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A Study of an Academic Enrichment Program at Western Kentucky University

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A STUDY OF AN ACADEMIC ENRICHMENT PROGRAM
AT
WESTERN KENTUCKY UNIVERSITY

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Ms. Huda Nakhal Melky

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A STUDY OF AN ACADEMIC ENRICHMENT PROGRAM

AT

WESTERN KENTUCKY UNIVERSITY

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A STUDY OF AN ACADEMIC ENRICHMENT PROGRAM AT WESTERN KENTUCKY UNIVERSITY

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ABSTRACT

The principle objective of this study was the investigation of whether or not an enrichment program would increase the success of remedial students attempting to complete a university program of study. An descriptive analytical design was utilized to test a null hypothesis related to selected control and experimental samples of remedial students.

Analysis of variance and descriptive statistics were utilized to compare differences between the control and experimental samples. A two sample t-test treated for equal or unequal variances was utilized to determine significant difference (.05) between grade point average (GPA) and earned hours (ER) of the control and experimental groups at the end of the first year. A Chi-square test was utilized to test for significant difference (.05) in success of completion of four years between the control and experimental group. Descriptive statistics were utilized to present success rates at the end of the first, second, third, and fourth years.

A comparison of student retention for the four academic years of this study produced the following results:

1. All students in both groups completed the first year. Control group students produced a mean GPA of 1.43597 and earned 21.67164 hours of credit. Experimental group students produced a mean GPA of 2.11791 and earned 24.35821 hours of credit. At the end of the first year, approximately seventy percent of the control group had failed to earn a two point or higher GPA while approximately thirty-five percent of the experimental group had failed to earn a two point GPA

2. At the end of the second year, fifty (seventy-five percent) of the experimental group and forty-one (sixty-one percent) of the control group remained in school

3. At the end of the third year, thirty-four (fifty-one percent) of the experimental group and nineteen (twenty-eight percent) of the control group were still in school

4. At the end of the fourth year, twenty-six (thirty-nine percent) of the experimental group and sixteen (twenty-four percent) of the control group had successfully completed four years of university work.

First year analysis of variance utilized a two sample t-test treated for equal or unequal variances to determine significant difference (.05) between grade point average (GPA) and earned hours (ER) of the control and experimental groups. This form of analysis of variance was possible since all participants in each group were retained, producing data for comparison.

Camparison of GPA data indicated that the experimental group earned a significantly (.001) higher GPA than that of the control group. The experimental group also earned a significantly (.02) higher number of earned hours than did the control group.

At the end of the fourth year, only twenty-six (thirty-nine percent) of the experimental group and sixteen (twenty-four percent) of the control group had successfully completed four years of university work. Since missing data precluded the use

of analysis of variance techniques similar to those used with year one, a Chi-square analysis was utilized to produce a probability of significant difference based upon retention.

Chi-square analysis of the control and experimental groups at the end of year two produced an odds ratio of (1.865) and a probability of (.1388). End of year three data produced an odds ratio of (2.603) and a probability of (.0013). End of year four data produced an odds ratio of (2.021) and a probability of (.0094). These data, with the exception of end of year two, indicated a significantly higher level of success for the experimental group as defined by retention.

CHAPTER 1
INTRODUCTION

Purpose of the Study

The purpose of this comparative study is to statistically investigate the level of success of an Academic Enrichment Program. The Academic Enrichment Program was initiated in the fall semester of 1987 and was discontinued in the fall of 1989. The program was an attempt to aid in the retention and development of academically marginal students and to provide a format for making a transition from the Community College System to Western Kentucky University where a bachelor degree may be obtained.

The parameters for academic enrichment are outlined in this paper. Also included are statistical summaries and comparisons made between a control group and the Academic Enrichment Group.

In the past, an American institution of higher learning could rely on an academic reputation to attract students. Such is not the case today. Most colleges and universities have adapted their operations, programs and services in response to evolving social needs. With the pool of traditional eighteen to twenty-four year old students decreasing, many institutions have expanded their search for students by attempting to attract various nontraditional groups. Whether visiting a local high school or talking to the Baptist Women's Auxiliary, the contemporary college recruiter is demonstrating a concept long accepted in business but historically disregarded among

academicians: American higher education is a business whose customers are students. Indeed, at some universities, education is big business.

By endorsing the idea of higher education as a business, administrators (and student personnel officers) must view the educational process from different perspectives than those of the past. Officials have embraced some of the resulting implications willingly, perhaps even affectionately. For example, developing a positive institutional image or telling prospective enrollees about services and benefits is now a routine activity for most university officials.

All of these promotional activities are an aid to drawing students to an institution of higher learning. Once students are enrolled, however, the question becomes,"How can students be retained while promoting a quality standard of educational values and care?"

Many students who are not degree-seeking students enjoy attending classes as a part of their life enrichment and are satisfied with taking classes of personal interest. But for the most part, students are seeking a goal, usually an undergraduate degree; such students are very receptive to assistance from friends, faculty, counselors, and special programs such as the Academic Enrichment Program.

Included in this study, are specific philosophies, techniques, procedures, and limitations related to the program. Similar and related programs are discussed in chapter 2.

Statement of Problems

Some students have not achieved the academic success in the public school system that fosters success at the university level. Such academic deficiency is compounded by numerous problems relating to relocation from the home environment, need for acceptance in a new situation, peer competition, peer influence, unfamiliar surroundings, and others.

Marginal students may view the necessary Grade Point Average (GPA) for university admission as a real and active problem. The earned GPA, however, is only meaningful if the student is prepared for academic achievement at a higher level.

It is logical to assume that students unable to resolve many of the above problems will eventually drop out of higher education at some level. If the retention level of the marginal students is to be improved, then, the following questions must be addressed:

1. Can an Academic Enrichment Program positively influence the grade point average of a student in Western's Community College to meet University entrance standards?

2. Can an Academic Enrichment Program positively influence problems associated with starting college - thus improving retention?

Research Background

The Academic Enrichment Program (AEP) was established at Western Kentucky University in the fall semester of 1987. Administered through the University's Community College (CC), the AEP was designed to ease the underprepared students' transition to college. One of the purposes was to improve the retention of such students. A second purpose was to improve the

students' grade point averages allowing them to enter one of the University's degree-granting programs. Rowe's (1988) initial analysis demonstrated that the AEP can have a positive effect on underprepared freshman retention and grade point averages (GPA).

Western Kentucky University has been offering college-prep or remedial courses for a number of years, as have other universities. Students who feel inadequately prepared for the demands and rigors of college may elect to take such remedial courses as "Introduction to College English" (DENG 055C), "Basic Math" (DMA 050C), and "Basic Algebra Skills" (DMA 055C)." Only DENG 055C is mandatory if the English ACT score was below fourteen. Each of these courses is designed to develop skills sufficient to continue course work in the disciplines included in the university general education requirements. Only courses numbered 100 or above carry college credit. Any student whose ACT score in English is below a score of fourteen is required to take a preparatory class during his first semester. Only by successful completion of such an introductory course will the student gain admission to regular university classes.

In addition, individuals whose composite ACT score is less than 14 are often referred to the community college rather than being admitted to the University. While allowing these enrollees to take general education courses required for degree program candidates, the Community College program also allows an opportunity to demonstrate capability in performing

college-level work and to establish a GPA acceptable for program admission.

Hypotheses

The following hypotheses, stated in null form, was tested for significant differences between an Academic Enrichment Program Group and a Control Group of marginal students.

HO 1: There will be no significant difference when comparing the success of an AEP Group and a Control Group of marginal students

Success is defined as completion of four years of study. During the first year, hours earned and grade point average are considered as a measure of success.

Limitations of the Study

Since the study is using selected independent variables and grade point averages of students accepted into the Academic Enrichment Program at Western's Community College, this study is limited to an exploration of the shared variance between those variables and grade point averages. There may be suggested causal links between variables, especially if there is a base in theory. Since there is lack of randomization of variables used, causal inferences are untenable. Although one cannot prove theory with an exploratory model, such as used in this study, consistency of the data may lend support to the study.

The summary of the relationship between retention and/or grade point averages for a specific group of students at one institution at a specific time and academic support services

such as the Academic Enrichment Program suggest results for this particular program and conditions only.

Definition of Terms

The following definitions are used in this study and are clarified with explanation:

Academic Enrichment Program--a program introduced at Western Kentucky University to aid in academically marginal student development.

Academic support services--all courses and services provided for underprepared or otherwise disadvantaged students.

High risk, underprepared, or new students--students participating in this study with composite ACT scores below 14.

Special services--federally funded project offering counseling, tutorial services, special courses, and other services for students deemed disadvantaged based on state and/or federal guidelines.

CHAPTER II
REVIEW OF LITERATURE

There are several qualities and influences which combine to determine an individual's success as a college student. In the review of literature to follow, a number of these influences are investigated and compared in an attempt to better understand the influence of an academic enrichment program.

Among some of the major factors which influence student success include family background, individual attributes and pre-college schooling; student goals and institutional commitments; and the academic and social systems of the college chosen, including its commitments to its students (Tinto, 1975).

Institutional Commitments

If individual students feel that their needs or wants are not being met, they can select from several courses of action: temporarily or permanently dropping out; transferring to another institution; trying to alter the situation by seeking additional aid or a change in the college's attitude; or just "sticking it out." "Studies have shown that students often leave a particular institution because they feel as if they don't belong there, as if they don't fit" (Astin, 1975).

For one reason or another, they have not been adequately integrated into the college's academic and/or social systems. Long recognized and accepted, the influence exerted by the

specific university's commitment to its students often remains unquestioned and unexamined. It seems to be assumed that such institutional dedication always exists. As a result, researchers tend to look solely to unsuccessful student for the reasons they left the university. One should realize, however, that these situations are not always the student's fault.

There are several factors that support improved retention and are controlled by the university. These factors may affect the student's persistence toward graduation in many ways. Factors included are:

--receiving effective academic and career advising
--living on campus
--working on campus
--participating in campus activities
--having the friendship of at least one faculty or staff member
--making the proper institutional fit
--attending full time
--interacting frequently with students, faculty, and staff
--making progress toward a goal

(Astin, 1975; Beal and Noel, 1980; Lenning, Beal, and Sauer, 1980).

The Williamsport Area Community College in Williamsport, Pennsylvania implemented a model program to improve enrollment and retention in 1984. The college seemed to lack the personal touch that often accompanies student success, as opposed to

institutional success. When committee meetings started in 1980, the problems of academic success were discussed and the process of academic advising was identified as the vehicle for the retention initiative. After initial acceptance of a one hundred dollar tuition deposit, first day, large group orientation, attendance averaged about fifty percent.

