I		Burtner & Tincher (1979)
		Foster, Sedlacek, & Hardwick (1978)
		Johnson (1981)
		Kuh & Ardaiolo (1979)
		Selby & Weston (1978)
		Stafford & Pate (1979)
C/S	Metzner (1983)	Copeland-Wood (1986)
		Desler (1987)
		Kuh & Sturgis (1980)
		Nelson (1981)
		Pascarella, Duby, & Iverson (1983)
		Pascarella, Duby, Terenzini, & Iverson (1983)
		Rich & Jolicouer (1978)
		Shaver & Duhon (1984)
		Trathen (1984)
		Tyron (1983)

D = dependent student living at home with parents or relatives
I = independent student living off-campus, but not with parents or relatives
C/S = students not identified by the researchers as either dependent or independent

TABLE 19

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY GENERAL CHARACTERISTICS

N = 24	Bainum (1983)	McClain & Sartwell (1983)
	Burtner & Tincher (1979)	Metzner (1983)
	Copeland-Wood (1986)	Nelson (1981)
	Desler (1987)	Pascarella (1985b)
	Foster, Sedlacek, & Hardwick (1978)	Pascarella (1984)
	Haggerty (1985)	Pascarella, Duby, & Iverson (1983)
	Johnson (1981)	Pascarella, Duby, Miller, & Rasher (1981)
	Kuh & Ardaiolo (1979)	Rich & Jolicouer (1978)
	Kuh & Sturgis (1980)	Schoenman (1983)
	LeMoal (1980)	Shaver & Duhon (1984)
	Liu & Jung (1980)	Simono, Wachowiak, & Furr (1984)
	Marecks (1985)	Stafford & Pate (1979)

TABLE 20

STUDIES REPORTING GENERAL CHARACTERISTICS OF THREE SUBPOPULATIONS OF COMMUTER STUDENTS IN HIGHER EDUCATION ARRANGED BY FIVE TYPES OF CHARACTERISTICS

	Demographic	Employment Status	Enrollment Status	Reasons Commute	Reasons Attend
D	Bainum (1983) Burtner & Tincher (1979) Foster, Sedlacek, & Hardwick (1978) Johnson (1981)	Burtner & Tincher (1979) Foster, Sedlacek, & Hardwick (1978) Marecks (1985) Johnson (1981)		Burtner & Tincher (1979)	Foster, Sedlacek, & Hardwick (1978) Pascarella (1984)
I	Burtner & Tincher (1979) Foster, Sedlacek, & Hardwick (1978) Stafford & Pate (1979)	Burtner & Tincher (1979) Foster, Sedlacek, & Hardwick (1978) Johnson (1981)		Burtner & Tincher (1979)	Foster, Sedlacek, & Hardwick (1978)
C/S	Copeland-Wood (1986) Desler (1987) Haggerty (1985) Kuh & Ardaiolo (1979) LeMoal (1980) McClain & Sartwell (1983) Nelson (1981) Pascarella (1985b) Pascarella, Duby, & Iverson (1983) Pascarella, Duby, Miller, & Rasher (1981)	Desler (1987) Haggerty (1985) Kuh & Ardaiolo (1979) Metzner (1983) Nelson (1981)	Copeland-Wood (1986)	Shaver & Duhon (1984)	Kuh & Ardaiolo (1979) LeMoal (1980) Liu & Jung (1980) Metzner (1983) Metzner (1983)

D = dependent student living at home with parents or relatives
I = independent student living off-campus, but not with parents or relatives
C/S = students not identified by the researchers as either dependent or independent

Pre-enrollment. Analysis of the data from the research studies that reported pre-enrollment characteristics of commuter students yielded three categories: parents' education, prior academic achievement and expectations from attendance at higher education. In general, Pascarella (1985b) concluded that most of the parents of commuter students had not attended higher education, few held professional jobs, and that commuter students have significantly lower levels of academic aptitude and high school involvement than residents and significantly lower levels of social and academic

expectations than residents. Residents also reported higher degree aspirations than dependent commuter students (Pascarella, 1984). Research done at three urban commuter institutions indicated that the parents of most commuter students have not attended higher education. Desler (1987) reported that 55% of students' fathers and 43% of students' mothers had college experience. Metzner (1983) reported that 46.3% of commuter students' fathers had college experience while only 35.2% of their mothers attended higher education. Additionally, students intent on leaving reported higher levels of parental education than those intent on staying (Metzner, 1983). Mothers of independent commuter students were reported to have significantly more formal education than the mothers of resident students and the mothers of dependent commuter students (Foster, Sedlacek & Hardwick, 1978).

Research at three private residential institutions addressed the level of education of the parents of commuter students. LeMoal (1980) reported that 53% of the commuter students were first generation students, with only 15% of their fathers having prior college experience, and 23% of their mothers without a high school diploma. Nelson (1981) found no difference between commuter and resident students on measures of family income and parental education. Burtner and Tincher (1979) found that 64% of dependent commuter students had fathers with college experience, yet resident students were more likely to come from upper middle class backgrounds than dependent or independent students (Burtner & Tincher, 1979).

Kuh and Ardaiolo (1979), studying nontraditional-aged commuter students at residential and commuter institutions, reported that 13% of students' fathers at the commuter campus and 35% at the residential campus had professional jobs. The mothers of commuter students at both campuses generally held unskilled jobs.

Research studies from specific institutions indicated that in general, commuter students scored lower on aptitude tests than resident students and that there is a positive connection between academic aptitude and persistence. At one residential institution, commuters were reported to score lower on the SAT than residents (Stafford & Pate, 1979).

Regarding persistence at three urban commuter institutions, Desler (1987) found that the higher a transfer student's GPA was, the less committed the student was one year later. Haggerty (1985) reported that the higher the high school ranking was of a commuter student, the more likely that student would be to persist providing college GPA was also high.

