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ABSTRACT

This report analyzes existing national data sets to determine their utility in studying teaching, learning, and assessment issues as they affect postsecondary student outcomes. The analysis used Astin's Input-Environment-Outcome model to evaluate student and faculty databases that are intended to be nationally representative, are recent or continuing, have a major focus on undergraduate postsecondary participation, and cover teaching and learning topics. The seven student-centered data sets reviewed are: Baccalaureate and Beyond Longitudinal Study; Beginning Postsecondary Student Longitudinal Study; High School and Beyond; National Education Longitudinal Study of 1988; National Longitudinal Study of the High School Class of 1972; National Postsecondary Student Aid Study; and Recent College Graduates Study. Also reviewed are four iterations of the Cooperative Institutional Research Project surveys. Faculty-centered data sets included are the American Council on Education Faculty Survey, the Higher Education Research Institute Faculty Survey, and the National Study of Postsecondary Faculty. Strengths and limitations of each data set are discussed and data sets are compared for inputs, teaching/learning, environments, and outcomes. Attached tables detail study findings. An appendix summarizes limitations of the data sets cited in empirical studies. (Contains 25 references.) (DB)

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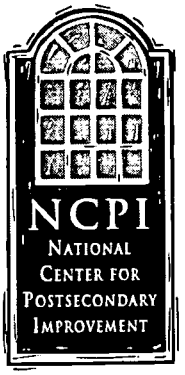

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Reviewing and synthesizing published research is a routine, yet critical, scholarly activity. Such reviews help document the current state of knowledge in particular fields of scientific inquiry while also serving to articulate themes and identify frameworks that are generated across a variety of studies. Although different "approaches to gleaning the accumulated findings of...research" have been suggested (Dunkin, 1996, p 87), it is clear that such reviews influence research, policy, and practice and are important in helping develop and advance knowledge.

The purpose of this analysis is to review existing national data sets to determine their utility in studying teaching, learning, and assessment issues. We approached this review as one might approach a review of a body of literature, substituting data bases and variables for books and articles. In doing so, we seek to review, compare, and contrast the strengths and limitations of existing national data resources on postsecondary education. The results of this review will help document the existing capacity to study teaching, learning, and assessment activities with existing data resources, while also suggesting directions and priorities for future data collection activities.

The specific focus of this review is on topics related to studying how teaching and learning processes affect postsecondary student outcomes. Interest in assessing the outcomes of undergraduate education and other forms of postsecondary activities has continued to grow in recent years. Unfortunately, the increased demand for empirical evidence on the relationship between teaching, learning, and assessment and student outcomes across the American

postsecondary system has largely remained unmet. Despite continuing investments in the production and maintenance of data systems at the institutional, state, and national levels, the data that are currently available tend to be limited in a number of ways. As has been observed elsewhere, "Much of the business of education occurs in the nation's classrooms -- elementary, secondary, and postsecondary -- yet national surveys presently tell us relatively little about what actually takes place at the classroom level" (National Center for Education Statistics, 1996, p. 16).

Thematic organization

In conducting our review, we focused primarily on data collected from students participating in some form of postsecondary education. Since faculty activity is an obvious component of teaching and learning in postsecondary education, we reviewed a number of faculty data bases as well but our primary effort was directed toward the student data set.

Data on students

We drew upon a number of existing frameworks as an aid to organizing our work. As a general organizational tool, we used Astin's (1970) Input-Environment-Outcome (IEO) model for studying college impact. At its most general level, the IEO model is useful in that it identifies a number of different kinds of student data -- inputs, environments, and outcomes -- that are needed in order to adequately assess the degree to which educational environments are influencing the outcomes measured among participating students. This model, which is depicted in Figure 1, underscores the need to collect detailed data on student characteristics (e.g., demographic, cognitive, attitudinal, and behavioral) before college ("inputs"), the educational environment in which students participate ("environments"), as well as the outcomes of interest. Attempts to assess questions of environmental influence can be seriously flawed if they ignore relevant data in one or more of these categories of data (see Astin, 1970; Astin, 1991).

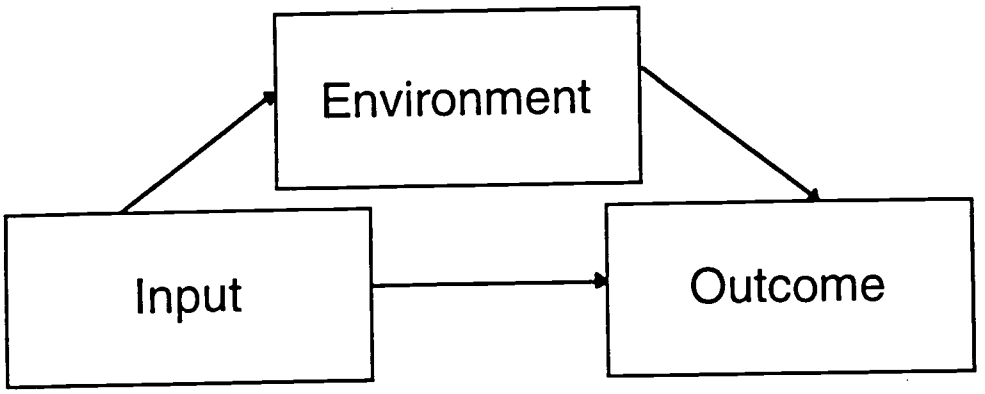

Figure 1
Astin's Input-Environment-Outcome model

The IEO model is important in that it identifies the kinds (or groupings) of data needed for sound analyses of educational impact. It is, however, limited for the purpose of reviewing existing data resources given the wide variety of variables that might be included in each of the three main categories. As such, we used a strategy employed in a recent work by Terenzini (1997) as the basis for identifying and developing relevant sub-categories within each of the three main elements of Astin's framework. For example, Terenzini identified a series of student outcomes from which we then adapted and created a format for analysis. Some of the outcomes categories were obtained directly from Terenzini's taxonomy, while we created other categories specifically for the purpose of this review. In addition, we divided the input and environmental classes of data into categories based upon variables commonly found in the existing college impact literature (Pascarella & Terenzini, 1991).

As shown in Table 1, we divided the general input class of student data into four subcategories – Pre-postsecondary educational activities, student goals and values, personal, and family characteristics – which were in turn broken down into more detailed subcategories. For example, educational activities were further subdivided so that individual activities, organized activities, and other types of activities were grouped together. Under these subcategories (and finer groupings of variables) the specific definitions that were used to classify variables into the thematic categories are shown.

Despite the advantages presented by the general nature of the IEO framework, the complexities of teaching and learning processes are such that a number of potentially relevant variables fail to cleanly fall in only one class of data. An example of such a grouping is the Teaching and Learning category represented on Table 1. Given that teaching and learning variables as defined here can be seen as encompassing a number of categories, we have chosen to represent these kinds of variables as a separate categories (as opposed to forcing them into one category or another).

It should be noted at the outset that a universally-useful definition of "outcome" is lacking and a wide variety of measures and needs exist. Some institutions measure outcomes such as student attitudes, concept mastery, and student performance (Laws, 1991), while others assess critical thinking skills (White, 1988). Similarly, researchers have studied topics ranging from student satisfaction and involvement with peers, faculty, and course work (Astin, 1991) to occupational choices and employment outcomes (Adelman, 1994). This variety is a reflection of the many goals that postsecondary institutions have for themselves and for their students, and the ways in which different interest groups view postsecondary education and its role.

For the purpose of this review, we have attempted to include as many possible definitions of different classes of student outcomes (as well as input and environmental considerations) as practical. We do not, however, claim that our approach has generated a list that is entirely comprehensive, nor one that equally represents all views about the important outcomes of postsecondary education. Nevertheless, our intent in undertaking this study is to provide a first step toward assessing the ability of present national data sets on postsecondary education to provide information on student outcomes as a springboard for future empirical research and policy initiatives.

Data on faculty

Viewed from the perspective of students, the activities and orientations of faculty help constitute the environment within which students study and learn. Although it is conceivable to

study faculty using data collected through a variety of research designs, from the student-environment perspective it is most advantageous to concentrate on data bases where data were collected so that faculty respondents are clustered within institutions (as opposed to simply taking a random sample of respondents from the entire population of faculty). This clustered approach allows the potential for studying an institution's instructional climate (and ideally the specific institutional and assessment techniques to which students are exposed).

But in addition to providing an environment for students, data collected from faculty can be used to study how teaching activities and other faculty-related topics are related to faculty characteristics and institutional context. As such, we developed the thematic categories found in Table 2 to organize our review of faculty data. Although this categorization scheme is not tied to a framework such as IEO, it does capture the types of variables that are commonly found in studies of postsecondary faculty (e.g., Finkelstein, 1984).

Methodology

The first step in performing our review was to identify as many potential data bases as possible. In order to do this, we systematically collected information on existing data bases by contacting research organizations and governmental agencies, reviewing printed publications on data collection activities and plans, as well as information available via the Internet. Specifically, we contacted and reviewed materials from relevant federal agencies (e.g., Census Bureau, Department of Education, Department of Labor, and the National Science Foundation), academic research organizations (e.g., UCLA Higher Education Research Institute, the University of Michigan's Institute for Social Research), and private foundations such as the Carnegie Foundation for the Advancement of Teaching. In addition, we reviewed the holdings of the social science data base archives maintained by the Inter-University Consortium of Political and Social Research (ICPSR). All told, we identified 27 individual-level data bases that appeared to have some relevance for the study of teaching, learning, and assessment practices as they relate to the outcomes of postsecondary education.

From this pool of data bases, we narrowed our choices by selecting only those data bases that are intended to be nationally representative, are recent or continuing, have a primary (or potentially strong) focus on postsecondary participation at the undergraduate level, and that have some coverage of teaching and learning topics within the context of postsecondary education. Using these criteria, we chose eleven data sets where individual students are the unit of analysis, and five where individual faculty are the unit of analysis.

Data bases that were originally considered and then excluded on the basis of representation include the 1992 National Study of Student Learning conducted by the former National Center for Postsecondary Teaching, Learning, and Assessment (which has a limited representation of institutional types), the National Science Foundation's Recent College Graduate studies (which are nationally-representative of scientists and engineers but not of graduates in other fields), and normative data from the College Student Experiences Questionnaire developed by C. Robert Pace and now coordinated through Indiana University. Three additional data bases were excluded due to a lack of coverage of teaching and learning topics. These included the National Longitudinal Survey of Youth from Ohio State University through the sponsorship of various federal agencies, the General Social Survey conducted by the National Opinion Research Center, the Monitoring the Future study, and the Panel Study of Income Dynamics (the latter two of which are conducted by the Institute for Social Research at the University of Michigan).

The Longitudinal Study of American Youth conducted by Northern Illinois University and the Chicago Academy of Sciences was considered potentially relevant, but the data base and associated documentation was unavailable during the period of the review. One series of faculty data (from the Carnegie Foundation for the Advancement of Teaching) was also considered but excluded from review on the basis of its research design. As noted above, one main use of faculty data is to provide information on the faculty environment at postsecondary institutions. The random sampling design used in the Carnegie surveys eliminates this possibility, and we therefore chose not to review it even though it otherwise met the criteria we established. Moreover, a review of the content of recent Carnegie survey showed a good deal of overlap with the faculty surveys

that we did review. As with the characteristics of the other excluded data bases noted above, these considerations are limitations only for the purpose of our review, and are not limitations inherent in the data bases or studies themselves.

Most of the data sets we reviewed for this study are administered by the U.S. Department of Education National Center for Education Statistics (NCES), with the balance being administered by the UCLA Higher Education Research Institute (HERI). Most student data sets of interest are longitudinal. The time span of each data set varies from one year to sixteen years. In contrast, all faculty data sets are cross-sectional. Each data set has its distinctive features in terms of primary focus, subjects, sample size, and availability of information on oversample or breakout of minority groups. The last category was especially designed to meet the needs of researchers who are interested in studying Latino or Asian American students. In cases where the student data set included supplementary information collected from respondents' parents, high school teachers, or high school or postsecondary institutions, our analysis is mostly limited to the data collected from the primary student respondents.

Data sets reviewed

The data sets we reviewed are summarized in Table 3 and described below. We reviewed seven student-centered data sets from the National Center for Education Statistics (NCES) in the U.S. Department of Education. These included: Baccalaureate and Beyond Longitudinal Study (B&B); Beginning Postsecondary Student Longitudinal Study (BPS); High School and Beyond (HS&B); National Education Longitudinal Study of 1988 (NELS); National Longitudinal Study of the High School Class of 1972 (NLS-72); National Postsecondary Student Aid Study (NPSAS); and Recent College Graduates Study (RCG). In addition, we analyzed data from four different iterations of the Cooperative Institutional Research Project (CIRP) surveys that are administered by the Higher Education Research Institute at UCLA. All the CIRP surveys critiqued are longitudinal, and include coverage from: 1971-1980; 1985- 1989; 1986-1990; and 1987-1991. The CIRP data

sets reviewed do not reflect the totality of the data resources maintained by CIRP, but are the only data sets available to us.

The National Longitudinal Study of the High School Class of 1972 (NLS-72) has the longest time frame among the student data sets (sixteen years) and focuses on transitions from high school to college and/or to work. A unique characteristic of this data set comes from the sampling strategy, which is designed to include both postsecondary participants and non-participants. Other survey studies under review gathered data from either high school students or college students, which may impinge on statistical inference of college impact on students due to the selection bias. The first wave of data collection began in 1972 with a 12th grade cohort, and includes follow-ups in 1973, 1974, 1976, 1979, and 1986. African American students are oversampled, and an ethnic group breakout of Latinos is available.

High School and Beyond (HS&B:80/92) is comparable to NLS-72 in terms of its data structure. It attempted to collect the same type of data gathered in the NLS-72, with newer elements of the educational process. HS&B provides information on educational, vocational, and personal development as well as on the transition from high school to postsecondary education or to the workforce. It includes a sophomore cohort as well as a senior cohort in 1980. Data collections for the follow-ups were undertaken in 1982, 1984, 1986, and 1992. Hispanic students are oversampled, and an ethnic group breakout of Asian Americans is available.

The National Education Longitudinal Study of 1988 (NELS:88/94) provides trend data on the transitions students encounter as they progress through their elementary, secondary, and postsecondary education or the work force. The NELS is also comparable to the NLS-72 and HS&B in terms of data structure. It began in 1988 with 8th grade students, and follow-up studies were conducted every two years until 1994. Asian Americans and Latinos are oversampled, and an ethnic group breakout of Asian Americans and Latinos is available.

The National Postsecondary Student Aid Study (NPSAS) is a cross-sectional data set. It is a comprehensive nationwide study of students enrolled in less-than-two-year institutions, community and junior colleges, and four-year colleges and universities. Undergraduate, graduate,

and first-professional students who receive financial aid, as well as those who do not receive aid, are included in the NPSAS. A large portion of the data set consists of financial information. The NPSAS also includes information on employment and educational aspiration. Data collection began in 1986, and was repeated every three years. It is notable that NPSAS has two longitudinal sub-components: the Beginning Postsecondary Student Longitudinal Study (BPS) and Baccalaureate and Beyond Longitudinal Study (B&B).

The Beginning Postsecondary Student Longitudinal Study (BPS) focuses on student persistence, progress and attainment. It began in 1990 as a longitudinal component of the NPSAS with beginning students in college. Its sample size is approximately 7,900 first-time postsecondary students in 1990, and these students were followed-up in 1992 and 1994. A unique feature of BPS is that it includes "non-traditional" students, or a heterogeneous sample of students by age. An ethnic group breakout of Asian Americans is available.

Baccalaureate and Beyond Longitudinal Study (B&B), which is another longitudinal component of NPSAS, replaced the Recent College Graduates Study (RCG). B&B pays special attention to those entering public service areas, particularly teaching. It focuses on education and work experience and transition to graduate school and/or the work force. Data collection began in 1993, and one follow-up study was conducted in 1994. An ethnic group breakout of Asian Americans is available.

The Recent College Graduates Study (RCG) focuses on graduates qualified to teach at the elementary and secondary school level. It is a study of the immediate post-degree employment and educational experiences of people who obtained a bachelor's or master's degree from an American college or university. The RCG is a cross-sectional study with graduates within one year of attaining a bachelor's or master's degree. The RCG has been conducted periodically since 1976. This study analyzes the 1991 RCG with 14,405 graduates. African Americans and Hispanics were oversampled for the study.

The Cooperative Institutional Research Program (CIRP) is a longitudinal study of the impact of different types of college environments on a student's development. The survey design

of the CIRP is based on the Input-Environment-Outcomes model suggested by Astin. This study analyzes only four data set iterations, which include 1971-80, 1985-89, 1986-90, and 1987-91. The questions included in each study are slightly different, but a primary focus is placed on a student's cognitive and psycho-social development in college. The time span of the studies is consistently four years, except for the CIRP 71-80. A Latino breakout is available for CIRP 87-91. Minority students were oversampled for CIRP 71-80.

The data sets we reviewed with faculty members as the unit of analysis included the American Council on Education Faculty Survey (ACEFAC-72); two cohorts (1989 and 1992) from the Higher Education Research Institute Faculty Survey (HERIFAC-89; HERIFAC-92); and two cohorts (1988 and 1993) from the NCES National Study of Postsecondary Faculty (NSOPF-88; NSOPF-93).