Major changes in the administrative structure of the institution were placed into effect. The College's Counseling and Career Development Center became the Advisement and Career Services Center. Roles of the three counselors were modified to accommodate increases in the academic advisement components, and the director became the project administrator. Faculty volunteers were recruited and trained to provide upgraded new-student service.

The new testing/advising/scheduling process was designed to attract a greater share of the new-student market to the College through increasing the applicants' identification with the institution and through simplifying the enrollment process.

To insure that students with academic deficiencies had proper assistance, the counselor became the student's academic advisor, establishing the "significant other" relationship that is vital for success.

After one year of program implementation, the market share of applicants increased to sixty-one percent, which was four percent above the mean of the past five years. The effects of the Advisement Center Project are viewed as responsible for this increase (Martin, 1987).

Careful analysis may detect (student) services that are inadequately supported by the institution and that may negatively affect enrollees' experiences. For example, dissatisfied students may have encountered a perceived or real lack of interest or an inadequacy on the part of faculty advisors.

Students may be experiencing such a situation here at Western Kentucky University (WKU). Although the annual total number of students at WKU has been increasing over the past few years, careful analysis has shown that the high number of freshmen has more than offset the number of dropouts. All class levels as well as faculty and staff, have suffered as a result of such imbalance. With the knowledge that many students will not complete their studies at WKU, there is little wonder faculty may be less than effective advisors. It follows that some students will be disappointed with the academic advisement they receive.

One major example of student trends is the nontraditional student and the influence they will have in the future. Several colleges and universities, including such prestigious institutions as Yale, Harvard and Bryn Mawr have already altered procedures or policies and have expanded facilities and services to help such students fulfill admissions and/or graduation requirements (Gross, 1983). Indeed, some universities or their campuses have been effectively serving nontraditional students since the 1960's. Who are these nontraditional students? What makes them different from other

college enrollees? Do they have special needs that should be considered? Why are our colleges and universities responding to them? In this chapter some of the answers to the above questions and some of the options colleges are using to meet the needs of such students, particularly those of women, will be considered.

The Nontraditional Student Defined

One of the first tasks, then, is to identify the nontraditional student. Since the charter or mission of any university or campus may delineate its clientele, each institution could define which of its enrollees are "nontraditional." In the past college students have been young adults between the ages of eighteen and twenty four (assuming they enroll in graduate school shortly after obtaining their baccalaureates) who are enrolled full-time during successive years and who usually attend classes during the day. Therefore, a nontradItional student is usually defined as one who:

1) is at least 25 years of age,
2) attends classes only on a part-time basis,
3) has not attended high school or college for at least three years, or
4) enrolls only in evening or weekend classes.

Students pursuing course work only during the summer are nontraditional as are re-entry students who have been away from their studies for at least three years. Though virtually ignored, another segment of the university student population

should also be remembered. College students between the ages of fourteen and seventeen years are a small, but measurable subgroup whose experiences may more closely parallel those of traditional enrollees than those of adult or re-entry students. As observed, many of these latter students have concerns, needs and experiences not shared by their younger, traditional associates.

Though nontraditional students have probably been a part of higher education since its inception, one can trace the beginnings of today's surge of such enrollments to the end of World War II. Funds made available by the so-called "GI Bill of Rights" (the Veterans' Educational and Training Acts of 1943 and 1944) and similar subsequent legislation have been utilized by thousands of servicemen to obtain a college education at virtually no cost.

In addition, a number of women who entered the work force to support America's war effort have continued to expand their horizons and roles outside home and family. Radical societal changes since the war also allowed some women to seek employment in the general marketplace. As modern women try to improve their situations or to advance their careers, they frequently enroll in higher and continuing education courses.

Today's College Enrollment

One must consider another aspect of today's college enrollment situation as well. While the baby boom after World War II may have triggered the enrollment explosion of the 1960s and 1970s, growing numbers of traditional-aged students

are no longer available. Institutions must now look to other groups to fill their facilities and faculties' schedules.

In an attempt to increase their rolls, some institutions are offering talented high school students a chance to earn early college credit. As Tables 1 and 2 (Appendix 1) show, however, students between fourteen and seventeen years of age are a very small (and diminishing) segment of today's college population.

In sharp contrast to this situation, over forty percent of WKU college students were at least twenty-five years of age in 1985. By 1995, the 1985 figure is expected to grow to nearly half the college population. Additional statistical analysis indicates that this cluster of students is also the fastest growing age-group of our college population (Appendix 1, Table 3). Between 1985 and 1995, the above group may be the ONLY group that increases its proportion of the anticipated total enrollment. It is also interesting to note that the largest percentage increase will probably be seen in the number of what Saslaw (1981) describes as "mature" students. By 1995, over fifty-three percent more students at least 35 years old may be attending our colleges than in 1985. Another interesting statistic is the increasing percentage of part-time students enrolled in colleges and universities (Appendix 1, Table 4). By 1995, these students may represent nearly forty-seven percent of college populations. Here, too, those over twenty-four years of age will probably be the largest and fastest-growing subgroup. As the pool of available full-time

eighteen to twenty-four-year olds decreases, institutions of higher education must find ways to increase enrollments of such nontraditional groups as part-time, re-entry and mature (i.e. older) students.

Further examination of Tables 1 through 4 (Appendix 1) indicate that, for most categories, more women than men over twenty-four years of age may be expected to join college-student ranks by 1995. In fact, many of these women will be over thirty-four-years old. Since the general population of the country is aging, it is logical that colleges see older individuals as potential consumers pursuing baccalaureate or advanced degrees. Once one understands how the number of older and part-time students has been growing and that this trend can be expected to continue, one realizes why colleges are listening so intently to the needs and concerns of these enrollees.

Though nontraditional students do share many concerns with their younger full-time associates, they also have other unique needs. Perhaps because of their greater maturity, adults seem to be more vocal in expressing their views. This may bring successful responses from institutions trying to meet those needs in the form of new or expanded programs and services.

Western Kentucky University Student Services

Unsure of university policies, new or returning adult students can be just as easily puzzled as any eighteen-year old by the maze of admissions, financial aid, advisement and fee-payment procedures. No matter what their ages, students

are frequently unsure of success as they begin their studies. Seminars, workshops and classes on essential study-skills and career selection such as Western Kentucky's "Educational and Life Planning" course are well attended by all types of students. A lack of parking facilities concerns all students as well as administrators, faculty and staff. So traditional and nontraditional students may experience some similar needs.

Yet, although some of their concerns may be akin to those of other enrollees, nontraditional students may have more negative college experiences. Adults who suffer deep or intense feelings of uncertainty, anxiousness and frustration have a different need than traditional students.

More nontraditional women than men seem to be susceptible to what has been described as internal (Glass and Rose, 1987), personal (Grottkau and Davis, 1987) and psychological (Wheaton and Robinson, 1983) barriers. Men have always been encouraged to improve their chances for better, higher-paying jobs. Until very recently, men have been expected to put career success ahead of family and personal wishes. On the other hand, societal influences have often kept most women in the home caring for husband and children. As one may note, the situation has been changing since World War II.

Still, past influences often linger. Some women may feel guilty about emphasizing their own needs and desires over those of husband and family. They may be accused of abandonment by "friends" who now isolate them socially. They may suddenly become the family breadwinner as the result of separation,

divorce or other circumstances. Societal influences still play a major part in determining how a woman feels attending college which, in turn, affects her chances for a successful educational experience.

In addition, people who enter or return to college today must often fulfill multiple roles. For women, these usually include mate, nurturer, housekeeper, gardener and chauffeur as well as student. Attempts to balance these roles may add to already high levels of stress. Negative emotions such as stress, guilt, anxiety and low self-esteem can be magnified if a student feels rejected by his/her mate, family or social groups.

To help ease such feelings of stress and strain caused by family, friends and society in general, some colleges have established support groups on campus where women's feelings may be freely expressed and where problems, experiences and ideas are openly shared without fear of being put down, rejected or ignored. Among these groups are Western Kentucky University's Women in Transition (WIT) as described by Bricking (1987); Women Involved in New Goals (WING) at Queens College of the City University of New York (Glass and Rose, 1987); and the University of Georgia's Women's Opportunity Network (WON) reported by Copas and Dwinell (1983). Such groups often become social circles for their members, expanding or replacing those outside the academic community. Official sanction of such organizations is a sign of our colleges' concern for this growing segment of the student population. Studies have

indicated that students (especially re-entry women) who have support of family, friends or special groups are more likely to have positive college experiences (Hildreth et al., 1983; Kirk and Dorfman, 1983; Wheaton and Robinson, 1983; Brenden, 1985; Roehl and Okun, 1985). Additional reports demonstrate that women with expanded support groups are also less likely to suffer from depression, anxiety and low self-esteem (Bynum and Thompson, 1983; Barnett and Baruch, 1985; Mohney and Anderson, 1988). The positive feelings that result from such support add to students' strong motivations for success. Such students are likely to complete their studies. They may even pursue more advanced degrees or may simply enroll in courses for the fun of it. The small investment that an institution makes in a support group for nontraditional students will pay dividends later in continued enrollment and active alumni.

Universities across the country have also established or expanded other support services to help nontraditional students build self-esteem and confidence. Orientation sessions utilizing a slower-paced, holistic (Heretick and Doyle, 1983) or (peer) interactional mentoring (Brenden, 1986) approach can be useful. These may be offered separate from or as an integral part of the institution's general welcome for new students. Self-paced tutorials or special seminars that emphasize skill renewal in such areas as taking notes, reviewing for tests, writing term papers and reducing anxiety with regard to science, math and computers may be especially useful to re-entry students (Cramer, 1981; Simpkins and Ray,

1985; Swift et al., 1987; Kostka and Wilson, 1988).

As another aid, counseling sessions can be designed to assist families in understanding the students' increased needs for emotional support as well as for a helping hand at home (Wheaton and Robinson, 1983; Henry, 1985). Individual counseling may also be needed by an unemployed breadwinner or a suddenly displaced homemaker. These students may also need special vocational and educational guidance. Workshops which discuss job-hunting skills, interview techniques and time management can be offered. The above suggestions are only a few of the programs and services being considered and utilized by colleges today as they try to make the academic experience a positive one for nontraditional students.

Expanded support services may help these students overcome some of the barriers they face. The social and psychological problems discussed above, however, are only a part of the total picture. Most members of the academic community seem unaware that institutional policies and procedures can also be barriers to nontraditional students wanting a college education or degree. Admissions offices usually require that prospective students submit transcripts for high school and earlier academic work as well as for results from such standardized tests as the ACT or SAT. Part-time students may find financial aid packages limited or (more likely) unavailable. Parents may not have access to child-care they can afford. Displaced homemakers may need help locating adequate housing for their families. Of course, a frequent complaint is that classes are

often scheduled only in the mornings and early afternoons. Students who must work during the day find their selection of courses and programs hampered by this constraint.