Pascarella, Duby and Iverson (1983) indicated that students attending a commuter campus with high ACT scores were more likely to persist than students with low scores. Students attending with higher levels of secondary school achievement were more likely to persist (Pascarella, Duby, Miller & Rasher, 1981). High school rank, as declared by the students, significantly distinguished between dependent male persisters and nonpersisters. Bainum (1983) found that the higher the high school rank, the more likely the male commuter student would persist.

Research studies indicated that while the initial degree aspirations of commuter students might be lower than residents, commuters plan to complete their degree plans as soon as they can. Commuters and residents seem to have similar initial degree goals, but different plans to meet them. At urban commuter institutions 35% of the students expected to earn a B.A. degree and that 97.3% thought it was very important to graduate from their current institution (Desler, 1987). Haggerty (1985) reported that students' degree aspirations were not related to their intent to persist.

Foster, Sedlacek, and Hardwick (1978) reported the results of their survey in terms of dependent and independent commuter students. They found that dependent and independent commuter students, along with residential students, had similar educational degree objectives, vocational career aspirations, academic competencies, reading patterns, expectations of changing majors, fathers' level of education, financial and social emotional adjustment concerns, anticipated involvement in campus activities and general expectations of the university.

Commuter students attending residential institutions planned to complete their degree plans as soon as they could. Nelson (1981) surveyed students at a private institution and found that degree plans did not differ significantly between resident and commuter students. LeMoal (1980) reported that most commuter students planned to complete their degree plans in four years. Johnson (1981) reported that 69% of dependent and independent commuter students planned to complete a B.A. degree, however, 23% would drop a term before they graduated. Burtner and Tincher (1979) found that 13% of dependent commuters expected to drop a term prior to completing a B.A. degree.

Similar results were reported by other investigators. Stafford and Pate (1979) found no significant differences between dependent, independent and resident students on initial degree goals, but independent commuters and residents initially report higher goals. Dependent commuter students tend to raise their goals during their first year while independent students tend to lower them (Stafford & Pate, 1979).

Involvement. Research studies reported the involvement of commuter students in higher education. Analysis of that data yielded two categories: influences and involvement. Influences were defined as events, attitudes and action, external to

commuter students, that affected them in some way. Involvement was defined as events, attitudes and actions taken by commuter students in relation to higher education.

Research studies indicated that commuter students were influenced more by friends than by parents and that commuters received less positive feedback than residents. Students attending a commuter institution and were intent on leaving received little or no encouragement to remain in school from their parents or spouses (Metzner, 1983). Bainum (1983) found that dependent male commuter students who persisted were more significantly influenced to continue their enrollment by their closest friend than were male commuters who withdrew. Yet, Johnson (1981), documenting the characteristics of freshmen attending a residential institution, reported that 86% of parents encouraged dependent commuter students to attend.

Through research that compared commuter students and residents, commuters were found to receive less feedback than residents. Schoeneman (1983), studying social interaction, found that dependent commuter students reported receiving less positive feedback from family members (39.1%) than from friends (64.6%). Overall, dependent commuters reported receiving positive feedback 51.3% of the time while residents reported 70.1% of feedback as positive. Residents tend to view their parents as significantly more affective and communicative than dependent commuters (Sullivan & Sullivan, 1980).

Research studies indicated that in general, commuter students are not as involved with various campus social agents as residents but that involvement can be positively associated with personal development and persistence. Analyzing data he obtained from a national sample, Pascarella (1984) indicated that dependent and independent commuters, in comparison to residents, had significantly lower levels of social integration

with peers and faculty. In comparison to resident students, commuters perceived faculty attention to be lower, were less satisfied and reported personal development in negative terms more often (Rich & Jolicouer, 1978).

Bainum (1983) found that dependent males who persisted at an urban institution were more likely than male nonpersisters to participate in non-university cultural activities, non-university recreational activities and have informal conversations with faculty. Dependent female persisters were more likely than female non-persisters to attend non-university religious activities (Bainum, 1983).

Desler (1987) reported that social integration has a significant and direct positive effect on institutional commitment and a significant, positive direct effect on persistence. However, Pascarella, Duby and Iverson (1983) reported that social interactions had a direct negative influence on persistence.

Pascarella, Duby, Terenzini and Iverson (1983) reported that informal contact with faculty for commuter students is positively associated with development. In Desler's (1987) study, 18% of the students she surveyed never met a full-time faculty member. Females who met full-time faculty members averaged three contacts outside the classroom per year while males averaged five. Desler (1987) also reported that the hours commuter students worked had a significant and direct negative effect on both academic and social integration, but a significant, direct, positive effect on persistence (Desler, 1987). Dependent students who worked on-campus were more likely than those who worked off-campus to be involved in campus activities (Marecks, 1985).

Commuter students attending residential institutions were not as involved in campus activities as resident students. In her study of nontraditional-aged commuter students, Copeland-Wood (1986) reported that 86% of the students studied at home and

that 63% were not involved in campus activities. Only 20% of the students surveyed by Shaver and Duhon (1984) reported that they could participate in campus activities. Nelson (1981) reported that 47% could participate.

In regards to campus services, commuters used personal counseling, academic advising and learning skills services more often than residents, but they participated less in athletics, Greeks, campus movies, health services, work study and spiritual counseling (Nelson, 1981). Tyron (1983) reported that commuters sought counseling in proportion to their percent of the student body. Analyzing intake cards at the university counseling center, Tyron (1983) found that residents sought counseling significantly more for personal problems, but that commuters sought counseling significantly more for more than one problem. Senior commuters sought more counseling than senior residents (Tyron, 1983).

