DOCUMENT RESUME

ED 293 440 HE 021 353

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TITLE A Multidimensional Approach to Student Outcomes

Assessment. AIR 1987 Annual Forum Paper.

PUB DATE May 87

NOTE 27p.; Paper presented at the Annual Forum of the

Association of Institutional Research (27th, Kansas

City, MO, May 3-6, 1987).

PUB TYPE Reports - Descriptive (141) -- Reports -

Evaluative/Feasibility (142) -- Speeches/Conference

Papers (150)

EDRS PRICE

MF01/PC02 Plus Postage.

DESCRIPTORS Academic Ability; *College Students; *Evaluation Methods; Higher Education; Institutional Research;

*Outcomes of Education; Skill Development; Student Attitudes; Student Attrition; Student College

Relationship; *Student Evaluation; Student College

Participation

IDENTIFIERS *AIR Forum; *College Outcomes Assessment; Ohio

University

ABSTRACT

A multidimensional program of student assessment that has been used for over 7 years at Ohio University is described. Between 200 and 250 freshman actually participate each year. Various forms of value-added testing, measures of social and academic integration, and alumni outcomes measures are used. The program is unique in that general education requirements have changed during the 7 years of the program, and valuable pre- and post-tests have been conducted. To measure the impact of general education, the American Colleges Testing Program College Outcomes Measures Project instrument is used. The Student Involvement Questionnaire was also used to collect information on academic involvement, social involvement, and students' goals and commitment to the institution. Other components of the assessment system are: the Student Tracking System, which identifies attrition influences; the Student Treatment Study, which identifies student attitudes concerning the university; and placement and alumni studies, including the Alumni Survey. Selected results of these assessment methods are presented, and the uses of the assessment information are also identified. 6 Refer (Author/SW)



A Multidimensional Approach to Student Outcomes Assessment

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This paper was presented at the Twenty-Seventh Annual Forum of the Association for Inscitutional Research held at the Vista International Hotel, Kansas City, Missouri, May 3-6, 1987. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

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Abstract

This paper describes a multidimensional program of student assessment that has been in place for over seven years at Ohio University. Various forms of value-added testing, measures of social and academic integration, and alumni outcomes measures are used. The program is unique in that general education requirements have changed during the seven years of the program, and valuable pre- and post-tests have been conducted.



A Multidimensional Approach to Student Outcomes Assessment
The assessment of institutional impact on students is viewed
as critical to the evaluation of academic programs. Many
national reports have discussed the subject in great detail over
the past two years. Numerous attempts have been made to define
student outcomes (Ewell, 1984; Chickering, 1979; Lenning, 1977;
Pace, 1984;), and a great number of research projects have been
conducted (e.g., Banta, 1984; McClain and Krueger, 1984) or
recommended (e.g., Study Group on the Conditions of Excellence in
American Higher Education, 1984).

This paper describes an institutional commitment of Ohio University to assess its impact on its students. This commitment was developed as a result of the 1980 State of the University address delivered by President Charles J. Ping to Ohio University faculty, students, and staff. The speech, entitled "Quality Dependent on the Making of Judgments," called for the University to make a commitment to growth in quality. In making this commitment the University, as a part of the ten-year plan, had a responsibility to define and examine this growth in quality. In his speech the president stated that to be of value this assessment of quality must have consequences, and offer direction for decision making and action.

As part of his address, President Ping appointed an institutional impact task force of faculty and staff to meet with the director of institutional research to develop a coherent, systematic, and ongoing program of assessment of institutional impact. The primary goal of this assessment was that in five to



ten years the University could systematically describe what was happening in its life as an educational institution.

The institutional impact task force spent about one year developing a program for assessing the impact of the college experience on students at Ohio University. This program considered such goals in the "Ten-year Educational Plan" as "providing our students with the knowledge and skills which are the essence of a solid liberal education and encouraging the development of an environment on the residential campus that reflects a vital commitment to learning and provides a community life for students." To accomodate these basic goals, our assessment was aimed at the broad impact of the collegiate experience and not at specific knowledge and skills gained from a major field of study. The outcomes program provided a broad-based yet flexible set of measuring devices. They were broad in the sense of allowing for a sufficiently diverse set of measures that enable a breadth of information to be gathered and flexible with respect to its acceptance of new instruments as they become available and rejection of instruments as they become dated. At the end of the one year period of study the committee reported back to the president a recommended program for conducting institutional assessment. This recommended program then became the theme for the 1981 State of the University address that was reported to faculty, students, and staff.