Colleges and universities must realize that, in order to be successful, any program or service must be offered at a time convenient to students. As the proportion of nontraditional students enrolled in institutions grows, service and program schedules must change to meet their needs. This takes careful planning on the part of coordinators and organizers. People involved in multiple roles will appreciate early announcements of special events (such as career days/conferences or writing workshops) since they must plan their daily schedules judiciously well in advance. The availability of programs and services in the evenings and on weekends is extremely important to students unable to utilize them during "normal office hours."

Evening classes have been a regular feature at some campuses for years. Weekend offerings may be expanding because of their popularity. Some colleges are scheduling different blocks of times for summer sessions or various combinations of summer and regular academic calendars. Convenient registration by phone and fee payment by mail may appeal to people who otherwise could not find time to sign up for the course they would like to take. On-site registration and fee payment when the class first meets may be another alternative for these students.

Receiving some type of financial assistance is the only

way a number of students can afford to attend college. Yet for most nontraditional students, the "usual" financial resources are unavailable. Wheaton and Robinson (1983) include the following suggestions for dealing with this problem: 1) extend financial aid to part-time students over the age of 25; and 2) develop new sources of aid and apply for special funds offered by governmental and private agencies.

Sources of financial aid may be unrecognized as well as under-utilized by students and colleges alike. Most university aid offices seem to alert students to only institution and government sponsored sources of funds (Schenk and Burt, 1983). There may be dozens of additional sources going untapped. Several companies and foundations will assist students who meet their criteria. In fact, one Tennessee woman has established her own foundation to assist only nontraditional students attending Middle Tennessee State University and the Nashville State Technical Institute. The Keyes Foundation solicits funds solely for the use of students over 30 years of age (McMillen, 1988).

Another unorthodox suggestion that could assist nontraditional students is the waiver of certain admission or graduation requirements. Rather than demanding that these students submit high school transcripts or scores for standardized tests, an institution may allow them to take a maximum number of courses (usually 6-12 hours) on a trial basis to demonstrate an ability to handle the work and to convince administrators that they will successfully complete a program

of study. Students can then be admitted to degree-granting programs.

Exams may be taken by students that will allow the student to bypass the class, this is called CLEP. CLEP and/or departmental placement examinations can also be utilized by a college. Credit can be awarded for courses in specific subjects such as American literature or English history to students who score well. If a general test is given that covers a variety of topics, close scrutiny of the student's responses can help determine how much credit can be awarded in which specific courses. So, there are a number of ways (some unconventional) for colleges to reduce or remove procedural barriers that nontraditional students often face. As noted, some authors examine possible alternatives to specific institutional barriers for nontraditional students. In contrast, others suggest a more sweeping approach. Heretick and Doyle's (1983) holistic orientation includes a seminar designed to examine such topics as: 1) the college's structure and the student's place within it; 2) self-evaluation and career planning; 3) skills renewal; and 4) stress and time management. Wheaton and Robinson (1983) also offer a comprehensive model discussing external and internal barriers. Their suggestions include outreach programs, support groups, family counseling, workshops and seminars. Mildred Dalton Henry (1985) agrees with this approach, especially for Black women entering or returning to college.

As noted, various authors have suggested alternatives that

nontraditional and regular students can utilize to deal with specific psychological and societal problems. Colleges and universities can assist in these attempts as well as with overcoming institutional barriers. As Gross (1983) points out, nontraditional students are not really "new" consumers. Several colleges have been responding to their needs for more than two decades. With the population of the United States aging and the pool of eighteen to twenty-four-year olds shrinking, even the Ivy League schools must respond to the needs of mature students who may enroll on a part-time basis. The institution that insists on doing things the "way we've always done them," is probably ignoring a golden opportunity to increase the base for its student population. Such a college may find it difficult to maintain student populations.

For example, recognizing that Western Kentucky University's Academic Advising Center plays a significant role in planning and realizing a successful college experience for many of our students, one should take a careful look at this office, its responsibilities and the support it has received from the University administration.

Located on the second floor of Cherry Hall, WKU's University Academic Advising Center (UAAC) in 1989 was staffed by a part-time director, two full-time and one part-time advisors, and a full-time secretary. In all,these people represent about 4.25 full-time equivalents. While these five people are primarily charged with advising some 1,100 undeclared majors (by holding general discussions with them and

by assisting them in choosing specific classes and planning schedules each term), they also encourage and aid underprepared students and readmissions (those returning to college after a lapse of several years). Occasionally, they are also asked to assist at the different extended-campus centers with student advisement.

Five people would seem an inadequate number to successfully and satisfactorily accomplish so much each academic year. By considering each duty in turn, one may recognize that considerable dedication and cooperation permit a small office (in number of employees) to carry out these various demanding functions.

Orientations for new students occur several times during the year. Those for individual colleges are primarily scheduled during summers and between the fall and spring terms. With the assistance of some 12-18 additional faculty and staff volunteers (often called undeclared advisors), the UAAC schedules group advising sessions for these students which discuss the University's general education (GE) requirements in detail. These advisors try to identify students' interests and abilities so they can encourage them to enroll in courses consistent with these. The basic goal is for the student to schedule a reasonable number of hours for a first semester course load consisting of remedial classes (when needed) and basic GE courses that will apply to almost any program.

Advising for currently undeclared majors follows a similar routine. At appropriate times during the fall and spring

terms, group sessions are scheduled for students who have not declared a major, at which time, GE requirements and academic regulations are reiterated and explained in terms they can understand. No matter how often this information appears in brochures, catalogs, schedule bulletins and other materials, some students know little of these or of the various available support programs. The undeclared advisors who help with orientations are also involved with these groups, discussing programs and requirements with as many individual students as possible.

Leaving the final decisions up to the student, these advisors discuss courses appropriate to their demonstrated skills as well as majors which might pique their interests. They try to help students make responsible decisions. These undeclared advisors often work with specific students throughout the year in much the same way as faculty advisors work with enrollees who have declared a major. Without such dedicated volunteers, the UAAC would be hard-pressed to handle its advising responsibilities at Western Kentucky University.

Orientation and advisement systems are far from perfect. One of the major problems is the lack of time and individual attention that results from such group and classroom sessions. Individual appointments between student and advisor would be better; yet needed resources and personnel are not presently available.

Occasionally (as requested and as time permits), the UAAC staff, also travel to Western's extended-campus centers to

advise students. Although trips to such Kentucky locations as Russellville still occur, those to Glasgow, Fort Knox and Owensboro have been virtually eliminated with the increased support these centers have received to expand their own services and offerings.

Since the General Studies Degree program is rather new, even the volunteer undeclared advisors may lack familiarity with its requirements. So most persons pursuing this degree work with one of the UAAC staff to plan their programs and file the appropriate forms.

Though some faculty are concerned this degree will provide an "easy way out" for students unable to fulfill a specific major's requirements, an analysis done by the UAAC's Marvin Daniel in the spring of 1989 shows that this is not the case. Over seventy-five percent of the forms filed for the General Studies degree with the registrar have been submitted by nontraditional students unable to take the courses necessary for a specific major. Frequently this results from scheduling problems.

The personal and academic support given nontraditional and underprepared students by the UAAC staff is often unmatched by some faculty. With these students, UAAC staff members spend most of their time discussing personal and professional interests; abilities and skills; strengths and weaknesses; likes and dislikes; career choices and plans; support programs--at the University and within the community; and "creative academics" such as departmental exams and the CLEPs.

Each staff member's dedication and actions clearly demonstrate the Office's underlying philosophy that students should be helped to gain the most from their college experience, that the University owes support to the students it enrolls, and that students be encouraged to make their own (responsible) decisions.

To wisely plan their academic programs, transfer students need additional help provided by the UAAC advisors who examine transcripts from other institutions to determine which courses can be used for credit at WKU. At the direction of Western Kentucky University President Thomas Meredith, a new tool has been produced, summarizing the most common decisions for courses offered through the University of Kentucky (UK) community college system. The Western Kentucky University Bulletin: Transfer Guidebook, 1989-91 is designed to assist students in planning their course work to facilitate their transition to WKU after an initial two-years with the community college system. In addition to helping all WKU's advisors, this "2 Plus 2" booklet may also influence the number of students transferring to and from Western. Though it is much too early to tell how total enrollment may be affected, one might hope that future student populations may be more suitably divided among the different undergraduate classes (Jackson, 1989).

Because this guide includes a course conversion guide matching The University of Kentucky Community College courses with Western Kentucky University, questions about transferred

credits can be answered more easily and more quickly than before. In the past, undeclared advisors often have had to refer students to the UAAC for answers to specific questions. Since this work is routinely done during "slow periods" when other duties require less time and attention (e.g. interims and summers), decisions about specific transcripts are often delayed.

The new "2 Plus 2" guide will help the UAAC, its volunteers and all WKU advisors. More administrative support, however, is still needed for a truly strong advising program. The current UAAC staff and its supporters have noted improvements which could be made. These include a recommendation for mandatory undergraduate advisement that is currently being phased-in and for a full-term orientation class for new students to improve their adjustment to Western and to college life in general. Perhaps advising for currently enrolled students could occur throughout the term rather than being concentrated in a few weeks as it is now.

A centralized automated system for keeping student records with terminals in each department or advisor's office could also help. With the appropriate security clearance, each advisor could check on the most recent data for such items as students' high school records, standardized test scores, and their progress in college (as reflected by their courses and transcripts). With the proper programming, such a system could also help advisors assure that students fulfill such academic regulations as filing required forms on schedule and completing

the necessary number of upper-division courses. With the current system, records may be lost, particularly when a student switches advisors. New advisors rarely receive any earlier materials to help them track the student's progress. This situation has frustrated many faculty members who try to discuss interests and skills to aid the student's decision-making.

Also disconcerting is the lack of information that the advisors have about the various student services. With only the brief descriptions that appear in the college bulletins, they must try to refer students to the proper office. If advisors realize that interest and/or skill-testing is needed to help students focus their attentions, they can refer students to at least two very different services: Counseling and Testing in Tate Page Hall and Career Planning and Placement in the Cravens Graduate Center. How do they know which is best? A "Manual for Advisors" has been proposed which would describe each service in detail and lists current director, location, staff and hours of service. This could be produced for a 3-ring binder so as data changes, old pages could be easily removed and new pages inserted.

Such solutions, however, require administrative commitment and support of personnel and other resources. Though the UAAC and its network of advisors are doing the best they can under the circumstances, they face challenges resulting from ever-increasing enrollments. University administrators who believe that advising is an essential educational support

service should find a way to commit the necessary fiscal, personnel and other resources for a strong program. We have seen some recent changes in this University's commitment and support. It is hoped that this indicates our institution's recommitment to our students. The personal dedication of staff members as demonstrated by the University Academic Advising Center must be an adjunct to, not a substitute for, administrative support.