Dependent commuter students were significantly less likely to participate in intramural activities than residents and significantly less likely to participate in activities and intramurals than independent commuters (Foster, Sedlacek, & Hardwick, 1978). Residents were more likely to attend cultural events than dependent commuters, and dependent commuters who did not attend a cultural event prior to enrolling were significantly less likely than dependent commuters who did attend, to attend one after enrolling (Stafford & Pate, 1979).

Dependent and independent commuter students spend as little time on campus as possible. Selby and Weston (1978) reported that independent commuter students used institutional academic advising services significantly less than residents. Independent and dependent commuters at a residential institution were reported to have a high awareness of services, but a general perception that they were for resident students (Johnson, 1981).

Approximately 50% of independent and dependent commuter students spend one hour or less in the university library per week, 19% used institutional counseling services, 28% indicated they were not aware of campus events, 7% met their closest friend in college and 31% of dependent and independent commuter students spend as little time on campus as possible (Burtner & Tincher, 1979). Johnson (1981) found that 67% of dependent and independent commuter students study on campus, 41% made their closest friends in high school, 46% of the commuter students never interacted with faculty outside the classroom and significant percentages of commuter students never participated in athletic events, concerts, lectures and residence hall parties.

Keller (1980) surveyed commuter students to study type and polarity of impact. She recorded 1,349 impacts for dependent commuter students in the following areas: facilities/campus, classroom/academic, instructor/staff, job, transportation/community, home/family, students, friends and self, and events. Significantly more of the impacts were negative than positive (Keller, 1980).

Kuh and Ardaiolo (1979) and Kuh and Sturgis (1980) reported that commuter students were less involved than residents. In both studies the investigators reported that nontraditional-aged students attending a commuter campus were significantly less likely to participate in campus activities than traditional-aged students. Even commuter students who had a residence hall experience prior to enrollment were as involved in campus activities as commuters who did not (Trathen, 1984).

General characteristics. Analysis of the research studies that reported general characteristics of commuter students in higher education yielded five categories: demographic, employment status, enrollment status, reasons students commute and reasons commuters attend higher education. A variety of characteristics were

documented in the research studies. Pascarella (1985b) reported general characteristics using a national sample of students. He found that commuter students were more likely to be male, choose their institution due to its academic program and were more likely to attend public institutions than resident students.

Demographic information about commuter students attending commuter institutions included reports about gender, age, finances and persistence. Desler (1987) reported 56% of the students to be male while Haggerty (1985) reported only 34.5% were male. Pascarella, Duby and Iverson (1983) found commuters to usually be first generation college students. Bainum (1983) reported 91.3% of the students to be under 21 years old. Adult learners at a commuter campus were older than adults at a residential campus (Kuh & Ardaiolo, 1979).

Desler (1987) reported that 56% of commuter students received financial support from their parents. Female commuters were more likely to persist than male commuters (Pascarella, Duby & Iverson, 1983) and stopouts were more likely to be Black (Pascarella, Duby, Miller & Rasher, 1981).

Demographic information about commuter students attending residential institutions included information about gender, age and persistence. Nelson (1981) reported 51% of the commuter students he surveyed were female. Copeland-Wood (1986) found 49% to be female and Burtner and Tincher (1979) found 37% of the students they surveyed to be female. Foster, Sedlacek and Hardwick (1978) reported significantly more males were commuters than were residents.

Burtner and Tincher (1979) found 23% of the dependent commuters to be under 25 years old. Johnson (1981) reported a mean age for independent and dependent students of 23, and that 35% of the students were married. Regarding financial support

commuters received from parents, 36% received $1,000 per year (Burtner & Tincher, 1979) while only 44% received any assistance from their parents (Johnson, 1981).

At a private residential institution, commuters were reported to be mainly white (85%), Roman Catholic (56%), and with at least one parent who was foreign born (21%) (LeMoal, 1980). LeMoal also reported that commuter students were more likely than residents to feel that higher education is necessary to succeed and they relied on their parents for financial support more than residents. Fortyfive percent of commuters who withdrew did so due to problems with commuting (McClain & Sartwell, 1983).

According to the research, most commuter students work. Desler (1987) reported 77% employed, Haggerty (1985) reported 76.2% employed, Marecks (1985) reported 69% employed and Metzner (1983) reported 76.6% employed. Seventy percent of commuters employed worked 10 hours per week, 47% worked over 20 hours per week (Desler, 1987) and 29.6% were employed over 30 hours per week (Metzner, 1983). Marecks (1985) also reported that 77% of the students employed worked over 20 hours per week. Forty-three percent of nontraditional-aged students attending a commuter campus worked while 27% of their counterparts at a residential institution worked (Kuh & Ardaiolo, 1979).

Regarding employment information on commuter students attending residential institutions, Burtner and Tincher (1979) found 40% of commuter students to be employed and 18% working more than 20 hours per week. Significantly more dependent commuter students were found to be employed than independent commuters or resident students (Foster, Sedlacek & Hardwick, 1978). Of the commuter students who worked, Nelson (1981) reported that 23% worked on campus.

Minimal data were reported on enrollment status and reasons commuter students

attend higher education. Haggerty (1985) found that females tend to enroll as full-time students more often than males at a commuter campus. At residential institutions, Copeland-Wood (1986) reported that 60% of the students enrolled full-time. Seventy percent of the commuter students surveyed by Shaver and Duhon (1984) indicated they would live on campus if they could afford it. Burtner and Tincher (1979) found that 82% of commuters cited more privacy as to why they commute. Eleven percent indicated that they were denied housing (Burtner & Tincher, 1979).

Minimal data were also reported for reasons commuter students attend higher education. Traditional-aged students attending a commuter campus and who were intent on leaving believed attendance had less utility for future employment opportunity than those students intent on staying (Metzner, 1983).

Nontraditional-aged students seem more eager to learn than traditional-aged students (Liu & Jung, 1980). Seventy-five percent indicated they attended to prepare for better jobs while 18% wanted to pursue a particular field of study (Kuh & Ardaiolo, 1979). LeMoal (1980) reported 59% of commuters attended for vocational purposes.