The National Study of Postsecondary Faculty (NSOPF) is a cross-sectional survey of 25,780 full-time and part-time postsecondary faculty members. The NSOPF was administered by NCES in the 1987-1988 academic year, and repeated in the 1992-1993 academic year. It provides information on the background, responsibilities, workloads, salaries, benefits, and attitudes of faculty in their postsecondary institutions. The faculty survey conducted by the Higher Education Research Institute is also a cross-sectional survey that includes 35,480 faculty members in 1988-89, and 43,940 in 1991-92. A unique feature of these studies is the similarity of questions between the CIRP student and faculty surveys. Finally, the 1972 American Council on Education survey collected data from 53,034 respondents working at 301 colleges and universities. Although not particularly recent, the ACE-72 study is similar in design to the later HERI surveys and was therefore included.

The review process

Our multi-step review procedure was accomplished in three phases. First, teams of researchers divided up the data sets in the sample and categorized all of the variables within the data sets into agreed upon thematic categories. Next, each team exchanged their reviews with the other

team and scrutinized the categorization strategies employed by the other group. Any differences in opinion pertaining to the placement of specific variables within the thematic categories framework were discussed mutually and revisions were made accordingly.

The number of variables (constructs) falling within each subcategory were then tallied in order to provide a basic summary of how well the subcategory was represented in each data set. These tallies were then divided into four levels of representation: Not represented, Limited representation (fewer than six variables), Represented (six to ten variables), and Well-represented (eleven or more variables). These representation cut-off points provide some basic descriptive information on how well each subcategory is represented in each of the data sets we reviewed. However, individual researchers may find that a data set with a "limited represention" of a certain category may be ideally suited for an analysis if the key variable of interest is included. Similarly, a data set that has strong representation in a certain category may not be at all useful for a particular purpose if a specific variable is not available from the data base.

At the same time, the review team also had the option of filling out index cards with information gleaned from the data sets that may not have been readily apparent through the thematic category approach. These index cards were later collected and then summarized into a matrix of themes arranged by data set.

These two systems complimented each other, in that the thematic category framework, or variable-by-variable approach, provided a more micro-view of the data sets, while the index cards/matrix approach contribute to a more macro-approach, since it allowed the researchers to make linkages across data sets and point out strengths/weaknesses/uniqueness among the respective data sets.

Finally, the research team has collected published empirical research studies that utilized the data sets outlined above and scanned the studies for any information pertaining to theoretical or methodological limitations to their studies due to the data sets.

Limitations of the review

Before proceeding to an overview of the findings from the data set review, it is important to recognize a number of important limitations. We have reviewed the data sets from the perspective of researchers interested in understanding teaching, learning, and student development processes. However, a number of the data sets we reviewed may not have been designed to capture these processes but were included in the review because they met the basic criteria we established for data set selection. Thus, while a certain data set may be limited when viewed through the lens we have employed in this review, this should not be taken as evidence of a general limitation of the data. In fact, the data set may have very effectively achieved its primary goals, but is simply not ideal for a secondary analysis looking at teaching, learning, and assessment issues.

One issue that is not explicitly considered in this review is data quality. Within the general context of survey research, data quality has many different aspects that involve a number of trade-offs (Groves, 1989). In the specific context of the data sets that we reviewed, there are issues ranging from more obvious considerations such as response rates (which, for example, are much higher for the data sets collected by NCES than those achieved by CIRP) to issues of reliability and validity of recall and self-report measures. As such, the student and faculty matrices should be interpreted with caution, especially with regard to psychological constructs, because it was primarily developed based on face validity. The relationship among the items of each subcategory, such as academic activities and values, was not empirically examined. Therefore, the tallies within each thematic category simply provides an indication that measures related to the thematic category content area were available on the data set; the measures were not further investigated.

The student data sets we reviewed varied in terms of their longitudinal design that has implications for the way that outcomes can and are defined. For example, a number of the CIRP data sets are limited in that they are only four-year follow-ups (although longer-term follow-ups are possible). If "outcome" is defined to focus on short-term cognitive and attitude development, this data structure may not be problematic. On the other hand, if the relevant outcome is related to occupational attainment, a much longer-term design would be stronger. Given the diversity of

potential postsecondary outcomes that are viewed as important, we have chosen to be flexible in terms of definition of outcomes, and emphasize the inherent strengths and limitations of each particular data set.

Finally, our review focused on the data sets collected via survey techniques. As such, supplemental data such as student transcripts are noted but not analyzed. Such collections, available for a number of NCES data bases, are rich additions to basic survey data and have led to interesting analyses (Adelman, 1993), but are beyond the scope of the present review.

Results

In describing the strengths and limitations that we observed, we have organized our comments according to the thematic categories we established above. In a number of cases, the data sets were not sufficiently focused on the topics covered by the review and are therefore succinctly summarized. All of the data set review observations are summarized in Tables 4 (student data sets) and 5 (faculty data sets), and described in more detail in the following sections. These observations center specifically upon the purpose of this investigation – namely the utility of the data in studying student outcomes produced by students' educational activities, contextual factors, and teaching and learning processes – and should not be interpreted for application beyond these parameters.

Strengths and Limitations of Individual Student Data Sets

Beginning Postsecondary Student Longitudinal Study (BPS)

The BPS, a longitudinal study, is a component of NPSAS with beginning students in college. Data collection started in 1990, and follow-up surveys were conducted in 1992 and 1994. College transcript data supplements are planned.

The BPS is weak in areas related to high school educational activities. It has no information pertaining to individual academic and social activities and organized curricular, co-curricular, and

extra-curricular activities. However, the BPS is rather strong in terms of the respondents' pre-college goals and values; it has good representation on variables related to attitudes/values, self-esteem, educational/career aspirations, reasons for attending college, and choice or application behaviors. Conversely, the BPS is relatively weak in areas related to high school characteristics and achievement.

The BPS only contains information about the respondents' SAT or ACT scores, but does not include high school grade information. The BPS has no representation in key personal and family constructs such as English proficiency, information on drug use, religion, family relations, and parental involvement in the respondents' upbringing and education. However, it does include information on the respondents' disabilities, financial assets or liabilities, and socioeconomic status--including a listing of household items owned. In terms of teaching or learning constructs, the BPS data set only includes variables related to respondents' overall satisfaction with their instruction and learning development during college.

With regard to individual academic, social, and co-curricular activities, the BPS provides only limited representation. Curricular and extra-curricular activities are better represented. The BPS also has only limited representation with regard to faculty contact or interaction; however, there is abundant information on interaction and satisfaction with student services. Institutional characteristics are well represented in this data set, while the respondents' impressions of college are adequately represented. Enrollment and tuition/expense information is also well represented.

One of the strengths of the BPS pertains to information in relation to employment activities. The BPS contains information concerning employment while enrolled, employment while not enrolled, and job related training and/or courses. The main strength of the BPS, though, pertains to the wealth of information it has on a respondent's financial aid status. The data set also includes information on why respondents did not apply for financial aid, information on parents' activities in relation to the respondents' financial aid status, and general financial indebtedness.

In terms of student outcomes, while the BPS is well represented with information on the respondents' college achievement, it lacks information on psychosocial development and views on

social issues. Civic behaviors such as political behaviors and volunteer work are well represented in the BPS, which is a particular strength of this data set. In addition, the BPS is well represented in terms of variables relating to aspirations, retention, and satisfaction.

Baccalaureate and Beyond Longitudinal Study (B&B)

The B&B is another longitudinal component of NPSAS. Those who pursue a teaching career receive special attention in this data set. The B&B replaced the Recent College Graduates Study (RCG). College transcript data supplements are planned.

This data set provides detailed information on a student's college choice/application behavior, high school achievement, social economic status, and financial assets and wealth. Students' activities in college, including academic, social, curricular and extra-curricular activities, are also well represented. Students' employment information while they are enrolled, job related training/courses and interaction with student services are also available. In addition, the data set has many variables describing institutional characteristics, students' enrollment, financial aid, and tuition/expenses. With regard to outcomes, students' college achievement, psycho-social development, views on social issues, aspirations, and success in transition to work or graduate school are well represented.

One of the main limitations of the data set is its lack of information on teaching/learning styles or processes. No variables are provided to describe teaching/learning during the students' college education. In addition, information on students' educational activities before college is limited. Students' family relations, religion, impression of college, and civic behaviors (political behaviors and volunteer work) after college are also absent. Further, an important element of student outcomes assessment, student satisfaction with college education, is not represented.

Cooperative Institutional Research Project (CIRP)

All the iterations of the CIRP included in this study are longitudinal surveys, which typically involve data collection from first year students who were followed-up four years later,

except for the CIRP71-80 which was a nine-year follow-up study. All versions (71-80, 85-89, 86-90, and 87-91) of the CIRP include variables that represent high school educational and extra-curricular activities of both an individual and organized nature. However, CIRP 71-80 has more limited availability of constructs related to individually-oriented academic and social activities, as well as organized curricular, co-curricular, and extra-curricular activities. Institutionally-provided transcript data are not available.

In terms of the pre-college goals and values of respondents (e.g., attitudes/values, self-esteem, reasons for attending college, and educational/career aspirations), all versions of the CIRP are well represented, but college choice or application behaviors have a limited representation in the CIRPs 86-90 and 87-91.

All versions of the CIRP contain limited amounts of information about the characteristics of respondents' high schools and the academic achievement of the respondents. However, versions 86-90 and 87-91 are well represented with regard to high school achievement. The CIRP data bases are not particularly strong in terms of personal information (that is, drug use, English language proficiency, and disability status) about the respondents. For example, only the 87-91 version contains any information about the English proficiency of the respondents, and only asks one question related to this issue. There is also no information about the respondents' drug usage. Finally, only the 86-90 and 87-91 versions of the CIRP contain information about the respondents' disabilities, if any.

While all versions of the CIRP are not strong in terms of personal information about the respondents, all of the versions of the CIRP do at least have some information about the respondents' socioeconomic status, except the 71-80 is slightly more represented in this area. Further, all of the versions have information pertaining to the religion of the respondents, with the 86-90 and 87-91 being slightly better represented on this issue. Only the 86-90 and 87-91 versions of the CIRP have information concerning the respondents' (or their parents') financial assets and liabilities. However, none of the versions contain any information about the respondents' family relations or parental involvement in their upbringing or education. The CIRP 85-89 contains the

best representation of variables related to teaching processes, but all of the iterations of the CIRP are relatively limited in this area.

The CIRP data sets (all versions) are particularly strong in terms of college activities of an individual (academic and social) and organized (co-curricular and extra-curricular) nature, with the following exception: the 71-80 has only limited representation with respect to co-curricular activities. All versions of the CIRP have only limited information about the respondents' curricular activities and employment status during college, and have no information on employment undertaken while the respondent was not enrolled. Similarly, all versions lack information on job-related training and/or courses.

With each subsequent version of the CIRP, more questions were included which relate to student-faculty contact or interaction. While the 71-80 and 85-89 versions have only limited representation in relation to faculty contact, the 86-90 is adequately represented and the 87-91 is well represented in this area. All versions of the CIRP are represented in terms of variables relating to the respondents' interaction and satisfaction with student services.

All versions of the CIRP are well represented in terms of overall characteristics of the postsecondary institutions attended as well as the respondents' impressions of the institutions. The 71-80 and 85-89 versions are better represented in terms of student provided information on course enrollment patterns than the 86-90 and 87-91. While all versions of the CIRP are strong in relation to information about financial aid, none of the versions have any constructs concerning tuition or other related expenses.

Constructs related to the respondent's college achievement, psycho-social development, and views on social issues are well represented in all versions of the CIRP. While the other versions lack representation with respect to political behaviors and volunteer work, the 87-91 has limited representation in these areas. All versions are strong in terms of questions relating to future occupational and educational aspirations. However, with the exception of 71-80, none of the versions contain any information on success in transition to work or graduate school. Finally, all

versions of the CIRP are well represented in terms of measures of retention and satisfaction with college.

High School and Beyond (HS&B)

The HS&B has a similar longitudinal data structure to the NLS-72, but includes broader measures of the educational process. The survey design of HS&B has a number of strengths, including the existence of a non-college going sample, several waves of follow-up data, and the fact that two different cohorts are being followed simultaneously. High school and college transcript data are available.

This data set contains abundant information on the input elements. Students' academic, curricular, extra-curricular, attitudes/values, self-esteem, educational/career aspirations, reasons for attending college, college choice/application behaviors, high school characteristics, high school achievement, and social-economic status are well represented. Environmental elements such as students' extra curricular activities, employment when enrolled, job related training/courses, institutional characteristics, financial aid information, and tuition/expense information are also well represented. Students' college achievement, views on social issues, volunteer work, aspirations, and success in transition to work/graduate school are described in detail.

With regard to limitations, the data set does not provide information on teaching/learning styles or processes. No information is available about students' individual activities in college, students' contact or interaction with faculty or student services, students' psycho-social development, civic behavior after college, or college satisfaction.

National Education Longitudinal Study of 1988 (NELS)

The NELS has a data structure similar to the NLS-72 and HS&B. Although the third follow-up provides information on postsecondary education of students two years after high school graduation, the strongest aspect of the data set thus far is its attention to the experiences of high school students. From a design standpoint, a strength of NELS is that it includes a non-college going sample and that there are several waves of follow-up data, including possibly one

more wave after college completion. High school transcripts are available and college transcript supplements are planned.

The NELS is well represented in high school educational activities, including individual academic and social endeavors, and organized curricular, extra-curricular activities as well as high school climate, work activity during high school, and anti-social behavior. The NELS is also strong in terms of pre-college goals and values, with excellent representation in attitudes/values, self-esteem, reasons for attending college, educational/career aspirations, and college choice/application behaviors. There is adequate information about the respondents' high school characteristics, including grading system information, location, and climate as well as teachers' and administrators' responses about the school. In addition, the NELS administered its own standardized test in 8th grade, and includes results from that test, in addition to college entry standardized tests, high school grades, and high school tracks.

The NELS is extremely strong in terms of personal and family background information, such as English proficiency, information on respondents' drug abuse, and measures of socioeconomic status. Of particular note are measures relating to family relations and parental involvement in child's upbringing and education. However, the NELS has only limited information on disabilities and religious background.

With respect to college endeavors, individual (academic and social) and organized (curricular and extra-curricular) activities are well represented. Only co-curricular activities are of limited representation. Similar to the BPS, the NELS data set is particularly strong in terms of information related to employment, including employment while enrolled, employment while not enrolled, and job training and/or courses.

The NELS is weak in terms of interaction with faculty (limited representation) and student services (no representation). It also has only limited representation in terms of institutional characteristics, but is slightly better represented in relation to the respondents' impressions of their institutions. In addition, the NELS contains no information on teaching or learning processes. Enrollment and financial aid information is well documented in the NELS; however, only limited

information is available regarding tuition and related expenses. Financial aid information includes information on parents' activities in relationship to the respondents' financial aid status.

The NELS is extremely weak in relationship to variables related to cognitive outcomes such as college achievement. There is no information on constructs such as college grades, grade point averages, or honors received. In contrast, the NELS is well represented in terms of the respondents' psychosocial development and views on social issues. While only limited information is available on political or voting behaviors, information on volunteer work is well represented.

Future occupational and educational aspirations are well represented, and the NELS has many constructs measuring success in transition to work. However, special caution should be taken as these variables measure success in transition to work from *high school.* Satisfaction outcomes relate to work-related satisfaction only.

National Longitudinal Study of the High School Class of 1972 (NLS-72)

The NLS-72 has the longest time span of sixteen years among the student data sets being reviewed. Data collection started in 1972 with 12th grade students. As with other longitudinal data sets sponsored by NCES, a strength in the design of the NLS-72 is that it includes a non-college going sample and that there are several waves of follow-up data. High school and college transcript data are available.

The information on educational activities in high school is limited, but the NLS-72 does have good representation on curricular activities. The NLS-72 is strong in terms of the respondents' pre-college goals and values; it has good representation on variables relating to attitudes/values, self-esteem, educational/career aspirations, reasons for attending college, and college choice or application behaviors. It also has representative information on high school characteristics and high school achievement.

Information on personal and family characteristics is limited for English proficiency, respondent's disabilities, and religion. However, a wealth of information on measures of SES is available, and NLS has good representation on parental involvement in the children's upbringing

and education as well as on financial assets and liabilities. Constructs related to teaching and learning in college are not represented.

In terms of college activities, the NLS has limited representation on academic, curricular, and extra-curricular, and no representation on social and co-curricular activities. One of the strengths of the NLS is that variables relating to employment information and job training are well represented. However, the NLS has no representation on faculty contact and interaction with student services. Institutional characteristics, impression of college, and information on enrollment and financial aid are well represented.

Student outcomes constitute another aspect of strengths of the NLS. It has good representation across all outcome categories, such as college achievement, psychosocial development, values and goals, political behaviors, volunteer work, aspiration, success in transition to work/graduate school, retention, and college satisfaction.

National Postsecondary Student Aid Study (NPSAS)

This data set is mainly concerned with students' financial information when they enrolled in college. As such, NPSAS has detailed information on students' or student families' financial assets liabilities, financial aid status, and tuition/expense. Students' high school achievement, curricular activities in college, employment when they were enrolled, interaction with student services, enrollment information, college achievement, views on social issues, aspirations after college, success in transition to work/graduate school, and satisfaction with college education are well represented.