Entrance Requirements

Entrance requirements for major universities are different than the entrance requirements for community colleges. Most major universities require specific testing such as the American College Test (ACT) or the Scholastic Aptitude Test (SAT), while most community college systems require only a high school diploma or General Education Diploma (GED) equivalency for entrance to the institution.

A recent article hypothesizes that the GED scores could be predictive of success in community college English and reading courses. This is supported by the idea that by using GED results to place such students, the need for costly testing may be reduced (Smith, Goetz, 1988).

Test scores and transcript records for 1,344 North Harris County (Texas) College students were examined. A significant correlation ($r=.80$) was found between the ACT composite and the GED totals. High, positive correlations were also found between sub-tests measuring similar subject areas. The age, grade point average (GPA), sex, and ethnicity were examined to assure no

significant difference between those who took the ACT after the GED and the students that did not.

Initial results seem to indicate that GED scores may be at least as accurate in predicting success in English courses as the ACT. Further analysis showed that the number of courses a student takes before enrolling in English may have an affect on his success. The more courses a student completed before such enrollment, the more successfully he seemed to fulfill the English requirement.

The authors conclude that the GED may be as useful in making placement decisions as ACT scores. Advisors and counselors may find the GED more useful in planning individual programs of study to assure a positive collegiate experience for the student which, in turn, will affect his success.

Although the GED may compare statistically to the ACT, the idea of using one over the other may not appeal to many. It is in the best interest of the student to have as much information as possible to assist in college decision making. The ACT has a information summary sheet that may assist the student in choosing specific courses and outline a program of study most suited to his or her personal needs.

There are many differences between a community college student and a senior university student. Therefore, the GED and the ACT and SAT have a place within both school systems. The community college includes many part time students from the immediate area. Many of these students are non-traditional and have full time employment. Hence, many classes need to meet at

night. Many of the community college students may be taking classes for personal gain and have no need to decide on a degree direction.

Senior university students are usually between the ages of eighteen and twenty-two years and need to decide on a specific undergraduate degree program of study. Such students are usually straight out of high school and seek information from many sources to aid in deciding on a career direction and a supporting undergraduate degree. Some students seek the assistance of additional testing such as the COPS test which reveals scores in 16 different interest areas that relate to career occupations and degree choice.

One may be concerned about the narrow-minded attitude of using limited information, or tests, in making major decisions to assist students. The use of ACT, SAT, and GED should be part of an overall counseling program for students.

In a related article on admission requirements seventy-four teacher education students that passed all admission requirements were compared to a similar group of seventy-four students that had not passed all admission requirements. Statistical results revealed that there was no significant difference between the two groups in completing program requirements and in securing teaching credentials (Demetrulias, Chiodo, and Diekman 1988). The data suggests that additional counseling toward end results may be more beneficial than putting a pass/fail decision on student admission.

Students as Customers

In spite of marketing efforts such as those discussed above, more than one college has often ignored another important aspect of business: the satisfied customer. As purchasers of goods and services from a particular college (its classes and hopefully its degree), students can establish or destroy the institution's image. They become its best advertisement and recruiters, or its worst examples of disillusion, dissatisfaction and disappointment.

University administrators and student development officers should recognize the three basic types of clients or customers: potential, current and past. While parents, other relatives, friends and acquaintances may also voice satisfaction or dissatisfaction with an institution, their reactions frequently depend on those of a student they know. Of the three basic student groups, the most important is often the one most ignored by the institution: the one currently attending college.

The satisfaction level of current students can affect the way all other groups view and react to the college or university. Recruiters may travel the state or country painting appealing pictures for potential customers in schools from elementary through senior high. They may talk to all sorts of community organizations and businesses, discussing the benefits one gains from having more education. Sooner or later, however, they will probably need to respond to such a question as "If your college is so good, why didn't Joe Cool stay past one month?" If a local figure has left the university for any

reason, the recruiter must deal with and overcome a poor institutional image. That image may well have been created by student dissatisfaction. More importantly, such negative feelings might have been preventable if an official had noticed and responded to the student's concerns as they were developing.

In addition, development officers should remember that past students are generally of two kinds: those who graduate and those who withdraw from the institution, whatever the reason. Though time may affect memories, the satisfaction that graduates describe will depend to a large extent on their experiences as enrolled students. If their concerns, fears and needs are handled in a timely manner by caring and sympathetic student officers, alumni are more likely to describe favorable images of their alma mater.

Students may leave a college for various reasons. Illness or family needs may result in a pupil's withdrawal with a hope to return after the crisis has passed. Student personnel officers must be sympathetic, caring and encouraging in their responses to such situations. Some students, however, transfer to other institutions to continue their studies. University officials should be aware of and concerned with their reasons for leaving one institution to attend another. Perhaps changes could be made on the first campus so future students may not be as willing or eager to transfer. Modifications or alterations in programs and services may reduce or eliminate the necessity of transferring.

Some students decide to drop out of college completely, perhaps to get married or to find work. They may be giving up a dream of getting a better-paying position or of starting a career. In these situations as well, student personnel officers should work to identify the students' concerns and strive to develop and implement institutional resolutions whenever possible. Only by being aware of potential and existing problems and by working to resolve them can university officials hope to keep their customers happy and to retain as many students as possible. Retention is one measure of consumers' satisfaction. If students continue and complete their studies at the institution, it seems to demonstrates that its officers are delivering desired goods and services. Peter Drucker might observe that eliminating customer dissatisfaction is a lesson taught by the Sears Roebuck experience (p. 50-59).

The words students use to describe the school they attend represents another indication of their satisfaction. Every time they talk about the school, pupils are painting a picture of academic life and of the campus for their listeners. If they advise that instructors and classes are okay but off-campus housing is the only desirable alternative, they are saying something definitive about the residence halls and staff. The attentive personnel officer would try to identify students' concern and its cause, decide if changes are necessary or desirable, and strive to implement these.

Experienced students may also advise avoiding certain classes, teachers or administrators. While it is normal for

upperclassmen to offer advice about classes and teachers to newer attendees, signs of discouraging enrollment at the institution or participation in such procedures as advisement, registration, etc., should be of immediate and deep concern to student personnel officers. Freshmen can easily become frustrated and disillusioned when told they must take specific courses, only to find those classes closed or otherwise unavailable. Large lecture halls or classes may discourage lively discussions or other participation; they can give students a feeling that they are numbers rather than people as far as the professor and college are concerned. All University personnel, whether faculty, administrators or staff, have the responsibility of making all students feel welcomed and wanted, of letting them know that they are important, and of doing everything possible to promote customer satisfaction.

Unfortunately, few of today's college students seem aware of their consumer strength or of what that concept implies. During the 1960's and 1970's, dissatisfied students' activities, protests and demonstrations resulted in changes on campuses across the country. This era is perhaps the most conspicuous and memorable example of student consumerism. In sharp contrast, today's students are unlikely to loudly voice their concerns and even less likely to stage a sit-in at the president's office. Though violent protests and demonstrations seem to have subsided at least temporarily, administrators and student development officers would be foolish to think that students' concerns and reactions no longer matter.

On the contrary, students are still consumers, as concerned about delivery and products as about supplier. They still choose their suppliers based on their satisfaction. Their reactions have merely taken other forms. Officials at institutions of higher education should be acutely aware of one very effective form of protest: dissatisfied customers can, and often do, take their business elsewhere. As discussed earlier, college students frequently transfer to another program, department, college or institution or quit their studies entirely.

Unwise is the student personnel officer who thinks that quiet students are necessarily happy, satisfied customers. They may be very frustrated about something and unwilling to say anything because they feel the college and its representatives won't pay attention. Ignorance of a problem is no excuse for today's student officer. Such individuals shows they react to situations only when it is absolutely necessary. The best student officers know today is an era of proactivism. Recognizing the potential for a problem or its early formation, the university officer can strive to defuse a situation before it reaches a critical or violent stage.

Reasons for dissatisfaction are important to current enrollees. They are also important to administrators and student development officers who should try to identify dissatisfied students as quickly as possible. Visits and discussions can help identify causes of negative feelings so work can begin to resolve or eliminate problems before there

are disastrous effects for the student or for the institution.

How can a college official tell if students are dissatisfied? One of the best ways is to keep in touch with students. Go where they go; do the things they do. Attend ball games, concerts, etc. Spend time at the student union. If possible, take a class each term; share meals with residents and commuters. Above all else, listen to what the students are saying. When similar concerns are voiced, especially by a variety of people, sit up and pay attention. There may be trouble brewing.

A second way to determine if customers are happy with the products they receive is conducting a survey to identify and measure such feelings. Questionnaires can be distributed to students at enrollment, registration or fee-payment. Survey items could gather information on students' feelings about and impressions of the college, personnel, programs, activities, services, etc. One item could ask what was the main factor in a student's decision to attend this particular institution: recommendation from family or friends, courses offered, catalog information, personal contact by officials, etc. Such information could be analyzed in at least two respects: as an evaluation of the institution's public image and as a measure of success in meeting students' needs (i.e. customer satisfaction).

Questionnaires can also be sent to homes or schools in the region to gather data on how potential enrollees feel about the college. Do they know anything about its programs and

services? Where are they getting their information from: former students, siblings, catalogs, recruiters. etc.? What opinion (if any) do they have of the institution? Would they consider going there?

Surveying graduates is another good way to gain information about satisfaction with the college experience. Did their classes help prepare them for their chosen careers? Did they find specific courses particularly useful, or unnecessary? Would they advise current students to definitely take any special course(s)? Did they use the college's placement services when looking for their first position? Did they find the service helpful? What changes would they recommend?

Were administrators and other student officers helpful while they were in school or as they were graduating? Would they advise potential students to attend the institution? Analyzing responses to questions such as these will allow officials to measure how well goals and objectives are being met and students' needs filled. If recent graduates describe happy experiences, useful services and caring personnel, administrators might assume they are pleased with the institution's products and services. Satisfied customers are good advertisements and excellent recruiters.

In contrast, unhappy customers usually paint an undesirable picture of an institution and its personnel. Interviewing students who withdraw from a college may be more effective than giving them questionnaires to complete and return. A trained interviewer can discern an individual student's degree of

frustration and dissatisfaction in addition to identifying his specific complaints. Desired results from such interviews include pinpointing areas of student concerns, analyzing ways of resolving these, gaining University support in response, and implementing needed changes.

Conclusion

As discussed, university officials today are concerned with the image that potential and past students have of the institution. In addition, they must not forget their current students' satisfaction. Whether or not one agrees with the idea that American higher education is business, one must admit that universities have adapted various marketing concepts to their advantage. With this in mind, college administrators and student personnel officers would do well to learn from the Sears-Roebuck experience that Peter Drucker describes. Know the customers, identify and fulfill their needs, and eliminate their dissatisfaction. Students are the University's customers. As described above, meeting the actual and real needs of the students as customers will improve retention and educational quality.