Research Objective Three

Affective developmental issues identified from research studies published between 1978 and 1992 of undergraduate students are listed in Tables 21 and 22. The category affective characteristics was further analyzed and divided into four subcategories: satisfaction with attendance, needs, identification with the institution of choice and development. Table 21 lists investigators reporting affective characteristics. Table 22 lists investigators who reported affective characteristics according dependent, independent and commuter student groupings.

TABLE 21

SUMMARY TABLE: RESEARCH FROM SELECTED STUDIES ON COMMUTER STUDENTS IN HIGHER EDUCATION BY AFFECTIVE CHARACTERISTICS

Bare (1983)
Burtner & Tincher (1979)
Copeland-Wood (1986)
Foster, Sedlacek, & Hardwick (1978)
Haggerty (1985)
Hallenbeck (1978)
Kuh & Sturgis (1980)
LeMoal (1980)
Liu & Jung (1980)
Lundgren & Schwab (1979)
Marecks (1985)
Marron & Kayson (1984)
Pascarella (1985b)
Pascarella (1984)
Pascarella, Duby, & Iverson (1983)
Pascarella, Duby, Terenzini, & Iverson (1983)
Rich & Jolicouer (1978)
Selby & Weston (1978)
Shaver & Duhon (1984)
Stafford & Pate (1979)
Sullivan & Sullivan (1980)
Trathen (1984)
Wilson, Anderson, & Flemming (1987)

TABLE 22

STUDIES REPORTING AFFECTIVE CHARACTERISTICS OF THREE SUBPOPULATIONS OF COMMUTER STUDENTS IN HIGHER EDUCATION ARRANGED BY FOUR TYPES OF CHARACTERISTICS

	Satisfaction	Needs	Identification with Institution	Development
D	Burtner & Tincher (1979) Hallenbeck (1978) Marecks (1985) Pascarella (1984)		Foster, Sedlacek, & Hardwick (1978)	Lundgren & Schwab (1979) Marron & Kayson (1984) Stafford & Pate (1979) Sullivan & Sullivan (1980)
I	Burtner & Tincher (1979) Hallenbeck (1978) Selby & Weston (1978)		Foster, Sedlacek, & Hardwick (1978)	Stafford & Pate (1979)
C/S	Bare (1983) Liu & Jung (1980) Shaver & Duhon (1984)	Copeland-Wood (1986) Pascarella, Duby, & Iverson (1983)	LeMoal (1980)	Haggerty (1985) Kuh & Sturgis (1980) LeMoal (1980) Pascarella (1985b) Pascarella, Duby, & Iverson (1983) Pascarella, Duby, Terenzini, & Iverson (1983) Rich & Jolicouer (1978) Trathen (1984) Wilson, Anderson, & Flemming (1987)

D = dependent student living at home with parents or relatives
I = independent student living off-campus, but not with parents or relatives
C/S = students not identified by the researchers as either dependent or independent

Satisfaction. Research studies generally reported that commuter students were less satisfied than residents. Pascarella (1984) found that overall, commuter students were generally less satisfied with higher education than resident students. Using data he obtained through a national sample of students, he concluded that dependent commuter students were significantly less satisfied than resident students and that social integration with peers and faculty had significant positive effects on their academic self-confidence.

At an urban commuter institution, Bare (1983) found no variables which would predict general student satisfaction, but did find students to vary in their satisfaction with different components of the institution. Nontraditional-aged students perceived academic advising as significantly positive while traditional-aged students perceived it as significantly negative (Bare, 1983). Males perceived opportunities for access to programs and services as positive while females saw it as negative (Bare, 1983). Liu and Jung (1980) though found upperclass students to be less satisfied. Dependent students employed on campus were found to be more satisfied with faculty, administration, academic majors and classmates than students employed off campus (Marecks, 1985). At residential institutions, Burtner and Tincher (1979) reported that dependent and independent commuter students were generally less satisfied with university life. However, they expressed satisfaction with the quality of education they were receiving and who they were as persons (Hallenbeck, 1978).

Five percent of the commuter students surveyed by Shaver and Duhon (1984) felt a part of university activities and 60% were generally dissatisfied with their attendance. At a private residential institution, Selby and Weston (1978) found independent commuters to be significantly less satisfied with their living arrangements than resident students. Stafford and Pate (1979) reported that independent commuter students thought

college would be better if organized sports were deemphasized.

Needs. Data categorized as needs were minimal, with the primary focus on material items such as lockers. Copeland-Wood found the primary needs of commuter students to include services such as lockers, newsletters and programs which promote interaction between students and faculty. Pascarella, Duby and Iverson (1983) reported that commuter students with high levels of social integration have high affiliation needs.

Identification with the institution. No data categorized as identification with the institution of choice pertained to students attending commuter institutions. At residential institutions, commuter students seemed not to identify with the institution as well as residents. LeMoal (1985) found that the environment at a private institution did not encourage a high value on social involvement for commuters as much as it did residents. Dependent commuters reported significantly less identification with the institution than residents and independent commuters (Foster, Sedlacek & Hardwick, 1978).

Development. Research studies indicated that commuters tend to feel less independent than residents. At commuter institutions, the environment seemed to encourage greater non-conformity and less social orientation for commuter students than for residents (Haggerty, 1985). Student interaction with faculty and peers had significant direct effects on developing an understanding of self, developing interpersonal skills, developing openness to new ideas and formulating a clear sense of career goals during the first year of attendance (Pascarella, Duby & Iverson, 1883).