The data set contains no information on teaching/learning styles or processes. Students' educational activities before college, family relations, religion, individual activities in college, faculty contact or interaction, impression of college, psycho-social development, political behavior after college are not represented, either.

Recent College Graduates Study (RCG 1991)

The RCG is a cross-sectional study (and has been replaced by the Baccalaureate and Beyond study). As such, the application of the Input-Environment-Outcome model to this data set is limited. Information from college transcripts is available.

In a strict sense, variables relating to inputs, such as educational activities, and goals and values, are not available. The RCG contains limited information about the respondents' measures of SES and demographic characteristics. The RCG has good representation on work-related information, job-related training or courses, financial aid and college expenses. However, all other sub-categories in the environment section have no representation.

In terms of outcomes, the RCG only contains well represented information on success in transition to work/graduate school. There is no representation on all other outcome categories.

Strengths and Limitations of Individual Faculty Data Sets

Higher Education Research Institute Faculty Surveys (HERI-89; HERI-92)

The HERI faculty data sets have a cross-sectional survey design. The data sets can be considered as parallel studies to the CIRP because of the similarity of questions. The strongest aspect of the 1989 and 1992 HERI faculty data pertains to information relating to teaching methods used. A weak aspect of the data relates to a lack of information about the professional teaching associations to which the faculty member belongs.

The HERI faculty data is adequately represented in terms of time spent on teaching, types of classes taught, satisfaction with environment/climate, and views on social issues. Of the variables related to teaching and learning, the HERI faculty data has only limited representation in terms of intended learning outcomes for students, time spent on service activities, a general student orientation, advising and/or mentoring roles, teaching awards incentives, professional development, and demonstration of racial or cultural awareness in both teaching and research arenas.

American Council on Education Faculty Survey of 1972

Similar to the HERI Faculty data, the ACE Faculty data set of 1972 is represented in terms of time spent on teaching, types of classes taught, and satisfaction with environment/climate. In contrast, it has more information on faculty members' intended learning outcomes for students. However, there is no representation on professional teaching associations or professional development, racial or cultural awareness in teaching or research activities, and views on social issues.

National Study of Postsecondary Faculty (NSOPF)

The NSOPF is a cross-sectional study of postsecondary faculty members, which was conducted in 1988 and 1993. NSOPF-88 and NSOPF-93 are very similar in terms of representation on each thematic category of interest. Only one exception lies in information on teaching methods used. While NSOPF-93 has good representation on the category, NSOPF-88 has no information on it. The NSOPF data sets are adequately represented in other categories, such as time spent on teaching and types of classes taught. However, the NSOPF data sets have limited representation on time spent on advising/mentoring and time spent on teaching committees as well as some generally student-oriented questions.

Results Across Student Data Sets

Inputs

While many of the data sets include information about high school educational activities (e.g. academic, social, curricular, co-curricular, extra-curricular, and other activities), the BPS, NPSAS, and RCG by-and-large do not contain such information. These data sets, however, tend to be cross-sectional in design and have samples that are either composed entirely of postsecondary students (NPSAS) or of students who have finished their postsecondary degree work (RCG). B&B, CIRP 1971-80, CIRP 1985-89, and NLS-72 are weaker with respect to high school

educational activities than CIRP 1986-90, CIRP 1987-91, HS&B, and NELS. Overall, it is the NELS data set which has the most abundant data relating to high school educational activities.

The pre-college goals and values of the respondents (attitudes/values, self-esteem, educational/career aspirations, reasons for attending college, college choice/application behaviors) are well-documented in a majority of the data sets. Exceptions to this include CIRP which lacks detailed questions regarding the college search process and RCG which has only one question about this precollege educational/career aspirations. Further, although B&B and NPSAS provide good information regarding college choice and application behaviors, these data sets are weak with respect to all other pre-college goals and values information.

Information regarding the characteristics of the respondents' high school is generally limited. HS&B is the only data set that is well represented in this area, although NELS and NLS-72 do provide several questions on this issue. However, no questions about high school characteristics are included in BPS, NPSAS, or RCG. It is also interesting to note that some data sets provide information about the specific skill capabilities of the respondents (CIRP 1987-91) and other data sets include standardized test results (NELS). While high school achievement is well documented in many of the data sets, BPS, CIRP 1971-80, and CIRP 1985-89 have just limited representation. Further, BPS does not include information about the respondents' high school grade point average.

Detailed personal information about the respondents is not included in many of the data sets. For example, information regarding English proficiency and drug use is scarce. While a few questions about the respondents' English proficiency are included in data sets such as B&B, CIRP 1987-91, HS&B, NLS-72, it is the NELS data set which is particularly well represented with questions regarding the respondents' English proficiency levels. NELS also provides abundant information about the respondents' use of drugs. In addition, information regarding the physical disabilities of the respondents is available in many of the data sets. However, CIRP 1971-80, CIRP 1985-89, and RCG do not contain this information.

Only HS&B and NELS offer information about family relations, yet four of the data sets include questions about parental involvement in students' upbringing and education - B&B, HS&B, NELS, and NLS-72. The CIRP 1986-90 and CIRP 1987-91 which provide more information about the respondents' religious affiliations than the other data sets. However, CIRP 1971-80, CIRP 1985-89, HS&B, NELS, and NLS-72, also contain some questions relating to religion. All of the data sets except CIRP 1971-80, CIRP 1985-89, and RCG include questions about the respondents' financial assets/ liabilities although B&B, BPS, and NPSAS are the most represented in this area.

Teaching/Learning

None of the data sets document teaching or learning processes as defined by the parameters of our study (see Table 1), with the possible exception of the CIRP 1985-89, which asks the student respondents to indicate his/her frequency of experience with different types of examinations or class assignments. However, a few data sets include broader questions relating to the respondents' overall satisfaction with or evaluation of their instruction or learning development (BPS, CIRP). While these data sets may be limited in terms of specific variables related to teaching or learning processes, they can be used to assess student outcomes through key input and environment constructs, many of which are strongly represented in the individual data sets.

Environments

While individual college activities (academic, social) and organized college activities (curricular, co-curricular, and extra-curricular) are included in many of the data sets, RCG is the only data set that does not have any college activities represented. The majority of questions pertaining to individual and organized college activities are contained in B&B, all versions of the CIRP except 1971-80, and NELS. In contrast, HS&B and NPSAS lack information about the respondents' academic activities. Social activities have at least some representation in all of the data

sets except HS&B, NLS-72, NPSAS, and RCG, and co-curricular activities have at least some representation in all of the data sets except B&B, NLS-72, NPSAS, and RCG.

Every data set includes employment information about the respondents during college. However, only BPS, NELS, NLS-72, and RCG provide any information regarding the respondents' employment while not in college. It is important to note, however, that the NELS, NLS-72, and HS&B include a non-college going sample. Other college activities documented in the data sets include job-related training (excluding CIRP versions and NPSAS), faculty contact and interaction (B&B, BPS, CIRP versions), interactions with student services (B&B, BPS, CIRP versions, NELS, NPSAS), and other related activities (all versions of CIRP except 1987-91, NLS-72). Institutional characteristics are not only included but are particularly well represented in most of the data sets. However, the respondents' impression of college (an institutional construct) is not contained in the B&B, NPSAS, or RCG.

All data sets have a strong showing of enrollment and financial aid information other than RCG which lacks enrollment data. In particular, NPSAS has abundant information about the respondents' financial aid, including the sources of financial aid and the reasons, if any, why the respondent did not apply for financial assistance. Some interesting financial aid information is also available from BPS: reasons why the respondent did not apply for financial aid; parent's activities in relationship to the respondents' financial aid status; and the financial indebtedness of the respondents. NELS has information on the parents' activities in relationship to the respondents' financial aid status as well. However, while most data sets document the respondent's tuition and expenses, NLS-72 and CIRP do not.

Outcomes

Many of the data sets are well represented with regard to cognitive and psychosocial outcomes. However, cognitive outcomes are not included in RCG or NELS and psychosocial outcomes are not represented in either RCG or BPS. Specific information about the respondent's views on social issues is contained in all data sets except BPS and RCG. In addition, BPS and

NLS-72 provide the most abundant information about the respondents' political behaviors and volunteer work and NELS, CIRP 1987-91, and NPSAS also contain some questions about the respondents' civic behaviors.

Finally, most data sets are well represented with regard to aspirations (excluding RCG) and success in the transition from college to work/graduate school (excluding CIRP 1985-89 through 1987-91). Again, it should be noted that some data sets which are cross-sectional (e.g. NPSAS) do not have information about post-college activities, and some longitudinal data sets have not yet collected data on students after their graduation, such as the NELS:88. Questions relating to the retention of students in college and to college satisfaction are well represented in BPS, CIRP, and NLS-72. College satisfaction is also well represented in NPSAS.

Results Across Faculty Data Sets

Some of the faculty data sets included in this study (HERI:89, HERI:92, ACE) contain at least a few questions relating to goals faculty members have for their students. However, with the exception of NSOPF-88, abundant information is available regarding the types of teaching methods used by faculty. Specifically, the HERI data sets contain the largest number of questions relating to teaching methods, but NSOPF-93 and ACE also provide a limited amount of information (e.g. ACE asks whether or not faculty work with a teaching assistant). Information about service functions performed by faculty varies from one data set to another, with NSOPF-88 and NSOPF-93 focusing on teaching committee loads while HERI and ACE rely on time-spent-on-task-information.

The extent to which faculty are student-oriented is measured to a limited degree in all five data sets. Further, there is a good amount of information about the amount of time faculty spend teaching and the types of classes which they teach. A limited number of questions also address the amount of time faculty invest in student advising and mentoring. However, although teaching awards and incentives are included in the HERI and ACE data sets, no professional teaching association information is represented in any of the surveys.

Both of the HERI data sets contain information regarding attendance at racial/cultural training workshops as well as indications of cultural awareness and sensitivity. HERI data sets also include good representation of faculty views on social issues, a topic that the other data sets do not examine. However, faculty satisfaction with the environment or climate of the institution is documented in each of the data sets. Finally, it is important to note that while the NSOPF data sets cannot be readily merged with other student data sets at the level of the institution, the HERI:89, HERI:92, and ACE data sets can be merged in this manner. By allowing for comparisons across student and faculty surveys when merged together, researchers can investigate a broader range of teaching and learning issues and outcomes than are possible using a single data base. Although it would be preferable to be able to link students and faculty together in ways that are possible in studies like High School and Beyond, institutional-level merges can at least provide some basic information on institutional context.

Limitations of the Data Sets Cited in Empirical Studies

In addition to our analyses of the federal data sets, we also undertook a review of literature related to limitations of the data sets cited in published empirical studies. Our selection and analysis process began by identifying all empirical research studies utilizing any of the student, faculty, or institutional level data sets that we identified for this project. Materials such as technical reports and manuals were not included in this phase of the project since they were consulted for the data set analyses.

Keyword searches were conducted using the ERIC (Educational Resources Information Center) database. The full names and acronyms of the data sets were used in keyword searches from the year 1982 forward, with the exception of the ACE Faculty Survey of 1972, which was searched from the year 1966 forward. The list of studies found were divided among the research team and each team member scanned the works for any limitations cited in the text pertaining to the data set itself, and not to other facets of the research or study. The research team then constructed broad categories—survey design, survey sampling, measurement, index or scale, and "other"--

based upon the predominant themes uncovered by the review process. Each team member organized the limitations of the data sets that they discovered in the literature review into these categories and relevant subgroupings. Later, these categorizations were cross-checked by another team member. Discrepancies were mutually discussed and revisions were made when necessary. All of the limitations were organized into an appendix (see Appendix A) and then summarized in a matrix based upon the general categories. These are shown in Table 6.

The limitations cited in the following section of this report are reflective of comments found in published research studies. These studies were typically found in educational, economic, sociological and social psychological journals as well as in conference proceedings, and published/unpublished reports. Generally speaking, most of the authors cited issues concerning sampling representation, and a lack of constructs or variables appropriate to their research inquiry.

The most popularly utilized—and thus critiqued--data sets in the empirical literature were (in rank order) the High School and Beyond Survey (HS&B), Cooperative Institutional Research Project (CIRP), National Postsecondary Student Aid Study (NPSAS), National Longitudinal Study of the High School Class of 1972 (NLS-72), and the National Education Longitudinal Study of 1988 (NELS). For the HS&B, several of the authors indicated that the data set was in need of more variables or more in-depth coverage with regard to: the respondent's cultural background, financial aid information, and measures related to achievement, income, educational or occupational aspirations after college graduation, and types or levels of graduate schools attended. Other limitations cited for the HS&B included a high individual item non-response bias and questions about the representativeness of the sample.

Similarly, comments about the CIRP tended to focus on representation (mainly an issue of low response rates), variable availability, and the depth of categories. Several authors suggested that more in-depth survey information was needed with regard to the following topics: college choice, quality of effort, intensity of faculty-student interaction, work values or job characteristics, affective measures, voluntary or involuntary withdrawal, and home environment characteristics.

While the overwhelming majority of limitations cited for the NPSAS involved representation issues, limitations of the NLS-72 cited in the literature were spread out across several categories. Questions pertaining to the NLS-72 included issues such as: the length of the survey, the reliability of its measures, sampling errors, and individual item non-response. Finally, since the NELS data set is still collecting information through what would be the respondents' postsecondary years, many of the limitations of the NELS cited by authors has related to a lack of national representation in terms of parent and secondary school teacher responses.

Fewer empirical studies have been conducted which focus on faculty and institutional data sets. Several authors have expressed the wish that the Higher Education Research Institute (HERI) Faculty Survey and the National Study of Postsecondary Faculty (NSOPF) were longitudinal instead of cross-sectional in order to better reveal causal relationships and the emergence of patterns over time. In addition, one author suggested that the NSOPF should contain information about how faculty members perceive the expectations of their institutions concerning their workload, and another author recommended that the HERI Faculty Survey include more information about the background and historical legacy of the institutions in which the faculty members worked.

Concluding Observations

The purpose of this analysis was to review existing national data sets to determine their utility in studying teaching, learning, and assessment activities. In doing so, our intent is to provide guidance to those interested in using one or more of the existing data sets for research and policy development purposes, but also to help strengthen future research on these topics by identifying areas where new data collections could make strong contributions to our knowledge base.

The results presented above demonstrate that our existing national data resources can be described as having a variety of strengths and limitations when viewed from the perspective of those engaged in studying teaching, learning, and assessment. It is possible to view these results

and, by emphasizing the limitations, see a glass that is half empty. Given the practical and theoretical complexity of studying teaching, learning, and assessment in postsecondary education, our view is that a balanced consideration of these findings produces the image of a glass that is half full; even though there is much room for improvement, the existing data resources provide many opportunities to add to our knowledge about certain aspects of teaching, learning, and assessment.

Given the appropriate resources, plans, and designs, all of the data sets we reviewed could be improved. For example, the response rates of some of the data sets – especially the CIRP surveys – could be improved dramatically, and the longitudinal span of all the data collection schedules could be extended. All of the data sets could contain a wider array of measures on attitudinal, cognitive, and employment outcomes, and these kinds measures could also be improved from a technical standpoint in terms of validity and reliability. In addition, the data sets could be consistently supplemented with unobtrusive and archival data provided by college transcripts and employment records. These kinds of improvements might be excellent priorities for improving current data collection systems, but it is not clear that such investments would yield more than incremental improvements in our knowledge about teaching, learning, and assessment. (This is not to say that such investments should not be made; the data sets reviewed have multiple uses and modest investments in critical areas may well yield tremendous benefits for purposes other than studying teaching, learning, and assessment issues.)

It should be noted that our review specifically focused on national data bases that were generated primarily through survey approaches, since these are the kinds of data most generally available for secondary data analysis. Survey research has tremendous value in helping provide data on many important aspects of postsecondary education, but it may be that the approaches used to generate the data we reviewed are not ideally suited to studying teaching, learning, and assessment issues. For example, each of the student data sets we reviewed had a good deal of strength in terms of selected outcomes represented in the data, but there was tremendous variability in the measures available to study how teaching and learning processes might contribute to such outcomes. Outcome measures are very important, of course, but process indicators are likely key

elements to understanding the rich complexity of how students, faculty, and institutional contexts interrelate when fostering learning within postsecondary education.

Survey approaches that allow linkages between student respondents and their peers, their families, and the faculty who teach them might be useful additions to current survey approaches to collecting quantitative data. Such strategies have been used successfully in collecting data in elementary and secondary settings, but are not well represented in national data resources at the postsecondary level. The paths that students take when moving through the postsecondary system are obviously more varied and complex than those that exist in pre-postsecondary systems, but the ability to link students with people and settings that may influence their development would be a welcome addition. Non-survey approaches can also make strong contributions – and possibly stronger contributions – to our knowledge about these topics, while also informing subsequent survey data collection efforts. Ethnographic and other qualitative approaches, as well as technology-facilitated data collection efforts such as those provided through video and audio recordings of classroom interactions, should all be considered as useful additions to the data provided by national surveys.

An expanded emphasis on the changing role of faculty and staff in the development of postsecondary students should also be considered. The current approaches to collecting data are useful in portraying global trends in the activities of these personnel, but the lack of longitudinal data makes it difficult to understand how faculty and staff can best develop in their ability to serve changing student needs. This, coupled with an ability to link faculty and staff data with the students with whom they interact, would add a tremendous amount to our knowledge about the effectiveness of faculty and staff in facilitating student development.