CHAPTER III
METHODOLOGY AND DESIGN

The problem statements of this study are:

1. Can an Academic Enrichment Program positively influence the retention and/or grade point average of a student in Western's Community College, helping the student meet University entrance standards?

2. Can an Academic Enrichment Program reduce the problems associated with entering college, thus improving retention?

As described below, this is a comparative study utilizing a descriptive analytical design based on a longitudinal time frame. Related methodology for applied research was utilized to test the problem statements.

Design

In the Fall semester of 1987 approximately eighty five students enrolled in the Academic Enrichment Program (AEP) of the Community College. Approximately one-third of the students in the study had composite ACT scores of nine and below. The mean composite ACT scores of students in the AEP program were between ten and eleven.

Freshman students applying to Western Kentucky University with composite ACT scores of thirteen and below or high school grade point averages below 2.2 were invited to enroll in the Academic Enrichment Program (AEP) administered through the Community College (Appendix A). The AEP included students who chose to participate as well as a small number of seriously

underprepared students who were denied admission to Western Kentucky University.

A control group was created with sixty-seven students who had high school grade point averages and ACT scores on record. This was done in order to evaluate the effectiveness of the AEP by means of a comparative study. The control group students were matched with students who had the same scores and opted to attend Western Kentucky University rather than enroll in the AEP.

Grade point averages for both groups were inflated due to nondegree courses. However, both groups were equally underprepared and pre-college courses were mandatory with enrollment depending on ACT scores or departmental testing with the exception of Reading and Study Skills 090. Grade point averages for Academic Enrichment Program students were adjusted by eliminating grades earned in Reading 090.

The Academic Enrichment Program group was compared with the control group. Factors for comparison included years completed, cumulative hours, and average grade point average as dependent variables. The independent variable was the Academic Enrichment Program.

The first two semesters (Fall 1987 and Spring 1988) were documented individually while six additional concurrent semesters were documented by each school year. The eight concurrent semesters were analyzed yearly to document the degree of retention among students within the Academic Enrichment Program as compared to Control Group.

Treatments

The curriculum available to the students of the Academic Enrichment Program was limited and carefully chosen by the AEP Director. A few students were allowed to choose courses from Western Kentucky University's curriculum in order to accommodate individual differences. Class sizes were limited to twenty students in order that students could receive more individual attention.

Students were enrolled in a semester class schedule of fifteen semester hours. This gave students the option of withdrawing from a class if necessary and still be classified as a full-time student. This was an important provision for students who received financial aid and needed to maintain a full-time status.

The AEP Director met with each instructor appointed by the academic department heads to teach AEP sections. Emphasis was given to highly-structured courses with frequent quizzes and exams. Instructors were also requested to report excessive absences or inadequate academic performance to the AEP Director. The Director followed up on these concerns with individual student meetings.

Upon receiving a mid-term deficiency report the Director "called in" each student for advising. AEP students were also preregistered for the next semester classes, sent memos before important deadlines, and scheduled for individual meetings with the AEP Director.

Since this was a comparative study, a control group was

formed consisting of sixty-seven Western Kentucky University freshmen with comparable ACT composite scores and similar high school grade point averages. Control Group B followed regular University channels for any academic assistance necessary during the eight semesters documented in this study.

Population and Sample

Computer printouts of Community College and Western Kentucky University freshmen for the fall semester of 1987 were acquired on October 28, 1987. The Community College printout yielded one hundred and twenty-eight full-time students, of which eighty-five were AEP students. Sixty-seven of the eighty-five students enrolled in the Academic Enrichment Program had ACT scores of thirteen and below and high school grade point averages on record. These students became Group A of the comparative study.

Computer printouts for the Western Kentucky University students yielded one thousand thirty-seven student records. Sixty-seven Western Kentucky University freshmen with comparable ACT composite scores and similar high school grade point averages made up the Control Group B.

Exact matches were achieved for over eighty percent of the students in the two groups. Close matches were achieved for the remaining twenty-six students, with the edge always being given to the Western Kentucky University freshmen (Control Group B).

Data Collection

The following data were collected for each student over an eight semester period starting for the Fall of 1987.

- Sex
- Race
- High school grade point average (HSGPA)
- Year of birth (YOB)
- English ACT (EACT)
- Math ACT (MACT)
- Social studies ACT (SSACT)
- Natural science ACT (NSACT)
- Composite ACT (CACT)
- Semester hours carried (HRS*)
- Grade point average earned per semester (GPA*)
- Adjusted grade point average per semester (AGPA*)

(* - distinguishes per semester)

Grade point averages were adjusted by removing grades earned in Reading 090. Grades in other pre-college-level courses were not eliminated since enrollment in courses such as Introduction to Freshman English 055 is mandated according to established criteria (Appendix D and E).

Analysis of Data

Information was gathered for each student from academic records and posted to a record sheet. This information included sex, race, high school grade point average, English ACT, Math ACT, Social Studies ACT, Natural Science ACT, composite ACT, semester hours carried, grade point average, and adjusted grade point average. Since students were matched by composite ACT score and high school GPA, differences in these two pre-college aptitude-achievement variables were minimal. Sex and Race

variables were not controlled. Frequency distributions of demographic, aptitude, and achievement variables are listed in Appendix C. Information summarized for analysis included the following time frames: fall 1987, spring 1988, 1988/1989 school year, 1989/1990 school year, 1990/1991 school year, and overall totals for the above.

Since retention rates for the AEP Group and the Control Group offered an opportunity for comparisons of earned hours and Grade Point Average during the first year, a "t" test was utilized to determine significant differences between the variables.

In subsequent years, retention data was tested utilizing a Chi Square test of significant difference. Since drop out rates for the Control Group rendered comparisons of earned hours and GPA's undesirable and threatened internal and external validity, the Chi Square test was deemed more appropriate after the first year.

The SOLO Statistical Package was utilized to produce statistical comparisons and descriptive data. While this computerized statistical package rounds off calculations to six places, data is further rounded to three places by the researcher for inclusion in this study.

Descriptive data and data produced through the analysis of variance processes are reduced to tables for presentation in CHAPTER IV, FINDINGS. Additional data is presented in the APPENDICES.

CHAPTER IV
FINDINGS

Described in the previous chapter were the population, instrumentation, procedures, and statistical methodology used in this study. The purpose of this chapter is the presentation of the analysis of the data.

The principle objective of this study was the investigation of whether or not an enrichment program would increase the success of remedial students attempting to complete a university program of study. A descriptive analytical design was utilized to test a null hypothesis related to selected control and experimental samples of remedial students.

Analysis of variance and descriptive statistics were utilized to compare differences between the control and experimental samples. A two sample t-test treated for equal or unequal variances was utilized to determine significant difference (.05) between grade point average (GPA) and earned hours (ER) of the control and experimental groups at the end of the first year. A Chi-square test was utilized to test for significant difference (.05) in success of completion of four years between the control and experimental groups. Descriptive statistics were utilized to present success rates at the end of the first, second, third, and fourth years.

Descriptive Results

A comparison of student retention for the four academic years of this study produced the following results:

1. All students in both groups completed the first year. Control group students produced a mean GPA of 1.43597 and earned 21.67164 hours of credit. Experimental group students produced a mean GPA of 2.11791 and earned 24.35821 hours of credit.

At the end of the first year, approximately seventy percent of the control group had failed to earn a two point or higher CPA while approximately thirty-five percent of the experimental group had failed to earn a two point GPA

2. At the end of the second year, forty-one (sixty-one percent) of the control group and fifty (seventy-five percent) of the experimental group remained in school

3. At the end of the third year, nineteen (twenty-eight percent) of the control group and thirty-four (fifty-one percent) of the experimental group were still in school

4. At the end of the fourth year, sixteen (twenty-four percent) of the control group and twenty-six (thirty-nine percent) of the experimental group had successfully completed four years of university work (see Graph A, next page).

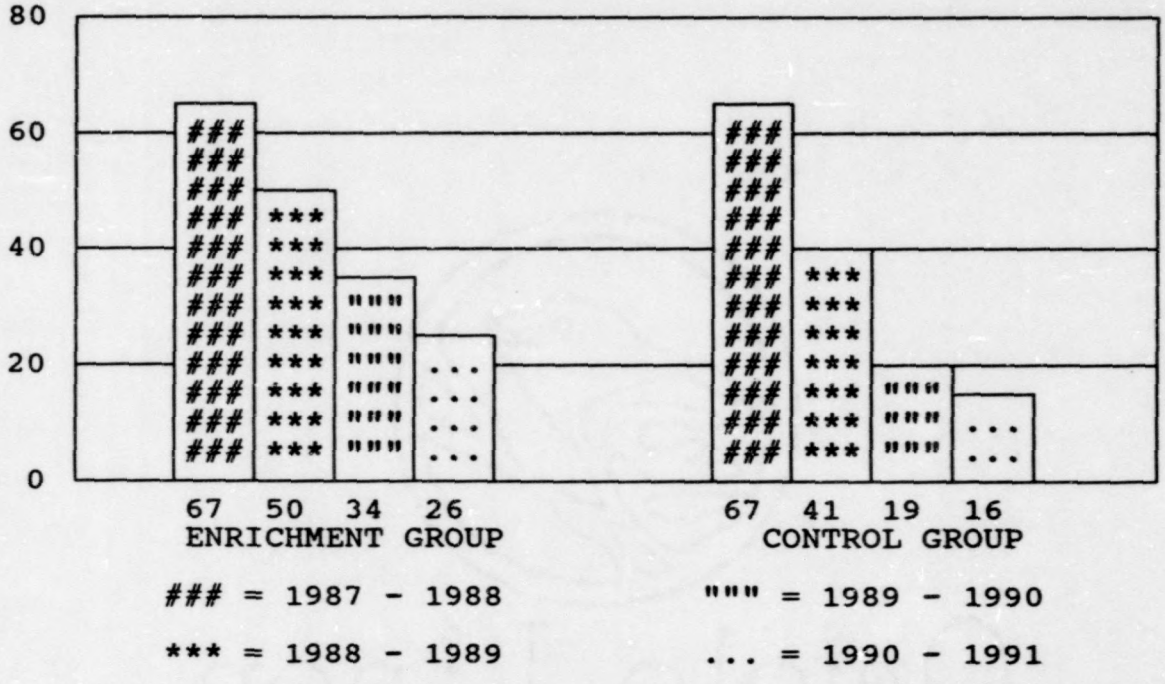
Analysis of Variance for Year One

First year analysis of variance utilized a two sample t-test treated for equal or unequal variances to determine significant difference (.05) between grade point average (GPA) and earned hours (ER) of the control and experimental groups. This form of analysis of variance was possible since all participants in each group were retained, producing data for comparison.