Stafford and Pate (1979) found independent commuters to be more politically liberal than dependent commuters and residents. Initially, LeMoal (1980) found commuters to be higher on thinking introversion and theoretical orientation, but lower on estheticism, complexity, autonomy and religious orientation than residents. After three

months, both groups of students increased their total intellectual disposition score slightly and increased their autonomy significantly, but the increase in autonomy for commuters brought them to the level where residents began.

Rich and Jolicouer (1978) collected responses from 2,016 students using the Inventory of College Activities. They found that residents reported significantly greater perceived leadership abilities, self-perceptions of development over four years, interests in cultural activities, abilities to relate to other people and acquisitions of career skills. Commuter students reported more development as seniors than as freshmen, but less than residents, and over six months, commuter students showed no change in dogmatism and became more interested in political and societal events during college than residents (Rich & Jolicouer, 1978).

Lundgren and Schwab (1979) found dependent commuters to rely more on their parents and to form less satisfying relationships with peers than residents. Dependent commuters experience too much inclusion and control by parents and too little control and affection from friends (Lundgren & Schwab, 1979). Lundgren and Schwab (1979) further reported that commuter students reported significantly greater attitudinal conflicts with parents, had less self-esteem, more psychosomatic symptoms and less favorable views of self as perceived by parents than residents. Sullivan and Sullivan (1980) reported that male dependent commuters perceived parents as allowing them significantly less independence than residents. Dependent commuter students experience less life change and fewer threats to their self-esteem than residents (Marron & Kayson, 1984).

Wilson, Anderson, and Flemming (1987) found that variables related to the family are important when examining the differences between commuters and residents. They reported that freshmen commuters saw themselves as more fused (insufficient energy to

form commitments) with their parents, more over involved with their parents, less trusting, had less self-esteem and personal mastery over their environment and greater health problems than residents or than students who were less fused with their parents. Commuter students displayed significantly less development of ego identity and thus were over concerned with the present rather than concerned with the future (Wilson, Anderson & Flemming, 1987).

A residence hall experience did seem to have some effects on commuter students. Trathen (1984) found students who had a two week experience in the residence hall had the same leadership abilities as students without the experience. Students with the experience, though, were more politically conservative, less defensive, less driven, more socially adjusted and felt more a part of the campus than students who did not have the experience (Trathen, 1984).

Nontraditional-aged students attending a residential campus scored higher on propensity and perceived the campus as less orderly, tolerant of diversity, conventional, intellectual and friendlier than their students who lived on campus (Kuh & Sturgis, 1980).

Research Objective Four

Environmental variables identified from research literature published between 1978 and 1992 which support or impede the affective growth of undergraduate students are listed in Table 23 and Table 24. The environmental variables for this study were control, location, size and housing availability.

Table 23 displays the number of research studies available per each affective characteristic for types of commuter students across four institutional variables. Student types were combined with the four affective variables, and then crossed with the

institutional characteristics. Ten possible institutional characteristics and 12 affective variables yielded a matrix design with 120 cells. The number of studies that pertain to the appropriate student type, characteristic and institutional variables was listed in each cell.

As is indicated in Table 1, a number of research studies did not indicate some or all of the institutional characteristics. Of the research studies that reported affective characteristics (Table 21 and Table 22), eight studies: Pascarella (1984; 1985b), Bare (1983), Liu and Jung (1980), Shaver and Duhon (1984), Sullivan and Sullivan (1980), Rich and Jolicour (1978) and Wilson, Anderson, and Flemming (1987) did not report institutional characteristics. These studies are excluded from Table 23. Three studies included partial institutional information. Information provided by LeMoal (1980), Marron and Kayson (1984) and Kuh and Sturgis (1980) was included in Table 23.

A number of observations can be made from Table 23. First, no information pertaining to the affective development of commuter students is available for 68 of the 120 possible institutional variations. This leaves wide gaps in the ability to generalize from one study to another. For example, in only two cases were affective issues for commuter students addressed at private institutions.

Second, different examinations of Table 23 yield different perspectives on the availability of research on institutional variables and the affective development of commuter students. A horizontal examination of Table 23 indicates the availability of research studies that address commuter students according to type. Dependent student issues were addressed 24 times. Independent student issues were addressed 19 times. Information labeled as general commuter student was addressed 34 times.

TABLE 23

SUMMARY TABLE: NUMBER OF STUDIES REPORTING AFFECTIVE CHARACTERISTICS OF UNDERGRADUATE COMMUTER STUDENTS BY AFFECTIVE CHARACTERISTICS, COMMUTER STUDENT TYPE AND INSTITUTIONAL CHARACTERISTICS

Commuter Students & Affective Variables	Institutional Characteristics									
	1	2	U	S	R	L	M	S	C	R
Satisfaction										
D	3	0	1	0	2	2	1	0	1	2
I	2	1	1	0	1	2	1	0	0	3
C/S	2	0	1	0	1	1	1	0	1	1
Needs										
D	0	0	0	0	0	0	0	0	0	0
I	0	0	0	0	0	0	0	0	0	0
C/S	1	0	0	1	0	1	0	0	0	1
Identification with institution of higher education										
D	1	0	1	0	0	1	0	0	0	1
I	1	0	1	0	0	1	0	0	0	1
C/S	0	0	0	0	0	0	0	0	0	1
Affective Development										
D	2	0	1	0	1	2	0	0	0	3
I	1	0	0	0	1	1	0	0	0	1
C/S	4	1	3	0	2	3	1	1	3	3

Commuter Students:

D - Dependent students
I - Independent students
C/S - Not identified by the investigators

Institutional Characteristics:

1 - Public control
2 - Private control
U - Urban location
S - Suburban location
R - Rural location
L - Large size
M - Medium size
S - Small size
C - Commuter campus
R - Residential campus

TABLE 24

EFFECTS MATRIX: CORRELATION OF INSTITUTIONAL CHARACTERISTICS WITH POSITIVE AND NEGATIVE VALUES FOR THE AFFECTIVE DEVELOPMENT OF UNDERGRADUATE COMMUTER STUDENTS