Program Description

To provide a variety of measures of assessment at various points in time a multidimensional program was proposed and



accepted beginning fall quarter 1981. This plan made use of both nationally developed assessment devices as well as locally developed instruments. Figure 1 presents a diagram of the complete assessment system at Ohio University.

To measure the impact of general education the American College Testing (ACT) Program College Outcomes Measures Project (COMP) instrument was used. The program originally used both the COMP/ACT Composite exam and the COMP/ACT Objective exam. two instruments are nationally normed and designed to assess student abilities in the following areas: communicating, solving problems, clarifying values, functioning within social institutions, using science and technology, an using the arts. The COMP/ACT Composite exam provides scores on writing, computing, and reading abilities. The Objective exam serves as a proxy measure of the composite exam and can be administered to a larger number of students in a shorter period. During the first year of the study both the Composite and Objective exam were used, but in all following years only the Objective exam was used. This testing was carried out on a longitudinal basis, and data have been collected on seven classes.

Another instrument designed to monitor change over the college career of the student is the Student Involvement Questionnaire. This instrument was originally designed by the Center for Helping Organizations Improve Choice in Education (Project CHOICE), in which Ohio University participated in 1978. When the institutional assessment program began in 1981 this instrument was modified and has been given to each freshman and



senior class since 1983. The modified questionnaire collects information on three areas of involvement: academic involvement, social involvement and activities, and students' goals and commitment to the institution. It collects information about students' participation in activities, organizations, extracurricular activities, contact with faculty, staff, and other students, and it assesses attitudes about satisfaction with Ohio University. This questionnaire is also used to identify potential "drop-outs" while they are still enrolled.

Another important component of the assessment system is the Student Tracking System. This system utilizes a cohort survival method of tracking each freshman until they either graduate or drop out of the University. This system's purpose is to identify potential areas of high attrition and to longitudinally monitor progress with the University's retention programs.

The Student Treatment Study is a part of the assessment process that was started before 1981, discontinued, and now has been reconstituted. This study collects information on the attitudes and perceptions of new freshmen after one quarter of enrollment, concerning the campus and its environment. It includes sections on treatment received from other people, quality of information students receive, and perceptions of processes that freshmen experience while at Ohio University. This instrument is administered every two years, and change is plotted from one freshman class to another.

The final area of outcomes information collected by Ohio
University includes placement and alumni studies. The University



had varying degrees of success in collecting this information before the institutional impact project, as different colleges and departments used various instruments to collect data that could be used for within departments but did not allow for interdepartmental comparison. As part of the design of the institutional impact project two separate instruments were developed. The first, a placement survey, was designed to collect information on graduates within one year of graduation. It collects information on employment status, graduate or professional school acceptance, and some limited information on employment satisfaction. The instrument was developed locally, and unsuccessful attempts have been made to have peer institutions use a similar instrument and share placement results.

A more complete graduate survey, the Alumni Survey, was developed to survey graduates after they had been away from the University for at least five years. The questionnaire was developed from scales of an instrument used by the Associated Colleges of the Midwest, a Project CHOICE instrument, and locally developed questions from Ohio University's eight academic colleges.

The questionnaire was divided into three major sections. The first section asked questions about traditional alumni outcomes, such as type of job held, employment status, salary, employment satisfaction, nature of employment responsibilities, relevance of educational experience to employment, and problems in seeking employment. There was also a group of questions dealing with



various competencies needed and developed. The second section asked questions about graduates' programs of study and their current satisfaction with their undergraduate programs. Questions asked about additional degrees received or hoped for, ratings of the education received at Ohio University, and changes that graduates would make in their education if they were given the chance to do it over again. The third section of the questionnaire contained college-specific questions, which included questions specific to each college's programs. In the last two years of the alumni study, each of the eight academic colleges participated in questionnaire preparation.

These six components—COMP/ACT, Student Involvement, Student Tracking, Student Treatment, Placement Survey, and Alumni Survey—currently comprise the Ohio University student outcomes assessment system. The system is evaluated on a regular basis, and instruments are added and modified in areas that require further attention. One of the system's original purposes, to be flexible enough to meet future needs and recognize areas that are no longer appropriate, is still important in Ohio University's evaluation of assessment devices.