Comparison of GPA data indicated that the experimental group earned a significantly (.001) higher GPA than that of the control group. The experimental group also earned a significantly (.02) higher number of earned hours than did the control group (see Table 4.1 and 4.2, Page 49).

Graph A

Comparison of Student Retention for Four Academic Years



Analysis of Variance for the Four Year Study Period

At the end of the fourth year, only twenty-six (thirty-nine percent) of the experimental group and sixteen (twenty-four percent) of the control group had successfully completed four years of university work. Since missing data precluded the use of analysis of variance techniques similar to those used with year one, a Chi-square analysis was utilized to produce a probability of significant difference based upon retention.

Table 4.1

A Comparison of Mean Earned Hours for Year One

Group	Earned Hrs.	SD	df	T Value	Sig.
Experimental Group	24.358	6.921			
Control Group	21.672	6.446	133.32	2.3250	.0216

SD = Standard Deviation df = degrees of freedom
Sig. = Probability level
Note: the above based upon unequal variances

Table 4.2

A Comparison of Mean GPA for Year One

Group	Mean GPA	SD	df	T Value	Sig.
Experimental Group	2.1179	.88678			
Control Group	1.4359	.86780	133.93	4.4988	.001

SD = Standard Deviation df = degrees of freedom
Sig. = Probability level
Note: the above based upon unequal variances

Chi-square analysis of the control and experimental groups at the end of year two produced an odds ratio of (1.865) and a probability of (.1388). End of year three data produced an odds ratio of (2.603) and a probability of (.0013). End of year four data produced an odds ratio of (2.021) and a probability of

(.0094). These data, with the exception of end of year two, indicated a significantly higher level of success for the experimental group as defined by retention.

Table 4.3

Chi-square for End of Year Two

	Retained	Dropped	Total
Experimental Gp.	50	17	67
Control Gp.	41	26	67

Chi-square	df	Odds Ratio	Probability
2.19167	1	1.86524	.13876

df = degrees of freedom.

Table 4.4

Chi-square for End of Year Three

	Retained	Dropped	Total
Experimental Gp.	34	33	67
Control Gp.	19	48	67

Chi-square	df	Odds Ratio	Probability
6.11787	1	2.60287	.0013

df = degrees of freedom.

Table 4.5

Chi-square for End of Year Four

	Retained	Dropped	Total
Experimental Gp.	26	41	67
Control Gp.	16	51	67

Chi-square	df	Odds Ratio	Probability
2.80900	1	2.02134	.0093

df = degrees of freedom.

CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate whether or not an academic enrichment program would have a significantly positive effect upon the success of remedial college students. Success was defined as the completion of four years of college work.

A randomly selected control group and experimental group were tracked for four years. Data related to each group were collected and recorded.

An experimental design was utilized to test a null hypothesis. Descriptive data related to success percentages were presented. Also presented were the outcomes of the analysis of variance of grade point average and hours completed at the end of the first year. End of four year success rates were analyzed utilizing a Chi-square design.

Since a significant difference between the control and experimental groups was found, the null hypothesis was rejected.

Conclusions

The primary thrust of this study was to investigate whether or not an academic enrichment program would have a significantly positive effect upon the success of remedial college students. Based upon the findings, as represented by the results from the analysis of variance presented in various

tables, the following conclusions seem warranted:

1. The null hypothesis: There will be no significant difference when comparing the success of an AEP Group and a Control Group of marginal students (success being defined as completion of four years of university work), was rejected.

2. The enrichment program afforded the AEP Group had a significantly positive effect on the success rates in completing four years of university work.

3. The enrichment program afforded the AEP Group had a significantly positive effect upon both the GPA and number of earned hours at the end of their first year of university work.

4. There is an inconsistency in the drop-out rate among Control Group students between the first and third years.

Discussion of the Conclusions

Significant differences between the control and experimental groups at the end of the first year ranged from (.02) for earned hours to (.001) for GPA. The control group produced an average of (21.762) earned hours compared to (24.358) for the experimental group. The control group produced only a (1.4359) GPA compared to a (2.1179) GPA for the experimental group.

The end of the first year data is interesting in that it illustrates the difficulties experienced by marginal students. At the earned hour level of 22-23 hours, control group students would take six years to complete the required 128 hours necessary for graduation. AEP Group students would finish in five years.

Another consideration is GPA. While the experimental group experienced a low GPA (2.1179), the majority avoided academic probation and remained in a position to graduate with a low but acceptable GPA. The control group, however, faced academic probation and the need to produce a second year GPA in excess of (2.5) to maintain a minimal (2.0).

Further, descriptive data indicates that only thirty-five percent of the experimental group experienced a GPA below (2.0), while seventy percent, twice as many, of the control group were in academic trouble at the end of the first year.

It is interesting to note that after four years, twenty-six of the experimental group were still in school while only sixteen of the control group remained. These figures are closely related to the ratio of experimental to control group GPA's at the end of the first year.

The inconsistency in the drop-out rate among Control Group students between the first and third years may be related to the academic probation process. Since thirty-five percent of the experimental group and seventy percent of the control group would have been remanded to the Academic Probation Committee for review, second year completion rates indicate a liberal application of probationary rules by the committees.

Recommendations

Recommendations for additional research and inquiry are listed below:

1. A follow-up study should be undertaken to determine why students participating in the study dropped out of school.

2. Students comprising the AEP group should be surveyed to determine what factors were, for them, the most beneficial.

3. A study of the records of individual students comprising the control group should be undertaken to ascertain the level of performance (earned hours and GPA) below which retention is cost or otherwise ineffective.

Discussion of Recommendations

The reasons for leaving the university were not included in the data related to this study. Success was defined as the completion of four years of study. Success for the student might have been defined differently. For example, a student may have completed two years of college, successfully completing a personal goal. Finances, relocation, or considerations other than academic success may have been the primary reason for leaving college.

Since the Academic Enrichment Group experienced greater success, as defined in this study, gaining a better understanding of the value of various elements of the program seems desirable. Allowing the participating students to make recommendations related to additional services or revision of existing services also seems desirable.

There is a cost involved with any program offering financial and personal services. The resources expended in the effort to enhance the success possibilities of marginal students must be balanced with the availability of such resources and the need for support among more prepared students.

Data related to this study could be used to give administrators better insight into the relationship of grades, earned hours, and academic success among marginal students. Ascertaining the point at which retention of marginal students becomes cost and otherwise ineffective would be useful in establishing guidelines for academic probation committees.

In a time of increasing enrollments and dwindling resources, a better understanding of such factors as those listed above are necessary. The wise use of university resources should never be left to chance.

APPENDICES

TABLE 1

ENROLLMENTS IN HIGHER EDUCATION BY AGE-GROUP AND SEX
(In Thousands)

	1975	1980	1985	Projected 1995
TOTAL	11,184	12,096	12,248	11,452
Male	6,148	5,873	5,819	5,388
Female	5,036	6,223	6,429	6,064
14-17 years	278	247	234	199
Male	126	99	121	88
Female	152	148	113	111
18-24 years	6,782	7,314	6,915	5,697
Males	3,689	3,698	3,494	2,903
Female	3,093	3,616	3,421	2,794
25+ years	4,124	4,535	5,099	5,556
Male	2,333	2,076	2,204	2,397
Female	1,791	2,459	2,895	3,159
25-29 years	1,774	1,871	1,953	1,733
Male	1,122	993	991	910
Female	652	878	962	823
30-34 years	967	1,243	1,261	1,394
Male	557	576	574	648
Female	410	667	687	746
35+ years	1,383	1,421	1,885	2,429
Male	654	507	639	839
Female	729	914	1,246	1,590

Sources: United States. Center for Education Statistics. Digest of Educational Statistics, 1988.
P. 143. United States. Bureau of the Census. Statistical Abstract of the United States, 1988.

TABLE 2

PERCENT OF TOTAL ENROLLMENTS IN HIGHER EDUCATION
BY AGE-GROUP AND SEX

	1975	1980	1985	Projected 1995
TOTAL	100	100	100	100
Male	54.97	48.55	47.51	47.05
Female	45.23	51.45	52.49	52.95
14-17 years	2.49	2.04	1.91	1.74
Male	1.13	0.82	0.99	0.77
Female	1.36	1.22	0.92	0.97
18-24 years	60.64	60.47	56.46	49.75
Male	32.98	30.57	28.53	25.35
Female	27.66	29.90	27.93	24.40
25+ years	36.87	37.49	41.63	48.52
Male	20.86	17.16	18.00	20.93
Female	16.01	20.33	23.63	27.59
25-29 years	15.86	15.47	15.95	15.13
Male	10.03	8.21	8.09	7.95
Female	5.83	7.26	7.86	7.18
30-34 years	8.64	10.28	10.30	12.17
Male	4.97	4.76	4.69	5.66
Female	3.67	5.52	5.61	6.51
35+ years	12.37	11.75	15.39	21.21
Male	5.85	4.19	5.22	7.33
Female	6.52	7.56	10.17	13.88

Derived from the figures in Table 1.

TABLE 3

PERCENT OF CHANGES IN ENROLLMENTS IN HIGHER EDUCATION
BY AGE-GROUP AND SEX

		PROJECTED	
	1975-1985 (10 years)	1995-1985 (10 years)	1995-1975 (20 years)
TOTAL	9.51	- 6.50	2.40
Male	- 5.35	- 7.41	-12.36
Female	27.66	- 5.68	20.41
14-17 years	-15.83	-15.00	-28.42
Male	- 3.97	-27.27	-30.16
Female	-25.66	- 1.77	-26.97
18-24 years	1.96	-17.61	-16.00
Male	- 5.29	-16.91	-21.31
Female	10.60	-18.33	- 0.97
25+ years	23.64	8.96	34.72
Male	- 5.53	8.76	2.74
Female	61.64	9.12	76.38
25-29 years	10.09	-11.26	- 2.31
Male	-11.68	- 8.17	-18.89
Female	47.55	-14.45	26.23
30-34 years	30.40	11.97	44.16
Male	3.05	12.54	16.34
Female	67.56	8.59	81.95
35+ years	36.30	53.47	75.63
Male	- 2.29	51.96	28.29
Female	70.92	54.25	118.11

Derived from the figures in Table 1.

NOTE: Negative figures indicate a decline in enrollment for the category shown.