Commuter Student Type and Affective Characteristic	Value	Control	Location	Size	Housing
Satisfaction					
Commuters	0	N/A	N/A	N/A	N/A
Dep & Ind w/univ life	-	Public	Rural	Med	Res
Dep & Ind w/quality of education	+	Public	Rural	Lg	Res
Upperclass	-	Public	Urban	Lg	Comm
Dep employed on campus	+	Public	Urban	Lg	Comm
Dep	-	N/A	N/A	N/A	N/A
Commuters	-	Public	Rural	Med	Res
Ind w/ living arrangements	-	Private	Urban	Lg	Res
Ind & organized sports	-	Public	Rural	Lg	Res
Needs					
Commuters & services	-	Public	Suburban	Lg	Res
Commuters & affiliation	-	Public	Urban	Lg	Comm
Identification					
Commuters & campus social act	-	Private	N/A	N/A	Res
Dep & Ind	-	Public	Urban	Lg	Res
Development					
Env encourage greater nonconform	+	Public	Urban	Lg	Comm
Env encourage less social orient	+	Public	Urban	Lg	Comm
Commuters: propensity	+	N/A	Rural	Sm	Res
Commuters: order, tolerance, conventional intellectual, friendly	-	N/A	Rural	Sm	Res
Commuters: thinking, introversion, theoretical orientation	+	Private	N/A	N/A	Res
Commuters: estheticism, complexity autonomy, religious orientation	-	Private	N/A	N/A	Res
Dep: parents, relations, control, conflict, esteem, psychosomatic	-	Public	Urban	Lg	Res
Dep: life change	-	N/A	N/A	N/A	Res
Dep: threats to self-esteem	+	N/A	N/A	N/A	Res
Commuters: sense of self, interpersonal skills, openness	+	Public	Urban	Lg	Comm
Commuters: leadership, career, interpersonal, sense of self	-	N/A	N/A	N/A	N/A
Commuters: seniors dogmatism, social	+	N/A	N/A	N/A	N/A
Ind vs Dep: political liberalism	+	Public	Rural	Lg	Res
Ind male	-	N/A	N/A	N/A	N/A
Commuters: defensiveness, leader	+	Public	Rural	Med	Res
Commuters: self-esteem, parents	-	N/A	N/A	N/A	N/A

0 = no significant predictor
+ = positive value
- = negative value

However, a vertical examination of Table 23 indicates that the research studies did not provide as much information about institutional variables as it did about student characteristics. Correlations of student characteristics with institutional variables vary substantially. The institutional characteristics most often cited were public (17), large (14) and residential (17). Other institutional characteristics included urban (9) and rural (8). The remaining institutional characteristics, private, suburban, medium, small and commuter were cited fewer than five times.

Third, based on the research, information on dependent commuter students attending either public, large, and/or residential institutions for each affective characteristic except needs is the most readily available. Information on independent students is not as available except for the affective characteristic satisfaction.

Finally, the majority of information available does not specify type of commuter student. This becomes problematic since the commuter student population consists of students of different living arrangements, ages, needs and priorities (Cross, 1976). This becomes more problematic when considering the nine research studies that did not report institutional characteristics and were not listed in Table 23. Six of the eight studies generalized their results to all commuter students. The other two studies reported results for dependent students.

To address possible cause and effect relations of environmental variables on the affective development of undergraduate commuter students, an effects matrix, Table 24, was built and analyzed. An effects matrix allows an investigator to focus on changes that result from particular variables (Miles & Huberman, 1974). Table 24 details affective outcomes experienced by different types of commuter students across different environmental variables. Students are classified as dependent and independent (Stewart

& Rue, 1983) and as commuter students in the cases when the investigator did not identify student type.

Table 24 displays information from all of the research studies that reported affective characteristics. Specific information pertaining to the four affective characteristics is stated along with a value and institutional information. Commuter students are identified as dependent, independent (Stewart & Rue, 1983) and as commuter students in the cases when the investigator did not identify student type. Values were determined as positive, negative or no significant predictor. They were assigned according to the results reported in the research studies. In cases where the research studies did not report identifying institutional characteristics, the symbol N/A is used. In these cases, it is impossible to discern anything except generalizations. Bare (1983), for instance, reported no significant variables as predictors of commuter student satisfaction. Yet, no institutional variables were cited in order to make specific references.

A horizontal reading of Table 24 indicates a positive, negative or neutral influence of the environmental variables control, location, size and housing availability on the affective development of commuter students. Analyzing Table 24 through a horizontal reading indicates that although institutional variables influence the affective development of commuter students, the influences vary between institutions and types of commuter students and no strong positive or negative influence emerged for any of the variables. The research studies indicate that each variable, control, location, size and housing availability, have positive and negative influences. However, more negative influences were reported for all of the institutional variables except for rural locations and commuter campuses. Four negative and four positive influences were reported for rural

locations. Regarding housing availability, four positive influences were reported for commuter campuses while only two influences were reported as negative.

In summary, this chapter presented data to address the four research objectives. Each research objective was addressed separately by organizing data onto summary tables. The summary tables indicated the availability of research, general characteristics and affective characteristics. To address influences environmental variables have on the affective development of commuter students, an effects matrix was constructed. The effects matrix indicated positive, negative and neutral influences that the environmental variables control, location size and housing availability had on commuter students.

CHAPTER V

DISCUSSION, CONCLUSIONS & RECOMMENDATIONS

Thirty-five research studies were reviewed and data relevant to four research objectives for this study were recorded, organized and analyzed. Initial analyses of the research data yielded three general categories: methodology, characteristics and institution. These three categories were further divided into subcategories. Information from the 35 research studies that fit the subcategories was recorded and displayed on a meta-matrix. Further analyses and syntheses were conducted in order to address the four research objectives.