In considering directions for future data collection efforts, the results of this review do in fact underscore the observation that "national surveys presently tell us relatively little about what actually takes place at the classroom level" (National Center for Education Statistics, 1996, p. 16). There are many possible paths that can be taken to rectify this limitation -- from large-scale longitudinal data collection efforts that track the development and experiences of postsecondary

students (and their professors, families, and employers) to more intensive cases analyses of teaching, learning, and assessment in a small number of classrooms or campuses. Each of these alternative paths necessarily involve design and resources trade-offs, and given the diversity of postsecondary settings, it is likely that there is no "one best path" to take in rectifying the current limitations in existing data sets. Instead, a multitude of approaches may be the most useful.

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Table 1
Definitions of terms used in reviewing student data sets

INPUT

Educational activities: Individual

Academic: Constructs related to academically-oriented activities undertaken by students during high school on an individual level that are not formally organized by the school. Measures reflect the respondent's level of involvement with the high school curricular program and how often a variety of instructional approaches are integrated into the learning process. Such constructs include use of calculators, note taking skills, activities such as time spent studying or doing homework, library usage patterns, etc.

Social: Constructs related to socially-oriented activities undertaken by students during high school on an individual level that are not formally organized by the school. Such constructs include activities such as socializing with friends, reading for pleasure, etc.

Educational activities: organized

Curricular: Activities undertaken by students during high school related to academic pursuits which are sponsored by the school. Such constructs include questions related to choice of courses, type of program in which enrolled, etc.

Co-curricular: Activities undertaken by student during high with an academic focus that are not part of the school's curriculum, which are sponsored by the school. Such constructs include participation in academic honor societies, etc.

Extra-curricular: Activities undertaken by students during high school outside of curricular or co-curricular pursuits which are formally organized or sanctioned by the school. Such constructs include participation in athletics, student government, or other types of student clubs or organizations.

Educational activities: others

Vocational training or courses: Activities or courses taken by students during high school directly related to vocational or job skills or interests. Such activities include course taking patterns in relation to vocational work or job training experiences during high school.

Teacher contact/interaction: Respondent's interaction with high school teachers, either in formal or informal circumstances, outside of the classroom. Examples may range from meeting teachers during office hours to visiting teachers at their homes.

Educational climate: Constructs used to measure the perceptions and attitudes of the respondent with regard to patterns of organizational life in the high school
(e.g. other students often disrupt class, students get along well with
teachers, there is a real school spirit).

Work activity during high school: Work activity during HS: Any type of employment performed while the respondent was enrolled as a high school student. This includes hours per week spent on most recent job, lowest hourly wage accepted while in HS,
amount of time spent looking for work, etc.

Others: Any other types of activities that the respondent engaged in during high school that does not fit any of the above categories. Variables include: drank beer, got arrested, watched television, etc.

Goals/values

Attitudes/values: Perceptions of the respondent which are reflective of personal ideology and larger social values/outlooks. (e.g. whom they admire, want to make a lot of money).

Self-esteem: Measures which reflect the respondent's belief in self , or general level of self-respect (e.g. academic ability, self-rated popularity, self-confidence)

Aspirations: Plans or expectations for future schooling or job placement which are generally considered desirable or important to the respondent or significant others in the respondent's environment. Variables in this category include student's probably career, highest degree planned, etc.

Reasons for attending college: Reasons for attending college: Measures which reflect the motivations and values of the respondent as well as influences by family and significant others regarding educational attainment. Statements explain why respondent decided to go to on to higher education (e.g. development of work skills, intellectual growth, quality of instruction, social life, prestige of school).

College choice/application behaviors: Measures which reflect the decision-making criteria of high school applicants to college. Variables in this category include both the number of colleges to which the respondent has applied for admission and the method of selection (e.g. advice of a friend, grads get top jobs).

High school characteristics: Self-reported information regarding the high school attended by the respondent. Variables include grading criteria, institutional type, location and ranking identifiers of the respondent's high school (e.g., city/state, public/private, region of country, size of student body, etc.).

High school achievement: Academically related achievement attained by R (student) during high school, including constructs such as grades, grade point averages, standardized test scores, academic honors, and diploma attainment.

Personal

English proficiency: The extent to which the respondent self-reports competency in the understanding and use of the spoken/written English language. Variables in this category include: how well respondent understands English when spoken by others, how well respondent can read English, etc.

Information on respondent's drug use: Variables that reflect R's use of cigarettes, alcohol, marijuana, and other controlled substances.

Information on respondent's disabilities: Information on respondent's disabilities: Any type of personal handicap (physical or mental) reported by the respondent. Variables in this category include: deafness, orthopedic handicap, speech disability, specific learning disabilities, etc.

Family

Measures of socioeconomic status: Measures which reflect the level of education, occupation, household income, and household amenities attained by the parents/family of the respondent (e.g. does respondent have a computer, how far in school did respondent's father go, does family receive a newspaper, etc.)

Family relations: Self-rated measures of compatibility and empathy with family members and variables which reflect the status of the health and welfare of the family unit. Variables in this category include: respondent gets along with family members, family member has been ill in the last two years, etc.

Parental involvement in child's upbringing and education: Personal involvement in child's upbringing and education: The extent of parental support, supervision, and discipline which the respondent receives in the home environment (e.g. how often parent checks respondent's homework, parents limit television watching, awareness of student activities and grades, level of communication with parents).

Religion: The organized religion, if any, to which the respondent belongs as well as level of involvement in practicing that religion (e.g. what is religious background of respondent, how often does respondent attend religious services).

Financial assets and liabilities: Measures which reflect the fiscal interdependence of the respondent's family unit (e.g. loans, mortgages, investments, etc.)

TEACHING & LEARNING

Variables related to teaching styles/processes: Related to R's (students') descriptions, reactions, impressions, and/or evaluations of their college instructors' teaching styles, methods, or processes. Teaching styles, methods, or processes may include both the type of instructional delivery (e.g., lecture, discussion, lab, etc.) and types of assignments or projects (e.g., collaborative or group work, role plays, etc.).

Variables related to learning styles/processes: Related to self-reported descriptions, reflections, and/or evaluations of R's learning styles or processes. Variables in this category include both learning styles, such as dimensions in the Kolb learning style model or gender-based style differences like the Belenky et al. theory, as well as learning processes, such as studying techniques or approaches to learning.

ENVIRONMENTS

College activities: individual

Academic: Constructs related to academically-oriented activities undertaken by students during college on an individual level that are not formally organized by the institution. Such constructs include activities such as time spent studying, library usage patterns, etc.

Social: Constructs related to socially-oriented activities undertaken by students during college on an individual level that are not formally organized by the institution. Such constructs include activities such as socializing with friends, reading for pleasure, etc.

College activities: organized

Curricular: Activities undertaken by students during college related to academic pursuits which are sponsored by the institution. Such constructs include questions related to choice of major, course taking patterns, etc.

Co-curricular: Activities undertaken by students during college with an academic focus that are not part of the institution's curriculum, which are sponsored by the institution. Such constructs include participation in academic honor societies, performing research with a faculty member, etc.

Extra-curricular: Activities undertaken by students during college outside of curricular or co-curricular pursuits which are formally organized or sanctioned by the institution. Such constructs include participation in athletics, fraternities/sororities, student government, or other types of student clubs or organizations.

College activities: work related

Employment information while R was enrolled in PSI: Any variables related to R's employment status while s/he was enrolled at a postsecondary institution, including both part- and full-time positions, jobs on- and off-campus, and work-study or non-work-study roles. Can also be related to combination employment/enrollment patterns.

Employment information while R was not enrolled in PSI: Any variables to employment or work performed (post high school graduation) while R was not enrolled in a postsecondary institution. Can include both part- and full-time positions, jobs on- and off-campus, and questions pertaining to why R was working and not attending school. (Note: in some longitudinal data sets in which the R's were tracked from their adolescence, there were members of the sample who went straight into the work force and did not attend a postsecondary institution. All variables related to their work status were placed in this category.)

College activities: others

Job related training/courses: Activities or courses taken by students during college directly related to vocational or job-related skills or interests. Such activities include course taking patterns in relation to licensing or certification in a certain vocation, or job-related field-work, internships, or co-ops.

Faculty contact/interaction: R's (students') interaction with faculty, either in formal or informal circumstances, outside of the classroom. Examples may range from visiting faculty member during their office hours to having dinner at a professor's home.

Interaction with student services: R's (students') usage of, perceptions of, and/or satisfaction with student services at the institution. Examples of student services include various types of counseling services (e.g., personal-psychological, career, and/or academic), recreational facilities, etc.

Others: Any other types of activity R (student) engaged in during college that does not fit any of the above categories.

Institutional

Characteristics: Structural characteristics of the higher education institution that R (student) is attending. May include such characteristics as level (e.g., 2- or 4-year); type (e.g., research or liberal arts); control (public, private or proprietary); region of country; enrollment size, etc.

Impression of college: R's (students') descriptions, comments, reactions and/or evaluations of their college environment, ranging from a general impression (e.g., evaluation of overall quality of institution) to assessments of specific portions of the environment (e.g., satisfaction with residence environment).

Enrollment

Enrollment information: Constructs related to the type of enrollment, enrollment patterns, and/or degree program of R (student) that is not related to a specific curricular program or major. Examples include variables related to part- or full-time enrollment, enrollment status by month or year, or enrollment in a degree program, such as an associates degree.

Financial aid information: Information related to R's (students') financing of their postsecondary education, including any or all of the following: work-study, loans, grants, scholarships, fellowships, assistantships, other forms of employment, and parental/significant other assistance.

Tuition/expenses information: Information related to R's (students') expenses related to tuition, room, board, and other expenses related to the pursuit of their postsecondary education, such as books, necessary equipment, commuting expenses, etc.

OUTCOMES

Cognitive

College achievement: Academically related achievement attained by R (student) during college, including constructs such as grades, grade point averages, academic honors, and degrees attained.

Psychosocial

R's psychosocial development: Variables which reflect respondents' personal growth, including self-understanding and the ability to both understand and get along with others. These self-rated abilities can be used to measure the social, emotional, and psychological growth of the respondent. Variables include perceptions of academic, artistic, physical, and social abilities or self-confidence.

R's views on social issues (values, goals): Opinions, attitudes, and/or views of R (student) pertaining to personal or social values or goals. Such values or goals may be directly related to R, such as R's plans for the future, or they may be more concerned with broader social issues, such as promoting racial diversity or protecting the environment.

Civic Behaviors

Political behaviors: Activities undertaken by R (student) of a civic or political nature, such as registering to vote, actually voting, participating in a political campaign, serving on local governing boards, or running for election.

Volunteer work: Any type of activity performed without pay in service to a local or broader social concern. These activities may include working for a local hospital or clinic, volunteering at various shelters, or assisting with youth organizations.

Aspirations

Aspirations: Future educational, career, or personal goals or plans of R (student). Can include such aspirations as graduate school plans, certain career goals or attainment, or family/marriage considerations.

Success in transition to work/graduate school: Variables related to the transition from college/postsecondary education to working or further educational roles. Possible constructs in this category include: choice of graduate school, graduate major, present occupation, present occupational salary, etc.

Retention

Measures of the educational success of the respondent relating to persistence and continued enrollment in college. Variables in this construct would include re-enrollment in college, degree completion, reasons for dropping out, etc.

Satisfaction

Variables in this category include the degree and manner in which the respondent experienced pleasure or gratification with educational experiences during college. Variables in this category include: satisfaction with campus climate, satisfaction with quality of instruction, work, courses, extra curricular activities, student services, social life, etc.

Table 2
Definitions of terms used in reviewing faculty data sets

Intended learning outcomes	Questions relating to faculty members' planned or desired outcomes for students who enrolled in their courses. Examples may include whether or not the instructor set as a goal for his/her students that they become better writers or more advanced in a particular skill, etc.
Information on teaching methods used	Questions relating to the instructional style or technique used by the faculty member while teaching a course. Examples may include using the lecture method, the seminar/discussion method, or other techniques like collaborative work groups, simulations or role plays, etc.
Information on technology used in teaching practices	Questions relating to faculty members' use of technology for instructional purposes. May include multi-media or related computer usage, audio or visual equipment, and/or scientific or laboratory equipment.
Service variables	Questions relating to the type and amount of activity faculty members perform in service to their institution outside of their normal teaching-, research-, and/or appointed administratively related duties. Examples may include serving on academic committees, task forces, and campus group boards, or being involved with student groups/activities, etc.
Student oriented	Questions attempting to ascertain the relative amount of importance, significance, and/or responsibility the faculty member places upon activities in relation to students, (as opposed to their research, service, administrative roles, etc.). Examples may include Likert-scale questions about the importance of being available to students at all times, etc.
Time spent teaching	Questions relating the amount of time faculty members reported they spent on teaching activities, which can include classroom time, class preparation, grading, and curriculum revision.
Types of classes taught	Questions relating to the discipline, subject matter, and/or level (e.g., lower or upper division, undergraduate or graduate) of courses that the faculty member teaches.
Advising/mentoring	Questions relating to the type and amount of advising and/or mentoring (activities with students that assist or help support students' academic or emotional development) the faculty member engages in, including both undergraduates and graduate students.

Teaching awards/incentives

Questions relating to the number or types of teaching awards or incentives faculty members have received in relationship to their teaching efforts at their institutions.

Professional teaching associations

Questions relating to the number or types of professional teaching associations or organizations to which the faculty member belongs. This category does not include membership in other, more discipline- or research-specific associations or organizations.

Professional development

Questions relating to the number or types of activities the faculty member engages in to improve his/her skills in teaching, research, or service.

Racial/cultural awareness

Questions relating to the amount or types of activities the faculty member is engaging/has engaged in for the purposes of greater sensitivity to students of diverse backgrounds. In addition, this category may also include questions posed to the faculty about their own cultural awareness/sensitivity.

Satisfaction with environment/climate

Questions relating to faculty members' assessments, perceptions, and/or evaluations of their institutions' environment or campus climate. Examples may include general assessments of the quality of the student body or may be more specific, such as the quality of the equipment the faculty member uses.

Views on social issues

Questions relating to faculty members' opinions or judgments on relevant and significant social issues, both in the broad societal sense and more localized to campus considerations. Examples may include views on capital punishment and opinions about their campuses' speech codes.

Table 3
A Profile of Data Sets in the Study

1. Student datasets

		B & B	BPS	HS & B	NELS
Agency		NCES	NCES	NCES	NCES
Primary focus		Education and work experience; transition to graduate school and/or work force; a special emphasis on teachers	Student persistence, progress, and attainment	Information on the educational, vocational, and personal development; transition from high school to postsecondary education or the workforce	Trend data about critical transitions
Subject		Degree attainers beginning one year after graduation	Beginning students (college)	Sophomore and senior cohorts(high school)	8th grade students
Sample size		11,000	7,900	30,000+(seniors) and 28,000(sophomores)	24,599(base year)
Race/Ethnicity oversample		No	No	Yes (Hispanic)	Yes (Asian, Latino)
Ethnic group breakout	Asian	Yes	Yes	Yes	Yes
	Latino	No	Yes	No	Yes
Time span		1993(base), 93-94, 93-97	1990/92/94/96(available in 98)	1980, 1982,1984,1986, and 1992	1988-1994 (every two year)
Longitudinal data		Yes	Yes	Yes	Yes
Supplementary info		Uniqueness: a longitudinal view on the graduate education/work interaction. The data set is based on the NPSAS. It replaced RCG.	Uniqueness: it includes "non-traditional" students, which results in well representing all beginning students. The data set is based on the NPSAS.	Data on parents, school, and observations from teachers also available; the same type of data in the NLS.	Parents, teacher, and school administrator questionnaires were conducted; Comparable to NLS, HS & B

		NLS-72	NPSAS[1]	RCG[2]
Agency		NCES	NCES	NCES
Primary focus		Transition from high school to college and/or to work	Financial information, employment, education aspirations	post-degree employment and educational experiences
Subject		12th grade in 1972	Undergraduates, graduates, and professional students	College graduates
Sample size		16,683(base year)	43,000 (1986-87 school year)	14,405 (1991 year)
Race/Ethnicity oversample		Yes (Black)	No	Yes(Black, Hispanic)
Ethnic group breakout	Asian	No	No	No
	Latino	Yes	No	No
Time span		1972, 1973, 1974, 1976, 1979 and 1986	1986-87, 1989-90, 1992-93	1976-1991
Longitudinal data		Yes	No	No
Supplementary info		Postsecondary transcripts(1984) collected	Data come from institutional records, students and parent interviews. It consists of longitudinal components of BPS and B&B.	Replaced with B & B

[1] National Postsecondary Student Aid Study
[2] Recent College Graduates Study

		CIRP (c1)	CIRP (c2)	CIRP (c3)	CIRP (c4)	CIRP (C4)
Agency		HERI	HERI	HERI	HERI	HERI
Primary focus		student attitude and values	Student attitude and values	Student attitude and values	student attitude and values	student attitude and values
Subject		college students (first time, full-time)	College students (first time, full-time)	College students (first time, full-time)	college students (first time, full-time)	college students (first time, full-time)
Sample size		10,326	27,065	4,408	5,615	40,770
Race/Ethnicity oversample		Yes (Black)	No	No	No	No
Ethnic group breakout	Asian	No	No	No	No	No
	Latino	No	No	No	Yes	Yes
Time span		1971-1980	1985-1989	1986-1990	1987-1991	1987-1991
Longitudinal		Yes	Yes	Yes	Yes	Yes
Supplementary info					most frequently used	more comprehensive