TABLE 4

PART-TIME ENROLLMENT IN HIGHER EDUCATION BY AGE-GROUP AND SEX
(Percent of Total Enrollment)

	1975	1980	1985	Projected 1995
TOTAL	38.84	41.32	42.22	46.80
Male	19.88	18.06	18.04	19.95
Female	18.96	23.26	24.18	26.85
14-17 years	0.32	0.26	0.25	0.21
Male	0.15	0.12	0.15	0.10
Female	0.17	0.14	0.10	0.11
18-24 years	12.62	12.38	11.36	10.19
Male	6.10	5.60	5.14	4.84
Female	6.52	6.78	6.22	5.35
25+ years	25.90	28.67	30.61	36.40
Male	13.62	12.33	12.75	15.01
Female	12.28	16.34	17.86	21.39
25-29 years	9.65	10.42	10.27	9.53
Male	5.80	5.08	4.87	4.65
Female	3.87	5.34	5.40	4.88
30-34 years	6.15	8.09	8.09	9.23
Male	3.33	3.70	3.70	4.13
Female	2.82	4.39	4.39	5.10
35+ years	10.08	10.16	10.16	17.64
Male	4.49	3.56	3.56	6.23
Female	5.59	6.60	6.60	11.41

Derived from figures found in the following sources:
United States. Center for Education Statistics. Digest of Educational Statistics, 1988. P. 143.
United States. Bureau of the Census. Statistical Abstract of the United States, 1988. P. 140-141.

APPENDIX A

Academic Enrichment Program: Community College Bulletin

Western Kentucky University has developed a new program especially designed to meet the individual needs of students with an ACT composite score of 13 or below--the Academic Enrichment Program, or the AEP.

WHAT ARE THE BENEFITS?

Among the benefits of the program are more individual attention and smaller classes. Students who wish to enroll in this special program, administered by the Community College of Western Kentucky University, will be advised into sections of freshmen courses with limited enrollment so they may receive more individual attention and have an increased opportunity for success. They will be enrolled in a study skills course providing instruction on how to study for particular courses and for college courses in general. Students in the Academic Enrichment Program will be provided college-prep courses in English and mathematics as needed and will be assigned to a special advisor/counselor who will monitor their academic progress and meet with each student periodically. AEP students will also be enrolled in general education courses that count toward the 53-54 semester hour requirement in general education, applicable to all students at Western pursuing a four-year degree.

HOW LONG IS THE PROGRAM?

Students may remain in the Academic Enrichment Program in the Community College for one semester, one year, or perhaps longer, depending on the student's individual needs and grades. While in the AEP program, students will receive assistance in choosing a major in one of Western's academic departments in an undergraduate college.

WHY SHOULD YOU BE IN THE AEP?

PARTICIPATION IN THE ACADEMIC ENRICHMENT PROGRAM WILL ENCHANCE YOUR CHANCES FOR SUCCESS IN THE UNIVERSITY. TAKE ADVANTAGE OF THIS PROGRAM FOR A SOLID START IN YOUR COLLEGE CAREER.

If you have questions about the AEP program, please contact the AEP program director at 745-5087 or write the Community College, 316 Science and Technology Hall, Western Kentucky University, Bowling Green, Kentucky 42101.

APPENDIX B

1987 FALL SEMESTER
AEP COURSES

CALL NO	DEPT ABBR	COURSE NO.	COURSE TITLE	CR HRS	TIME BEGIN	TIME END	DAYS MEET	BLDG - ROOM	INSTRUCTOR
A - COMMUNICATION OF IDEAS									
8078	ENG	055	Intro to Fr Eng	3	8:00-	9:00	MWF	CH 18	Staff
8132	ENG	055	Intro to Fr Eng	3	9:15-	10:15	MWF	CH 18	Staff
*8175	ENG	055	Intro to Fr Eng	3	9:15-	10:15	MWF	CH 24	Staff
8133	ENG	100	Freshman English	3	9:15-	10:15	TTHF	CH 19	Staff
8149	ENG	100	Freshman English	3	9:15-	10:15	TTHF	CH 24	Staff
B - HUMANITIES									
*8176	MUSIC	120	Music Apprec	3	8:00-	9:00	TTHF	FAC 198	Staff
8138	ART	100	Art Appreciation	3	1:00-	2:00	MWF	FAC 419	Rowe, D
8139	ART	100	Art Appreciation	3	1:00-	2:00	TTH	FAC 419	Rowe, D
C - SOCIAL / BEHAVIORAL STUDIES									
8134	PSY	250	Personal Adj	3	10:30-	11:30	MWF	CH 23	Staff
8135	PSY	250	Personal Adj	3	10:30-	11:30	TTHF	CH 19	Staff
8136	AGRI	108	Rural Sociology	3	10:30-	11:30	MWF	SH AUD	Coffey, D
8137	AGRI	108	Rural Sociology	3	10:30-	11:30	TTHF	SH AUD	Coffey, D
8145	SOCLGY	100	Intro to Soc	3	10:30-	11:30	MWF	CH 124	Staff
8146	SOCLGY	100	Intro Sociology	3	10:30-	11:30	TTHF	CH 124	Staff
*8173	SOCLGY	100	Intro Sociology	3	11:45-	12:45	TTHF	GH 138	Staff
D - NATURAL SCIENCE / MATH									
*8174	GEOG	100	Int Man Phy Env	3	11:45-	12:45	MWF	EST 402	Twelddell, T
8150	GEOG	100	Int Man Phy Env	3	1:00-	2:00	MWF	EST 402	Twelddell, T
8151	GEOG	100	Int Man Phy Env	3	1:00-	2:00	TTHF	EST 402	Twelddell, T
E - PHYSICAL DEVELOPMENT									
8158	PHY ED	101S	Aerobic Dance	1	8:00-	9:00	TTH	DA 146	Staff
8152	PHY ED	101P	Weight Tran-Wom	1	9:15-	10:15	MW	DA-WR	Meadors, W
8167	PHY ED	101P	Weight Training	1	9:15-	10:15	TTH	DA-WR	Meadors, W
8154	PHY ED	102K	Racketball	1	10:30-	11:30	TTH	DA AUX	Rascoe, R
8156	PHY ED	103D	Life Saving	1	10:30-	11:30	TTH	DA POOL	Powell, W
8159	PHY ED	101E	Jazz Exercise	1	11:45-	12:45	TTH	SS 218	Leonard, K
8160	PHY ED	101A	Ballet	1	11:45-	12:45	MW	SS 218	Leonard, K
8166	PHY ED	101M	Tennis-Beg	1	11:45-	12:45	MTWTH	TC	Long, C
		ABOVE COURSE IS FIRST BI-TERM							
8155	PHY ED	101Y	Swimming (Beg)	1	1:00-	2:00	MW	DA POOL	Powell, W
8165	PHY ED	101J	Gymnastics I	1	1:00-	2:00	TTH	SS 119	Farley, R
8153	PHY ED	102A	Archery	1	2:10-	3:10	MW	DA 220	Jones, J
8162	PHY ED	101C	Bowling	1	2:10-	3:10	MW	DUC	Jones
8163	PHY ED	101C	Bowling	1	2:10-	3:10	TTH	DUC	Jones
8164	PHY ED	101V	Figure Improvmt	1	2:10-	3:10	TTH	DA-WR	Meadors, W

E - PHYSICAL DEVELOPMENT (cont'd)

8157	PHY ED	104C	Cross Country	1	3:20- 4:20	MTWTH	SS TRACK	Long, C
		ABOVE COURSE IS FIRST BI-TERM						
8161	PHY ED	101	Jogging	1	3:20- 4:20	MTWTH	SS TRACK	Oglesby, B
		ABOVE COURSE IS FIRST BI-TERM						

F - GENERAL ELECTIVES

8147	HE	100	Personal Health	3	10:30-11:30	MWF	CH 126	Carter, D
8148	HE	100	Personal Health	3	10:30-11:30	TTHF	STH 405	Carter, R
*8172	CNS ED	100	Educ & Life Plan	2	2:10- 3:10	MW	CEB 416	Staff

HELPING COURSES

8140	RDG ED	090	Coll Rdg St Sk	2	9:15-10:15	TTHF	CEB 127	Ruff, A
8141	RDG ED	090	Coll Rdg St Sk	2	10:30-11:30	MWF	CEB 127	Ruff, A
8142	RDG ED	090	Coll Rdg St Sk	2	1:00- 2:00	TTHF	CEB 127	Ruff, A
8143	RDG ED	090	Coll Rdg St Sk	2	2:10- 3:10	MWF	CEB 127	Ruff, A
8144	RDG ED	090	Coll Rdg St Sk	2	2:10- 3:10	TTHF	CEB 127	Ruff, A

* = ADDED COURSES

WKU—Printing paid from state funds, KRS 57.375.

APPENDIX C. COMPARISONS: AEP AND CONTROL GROUP

FREQUENCIES

VARIABLE		AEP STUDENTS	WKU CONTROL
SEX:	MALE	60%	39%
	FEMALE	40%	61%
RACE:	WHITE	58%	75%
	BLACK	42%	25%
HS GPA:	< 2.0	46.0%	27.0%
	2.0 - 2.2	16.5%	31.0%
	2.3 - 2.5	22.5%	27.0%
	2.6 - 2.8	9.0%	9.0%
	2.9 - 3.2	6.0%	6.0%
E ACT:	< 6	9.0%	9.0%
	6 - 8	12.0%	13.0%
	9 - 11	34.0%	25.0%
	12 - 14	20.0%	25.0%
	15 - 17	19.0%	24.0%
	> 17	6.0%	3.0%
M ACT:	< 6	39.0%	52.0
	6 - 8	30.0%	19.5%
	9 - 11	21.0%	12.0%
	12 - 14	7.0%	15.0%
	15 - 17	1.5%	0%
	> 17	1.5%	1.5%
SS ACT:	< 6	12.0%	19.5%
	6 - 8	34.0%	28.0%
	9 - 11	33.0%	24.0%
	12 - 14	18.0%	18.0%
	15 - 17	1.5%	4.5%
	> 17	15.0%	6.0%
NS ACT:	< 6	0%	0%
	6 - 8	9.0%	7.0%
	9 - 11	13.0%	15.0%
	12 - 14	24.0%	33.0%
	15 - 17	39.0%	33.0%
	> 17	15.0%	12.0%
C ACT:	< 6	1.5%	1.0%
	6 - 8	19.5%	18.0%
	9 - 11	40.0%	42.0%
	12 - 13	39.0%	39.0%