Data Collection Procedures

Value-Added Testing

Ohio University has used the two and one-half hour COMP
Objective test since 1981, testing random samples of freshmen and
seniors until 1984, when longitudinal testing of seniors was able
to be done. About 1,200 freshmen and 600 seniors have been
tested. Three years of longitudinal data have been collected



since 1981.

New freshmen are sampled in the beginning of each fall quarter. Students are sent a personal letter from the president of the University that describes the program and the dates and times that the test is offered. A letter from the institutional research office accompanies the president's letter. It describes the program in more detail, and it offers an incentive for student participation. Freshmen are offered a coupon for a small pizza (about a \$4.00 value) for their participation. A variety of times are offered for students to take the test, all within one week. "Make-up" sessions are offered about two weeks later for those students who could not attend the first session.

Between 200 and 250 freshmen actually participate each year.

For the last three years Ohio University has had the opportunity to retest seniors who took the COMP as freshmen. Students who are still enrolled and who took the test as a freshman four years before, five years before (and missed the previous year's senior test), and students who took the test as a freshman three years before (and are not likely to be enrolled the next year because of early graduation) are invited. Seniors receive a personal letter from the president and a letter from the institutional research office describing the program and the incentive that is offered. Seniors are offered a \$10.00 gift certificate from a local restaurant for their participation. A variety of times are offered for seniors to participate. The letter requests that students call the institutional research office to schedule which session they will attend. Seniors who



have not contacted the institutional research office are called personally and asked to participate. The senior response rate is about 70 percent each year.

Social and Academic Integration

The Student Involvement Study has been conducted cooperatively by the Institutional Research Office and the Dean of Students Office. Each year members of these two offices meet (in the form of the Student Affairs Research Advisory Committee) to discuss modifications in the freshman instrument and the data collection procedure. Suggestions for changes are considered, but the majority of the instrument is left unchanged so that information can be collected on trends from year to year.

The information that is collected has been used in three ways. First, a year-to-year comparison of freshmen has been done. Second, freshman to senior comparisons have been made. Third, the information is used as part of a retention program. Individual freshman responses are used to identify potential leavers each year so that residence life staff can intervene and help solve individuals' attrition-related problems.

In 1979, 1983, 1984, 1985, and 1986 freshmen at Ohio
University have participated in the freshman Involvement Study.
In 1979 a random sample of freshmen were sent a questionnaire, and in subsequent years the entire classes of freshmen living in the residence halls (about 90 percent of the freshman class) have been surveyed. Questionnaires are distributed through resident assistants during the first week of spring quarter. However, much preparation for that distribution takes place. After the



final form of the questionnaire is decided, meetings take place with Institutional Research, Dean of Students, and Residence Life staff. These restings are designed to involve the residence life staff in the data collection and student intervention process. Additional meetings, mailings, and reminder notices occur from the dean of students office to the residence hall directors to further elicit their support.

Freshman response rates have varied over the years because of changes in the distribution process. The freshman response rates are as follows: 1979, 53 percent; 1983, 43 percent; 1984, 90 percent; 1985, 75 percent; 1986, 49 percent; 1987, 68 percent. Experience has shown that the greater the involvement of the residence life staff (resident assistants and residence hall directors), the greater the response rate has been.

Two follow-up studies of seniors who were surveyed as freshmen have been done, and the third year of senior data is currently being collected. Freshmen in the 1978-1979, 1982-1983, and 1983-1984 classes have been surveyed as seniors. Seniors who participated as freshmen are asked to participate again, and they are given a questionnaire that is identical to the one they completed as freshmen. In the spring quarter of their senior year they receive a personal letter from the president of the University and a note from the institutional research office that describes the program and the incentive that is offered. The current incentive that is offered is a coupon for free ice cream cone from the local Baskin-Robbins store. Other incentives that have been offered in the past have been free admission to a



local theater, a free hamburger, and free admission to an on-campus pub where local entertainment performs. The response rates of the seniors were 91 percent in the first year and 77 percent in the second year.

The Freshman Treatment Study was first done for the 1978 freshman class and was replicated for the 1984 freshman class. The study was adapted from work done at the University of Missouri at Columbia, and it was used at Ohio University to identify problem areas in student services and academic areas. The questionnaire was designed to measure how students felt they were treated by the staff of various offices, the quality of information they received from those offices, and their perceptions of processes they were exposed to at Ohio University. It used a semantic differential scale to measure students' ratings on such things as accessibility, courtesy, and efficiency; it solicited comments and suggestions about the University offices and processes that freshman deal with; and it asked whether the student intended to 'save the University before finishing the freshman year and what factors influenced their decision. Random samples of freshmen were collected each year; the response rate was 39 percent in each year.