The research reviewed for this study was published between 1978 and 1992. The selected studies reported characteristics and outcomes for undergraduate commuter students attending four-year institutions of higher education. Research methodologies, general characteristics and affective characteristics reported in the research studies were identified, recorded, systematized and used to examine how certain environmental variables influence the affective development of undergraduate commuter students.

Discussion

Commuter students comprise a majority of the undergraduate students attending four-year institutions of higher education. These students are often referred to as nontraditional and the college experience is often not designed directly for their benefit. They are a diverse group consisting of students of all ages, ethnic groups, academic readiness and financial need. Like resident students, they are adjusting to and realizing

the demands of higher education, but in contrast to residents, they often manage families, jobs and community involvement in addition to their academic responsibilities.

Researchers have identified ways to determine subpopulations of commuters and to distinguish between the groups that comprise this diverse population of students in higher education. In addition to the age groupings of traditional and nontraditional, students are often grouped as to whether they live on their own or with their parents. These groups, or typologies, enable researchers and professionals to understand commuter students at a very specific level.

Further understandings of the needs and issues these students bring to higher education is necessary through research and professional assessment. The data presented here suggest that more research is needed to more fully understand commuter students. Further information about commuter students will add to the current data base to help professionals in higher education understand the process of student development for commuter students.

The data presented here suggests that the affective development of commuter students is influenced through their attendance in higher education. More specifically, their satisfaction and development are influenced positively and negatively by institutional factors such as control, location, size and housing availability. For example, commuters who attended large, urban, nonresidential institutions reported feelings of isolation, nonconformity and place negative values on their satisfaction. Commuter students who attended residential institutions also reported feelings of isolation. In addition, these students reported more threats to their self-esteem and more defensiveness.

This suggests that large public institutions, because of their nature, tend to isolate commuters and provide them with fewer social interactions with students and faculty.

The lack of interactions, as Pascarella (1984) suggested, does not provide students with a sense of integration into the campus milieu. This leads to less satisfaction and increased attrition.

The same interpretation can be made for commuters who attend residential institutions, but for a slightly different reason. Most residential institutions focus on the students who live on campus. Commuters who attend these institutions are not experiencing environments designed for them. They are expected to fit the existing social and physical systems.

Commuter students seem to be influenced by their environments, but often the environments are restrictive because of their size or design. Professionals can address the nature of their environments by identifying the pre-enrollment characteristics of commuter students who attend their institutions, documenting institutional factors that influence students, and using the information to design programs that promote interactions between students and faculty.

Conclusions

A number of trends emerged in relation to the research methods used by investigators to study commuter students. First, the availability of research is consistent with statements made by Pascarella (1984). Few longitudinal studies exist and no systematic theory on commuter students has been developed. Most of the data available was collected prior to 1985 and most was collected with the objective to profile commuter students.

Second, the methods of study have been consistent with Slade and Jarmul's (1975) reference that there is a lack of consistent use of one definition of commuter students. Definitions in the research presented here varied and thus standardization was necessary.

Most research fits into the dependent and independent categories described by Stewart and Rue (1983). Those that did not were generalized to all commuter students. This resulted in a lack of specific information about specific types of commuter students.

Third, standardization of information from one study to the next was not consistent. Different research objectives, different research instruments and a lack of duplicate studies contribute to the lack of systematic information available about commuter students.

Finally, most of the research was collected at large, public urban institutions. Unfortunately, this information limits the opportunity to examine characteristics and the effects of institutional variables on commuter students who attend other types of institutions.

In relation to general characteristics reported in the research studies, a number of generalizations can be made. First, the parents of commuter students have usually limited experience with higher education. In addition, most of these parents are not employed in professional jobs. Second, commuters tend to score lower on academic aptitude tests and are less involved in campus activities than residents. Commuters tend to focus their efforts on employment and use of institutional services such as academic advising. The friends of commuter students generally have stronger influences than do parents. Commuters also report fewer positive interactions with parents and campus agents than residents. Third, commuter and resident students report similar initial degree goals, vocational aspirations and expectations of higher education. However, commuters and residents differ in their plans to accomplish their goals. Commuters tend to expect to stop-out for a time period prior to graduating. Commuters also work more, focus their efforts less on social orientations and are involved more in off-campus activities.

Four types of affective characteristics were documented in the research: student satisfaction, needs, identification with the institution and personal development. In general, commuter students are not as satisfied with their higher education experience as resident students. They seem to expend far more energy on issues away from their education than residents. Commuters are less independent and less socially oriented. A majority of their focus and identification is with parents and friends away from higher education.

Regarding environmental influences on the affective development of commuter students, the variables institutional control, location, size and housing availability all had more negative influences than positive. In addition, so few studies addressed the possible types of institutional variables that generalizing can only be done in the broadest sense. Investigators have not yet documented enough information about specific types of commuter students at specific institutions to see direct influences of any of the four institutional variables.

The research cited here indicates that commuter students are less satisfied with higher education, less independent and less involved on campus than residents. Commuters are usually first generation students whose parents have not attended higher education. They generally score lower on academic aptitude tests and measures of self-esteem than residents. They also identify less with higher education than they do with their families and employment.

Two strong trends emerged from the research cited here. First, commuters reported expectations and aspirations similar to resident students. Yet, commuters seem not to involve themselves in social and recreational programming. They tend to develop plans to achieve their goals differently than residents. When the formal levels of

education of their parents are taken into consideration, it becomes evident that their lack of involvement may be due to the type of encouragement they receive at home. As Keller (1980) reported, commuters tend to receive more negative feedback. Thus, psychological involvement may be a more powerful descriptor of student development and persistence for commuter students than physical student activities.

A second trend is that the more commuter students seem to work, the more likely they are to persist. This is especially true for students who work on campus. Working on campus increases the likelihood of involvement with peers and faculty. This idea fits with the propositions advanced by Pascarella (1984).