2. Faculty datasets

	NSOPF-88 (n1)	NSOPF-93 (n2)	faculty-89 (h1)	faculty-92 (h2)	faculty-72
Agency	NCES	NCES	HERI	HERI	ACE
Primary focus	National profile of faculty	national profile of faculty			reassessment of faculty
Subject	Postsecondary faculty	postsecondary faculty	postsecondary faculty	postsecondary faculty	postsecondary faculty
Sample size	11,013(faculty)	25,780 (final)	35,480	43,940	53,029
Time span	1987-1988	1992-1993	1988-1989	1991-92	1971-72
Longitudinal data	No	No	No	No	No
Supplementary info	The data set includes institutional records, a survey of 3,029 department chairpersons, in addition to faculty members.		similar questions to CIRP	similar questions to CIRP	related to 1968-69 survey

3. Institutional datasets

	IPEDS
Agency	NCES
Primary focus	institutional characteristics
Subject	colleges or universities
Sample size	approximately 11,000 institutions
Time span	1987 - 96
Longitudinal data	No
Supplementary info	Prior to 1993, only national-level estimates from a sample of institutions are available for the private, less-than-2 year institutions
Data sets reviewed	1992-93

Table 4
Representation of Constructs on Student Data Sets

	Inputs					
	Educational activities					
	Individual		Organized			Others
Name of dataset	Academic	Social	Curricular	Co-curricular	Extra-curricular	
Student-centered						
B&B	R	NR	NR	NR	NR	NR
BPS	NR	NR	NR	NR	NR	NR
CIRP-71/80	L	L	L	L	R	L
CIRP-85/89	R	L	R	L	R	R
CIRP-86/90	R	R	R	L	R	R
CIRP-87/91	R	R	R	L	R	R
HS&B	WR	NR	WR	R	WR	WR
NELS	WR	WR	WR	L	WR	WR[20]
NLS-72	L	L	WR	L	L	L
NPSAS	NR	NR	NR	NR	NR	NR
RCG	NR	NR	NR	NR	NR	NR

Table 4
Representation of Constructs on Student Data Sets

Name of dataset	Goals/Values					HS characteristics	HS achievement
	Attitudes/ Values	Self-esteem	Educational/ Career aspirations	Reasons for attending college	College choice/ application behaviors		
Student-centered							
B&B	NR	NR	L	NR	WR	L	WR
BPS	WR	WR	R	WR	WR	NR	L[1,7]
CIRP-71/80	WR	WR	WR	WR	NR	L	L
CIRP-85/89	WR	WR	WR	WR	NR	L	L
CIRP-86/90	WR	WR	WR	WR	L	L	WR
CIRP-87/91	WR	WR	WR	WR	L	R	WR[12]
HS&B	WR	WR	WR	WR	WR	WR	WR
NELS	WR	WR	WR	WR	WR	R[14]	WR[15]
NLS-72	WR	WR	WR	WR	WR	R	WR
NPSAS	NR	NR	L	NR	R	NR	WR
RCG	NR	NR	L	NR	NR	NR	WR

Table 4
Representation of Constructs on Student Data Sets

Name of dataset	Personal			Family			
	English proficiency[3]	Info on R's Drug Abuse	Info on R's disabilities	Measures of SES	Family Relations	Parental Involvement in Child's Upbringing & Education	Religion
Student-centered							
B&B	R	NR	R	WR	NR	L	NR
BPS	NR	NR	R	R[6]	NR	NR	NR
CIRP-71/80	NR	NR	NR	R	NR	NR	L
CIRP-85/89	NR	NR	NR	L	NR	NR	L
CIRP-86/90	NR	NR	R	L	NR	NR	R
CIRP-87/91	L	NR	R	L	NR	NR	R
HS&B	L	NR	R	WR	R	L	L
NELS	WR	WR	L	WR	WR	WR	L
NLS-72	L	NR	L	WR	NR	R	L
NPSAS	NR	NR	R	R	NR	NR	NR
RCG	NR	NR	NR	L	NR	NR	NR

Table 4
Representation of Constructs on Student Data Sets

	Environments				
	College Activities				
	Financial assets & liabilities	Teaching/learning processes		Individual		Organized
		Teaching styles/ processes	Learning styles/ processes	Academic	Social	Curricular
Name of dataset						
Student-centered						
B&B	WR	NR	NR	WR	WR	WR
BPS	R	L[19]	L[19]	L	L	R
CIRP-71/80	NR	NR	NR	WR	R	L
CIRP-85/89	NR	R	NR	WR	R	L
CIRP-86/90	L	L	NR	WR	WR	L
CIRP-87/91	L	L	NR	WR	WR	L
HS&B	R	NR	NR	NR	NR	R
NELS	R	NR	NR	WR	WR	WR
NLS-72	R	NR	NR	L	NR	L
NPSAS	WR	NR	NR	NR	NR	WR
RCG	NR	NR	NR	NR	NR	NR

Table 4
Representation of Constructs on Student Data Sets

Name of dataset	Co-curricular	Extra-curricular	Work related: Employmt. info when R was enrolled	Work related: Employmt. info when R was not enrolled*	Others: Job related training/ courses	Others: Faculty contact/ interaction
Student-centered						
B&B	NR	WR	WR	NR	WR	L
BPS	L	R	WR	WR	WR	L
CIRP-71/80	L	R	L	NR	NR	L
CIRP-85/89	R	R	L	NR	NR	L
CIRP-86/90	R	WR	L	NR	NR	R
CIRP-87/91	R	WR	L	NR	NR	WR
HS&B	R	WR	WR	NR	WR	NR
NELS	L	WR	WR[22]	WR	WR	NR
NLS-72	NR	L	R	WR	WR	NR
NPSAS	NR	R	WR	NR	NR	NR
RCG	NR	NR	WR	L	R	NR

Table 4
Representation of Constructs on Student Data Sets

			Institutional		Enrollment	Expenses
	Interacation with student services	Others	Characteristics	Impression of college	Enrollment info	Financial aid info
Name of dataset						
Student-centered						
B&B	WR	NR	WR	NR	WR	WR
BPS	WR	NR	WR	R	WR	WR[8, 9, 10]
CIRP-71/80	R	R	WR	WR	WR	WR
CIRP-85/89	R	WR	WR	WR	WR	WR
CIRP-86/90	R	WR	WR	WR	L	WR
CIRP-87/91	R	NR	WR	WR	L	WR
HS&B	NR	NR	WR	R	WR	WR
NELS	L	NR	L	R	WR	WR[9]
NLS-72	NR	L	WR	WR	WR	WR
NPSAS	WR	NR	WR	NR	WR	WR
RCG	NR	NR	L	NR	NR	WR

Table 4
Representation of Constructs on Student Data Sets

	Outcomes					
	Cognitive		Psychosocial		Civic Behaviors	
Name of dataset	Tuition/expenses info	College achievement	R's psycho-social dvlpmt	Rs' views on social issues (values, goals)	Political Behaviors	Volunteer work
Student-centered						
B&B	WR	WR	WR	WR	NR	NR
BPS	WR	WR	NR	NR	WR	WR
CIRP-71/80	NR	R	WR	WR	NR	NR
CIRP-85/89	NR	WR	WR	WR	NR	NR
CIRP-86/90	NR	WR	WR	WR	NR	NR
CIRP-87/91	NR	WR	WR	WR	L	L
HS&B	WR	WR	NR	WR	NR	NR
NELS	L	NR[5]	WR	WR	L	WR
NLS-72	NR	WR	WR	WR	WR	WR
NPSAS	WR	WR	NR	WR	NR	R
RCG	WR	NR	NR	NR	NR	NR

Table 4
Representation of Constructs on Student Data Sets

	Aspiration		Retention	Satisfaction
	Aspirations	Success in transition to work/ graduate school	Retention	College Satisfaction
Name of dataset				
Student-centered				
B&B	WR	WR	R	NR
BPS	WR	WR	WR	WR
CIRP-71/80	R	WR	WR	WR
CIRP-85/89	WR	NR	WR	WR
CIRP-86/90	WR	NR	WR	WR
CIRP-87/91	WR	NR	WR	WR
HS&B	WR	WR	NR	NR
NELS	WR	WR[23]	NR	R[21]
NLS-72	WR	WR	WR	WR
NPSAS	WR	WR	NR	WR
RCG	NR	WR	NR	NR

Table 4
Representation of Constructs on Student Data Sets

Key:

NR = Not represented in dataset (# variables = 0)

L = Limited amount represented in dataset (# variables = 1-5)

R = Represented in dataset (# variables = 6-10)

WR = Well represented in dataset (# variables > 10)

Note:

* Some surveys (NELS, NLS-72, HS&B) included non-college going samples and thus may include respondents who are not enrolled in a postsecondary institution. Conversely, other samples include only college-going respondents, and thus would have no information (NR) on this topic.

Footnotes:

[1] Has SAT/ACT and degree attainment, but no HS GPA

[2] Check against NPSAS

[3] English proficiency reading, writing, and understanding

[4] Oversamples Asians, Latinos, has ~10% Black sample

[5] No college grades, GPA, etc.

[6] Includes household items owned

[7] Includes self-ratings of ability

[8] Even includes reasons why R did NOT apply for financial aid

[9] Includes info on parents' activities in relationship to R's financial aid status

[10] Includes financial indebtedness

[11] 4 variables on satisfaction with teaching/learning while in college

[12] Including various skill capabilities

[13] See satisfaction in "outcomes" section

[14] Primarily includes grading system information; location; climate

[15] Includes standardized test results

[16] Includes attendance behaviors, curriculum information, classroom activities

[17] Includes social behaviors, involvement

[18] Only includes information about HS achievement, such as GPA, SAT scores, etc.

[19] Only pertains to R's satisfaction with overall teaching/learning during college

[20] Variables related to high school climate, work activity during HS, and anti-social behavior

[21] Satisfaction with work only

[22] Includes non-college going sample.

[23] These variables describe success in transition to work from *high school.*

Table 5
Representation of Constructs on Faculty Data Sets

	Teaching awards/ incentives	Professional teaching associations	Professional development	Racial/ cultural awareness	Satisfaction with envir/ climate	Views on social issues	Mergable with other student data
Faculty-centered							
NSOPF-88	NR	NR	R[6]	NR	R	NR	NR
NSOPF-93	NR	NR	L	NR	R	NR	NR
HERIFAC-89	L	NR	L	L[4,5]	R	R	ACE codes
HERIFAC-92	L	NR	L	L[4,5]	R	R	ACE codes
ACEFAC-72	L	NR	NR	NR	R	NR	ACE codes

Table 5
Representation of Constructs on Faculty Data Sets

	Teaching goals for students	Info on teaching methods used	Service vars	Student oriented	Time spent teaching	Types of classes taught	Advising/ Mentoring
Faculty-centered							
NSOPF-88	NR	NR	L[1]	L	R	R	L[3]
NSOPF-93	NR	R	L[1]	L	R	R	L[3]
HERIFAC-89	L	WR	L[3]	L	R	R	L[3]
HERIFAC-92	L	WR	L[3]	L	R	R	L[3]
ACEFAC-72	R	L[2]	L[3]	L	R	R	L[3]

Key:

NR = Not represented in dataset (# variables = 0)

L = Limited amount represented in dataset (# variables = 1-5)

R = Represented in dataset (# variables = 6-10)

WR = Well represented in dataset (# variables > 10)

Footnotes:

[1] No service variables, except for teaching committee load

[2] Only info on whether or not a TA was used

[3] Time spent on task

[4] Attended racial/cultural training/workshops

[5] Includes teaching/research interests, area of expertise

[6] Includes one variable on "Funds for teaching skills training

Table 6
A Summary of Limitations of Data Sets Cited in Empirical Studies

	Survey design			Survey sampling		Measurement		
	Inadequate length of survey	Design	Transcript file problem	Representation	Lack of subsample	Accuracy	Reliability	Validity
Student data sets								
B&B				11	3		2	2
BPS	1	3		6	2	6	3	2
CIRP	2	2	1	4	2	1	1	
HS&B			1	7	3	2	4	1
NELS	4	3		17			2	3
NLS-72	1	2				1		
NPSAS			1					
RCG								
Faculty data sets								
ACE-72		3		1				
HERI Faculty Survey								
NSOPF								
Institutional data sets								
IPEDS				3				

Note: The total number of documents examined includes those of works within which no limitations were cited. Thus, the total number of documents examined may not reflect the cumulative number of limitations cited across the columns.

Table 6
A Summary of Limitations of Data Sets Cited in Empirical Studies

Index or scale		Others	Total number of documents examined
Need more variables	Need more in-depth		
			0
		1[1]	1
15	13	7[2]	64
9	6	10[3]	72
2		4[4]	34
4	2	2[5]	37
8	1	1[6]	50
		2[7]	2
			1
1	2		6
1	1		3
		2[8]	14

[1] BPS: Selection bias
[2] CIRP: Low response rate; ordinal scales in financing data; no information on drop out rates; response bias; survey not in response to user demand
[3] HS&B: Non-response bias; biased parent responses; selection bias; excludes high school non-graduates; time-censoring effect
[4] NELS: Teacher component not representative; parent component not representative; quality of answers; unequal richness of variable information
[5] NLS-72: Sampling error; missing values
[6] NPSAS: Members of racial/ethnic groups who did not identify themselves or were too small to disaggregate were classified as "other/non-specified."
[7] RCG: Non-response bias; selection bias
[8] IPEDS: Racial/ethnic data prior to 1986; aggregated state level data

Appendix A

Limitations of Data Sets Cited in Empirical Studies

1. Student data sets

BPS

Fitzgerald, Robert, And Others. (1994.) Descriptive Summary of 1989-90 Beginning Postsecondary Students: Two Years Later. Contractor Report. Statistical Analysis Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED372691	BPS includes only first time enrollees in any post-secondary education (which means students who attended a vocational school earlier would not be counted, as well as those who had previously been enrolled in a college or university). Only full time students were included.

CIRP

Antonio, Anthony Lising. Making Social Comparisons: Black and White Peer Group Influence in College. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (20th, Orlando, FL, November 2-5, 1995).	ED391412	These limitations suggest that smaller scale, intra-institutional studies are probably necessary to uncover many of the issues brought up in this study.
Arredondo, Marisol. (1995.) Faculty-Student Interaction: Uncovering the Types of Interactions That Raise Undergraduate Degree Aspirations. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (20th, Orlando, FL, November 2-5, 1995)	ED391423	The assessment of faculty-student interaction did not allow for the analysis of the duration of intensity of the interaction. How often or to what extent of participation could not be determined. A finite number of faculty-student variables are included (something like co-authoring an article is not included). The direction of influence between higher degree aspirations and faculty contact cannot be determined since they are measured at the same time.

Astin, A. (1993) "An Empirical Typology of College Students." Journal of College Student Development, v. 34. (36-46).	EJ459074	"Another constraining on studying interaction effects involving variables other than demographic characteristics (sex, age, race, etc.) is the lack of available measures of these other student characteristics. Although some of the typologies developed in earlier research suggest potentially interesting student characteristics that might interact with environmental experiences, there is no practical way for most investigators to incorporate such characteristics in their actual data. This limitation has to a certain extent been overcome in the current study, since the CIRP data necessary for using the typology already exist at several hundred institutions. Moreover, investigators who do not happen to have access to CIRP data can incorporate this typology into their own research at relatively low cost.
Astin, Alexander W. (1990). The Black Undergraduate: Current Status and Trends in the Characteristics of Freshmen. California Univ., Los Angeles. Higher Education Research Inst.	ED325043	CIRP1971-89 None cited
Astin, Alexander W., And Others. The American Freshman: National Norms for Fall 1991. Higher Education Research Institute, Graduate School of Education, 320 Moore Hall, University of California, Los Angeles, CA 90024-1521 ($20.00). Dec 91.	ED340326	None cited.
Astin, Helen S. and Kent, Laura. (1983). Gender Roles in Transition: Research and Policy Implications for Higher Education. Journal of Higher Education, v54 n3 p309-24 May-Jun 1983	EJ281276	CIRP1966-80 None cited
Bayley, Linda J. Changing Aspirations: An Analysis of College Student Status Aspirations. 20 Apr 92.	ED347936	None cited.
Braxton, John M., And Others. Peer Groups of Colleges and Universities Based on Student Outcomes. Journal of College Student Development v32 n4 p302-09 Jul 1991.	EJ432312	The findings from typological inquiries are limited in many ways; for example, the degree to which the variable encompass the phenomenon under investigation and the extent to which the sample is representative of the population.