The Institutional Research Office is currently in the process of completing the Treatment Study for each of its six branch campuses.

Alumni Outcomes

Two surveys were designed to address alumni outcomes. A placement survey is sent to every graduate (undergraduate,



graduate, and professional degrees) within one year of graduation. A more extensive alumni survey is sent to undergraduate degree recipients within five and ten years of graduation.

The Placement Study has been conducted cooperatively by the Institutional Research Office and the Career Planning and Placement Office. The Flacement Study has been completed for graduates of the classes of 1980, 1984, 1985. Data from the 1986 class is currently being collected. It collected information through a questionnaire that was mailed to graduates within one year of graduation. In 1980 the questionnaire was mailed to a random sample of 1,000 graduates from fall 1979 through summer 1980. Forty-one percent of those sampled responded. In 1984 and 1985 the questionnaire was mailed with diplomas to all graduates. About 40 percent of the graduates responded to the Placement Study. Questionnaires are no longer sent with diplomas because that was too soon after graduation to get accurate employment information. Questionnaires are now sent about one year after graduation, and the distribution of the questionnaires is closely monitored by institutional research staff.

The Alumni Study has been conducted on graduates five to ten years after graduation. Since 1982 six classes have been surveyed. In the first four years the questionnaire was mailed to random samples of Ohio University alumni who had received the baccalaureate five and ten years earlier, respectively. In 1986 the entire classes of 1978 and 1979 were surveyed. In 1982 the questionnaire was mailed to Ohio University alumni holding the



baccalaureate from the classes of 1971 and 1976. Random samples from the two classes were drawn, and questionnaires and personal letters from the president of the University were sent. The response rate was about 44 percent. In 1983 a random sample of graduates from the classes of 1972 and 1977 were surveyed. The response rate was about 54 percent.

In 1986 plans were male to survey 1978 and 1979 alumni. Several requests for alumni outcomes information had been received from academic departments, and it was determined that larger pools of data were needed in order to satisfy these requests. In addition, each academic college was contacted and given the opportunity to include their own questions in a section on the alumni questionnaire. The entire classes of bachelor's degree recipients were surveyed. Results of the 1978 and 1978 university-wide and college-specific surveys are currently being analyzed.

Results

Brief results are presented here to provide examples of how information is interpreted.

Value-Added Testing

The COMP Objective test has not been used to directly assess general education outcomes at Ohio University, but it has provided some useful evaluative material during a change in the general education program. The general education program underwent a review that was implemented in 1979, and the COMP was introduced at Ohio University in 1981. The Tier I (English composition and quantitative skills) component was required of



freshmen entering in 1979. The Tier II (breadth of knowledge or "distribution") component was required of freshmen entering in 1981. A report of the "Tier II Review Committee" concluded that students had taken more "Third World Cultures" and "Applied Science and Technology" courses since the inception of Tier II. The Tier III (senior synthesis) was required of freshmen entering in 1982; these students were seniors in 1986, which was the first year the COMP was administered to students who had taken the Tier III requirement. Although it is unclear which seniors in 1986 took the Tier III requirement before taking the COMP, it is likely that most of them had taken it before taking the COMP.

The Office of Institutional Research has collected data on seniors who have taken the COMP since 1981. Three classes of seniors who took general education classes prior to the Tier system took the COMP test, and two classes of seniors who have taken most of the general education Tier requirements have taken the COMP test. Except for a slight decline in senior percentile scores from 1981-1982 to 1982-1983, the senior scores have improved steadily. Improvement is especially noted in the two senior classes who had taken the Tier requirements. In 1981-1982 the total COMP score was at the forty-ninth percentile (based on a national sample of seniors who took the COMP), in 1984-1985 it was at the fifty-eighth percentile, and in 1985-1986 the seniors' total COMP score was at the sixty-fourth percentile. The large. increase in 1986 seniors' scores may be attributable to the fact that some of these students had taken the Tier III requirement. The Tier III requirement is designed to teach students to apply a



variety of information to solving problems; this element is similar to the type of aptitude skills that the COMP measures.

All of these seniors pursued their education at Ohio University while it was essentially an open-admission institution. The admission policy has since changed to be more selective, and use of the CCMP for senior and freshman classes may provide useful information about levels of students' abilities as they enter and leave Ohio University.