The data presented here have attempted to organize information reported in research studies on commuter students published over the last 12 years. Attempts were made to systematize the sample populations of commuter students in order to assign characteristics to student types. Doing so would enable complete and accurate profiles on different types of students to be viewed. It would also fit with what a growing number of professionals in higher education recognize as a heterogenous population of students.

After identifying commuter student typologies, the data were analyzed to connect institutional variables with student characteristics. Analysis of the relations of student types, characteristics and institutional variables yielded large gaps in the available data. Minimal data were available for some types of commuter students at some types of institutions. In addition, limits on the data presented here exist since investigators did not use standard definitions and often did not report institutional variables. In many cases, institutional variables were assigned using an external reference. In addition, none of the studies was duplicated by a second investigator.

Recommendations

Student affairs professionals in higher education who work with commuter students should develop programs which respond to the needs of these students. The first step is to identify what subpopulations of commuter students are on campus. Do most commuter student live in off-campus apartments or at home with parents? How many are traditional-aged students? Second, what types of opportunities can be designed to promote commuter students spending more time on campus. Should campus employment opportunities be readily available for commuter students? Third, rather than designing student activities for commuter students on campus, programs that promote faculty and staff involvement with these students off-campus may be an ideal alternative to traditional activities. Internship programs, employment and training opportunities and activities that expand the boundaries of the campus into the community can be used to promote involvement of faculty and staff with commuter students.

Student affairs professionals in higher education face a number of challenges regarding commuter student impact on higher education. Research must continue to be done which documents the differences between commuter and resident students in order to understand how and why the campus environment affects commuters and residents differently.

First, student affairs professionals must understand why the learning environments of both groups of students differ profoundly and why the campus environment is reported to have its greatest impact on resident students during the first and second years and on commuter students during the third and fourth years (Chickering & Kuper, 1971).

Second, obstacles or barriers found on campus that prevent commuter students from seeking assistance, participating in campus programming, or interacting with faculty

or peers should be identified. Barriers limit the involvement of commuter students and can potentially limit their intellectual and personal development (Quade, 1986).

Student affairs professionals should look for ways to influence the personal development of commuter students through programs that appeal to both their diversity and to their common characteristics. Barriers, such as limited financial and staff resources, the transience of the population, the absence of a commuter perspective on campus and the sheer diversity of the students should be identified and eliminated (Quade, 1986).

Third, differences between the affective and cognitive development of commuters and residents must be identified (Flanagan, 1976). Professionals must understand why commuters score lower on measures of educational, social, and psychological development, why commuters are more dissatisfied with their college experiences than residents (Chickering, 1974; Sinnett, Sackson, & Eddy, 1972), and why commuters tend to arrange their academic schedules to spend a minimum amount of time on campus (Harrington, 1972).

Fourth, additional data collected about commuter students may help change prevailing attitudes and help legitimize their college experience. Foster, Sedlacek, Hardwick and Silver (1977) found that student affairs staff have negative impressions of commuter students. In contrast, Lea, Sedlacek and Stewart (1977b) found no evidence that faculty differentiate between students based on their residence. Rhatigan (1986) reported that commuter students are perceived as being less committed to their education, less able academically, uninterested in the campus beyond class, and in need of fewer student services and instructional services. These views probably stem from the idea that traditional-aged, resident students are the norm in higher education, an idea perpetuated by the undergraduate experiences of many faculty and staff, and by student

development theories that were primarily tested on residential populations (Knefelkamp & Stewart, 1983; Stamatakos, 1980; Stodt, 1982).

Fifth, further data about commuter students will not only assist student affairs professionals in their daily interactions with these students, but may lead to a model for understanding other groups of students on campus (Knefelkamp & Stewart, 1983). Data may also assist student affairs professionals to design intervention programs that provide commuter students with more supportive environments (Knefelkamp & Stewart, 1983). The more opportunities which exist on campus for commuters to develop reference groups, the more likely they will identify with the campus. Collecting data may lead researchers to develop a systematic understanding of commuter students.

Finally, recent work on retention underscores the need to understand specific characteristics of commuter students and the relations between commuters and the campus environment. Commuter students are more likely than resident students to leave college without graduating (Astin, 1977; Chickering, 1974; Dollar, 1966; Lenning, Beal, & Sauer, 1980; Trivett, 1974). Noel, Levitz, and Saluri (1985) postulated that programs which positively affect student retention subsequently affect the growth and development of students. Students who are satisfied and have experienced support within the environment are likely to remain at a specific institution of higher education.

In summary, further study on commuter students will aid in identifying characteristics and issues, will assist in understanding the relationship between students and their environments, and will legitimize their experiences. The obstacles that exist which prevent commuter students from being involved with campus social agents must be identified. Student affairs professionals will be able to use the information to design programs and policies which retain students and contribute to their growth and development.

APPENDIX I

Source Format

I. Methodology

1. Author and date published
2. Date studied
3. Purpose
4. Mode of the study
5. Design of the study
   a. type
   b. instrumentation used
   c. statistical procedures used
   d. dependent variables
6. Sample characteristics
   a. size of the sample
   b. demographic characteristics of the sample
   c. selection criteria
   d. residential status(es) of the sample

II. Characteristics (Results reported by the researcher)

1. General characteristics
2. Developmental characteristics

III. Institutional Characteristics

1. Name
2. Location
3. Control
4. Size
5. Institutional housing availability

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The thesis submitted by Michael S. Miller has been read and approved by the following committee:

Dr. Terry Williams, Director
Loyola University of Chicago

Dr. Steven Miller
Loyola University of Chicago

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is, therefore, accepted in partial fulfillment of the requirements for the degree of Master of Arts.

12/16/92
Date

Terry E. Williams
Director's Signature