		Both limitations are applicable to this study in that the seven variables do not capture the totality of educational outcomes that colleges and universities seek to instill in their students, nor are the 38 institutions representative of the universe of institutions.
Deppe, Marilyn J. (1989). The Impact of Racial Diversity and Involvement on College Students' Social Concern Values. ASHE Annual Meeting Paper.	ED313982	CIRP1982-86 There were several limitations of the sample employed for the study. First, it was not representative of national higher educational racial diversity enrollment, with very low representation of minority groups other than Black students. Second, the average institutional racial diversity represented in the sample was below the national average, which limits the assessment in more diverse environments. Third, the geographical distribution was uneven and not representative of the national higher educational system.
Deppe, Marilyn J. (1989.) The Impact of Racial Diversity and Involvement on College Students' Social Concern Values. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (Atlanta, GA, November 2-5, 1989).	ED313982	Not representative of national higher education racial diversity enrollment. Very low representation from minorities, which limits the ability to study the research questions for minority groups. Not geographically representative of the national higher education system. The average institutional racial diversity represented was below the national average.
Dey, Eric L. (1988.) College Impact and Student Liberalism Revisited: The Effect of Student Peers. ASHE 1988 Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (St. Louis, MO, November 3-6, 1988).	ED303066	Concern regarding reliability of items. Very real possibility that results are influenced by the order of the items on the survey.
Dey, Eric L. (1990). Evaluating College Student Retention: Comparative National Data from the 1981-1984 Entering Freshman Classes. Paper presented at the Annual Meeting of the American Educational Research Association (Boston, MA, April 16-20, 1990).	ED319320	CIRP1981-84 None cited

Dey, Eric L. (1995.) Working with Low Survey Response Rates: The Efficacy of Weighting Adjustments. AIR 1995 Annual Forum Paper. Paper presented at the Annual Forum of the Association for Institutional Research (35th, Boston, MA, May 28-31, 1995).	ED387018	Response rate on the follow up survey needs attention.
Dey, Eric L., And Others. Does Being Student-Centered Lead to Lower Academic Standards? Faculty Orientations and Undergraduate Grading Practices. AIR 1995 Annual Forum Paper. Paper presented at the Annual Forum of the Association for Institutional Research (35th, Boston, MA, May 28-31, 1995).	ED387013	Finally, it should be noted that issues of grade inflation are most naturally studied in a longitudinal fashion using sequential cohorts of data on students. Although these data raise interesting questions about some common assumptions about the process of grade inflation, these are raised indirectly. Institutional researchers with access to information on enrollment and grading trends over time can examine these questions directly using procedure such as time-series analysis. By bringing appropriate data resources to bear on this and related questions, institutional researchers can help unravel complex issues of concern to the higher education community.
Dey, Eric L., And Others. The American Freshman: Twenty-Five Year Trends, 1966-1990. Higher Education Research Institute, Graduate School of Education, 320 Moore Hall, University of California, Los Angeles, CA 90024-1521 ($25.00).	ED340325	None cited.
Dixon, Terry P. Use of the 1995 Clarkson College CIRP Summary To Determine the Presence of Institutional Outcomes Possessed by Entering Freshmen.	ED392365	None cited.
Gruca, JoAnn M. and Others. (1988). Intergenerational Effects of College Graduation on Career Sex Atypicality in Women. Research in Higher Education, v29 n2 p99-124 Oct 1988	EJ389081	CIRP1971-80 The choice of variables was limited to variations of those included in the CIRP data set. It was not possible, for example, to include measures of certain home environment characteristics that might have mediated the influences of parents' college graduation onto the next generation. The data set utilized also did not permit quantification of the period of time each parent may have resided in the family home.(121)
Gruca, JoAnn M. and Others. (1989). Intergenerational Effects of Parents' College Graduation: Comparative Path	ED309688	CIRP1971-80 None cited

Analyses for Four Racial-Gender Groups. Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, March 27-31, 1989).		
Henderson, Cathy. College Freshmen with Disabilities: A Triennial Statistical Profile. HEATH Resource Center, Department CFD, American Council on Education, One Dupont Circle, Washington, DC 20036. Aug 95.	ED387971	Students who respond to the CIRP question are self-reporting their disabilities in the fall of their freshman year. It is unknown how long the students have lived with their conditions or whether they have ever been through a formal diagnostic process.
Hess-Quimbita, Grace; Pavel, Michael. (1996.) Assessing an Environmental Attitude Development Model: Factors Influencing the Environmental Attitudes of College Students. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, April 8-12, 1996).	ED394438	Findings may be generalized to traditional first-time, full-time college students only. Even though some variables lend to the impression of temporal positioning relative to each other, if they were in the same survey administration they were collected at the same time. The consideration that one causally precedes the other calls for caution when making conclusions about the order of these variables.
Huang, Ya-Rong. (1995.) The Accentuation Effect of Academic Majors on Undergraduate Work Values and Holland's Theory. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (20th, Orlando, FL, November 2-5, 1995)	ED391408	Lack of items which measure students' work values or job characteristics that are important. Major, as a proxy for department influence, would be better if the degree of involvement of the department was measured, or if the length and depth of involvement with the department environment was measured.
Hull-Toye, Carolyn Sue. Persistence Based upon Degree Aspirations. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (20th, Orlando, FL, November 2-5, 1995).	ED391414	A better measurement, of course, would be to include both quality of effort and satisfaction measures of the college experience.
Hurtado, Sylvia, And Others Varieties of General Education Programs: An Empirically Based Taxonomy. Journal of General Education v40 p133-62 1991	EJ436356	None cited.
Hurtado, Sylvia, And Others. Social Interaction on Campus: Differences among Self-erceived Ability Groups. AIR 1995 Annual Forum Paper. Paper presented at the Annual Forum of the Association for Institutional Research (35th, Boston, MA, May 28-31, 1995).	ED387014	Institutional researchers engaged in developing assessment of campus diversity, should include student perceptions of the climate, as well as actual behavioral measures or reports of interaction across race/ethnicity to adequately assess the extent of social interaction on campus.
Hyun, MeHee. Helping To Promote Racial Understanding: Does It Matter	ED375710	The issue of race is complex, and whether increasing students' commitment to racial

If You're Black or White? ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (19th, Tucson, AZ, November 10-13, 1994).		understanding can be completely explained by one or any of these models is unlikely. ..If these variables may raise students' desire to promote racial understanding, besides having the virtue of enhancing student development, they are certainly worth investigating further.
Jacobs, Jerry A. Gender and Academic Specialties: Trends among Recipients of College Degrees in the 1980s. Sociology of Education v68 n2 p81-98 Apr 1995.	EJ502244	However, I have no direct data on whether particular occupations became more family friendly during this period, and, consequently, this explanation cannot be ruled out....Data on methematics performance are available, but data on the extent to which concern about mathematics may affect the choice of majors are not available on a consistent basis for this period.
Kent, Laura. (1982). Puerto Ricans in U.S. Higher Education: Current Status and Recent Progress. Higher Education Research Inst., Inc., Los Angeles, Calif.	ED226692	None cited
Korn, Jessica S. (1995.) Tolerating the Intolerable: Examining College Students' Attitudes about Date Rape. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (20th, Orlando, FL, November 2-5, 1995).	ED391415	Lack of a follow up survey for the 1990 freshman cohort. Contains only a simple date rape item.
Lawrence, Judith K. and Others. (1982). The Handicapped Student in America's Colleges: A Longitudinal Analysis. Higher Education Research Inst., Inc., Los Angeles, Calif.	ED226694	None cited
Leslie, Larry L. (1982). Student Financing. National Center for Higher Education Management Systems, Boulder, Colo.	ED246820	The NLS surveys provide the best student financing data. Its demographic or independent variable data are excellent. Further, financing data are actual as well as expected. Some nonstudent data are available as well. The major strength of CIRP are that it provides time-series data and detailed student demographic financing data. Its limitations are that it samples only first-time, full-time freshmen; the financing data are expected sources of support rather than actual or realized financing sources.

		A further limitation is that these data are in ordinal rather than nominal form.
Leslie, Larry L. (1984). Changing Patterns in Student Financing of Higher Education. Journal of Higher Education, v55 n3 p313-46 May-Jun 1984	EJ299882	CIRP1972-76 and 1973-80 CIRP data essentially are limited to first-time, full-time freshmen, whereas the NLS reports on part-time as well as full-time students and is not limited to first-time enrollees. CIRP excludes students attending proprietary, special vocational, and semi-professional institutions, whereas the NLS includes all postsecondary students. A less significant difference is that CIRP excludes students from very small institutions. NLS data for the most part represent actual student-reported expenditures, where CIRP data reflect student expectations at the time of registration, and that NLS data are nominal whereas CIRP data are converted from ordinal to nominal form through estimating procedures
Litten, Larry H.; Kern, Kathleen. Social/Political Liberalism Among Freshmen at Selective Private Institutions: A CIRP Data Sharing Project. Annual Forum Paper. Paper presented at the Annual Forum of the Association for Institutional Research (33rd, Chicago, IL, May 16-19, 1993).	ED360936	These data also indicate that it would be useful for CIRP to report institutional scores (and norms) for summary indexes that synthesize the voluminous data that merge from the Student Information Form.
Maxwell, James P. and Corrallo, Salvatore B. (1984). How Do Student College Finances Vary by Student and Institutional Characteristics? Paper presented at the Annual Meeting of the American Educational Research Association (68th, New Orleans, LA, April 23-27, 1984).	ED245649	CIRP1982 None cited
McDonough, Patricia M.; Antonio, Anthony Lising. Ethnic and Racial Differences in Selectivity of College Choice. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, April 8-13, 1996).	Ed394466	This variation suggests the existence of multiple selective college choice habiti that have been and are continuously honed by the interaction of individual students with the administrations structure they face. Research detailing the development of these habiti for different ethnic groups is necessary to provide additional insight into the ways the selective college access game differentially pays off students by

		race.
McHale, Maureen T. The Impact of College on Students' Attitudes toward Women's Roles. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (19th, Tucson, AZ, November 10-13, 1994).	ED375711	None cited.
Mencke, Reed and Others. (1988). Assessing Institutional Effects on Retention. AIR 1988 Annual Forum Paper.	ED298855	CIRP1985-86 The data available did not allow us to distinguish between voluntary and involuntary withdrawal, and important distinction in the Tinto model.
Moline, Arlett E.; Hendel, Darwin D. Exploring International Issues through the Use of CIRP Data. AIR 1992 Annual Forum Paper.May 92. Paper presented at the Annual Forum of the Association for Institutional Research (32nd, Atlanta, GA, May 10-13,1992).	ED349864	Though the CIRP Student Information Form contains many different variables often considered dependent, the survey had relatively few questions focused on international questions and concerns, thereby limiting the use of CIRP data.
Opp, Ronald D. (1989). Freshmen Interest in Teaching: Recent Trends. Journal of Teacher Education, v40 n4 p43-48 Jul-Aug 1989	EJ399702	CIRP1966-88 None cited
Pascarella, Ernest T. and Others. (1987). Becoming a Physician: The Influence of the Undergraduate Experience. Research in Higher Education, v26 n2 p180-201 1987	EJ356939	CIRP1971-80 With only one follow-up, the configuration of the CIRP data makes it nearly impossible to separate the effects of aspiration changes during college from failure to get into medical school. The data follow students only over a nine-year period from first enrollment as college freshmen. Consequently, while we can determine who becomes a physician, we cannot determine the effects of college, if any, on subsequent success within the profession. Similarly, the occupational categories provided by the data do not permit the possible explanation of differential statuses within medicine.
Pascarella, Ernest T. and Others. (1988). The Influence of College on Humanitarian/Civic Involvement Values. Journal of Higher Education, v59 n4 p412-37 Jul-Aug 1988	EJ376514	CIRP1971-80 The measure of social leadership experiences during college, for example, consisted of only four items and was limited to assessing participation or nonparticipation. Obviously, influential student involvement in an institution's social system could consist of a

		substantially greater range of experiences than those constituting the scale in its present form. Similarly, the quality or intensity of involvement may be of even greater impact than simple measures of participation or nonparticipation. A related measurement issue concerns the dependent variable: the humanitarian/civic involvement scale. The problem with assessing values by means of a questionnaire instrument is that an individual's stated values are not always predictive of behavior. Despite the national sample on which the analyses were conducted, the generalizability of the results are also limited to those black and white students who attended only one undergraduate institution. This was necessitated by the fact that the structural information(for example, size, selectivity) on institutions in the CIRP data referred only to the first institution attended, whereas college experience data referred only to the last institution attended.
Pascarella, Ernest T. and Others. (1989). College Race and the Early Status Attainment of Black Students. Journal of Higher Education, v60 n1 p82-107 Jan-Feb 1989	EJ385654	CIRP1971-80 The data did not contain a pure measure of student intellectual ability. This is perhaps not an overly serious limitation, however, in that the data did permit assessment of high-school rank in class as well as high-school grades. The study is obviously limited by the time over which the sample was followed; nine years after original enrollment as full-time freshmen.
Pascarella, Ernest T. and Smart, John C. (1990). Impact of Intercollegiate Athletic Participation for African American and Caucasian Men: Some Further Evidence. Journal of College Student Development, v32 n2 p123-30 Mar 1991	EJ408762	CIRP1982-86 Although the present study has the significant benefit of being longitudinal, the fact that it used students who entered college and then were followed four years later caused the dropout rate of the original group of participants to be significant. A large number of those in the initial smaple did not complete the follow-up. Data are based on self-report and retrospective measures of change and institutional characteristics.(186)
Phelan, Jo Carol and Phelan, Thomas	ED232549	CIRP1970-77

James. (1983). Underemployment among College Graduates. ASHE 1983 Annual Meeting Paper.		None cited
Phelan, Thomas James and Phelan, Jo Carol. (1983). A Comparative Study of College Impacts on Human Outcomes. ASHE 1983 Annual Meeting Paper.	ED232550	CIRP1970-77 None cited
Phelan, Thomas James and Phelan, Jo Carol. (1983). Higher Education and Early Life Outcomes. Higher Education, v12 n6 p665-80 Dec 1983	EJ293454	CIRP1970-77 While college experience might well shape personality, a drawback of the CIRP data for our purpose is the absence of affective measures adequate for testing such a notion.
Porter, Oscar F. (1987). A Comparative Analysis of the Characteristics of Private Black College Freshmen: Implications for the Future of Black Leadership in America. United Negro College Fund, Inc., New York.	ED280354	None cited
Ruskus, Joan A. and Solmon, Lewis C. (1984). Comparative Analysis of College Freshmen by Major Field of Study: A Changing Profile. Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 23-27, 1984).	ED249824	CIRP1967, 72, 75, 81 None cited
Sax, Linda J. (1992.) Self-Confidence in Math: How and Why Do Men and Women Differ during the College Years? ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (Minneapolis, MN, October 28-November 1, 1992).	ED352899	Response bias exists; respondents tend to be of higher academic ability than non-respondents, which means that items such as math ability self rating may be skewed.
Sax, Linda J.; Arredondo, Marisol Student Attitudes toward Affirmative Action in Higher Education: Findings from a National Study. Paper presented at the Annual Meeting of the	ED394467	None cited.

American Educational Research Association (New York, NY, April 8-13,1996).		
Slotnick, Sandra, and Others. (1992.) CIRP (Cooperative Institutional Research Program) Freshman Survey Report. Fall 1992. Pennsylvania College of Technology, Williamsport.	ED376864	Response bias exists; CIRP is not representative of the entire full-time entering class (attributed to test administration circumstances).
Smart, John C. (1987). Student Satisfaction with Graduate Education. Journal of College Student Personnel, v28 n3 p218-22 May 1987	EJ357768	CIRP1971-80 None cited
Smart, John C. (1988). Life History Influences on Holland Vocational Type Development. ASHE 1988 Annual Meeting Paper.	ED303080	CIRP1971-80 The study was limited to these three vocational types because they comprise the majority of occupations that college students typically enter and because the CIRP survey did not contain measures to assess Realistic, Artistic, and Conventional personal orientations in 1971.
Smart, John C. and Pasacarella, Ernest T. (1986). Socioeconomic Achievements of Former College Students. Journal of Higher Education, v57 n5 p529-49 Sep-Oct 1986	EJ341404	CIRP1971-80 None cited
Smart, John C. and Ethington, Corinna A. (1987). Occupational Sex Segregation and Job Satisfaction of Women. Research in Higher Education, v26 n2 p202-11 1987	EJ356940	CIRP1971-80 None cited
Smart, John C. and McLaughlin, Gerald W. (1985). Baccalaureate Recipients: Variations in Academic Ability, Personal Values, and Early Career Satisfaction. AIR 1985 Annual Forum Paper.	ED259671	CIRP1971-80 None cited
Smart, John C. and Pascarella, Ernest T. (1987). Influences on the Intention to Reenter Higher Education. Journal of Higher Education, v58 n3 p306-22 May-Jun 1987	EJ354265	CIRP1971-80 None cited
Terrell, Patricia S. Use and Effectiveness of the Cooperative Institutional Research Program Freshman Survey. NASPA Journal v29 n3 p222-29 Spr 1992	EJ445523	The CIRP Freshman survey was developed as a national data base, not in response to user demand.