APPENDIX D

AEP: GROUP A DATA

NO	R	S	ACT	F'87 FHRS	F'87 FGPA	S'88 SHRS	S'88 SGPA	'87-88 C.HRS	87-88 C.GPA	87-88 A.GPA	F'88 OHRS	F'88 OGPA	S'89 OHRS	S'89 OGPA
1	B	M	13	15	3.60	15	3.20	30	3.40	3.35	*			
2	W	F	10	15	2.60	15	3.13	30	2.86	2.59	*			
3	B	F	11	16	2.68	12	1.25	28	2.50	2.17	*			
4	W	M	11	15	2.66	13	2.07	28	2.53	2.53	*			
5	W	F	8	15	2.80	14	2.35	29	2.58	2.33	*			
6	W	M	12	17	2.52	13	2.15	30	2.36	2.36	*			
7	W	M	10	19	2.94	13	3.69	32	3.25	3.37	*			
8	B	M	7	12	2.91	13	1.84	25	2.36	2.29	*			
9	B	F	8	12	2.25	14	2.71	26	2.50	2.16	*			
10	W	M	9	12	3.00	14	1.28	26	2.07	1.85	*			
11	W	M	10	12	2.66									
12	W	M	13	14	2.92	12	1.91	26	2.46	2.10	*			
13	W	M	8	12	2.50	14	2.64	26	2.57	2.11	*			
14	B	F	13	16	2.75	15	3.26	31	3.00	3.00	*			
15	W	F	11	12	2.75	12	2.00	24	2.50	2.31	*			
16	W	F	13	14	3.50	10	2.40	24	3.04	3.04	*			
17	B	M	13	12	2.33									
18	B	M	8	12	2.25									
19	B	M	9	13	2.30	12	1.58	25	1.96	1.85				
20	W	F	12	15	2.13	16	2.06	31	2.09	2.00	*			
21	W	M	11	15	3.33	15	2.46	30	2.90	3.00	*			
22	W	M	12	12	2.41	13	2.69	25	2.56	2.50	*			
23	W	M	10	12	2.08	13	1.69	25	1.88	1.38	*			
24	B	F	12	16	2.93	15	2.80	31	2.87	2.87	*			
25	W	M	13	15	1.60	14	0.57	29	1.10	0.95				
26	W	F	12	14	1.64	16	1.56	30	1.60	1.44				
27	W	F	12	15	3.33	16	3.18	31	3.25	3.25	*			
28	B	M	8	12	2.33	12	1.75	24	2.04	1.89	*			
29	W	F	12	12	2.41	9	2.33	21	2.38	2.38	*			
30	B	M	10	16	3.18	13	2.69	29	2.96	3.00				
31	B	M	12	13	2.69	16	1.56	29	2.06	1.92	*			
32	W	M	11	12	0.33	9	0.33	21	0.33	0.38				
33	B	F	6	15	2.06	13	1.46	28	1.78	1.35	*			
34	B	M	12	14	2.92	12	1.50	16	2.26	2.14	*			
35	W	M	13	14	2.71	10	3.00	24	2.83	2.83	*			
36	W	M	9	12	2.00	13	0.69	25	1.32	1.06	*			
37	W	F	8	12	0.16									
38	B	F	10	13	1.15	12	1.66	25	1.66	1.00	*			
39	W	M	9	12	2.25	6	2.00	18	2.16	2.07	*			
40	B	F	11	16	2.50	12	2.00	28	2.28	2.04				
41	B	M	8	13	0.92	7	0.71	20	0.85	0.73				
42	B	F	9	12	1.75	13	1.53	25	1.64	1.47	*			
43	B	M	10	12	1.91	10	0.00	22	1.04	0.64				
44	W	M	12	14	3.78	13	3.53	27	3.66	3.64	*			
45	B	F	12	16	2.81	14	3.21	30	3.00	3.00	*			
46	B	M	13	16	2.50	11	1.54	27	2.11	2.11	*			
47	B	F	8	12	1.66	8	1.50	20	1.60	1.16				
48	W	F	12	15	2.46	13	2.92	28	2.67	2.39				
49	W	M	11	15	3.40	14	2.00	29	2.72	2.57	*			

50	W	F	10	15	3.20	14	2.92	29	3.06	3.21	*
51	W	M	5	12	2.25	9	0.44	21	1.47	1.76	
52	W	M	8	00	0.00	7	0.00	7	0.00	0.00	*
53	W	F	12	00	0.00						
54	B	F	12	15	2.93	17	2.41	32	2.65	2.51	*
55	W	M	11	14	1.50	9	0.66	23	1.17	1.05	*
56	W	F	12	16	2.81	15	3.20	31	3.00	3.00	*
57	B	M	7	12	1.08	12	0.83	24	0.95	0.87	
58	B	M	9	14	2.50	14	2.92	28	2.71	2.55	*
59	W	F	11	12	2.25	14	2.14	26	2.19	2.19	*
60	B	F	8	12	1.91	13	2.46	25	2.20	2.25	*
61	W	F	9	13	0.00						
62	W	M	11	12	2.08	8	0.37	20	1.40	1.13	
63	W	M	13	15	2.40						
64	W	M	12	15	2.60	11	1.54	26	2.15	2.35	*
65	W	M	11	15	2.46	12	2.50	27	2.48	2.36	*
66	B	M	9	15	2.13	12	2.33	27	2.22	2.18	*
67	B	M	13	13	2.92	14	3.29	27	3.11	3.04	*

APPENDIX E

WKU: GROUP B DATA

NO	R	S	ACT	F'87 FHRS	F'87 FGPA	S'88 SHRS	S'88 SGPA	87-88 C.HRS	87-88 C.GPA	87-88 A.GPA	F'88 CHRS	F'88 CGPA	S'89 CHRS	S'89 CGPA
1	W	F	13	12	2.75	15	3.33	27	3.07	3.07	*			
2	W	F	10	12	1.00	6	0.00	18	0.66	0.66				
3	W	F	11	12	0.75	13	1.76	25	1.28	1.28				
4	W	M	11	13	2.00	14	1.50	27	1.74	1.50				
5	B	F	8	17	0.52	13	1.30	27	0.96	0.72	*			
6	W	F	12	12	0.58									
7	W	M	10	14	0.35	3	0.00	17	0.29	0.14				
8	W	M	7	12	1.25	12	1.50	24	1.37	1.28				
9	B	F	8	12	2.91	12	1.66	24	2.29	2.26				
10	B	F	9	12	1.75	13	0.61	25	1.16	0.75				
11	W	F	10	14	2.64	13	2.15	27	2.40	2.40	*			
12	W	F	13	12	0.58	9	0.00	21	0.33	0.36				
13	B	F	8	13	0.46	12	1.83	25	1.12	1.12				
14	W	F	13	16	2.87									
15	B	M	11	15	2.13	13	1.84	28	2.00	1.91	*			
16	W	F	13	12	0.00	13	1.38	25	0.81	0.81				
17	W	M	13	10	1.00	9	0.00	19	0.45	0.45				
18	W	F	8	14	1.14	10	0.20	24	0.75	0.31				
19	W	F	10	12	0.50									
20	B	F	12	12	2.00	13	0.53	25	1.24	1.00				
21	W	F	11	12	2.33	15	2.20	27	2.25	2.20	*			
22	B	F	12	13	2.00	14	1.92	27	1.96	1.68	*			
23	W	F	10	12	0.50	13	0.15	25	0.32	0.32				
24	W	F	12	6	0.50									
25	W	M	13	15	0.00	12	2.75	27	1.22	1.37				
26	W	F	12	12	0.00									
27	W	M	12	12	2.25						*			
28	W	M	8	15	1.60	13	2.46	25	2.00	2.00	*			
29	W	F	12	13	2.61	13	2.00	26	2.30	2.16				
30	B	M	10	13	0.61	12	0.25	25	0.44	0.44				
31	W	M	12	8	0.62									
32	W	M	11	13	1.69	14	1.92	27	1.81	1.79	*			
33	W	F	6	12	2.75						*			
34	W	M	12	11	0.72									
35	W	F	13	16	1.75	9	1.66	25	1.72	1.72	*			
36	B	M	9	10	0.50	11	0.90	21	0.71	0.68	*			
37	W	F	8	12	1.91	10	0.00	22	1.04	0.52				
38	W	M	10	16	1.87	14	1.78	30	1.83	1.81	*			
39	B	F	9	15	1.66	14	1.14	26	1.57	1.33				
40	W	M	11	15	2.40	10	2.20	25	2.32	2.20	*			
41	W	M	8	13	1.30	7	1.85	20	1.50	1.41	*			
42	W	M	9	13	0.61									
43	B	M	10	12	0.50									
44	W	F	12	12	2.75	15	1.40	27	2.00	2.00	*			
45	B	F	12	16	0.37	12	1.16	25	0.80	0.63	*			
46	W	M	13	17	2.76	12	1.75	29	2.34	2.34	*			
47	B	M	8	12	1.33	3	3.00	15	1.66	1.58	*			
48	W	F	12	15	3.40	13	2.84	28	3.14	3.07	*			
49	W	M	11	12	2.41	12	1.75	24	2.08	2.09	*			

50	W	F	10	12	3.00	17	2.70	29	2.82	2.58	
51	B	F	5	13	1.23	14	1.07	27	1.14	0.95	
52	W	F	7	13	2.46	13	1.38	26	1.92	1.78	
53	W	F	12	13	1.23	12	2.41	25	1.80	1.63	*
54	W	F	12	14	3.78	16	4.00	30	3.90	3.90	*
55	B	F	11	15	0.00	6	0.00	18	0.00	0.00	
56	W	M	12	12	0.00						
57	W	M	7	18	2.33	12	2.33	30	2.33	2.24	*
58	B	F	9	14	2.07	9	2.11	23	2.08	1.88	*
59	W	F	11	13	1.38	14	1.07	27	1.22	1.22	*
60	W	F	9	12	1.25						*
61	W	F	9	12	0.50						*
62	W	F	11	13	0.92	13	1.53	26	1.23	1.13	
63	W	M	13	13	1.53	14	1.50	27	1.51	1.51	
64	W	M	12	12	0.50						
65	W	M	11	12	1.75	9	1.77	21	1.76	1.76	*
66	B	F	9	12	2.16	16	2.50	28	2.35	2.23	*
67	W	M	13	13	1.07						

APPENDIX F

LEGEND

R = RACE

S = SEX

EACT = ENGLISH ACT

MACT = MATH ACT

SSACT = SOCIAL STUDIES ACT

NSACT = NATURAL SCIENCE ACT

CACT = COMPOSITE ACT

HRS = SEMESTER HOURS

FHRS = FALL SEMESTER HOURS

SHRS = SPRING SEMESTER HOURS

CHRS = CUMMULATIVE HOURS

HSGPA = HIGH SCHOOL GRADE POINT AVERAGE

FGPA = FALL GRADE POINT AVERAGE

SGPA = SPRING GRADE POINT AVERAGE

CGPA = CUMMULATIVE GRADE POINT AVERAGE

AGPA = ADJUSTED GRADE POINT AVERAGE (GPA AFTER ELIMINATION OF GRADES EARNED IN PRE-COLLEGE-LEVEL COURSES)

* STUDENT RETAINED FOR NEW SEMESTER

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