The COMP has been administered to freshmen since 1981. The scores of freshmen who persisted to the senior year scored higher than freshmen who dropped out before their senior year. For example, 1982-1983 freshmen who persisted to the senior year in 1985-1986 scored at the thirty-seventh (senior) percentile, while all freshmen tested in 1982-1983 scored at the twenty-ninth percentile.

In 1984-1985 seniors took the COMP who took it in 1981-1982. These students achieved a 20 percentile point learning gain on the total score, which is comparable to the national average for learning gain. The greatest test subscore gains were in "clarifying values" and "using science and technology." The senior test percentiles ranged from 51 to 63, based on a national sample. In 1985-1986 seniors took the COMP who took it in 1982-1983 as freshmen. These students achieved a 27 percentile point learning gain on the total score, which is above the national average for learning gain. The greatest test subscore gains were in "solving problems" and "using the arts." The senior test percentiles for this group ranged from 55 to 76,



based on a national sample.

Social and Academic Integration

The Student Involvement questionnaire was given to freshmen in 1979, 1983, 1984, and 1985, and 1986. Freshmen in 1979 who were seniors in 1983 were given the questionnaire again, and freshman and senior data were compared. The number of formal contacts (such as advising) and informal contacts (such as dinner with a faculty member) freshman had with faculty increased from 1983 to 1985, and the number of contacts seniors had with faculty was greater than the number of contacts they had as freshmen. Fleshmen reported greater satisfaction with faculty, the pre-college orientation, and Ohio University in general in 1985 than they did in 1983 and seniors indicated greater satisfaction with Ohio University in general than they did as freshmen. amount of time freshmen spent studying increased from 1983 to 1985, and the amount of time seniors spent studying and the number of books read outside of class were greater than they were as freshmen. The number of weekends students spent per month on campus increased from 1983 to 1985. Involvement in extracurricular activities increased from 1983 to 1985. Seniors reported greater participation in student organizations than they did as freshmen, and they indicated that more of their best friends attended Ohio University than they did as freshmen.

The Office of Institutional Research has regularly monitored the freshman attrition rate through its tracking system. The retention rate improved steadily since 1977. In 1977, 33.1 percent of the freshmen did not return to Ohio University as



sophomores, and in 1985, 25.0 percent of them did not return as sophomores, which is lower than the national attrition rate. The attrition rate of students in the top quintile of their high school class declined from 19 percent in 1978 to 15 percent in 1984, and the attrition rate of students with a college grade point average of 2.5 and above has declined. These figures, along with changes in predictor statistics in the Involvement Study, suggest that the identification and intervention strategy is having positive effects.

In 1978 and 1984 freshmen were surveyed as to the quality of treatment they received from faculty and various campus offices. Most areas improved between 1978 and 1984, but the greatest improvements were in academic areas: advising, treatment by faculty, information about what to expect in the classroom, and information about the process of getting help with academic problems. Significant improvements in treatment of freshmen were reported in offices such as the Cashier's Office, the Housing Office, and by the Pre-College staff.

Alumni Outcomes

The Placement Study revealed that about 80 percent of the graduates were employed full-time at the time of the surveys, and most of them were employed in Ohio. Most of the graduates reported being satisfied with the academic preparation they received at Ohio University for their first job and for additional academic work (95 and 98 percent, respectively). Ninety-seven percent of the graduates reported being satisfied with the preparation they received at Ohio University for



establishing career goals.

Alumni Study questionnaires were sent to five- and ten-year graduates. The study collected information on employment, employment satisfaction, and competencies needed and developed at Ohio University. Graduates reported salaries that averaged higher than national and state salary averages. No more than 2.5 percent of the graduates expressed any dissatisfaction with their major programs, general education, elective courses, or extracurricular activities. Graduates reported several competencies, from a list, that were most needed and best developed at Ohio University. These competencies were the ability to acquire new skills and understanding, the ability to think analytically, the ability to formulate creative and original ideas and solutions, sensitivity to feelings and perceptions of others, and the ability to communicate orally.

Implications and Uses

The use of outcomes information receives a high priority as highlighted by the University's president in his 1980 State of the University address, in which he stated that "the key issue is whether we can use the [assessment] process of defining and examining to enhance quality."

The president has established a policy that at each fall quarter meeting of the Board of Trustees an in-depth report is made of one of the dimensions of the assessment program, and a general report is given on the status of the overall project. This report receives special interest from the trustees, and many provoking and intuitive questions are asked by them.