Tsui, Lisa. (1995.) Boosting Female Ambition: How College Diversity Impacts Graduate Degree Aspirations of Women. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (20th, Orlando, FL, November 2-5, 1995)	ED391429	Would prefer a wider array of feminist college experience variables from which one could further decipher how feminism boosts the degree ambitions of white women. As well, a parallel multicultural measure to feminism (such as racial egalitarianism).
Twede, K. (Nov. 1990). Baccalaureate transfers: An exploration of factors that influence second institution choice. ASHE Meeting Paper.	ED326127	None cited.
Villalpando, Octavio. Comparing the Effects of Multiculturalism and Diversity on Minority and White Students' Satisfaction with College. ASHE Annual Meeting Paper. Paper presented at the Annual Meeting of the Association for the Study of Higher Education (19th,Tucson, AZ, November 10-13, 1994).	ED375721	Even though the "diversity" constructs developed by Astin and used in this study provided a good understanding of institutional environmental variables that contribute to a general "multicultural" environment, we are not really certain to what extent the survey respondents understood the researcher's intended meaning for diversity as well as other variables.
Whitaker, David G.(1987). Persistence and the Two-Year College Student. ASHE Annual Meeting Paper.	ED292404	CIRP1971-80 None cited
Williams, Melanie Reeves and Kent, Laura. (1982). Blacks in Higher Education: Access, Choice, and Attainment. : Higher Education Research Inst., Inc., Los Angeles, Calif.	ED226693	None cited

HS&B

(1982) Washington High School and Beyond. A Profile of the 1980 Senior Class. Washington Office of the State Superintendent of Public Instruction, Olympia.	ED302109	Good breadth of data available.
(1988) Enrollment in Postsecondary Education of 1980 and 1982 High School Graduates. Survey Report. National Center for Education Statistics (ED), Washington, DC.	ED299943	Non-response bias and differing interpretations of questions by respondents may create nonsampling errors.

ALSO NELS:88 Steelman, L. C. & Powell, B. (1993). Doing the right thing: Race and parental locus of responsibility for funding college. Sociology of Education, 66(4), 223-44.	EJ490104	NELS: "Unfortunately, the NELS questionnaire was not as comprehensive as was the HSB questionnaire in asking parents about their attitudes and behavior regarding funding for college, although it included information on the investments parents have made in anticipation of their children's postsecondary education." Parent surveys were disproportionately completed by mothers (>60% in HSB, and >80% in NELS) Nonresponse on certain items (e.g., family income) was fairly high in both the HSB and NELS. NELS: "did not include questions on parents' aspirations (for their children)." HSB: Hispanic sample too small to disaggregate, but NELS allows for ethnic breakout with the Latino oversample.
ALSO NLS-72 St. John, E. P. & Noell, J. (1989). The effects of student financial aid on access to higher education: An analysis of progress with special consideration of minority enrollment. Research in Higher Education, 30(6), 563-81.	EJ407141	NLS-72 and HS&B don't have large enough Native American or Asian American samples to conduct separate analyses on the effects of financial aid on college choice decisions. Several key constructs in financial aid/access model had missing values for both NLS-72 and HS&B.

Apling, Richard N. (1991.) Postsecondary Educational Experiences of High School Graduates. CRS Report for Congress.	ED332622	Data collected from students over a multi-year period are critical for examining postsecondary experiences. The 1980 senior cohort of HS&B dataset provides two more years of data after high school than does the 1980 sophomore cohort. There is insufficient data in the sets that have only four years because the average B.A. completion for the high school class of 1972 was 4.5 years and now may be longer. HS&B has insufficient time of study to analyze the complete persistence and completion patterns of the 1980 seniors. HS&B does not include dropouts or GED certified people. HS&B excludes information related to attendance, persistence, and completion rates of dropouts or GED holders, or "ability to benefit" of students who enter postsecondary education. HS&B contains no information related to the postsecondary experiences of students graduating from high school before 1980 who were attending colleges, two year institutions, and less than 2 year institutions during the period from fall 1980 through February 1986.
Baum, S. (1987). Financial aid to low-income college students: its history and prospects. Washington, DC: Department of Health and Human Services.	ED377265	Same limitations as cited in Baum, S.R. & Schwartz, S. (1986).
Baum, S.R. & Schwartz, S. (1986). Equity, envy, and higher education. Social Science Quarterly, 67(3), 491-503.	EJ341944	HS&B cannot distinguish between those who don't want to go to college due to financial reasons versus those who have the funds but still choose not go to. Similarly, it cannot distinguish between those who DO want to go to college but due to financial reasons cannot versus those who do want to go to college and have the money but don't go anyway.
Braddock, J. H., II. Tracking: Implications for Student Race-Ethnic Subgroups. Report No. 1.	ED325600	None cited.
Brandon, P. R. (1990). Gender differences in educational attainment among Asian Americans in the High School and Beyond senior-cohort third follow-up survey. Paper presented at the Annual meeting of the American Educational Research Association, Boston, MA.	ED319844	The n's in Asian American subgroups are small, the standard error are larger than those reported for some other groups, and the greatest number of Asian American respondents in a primary sampling unit (School) is 15. Breakdown by ethnicity impossible for multivariate analysis.

Brown, C.L. (1989). The secondary schools taxonomy.	ED315544	None cited.
Brown, K. G. Postsecondary plans of high school seniors in 1972 and 1980: Implications for student quality. Paper presented at the Annual Forum of the Association for Institutional Research, Denver, CO.	ED220060	
Burbridge, L. C. (1991). The interaction of race, gender, and socioeconomic status in education outcomes. Wellesley College, MA: Center for Research on Women.	ED360243	Sample size for American Indians and Asian Americans were too small for comfortable reporting of statistical analyses. Alludes to limitations to HS&B with following quote (but provides no accompanying citation): "In spite of some of the questions that have been raised about the HSB data, since it is longitudinal and retests students two years later it is useful for examining the extent to which gender differences narrow over time, at least for those who are in the sample and who remain in the sample two years later."
Camburn, E. M. (1990). College completion among students from high schools located in large metropolitan areas. American Journal of Education, 98(4), 551-69.	EJ419410	None cited.
Campbell, P. B. & Laughlin, S. Participation in Vocational Education: An Overview of Patterns and their Outcomes.	ED328797	None cited.
Cardoza, D. (1991). College attendance and persistence among Hispanic women: An examination of some contributing factors. Sex Roles: A Journal of Research, 24(3), 133-47.	EJ427917	
Chaikind, S. (1987). College enrollment patterns of Black and White students. Washington, DC: Decision Resources Corp.	ED284463	"The HS&B survey offers only a few measures of achievement and income by which to analyze enrollment patterns."
Choy, Susan P., and Gifford, Antoinette G. (1990.) Profile of Undergraduates in American Postsecondary Institutions. Survey Report. National Center for Education Statistics, Washington, DC.	ED325483	"Rather than representing all students enrolled in postsecondary education at a particular point in time, HS&B represents a specific cohort of students who were high school seniors in 1980. Although data from the 1980 seniors may not accurately reflect the attitudes of all undergraduates, the data do represent younger undergraduates (23 years old or younger)."

Cobb, R. A. & Others. (1989). Vocational and educational aspirations of high school students: A problem for rural America. Research in Rural Education, 6(2), 11-16.	EJ407455	
Crawford, D. & Others. Schools and labor market outcomes. Washington, DC : Office of Educational Research and Improvement.	ED394002	None cited.
Drazen, S. Student Achievement and Family and Community Poverty: Twenty Years of Education Reform.	ED346234	No information on high school financial resources in the NLS-72, and non-similar questions about resources were asked in the HS&B and NELS:88.
Eagle, E. & Schmitt, C. (1990). Consequences of delay in postsecondary education: Degree attainment for 1972, 1980, and 1982 high school graduates. Washington, DC: National Center for Education Statistics.	ED314506	"High School and Beyond and NLS samples, while representative and statistically accurate, are not simple random samples. Students were initially selected within high schools grouped within strata. Sampling rates for schools within different strata varied, resulting in better data for policy purposes, but at a cost to statistical efficiency. Hence, simple random techniques for the estimation of standard errors frequently underestimate the true standard errors for some estimates." (Similar limitations cited in ED314507, ED314508, & ED314509).
Ekstrom, R. & Others. Undergraduate debt and participation in graduate education: the relationship between educational debt and graduate school aspirations, applications, and attendance among students with a pattern of full-time, continuous postsecondary education. Princeton, NJ: Educational Testing Service.	ED392374	"HS&B has single-item measures of educational and occupational aspirations, but these may not fully describe variations in the extent or ambition or depth of commitment to plans that contribute to the educational choices students make." "When we look at the distinction between graduate and professional school, one cannot distinguish between types and levels (e.g., terminal masters vs. doctorate). " "Finally, these is a lack of items that would help us infer students' feelings about debt ad their sensitivity to changes in the economy and in the job market ."
Ekstrom, R. B. (1991). Attitudes toward borrowing and participation in post-secondary education. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Boston, MA.	ED339304	None cited.

Ethington, C. A. & Wolfle, L. M. (1988). Women's selection of quantitative undergraduate fields of study: Direct ad indirect influences. American Educational Research Journal, 25(2), 157-75.	EJ383270	Several key constructs (e.g., locus of control, self-concept, and initial choice of undergraduate major) had a large number of cases with missing data.
Fitzgerald, Robert, And Others. (1994.) Descriptive Summary of 1989-90 Beginning Postsecondary Students: Two Years Later. Contractor Report. Statistical Analysis Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED372691	NLS72 and HS&B are limited to members of a single high school class/cohort.
Ganderton, P. T. & Santos, R. (1995). Hispanic college attendance and completion: Evidence from the High School and Beyond surveys. Economics of Education Review, 14(1), 35-46.	EJ501224	None cited.
Gifford, A.G. et al (April 1989). Course enrollment patterns in secondary schools 1975-1987.	ED315546	Strengths: Course names and codes highly differentiated. Limitations:
Grogger, J. & Eide, E. Changes in college skills and the rise in the college wage premium. Journal of Human Resources, 30(2), 280-310.	EJ502537	None cited.
Grubb, W. Norton. (1990.) The Decline of Community College Transfer Rates: Evidence from National Longitudinal Surveys. Department of Education, Washington, DC.; National Assessment of Vocational Education (ED), Washington, DC.	ED315125	Period of transcript coverage is too short. Four years in insufficient to meet the patterns of students in longer programs or who take longer to complete programs. This is especially true of transfers. This data also excludes older students.
Hansen, T. D. & McIntire, W. G. (1989). Family structure variables as predictors of educational and vocational aspirations of high school seniors. Research in Rural Education, 6(2), 39-49.	EJ407460	
Hanson, S. L. (1994). Lost talent: Unrealized educational aspirations and expectations among U.S. youths. Sociology of Education, 67(3), 159-83.	EJ493914	None cited.
Harnisch, D. L. & Others. Analysis of seven behavioral domains of independent living.	ED299735	None cited.

Hearn, J. C. (1987). An exploration of nontraditional postsecondary enrollment patterns. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Baltimore, MD.	ED292398	None cited.
Hearn, J. C. (1988). Determinants of postsecondary education attendance: Some implications of alternative specifications of enrollment. Educational Evaluation and Policy Analysis, 10(2), 171-85.	EJ381183	Only self-reported GPAs given in HS&B. Strength: Pays close attention to time and type variations in postsecondary enrollment, and has 2 cohorts.
Hearn, J. C. (1992). Emerging variations in postsecondary attendance patterns: An investigation of part-time, delayed, and nondegree enrollment. Research in Higher Education, 33(6), 657-87.	EJ456110	R's gave retrospective accounts of their enrollment activities. Verification of such activities difficult due to unusual form of postsecondary transcript file. Not enough Asian Americans in sample for detailed investigation. Neither is there a large enough Hispanic population for analyses by ethnicity (e.g., Mexican, Cuban, etc.)
Hilton, T. L. & Lee, Valerie E. (1988). Student interest and persistence in science: Changes in the educational pipeline in the last decade. Journal of Higher Education, 59(5), 510-26.	EJ380261	Asian Americans excluded from study because of low sample size. Majority of student data is self-reported, which can lead to bias or error.
Jackson, G. A. (1986). MISAA, the fall of Saigon, and college choice, 1972 to 1980. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, San Antonio, TX.	ED268867	HS&B (unlike NLS-72) only include student self-reported variables for college GPA and type of program enrolled in. NLS-72 includes school reports (aka transcripts?). Financial aid variables required extensive manipulation. Often, they were coded as "missing," when they were in fact, supposed to be another type of aid. Also, several of the financial aid variables were internally inconsistent.
Jackson, G. A. (1988). Did college choice change during the Seventies? Economics of Education Review, 7(1), 15-27.	EJ376197	No info on local economic conditions or descriptions of nearby colleges and universities. HS&B contains only student self-reported grades. Many financial-aid categories were misleading, since many respondents were flagged as missing--made it look like there were tons of people on aid, but many were coded as "missing" in the value labels.

Jackson, G. A. (1990). Financial aid, college entry, and affirmative action. American Journal of Education, 98(4), 523-50.	EJ419409	"Interpreting and using financial aid statistics such as those available from HS&B requires substantial caution. Students report aid amounts retrospectively, and their responses may entail reporting errors of various sorts."
Kane, T. J. (1994). Race, college attendance, and college completion. Washington, DC: Office of Educational Research and Improvement.	ED374766	Only data on geographical location of high school.
Karraker, M. W. (1992). Socioeconomic or race differences?: Explaining Black and White adolescent females' plans for education. Urban Education, 27(1), 41-58.	EJ445342	Same limitations as cited in Karraker, M. W. (1995), plus: "The HS&B sample is more homogeneous on educational attainment than is the general population." "The original (1986) study used very rough categorizations of occupations, particularly the professional/technical occupations."
Karraker, M. W. (1995. The effects of mother-only family structure on the education and marriage plans of Black adolescent females. International Journal of Social Education, 9(2), 46-52.	EJ515369	SES for females complicated when case involves no father in household or when mother had no occupation other than homemaker. HS&B does not account for this type of R.
Lee, V. & Frank, K. A. (1987). Factors facilitating student transfer from 2-year to 4-year colleges. Ann Arbor, MI: School of Education.	ED291444	None cited.
Lee, V. E., Mackie-Lewis, C., & Marks, H. M. (1993). Persistence to the baccalaureate degree for students who transfer from community college. American Journal of Education, 102(1), 80-114.	EJ478716	Same limitations as cited in Ware & Lee (1988).
Maple, S. A. & Stage, F. K. (1991). Influences on the choice of math/science major by gender and ethnicity. American Educational Research Journal, 28(1), 37-60.	EJ427884	None cited.
Marion, S. F. (1988). Gender differences in selecting undergraduate science majors. Paper presented at the Annual Meeting of the New England Educational Research Organization, Rockport, ME.	ED327393	None cited.

McCormick, A. C. (1990). Mobility or educational expectations: The effect of community colleges. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Portland, OR.	ED326132	Dataset does not adjust for differences in GPA scales and quality across institutions.
Ordovensky, J. F. (1995). Effects of institutional attributes on enrollment choice: Implications for postsecondary vocational education. Economics of Education Review, 14(4), 335-50.	EJ517809	No institutional level distinction between what is an "academic" and "vocational" program. However, there are student responses as to their depiction of the program. Strength; HS&B constructed it own composite SES variable. Strength; HS&B conducted its own standardized cognitive test in 1980 on its R's.
Orfield, Gary; Paul, Faith G. (1992.) State Higher Education Systems and College Completion. Final Report to the Ford Foundation. Ford Foundation, New York, N.Y.	ED354041	p. 13: "Students from the central city of a very large metropolitan area had higher transfer rates when they came from a general high school curriculum rather than from a college preparatory curriculum. They were, in fact, twice as likely as those from academic programs to transfer from a 2-year to a 4-year college, a puzzling finding. This may, however be related to a defect in the High School and Beyond data on this item."

Pavel, D. M. & Padilla, R. V. (1993). American Indian and Alaska Native postsecondary departure: An example of assessing a mainstream model using national longitudinal data. Journal of American Indian Education, 32(2), 1-23.	EJ460221	Large numbers of missing values were found among an already small number of American Indian/Alaskan Native respondents (n=351 sophomores, n=229 seniors.) Strength: R's AI/AN self-identification was cross validated with parents' ethnic identification responses, to ensure the authenticity of R's response. *Suggestions from the authors for future national datasets in relation to AI/AN samples:* 1. Increase sample size of AI/AN population to 2000-3000. 2. Can concentrate sampling to ~10 states that have around 60% of the AI/AN populations. 3. Break down the "American Indian/Alaskan Native" to subethnicities, especially tribal affiliation, degree of ancestry, and tribal enrollment status. 4. Distinguish between AI/ANs with close ties to heritage and those who are more "mainstreamed." 5. Include more measures that serve as constructs for Tinto's model, especially in relationship to the experiences of minority students.
Pelavin, S. H. & Kane, M. (1990). Changing the odds: Factors increasing access to college. New York: College Board Publications	ED326095	This document not available from EDRS.
Peng, S. S. (1985). Enrollment pattern of Asian American students in postsecondary education. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.	ED261625	None cited.
Porter, O. F. (1989). Undergraduate completion and persistence at four-year colleges and universities: Completers, persisters, stopouts, and dropouts. Washington, DC: National Institute of Independent Colleges and Universities.	ED319343	None cited.
Rivkin, S. G. (1995). Black/White differences in schooling and employment. Journal of Human Resources, 30(4), 826-52.	EJ514323	None cited.