The National Alumni Board also receives a major briefing on some aspect of the assessment system each year from the institutional research office. In addition, the alumni relations director forwards to all members of the National Alumni Board all reports he receives produced as a part of the assessment system.

On campus all major planning groups are involved in receiving various types of information concerning the assessment system.

The Dean's Council receives reports on general education, student involvement, retention, and placement and alumni. In addition, each college receives their own personalized reports which apply directly to their specific planning needs.

The University Planning Council receives periodic briefings on the assessment system and other large groups, including the faculty senate, the curriculum review council, and the university advising council receive both oral and written reports on varying aspects of the assessment system.

Individual campus offices are targeted for receiving most of the information produced from the assessment system. These offices include: Career Planning and Placement, Alumni Relations, Admissions, Student Affairs, Residence Life, and the Counseling and Guidance Center.

Specific assessment information has been used to develop or modify a number of programs across campus. Attrition assessment information is used by colleges and departments to develop retention programs. For example, the Student Involvement Study has been used to develop a prediction system to identify individual potential drop-outs with a grade point average of at



least 2.0 and intervene while they are still enrolled. Both academic and residence life staff are involved in this effort to contact and retain these students. Information from the Treatment Study was used to establish a new advising system for undecided students in the University College, and the Tracking system gives each college an annual update of how they are progressing with their individual retention programs. Information from all these assessment systems has contributed greatly to the reduction of 33 percent of freshmen leaving during their freshman year in 1978 to only 25 percent of the freshmen leaving in 1986.

The Placement Survey is being used to evaluate the success of the Career Planning and Placement Office and to provide useful information to incoming students. The Admissions office and individual colleges use this information for prospective freshmen. The Alumni Study is being used to evaluate the success of academic programs on a long-term basis and to identify areas of competencies that are important to Ohio University graduates. In addition, college-specific alumni information is assisting individual colleges with program review and accreditation. Both placement and alumni data have been useful in recent Program Excellence awards given by the Ohio Board of Regents. Within the last three years Ohio University has won four of these awards for about \$650,000 for four "excellent" academic programs.

Ohio University's revised general education program is being evaluated, and one of the measures of its success will be our longitudinal testing of freshmen and seniors who experienced the



old and new general education requirements.

In 1983 much of our assessment information was included in the comprehensive review of the North Central Association accreditation review process. While current criticisms of institutional reviews by accreditation associations have pointed to a weakness in assessment data, at Ohio University the North Central Association review team suggested that instead of not having enough assessment data, we may have too much. This is a perplexing problem that institutions must manage as the mountains of assessment data begin to accumulate at our institutions of higher education in the near future.



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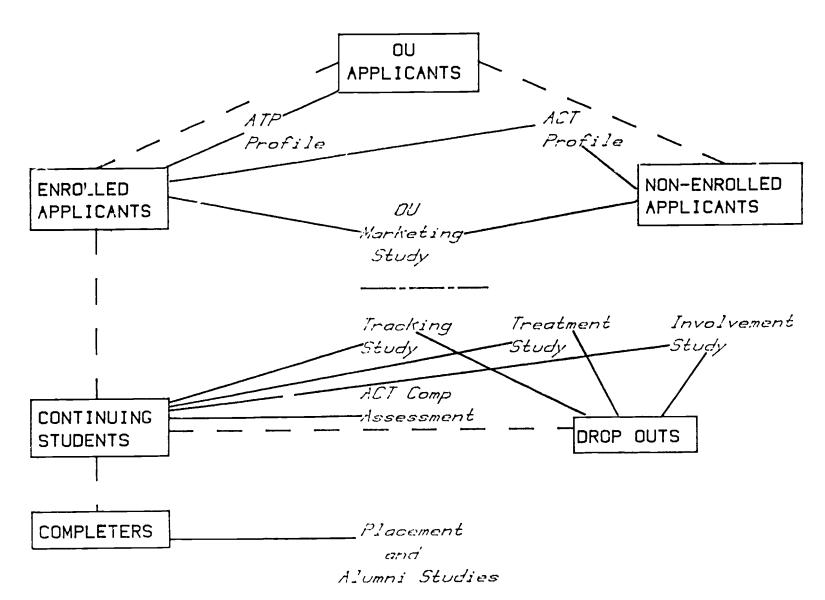
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Page