Schwartz, J. B. (1986). Wealth neutrality in higher education: The effects of student grants. Economics of Education Review, 5(2), 107-17.	EJ338776	"Some may argue that a selection bias is present in the data since only those individuals who enroll in college can be observed to receive student grants."
Smith, W. E. (1982). Factors related to the performance of two-year college transfer students. Paper presented at the Annual Forum of the Association for Institutional Research, Denver, CO.	ED220052	Standardized cognitive test variables do not always match the similar variables represented in the NLS-72. HS&B has higher non-response rate than NLS-72. Strength: HS&B oversample disadvantaged students.
Snyder, E. E. & Spreitzer, E. (1990). High school athletic participation as related to college attendance among Black, Hispanic, and White males: A research note. Youth & Society, 21(3), 390-98.	EJ406389	None cited.
St. John, E. P. (1989). The influence of student aid on persistence. Journal of Student Financial Aid, 19(3), 52-68.	EJ405484	
St. John, E. P. (1990). Price response in persistence decisions: An analysis of the high school and beyond senior cohort. Research in Higher Education, 31(4), 387-403.	EJ421580	
St. John, E. P. (1991). What really influences minority attendance? Sequential analyses of the High School and Beyond sophomore cohort. Research in Higher Education, 32(2), 141-58.	EJ427415	Same limitations cited as in St. John & Noel (1989).
Stocking, C. B. & Curry, G. D. (1986). Postsecondary plans of U.S. and Japanese high school seniors: An introductory comparative analysis. Washington, DC: Office of Educational Research and Improvement.	ED271402	None cited.
Tuma, J.E. (April 1989). Course enrollment patterns in public secondary schools, 1969-1987.	ED315545	Strengths: None cited. Limitations: Students' estimates of the number of semesters completed in specific subject areas consistently differed from estimates derived through transcripts. Difficult to estimate credits earned in non-standard term courses, differences in length of class periods, or differences in the number of periods per week that the class met.

Tuma, John E., And Others. (1989.) Student Financial Aid and Postsecondary Vocational Education. National Assessment of Vocational Education (ED), Washington, D.C.	ED315542	HS&B does not show vocational enrollments well, focusing more on traditionally aged students (who are less represented in vocational programs).
Tuma, John, and Others. (1995.) Educational Attainment of 1980 High School Sophomores by 1992. 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later. High School and Beyond. Statistical Analysis Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED380659	There is a potential "time censoring effect" in the sophomore cohort.
Tuma, John; Gifford, Antoinette. (1990.) Higher Graduation Standards and Their Effect on the Course-Taking Patterns of College- and Non-College-Bound High School Graduates, 1969 to 1987.	ED318767	Examines only high school graduates. The impact of reform on non-graduates is interesting but difficult to pursue in these datasets. The primary sampling unit was the school. Students who had left before tenth grade (or eleventh grade for NAEP) were not included in the sample. A plus with HS&B, ETS, NAEP and NLSY is that college bound and non college bound students have been identified accurately.
Tuttle, R. (1981). A path analytic model of the college going decision. Boone, NC: Appalachian State University.	ED224434	None cited.
Ware, N. C. & Lee, V. E. (1988). Sex differences in choice of college science majors. American Educational Research Journal, 25(4), 593-614.	EJ409689	Strength: HS&B provides design weights to correct for intentional oversampling of certain minority and disadvantaged groups.
Weiler, W. C. (1989). A flexible approach to modelling enrollment choice behavior. Economics of Education Review, 8(3), 277-83.	EJ397762	None cited.
Weiler, W. C. (1991). The effect of undergraduate student loans on the decision to pursue postbaccalaureate study. Educational Evaluation and Policy Analysis, 13(3), 212-20.	EJ435115	Names of postbaccalaureate institutions to which students were accepted but did not enroll were not collected.
Wilson, P. M. & Wilson, J. R. (1992). Environmental influences on adolescent educational aspirations: A logistic transform model. Youth & Society, 24(1), 52-70.	EJ450997	None cited.
Zemsky, Robert; Shapiro, Daniel. (1994.) On Measuring a Mirage: Why U.S. Training Numbers Don't Add Up EQW Working Papers WP20. Office of Educational Research and Improvement (ED), Washington, DC.	ED372191	Authors cite an increased demand for data to measure the current scale and scope of how and when the nation invests in the educational quality of the workforce, and include recommendations focused on constructing more reliable instruments.

Zilbert, E. E. (1992). Selection bias and the earnings effects of postsecondary vocational education. Journal of Vocational Education Research, 17(1), 11-34.	EJ477051	

NELS88

A Profile of the American 8th Grader. National Education Longitudinal Study of 1988. Research in Brief.	ED360352	N/A Research in Brief Report
Anderson, J. & Others. Poverty and Achievement: Re-examining the Relationship between School Poverty and Student Achievement: An Examination of 8th Grade Student Achievement using the National Education Longitudinal Study of 1988.	ED346207	None cited.
Bobbitt, S. A. Using Opportunity to Learn Items in Elementary and Secondary National Surveys.	ED363667	STRENGTH: great deal of information on secondary students' opportunity to learn (e.g., classroom characteristics, descriptors of course content, etc.)
Braddock, J. H., II. Tracking: Implications for Student Race-Ethnic Subgroups. Report No. 1.	ED325600	None cited.
Campbell, P. B. & Laughlin, S. Participation in Vocational Education: An Overview of Patterns and their Outcomes.	ED328797	None cited.
Characteristics of New York State's 8th Grade Students from the National Education Longitudinal Study of 1988.	ED340732	NELS:88 sample excludes Bureau of Indian Affairs (BIA) schools, special education schools for the handicapped, area vocational schools that do not enroll students directly, and school for dependents of U.S. personnel overseas. Exclusion of BIA schools could significantly skew and bias the American Indian sample. In addition, students who are educated at home or in private tutorial settings and those who have dropped out of school prior to 8th grade are excluded.
Choy, Susan P., and Others. (1993.) America's Teachers: Profile of a Profession. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED359185	Data was more detailed on math and science instruction than on English and social studies instruction.

Drazen, S. Student Achievement and Family and Community Poverty: Twenty Years of Education Reform.	ED346234	No information on high school financial resources in the NLS-72, and non-similar questions about resources were asked in the HS&B and NELS:88.
Drazen, S. Student Achievement and Family and Community Poverty: Twenty Years of Education Reform.	ED346234	No information on high school financial resources in the NLS-72, and non-similar questions about resources were asked in the HS&B and NELS:88.
Geenen, Kristen, and Others. (1995.) A Disability Perspective on Five Years of Education Reform: Synthesis Report 22. National Center on Educational Outcomes, University of Minnesota, 350 Elliott Hall, 75 East River Road, Minneapolis, MN 55455.	ED396476	"The sample size of NELS 88 varies through the study due to freshening the sample in order to account for dropouts, transfers, and subjects found to be ineligible." "Few analyses have been completed on this subsample (students with disabilities), primarily due to the difficulty associated with identifying students with disabilities in this data set. Identifying disability status within NELS:88 is contingent upon maternal responses to two items."
Green, Patricia J., And Others. (1995.) Trends among High School Seniors, 1972-1992. National Education Longitudinal Study of 1988. Statistical Analysis Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED387533	NELS88 has high consistency of 8th grader and parent responses.
Grubb, W. Norton. (1990.) The Decline of Community College Transfer Rates: Evidence from National Longitudinal Surveys. Department of Education, Washington, DC.; National Assessment of Vocational Education (ED), Washington, DC.	ED315125	Period of transcript coverage is too short, and is insufficient to meet the patterns of students in longer programs or who take longer to complete programs. This is especially true of transfers. This data also excludes older students.
Hafner, A., Owings, F. Careers in Teaching: Following Members of the High School Class of 1972 In and Out of Teaching. Analysis Report. National Longitudinal Studies of the High School Class of 1972.	ED336386	None cited.
Henderson, L. & Levinsohn, J. National Longitudinal Study of the High School Class of 1972. School File Documentation.	ED313401	None cited.
Hilton, T. L. & Lee, Valerie E. (1988). Student interest and persistence in science: Changes in the educational pipeline in the last decade. Journal of Higher Education, 59(5), 510-26.	EJ380261	Asian Americans excluded from study because of low sample size. Majority of student data is self-reported, which can lead to bias or error.

Hoachlander, E. G. A Profile of Schools Attended by 8th Graders in 1988. Statistical Analysis Report. National Education Longitudinal Study of 1988.	ED338689	Notes that limitations of the NELS:88 are articulated in NORC. (1989). National Education Longitudinal Study of 1988 Base Year: Student Component Data File User's Manual. NORC: Chicago, IL.
Horn, L. & Others. A Profile of American 9th Grade Mathematics and Science Instruction. National Education Longitudinal Study of 1988. Statistical Analysis Report.	ED347094	Teacher component of the NELS is not nationally representative, even though the student sample is. NELS:88 sample excludes Bureau of Indian Affairs (BIA) schools, special education schools for the handicapped, area vocational schools that do not enroll students directly, and school for dependents of U.S. personnel overseas. Exclusion of BIA schools could significantly skew and bias the American Indian sample. In addition, students who are educated at home or in private tutorial settings and those who have dropped out of school prior to 8th grade are excluded.
Horn, L. & West, J. A Profile of Parents of 8th Grade Students from the National Education Longitudinal Study of 1988.	ED350341	Parent data in NELS:88 is not nationally representative, even though the student data is. The majority of parents (~85%) who responded to the surveys were mothers, so results may be biased in terms of the mother's view of the child.
Huang, G. G. Self-Reported Biliteracy and Self-Esteem: A Study of Mexican American 8th Graders.	ED356937	None cited.
Huang, J. & Cervero, R. M. Adult Education and Inequality.	ED351450	None cited.
Ingels, S. J. Strategies for Including All Students of National and State Assessments: Lessons from a National Longitudinal Study.	ED363645	Mentally disabled, language disabled, and physically disabled children omitted from BY sample.
Ingels, S. J. & Others. National Education Longitudinal Study of 1988. Base Year: Teacher Component Data File User's Manual.	ED322222	8th grade teachers selected for the survey were only the teachers of the students who were in the student sample, and only 4 subject areas were chosen. Therefore, researchers are cautioned not to use the teacher components on the NELS under the belief that it is a random sample. Furthermore, teacher-student comparisons (as opposed to student-teacher comparison level data) is not encouraged.
Ingels, S. J. & Others. National Education Longitudinal Study of 1988. Base Year: School Component Data File User's Manual.	ED322223	Same limitations cited as ED322222.

Ingels, S. J. & Others. School, Individual and Item Nonresponse in the National Education Longitudinal Study of 1988 (NELS:88) Base Year Survey.	ED312311	Due to sampling realities, responses from students who are mentally handicapped, not proficient in English (but still oversample of Latinos and Asians?--are they all non-recent immigrants then?), and having physical or emotional problems. This was only 5% of original sampling frame. School-level and individual-level non-response handled through school/individual replacement of like students, and/or weighting/flags to adjust for non-response. Individual item non-response not adjusted for.
Jackson, G. A. (1988). Did college choice change during the Seventies? Economics of Education Review, 7(1), 15-27.	EJ376197	No info on local economic conditions or descriptions of nearby colleges and universities. HS&B contains only student self-reported grades. Many financial-aid categories were misleading, since many respondents were flagged as missing--made it look like there were tons of people on aid, but many were coded as "missing" in the value labels.
Kaufman, P. & Rasinski, K. A. Quality of Responses of 8th Grade Students in the NELS:88--National Education Longitudinal Study of 1988. Technical Report.	ED339722	Quality of responses (i.e., internal consistency and comparability to parents' responses) of 8th graders not as high as similar HS students in the HS&B. Students from high SES backgrounds, those with higher abilities in reading, White or Asian students, and females were more likely to give valid answers than their peers.
Keith, P. B. & Lichtman, M. Testing the Influences of Parental Involvement on Mexican-American 8th Grade Students' Academic Achievement: A Structural Equations Analysis.	ED351170	None cited.
McGrew, Kevin S., And Others. (1995.) Matching Information in National Data Collection Programs to a Model of Post-School Outcomes and Indicators. Technical Report 17. National Center on Educational Outcomes, University of Minnesota, 350 Elliott Hall, 75 East River Road, Minneapolis, MN 55455	ED396483	"NELS88 could not be included due to the lack of a published technical or methodology report for the third follow-up at the time of this investigation." "Most pressing is the need to develop or employ existing outcome indicators related to accepting the consequences of one's behavior (responsibility and independence), academic and functional literacy, personal and social adjustment and satisfaction."

McGrew, Kevin. (1995.) Disability Summary Analyses of Select National Data Collection Programs. Technical Report 11. National Center on Educational Outcomes, University of Minnesota, 350 Elliott Hall, 75 East River Road, Minneapolis, MN 55455	ED396477	Individuals were excluded if they were had severe mental or physical disabilities. Students at specialized special education schools were also excluded.
Morgan, L. A. (1988). Outcomes of marital separation: A longitudinal test of predictors. Journal of Marriage and the Family, 50(2), 493-98.	EJ378524	N/A Used National Longitudinal Survey Cohort of Mature Women
Owens, E. W. & Waxman, H. C. (1995-96). Differences among urban, suburban, and rural schools on technology access and use in eighth-grade mathematics classrooms. Journal of Educational Technology Systems, 24(1), 83-92.	EJ518438	None cited.
Passmore, D. L. & Others. Epidemiology of Work Injuries among Former Participants in Vocational Education.	ED341827	N/A Used National Longitudinal Surveys of Labor Market Experience
Peters, E. H. (1988). Retrospective versus panel data in analyzing lifecycle events. Journal of Human Resources, 23(4), 488-513.	EJ381301	N/A. Used National Longitudinal Survey of Work Experience (NLS)
Planning Papers for the National Longitudinal Study of 1972. Implications for Schools under Chapter 1.	ED310156	Paper is presentation of "advice from the masters." NCES commissioned several experts to suggest what should be included in a longitudinal study of elementary and secondary education. While N/A for limitations, may be useful in the design of our own surveys.
Sares, T. A. School Size Effects on Educational Attainment and Ability.	ED348743	None cited.
Schneider, B., Schiller, K. S., & Coleman, J. S. (1996). Public school choice: Some evidence from the National Education Longitudinal Study of 1988. Educational Evaluation and Policy Analysis, 18(1), 19-29.	EJ525421	Racial/ethnic groups and parent education levels distributed unevenly across central city, suburban, small town, and rural school districts. 8th grade base year sample respondents who did not matriculate to the same high school as their classmates were generally not followed-up, making the HS sample skewed by those who did not move.
Shin, H-S. Estimating Future Teacher Supply: An Application of Survival Analysis.	ED367720	None cited.

Sosniak, L. A. & Ethington, C. A. (1992). When public school "choice" is not academic: Findings from the National Education Longitudinal Study of 1988. Education Evaluation and Policy Analysis, 14(1), 35-52.	EJ446664	High school choice not random; subjects chosen by purposeful selection in 8th grade. NELS data does not provide information about HS topic presentation (although it does say the actual topic taught in HS), how students are expected to think about the topic, the nature of classroom discussions, lab work, etc. in HS.
User's Manual for 1970 Census Fourth Count (Population) School District Data Tapes.	ED313415 ED313416	No limitations referenced, but information on how portions of the Census can supplement the main data files of the NLS-72.

NLS72

Adelman, Clifford. (1990.) Light and Shadows on College Athletes: College Transcripts and Labor Market History. Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.	ED327112	This data provides unequivocally accurate long term college graduate rates, detailed data on college courses taken, and data on labor market participation. Because it follows high school seniors no matter what they subsequently do, it is not distorted by decisions to study specific groups of students.
Altonji, J.G. (1995). The effects of high school curriculum on education and labor market outcomes. Journal of Human Resources, *30* (3), 409-438.	EJ507818	Strength: -Includes number of semester hours taken in high school in a number of subject areas -Includes family background, parental attitudes toward education, test scores, and high school characteristics -Includes several students from each of 897 high schools sampled - this allows use of the means for each HS of courses taken in each subject as instrumental variables for the courses chosen by individuals while controlling for other characteristics of the individual students and for HS variables such as the average characteristics of the students in the HS Weakness: -Attrition rates are greater for those with disadvantaged backgrounds and for persons who took fewer academic courses NOTE: HS&B DATA SET CONTAINS SUPERIOR CURRICULUM MEASURES TO NLS AND PROVIDES THE OPPORTUNITY TO CONTROL FOR ABILITY AND APTITUDE PRIOR TO THE 10TH GRADE.

Apling, Richard N. (1991.) Postsecondary Educational Experiences of High School Graduates. CRS Report for Congress.	ED332622	Data collected from students over a multi-year period are critical for examining postsecondary experiences. The 1980 senior cohort of HS&B dataset provides two more years of data after high school than does the 1980 sophomore cohort. There is insufficient data in the sets that have only four years because the average B.A. completion for the high school class of 1972 was 4.5 years and now may be longer.
Brown, S.V. (1988). Minorities in the graduate education pipeline. A research report of the minority graduate education MGE) Program.	ED299906	None cited.
Campbell, P.B. (1984). Transition patterns between education and work. Columbus, OH: National Center for Research in Vocational Education, Ohio State University.	ED240272	Strength: -Includes high school course-taking patterns
Constantine, J.M. (1995). The effect of attending historically black colleges and universities on future wages of black students. Industrial and Labor Relations Review, *48* (3), 531-546.	EJ500810	Strength: -very few black respondents' observations were lost due to unusually high or low hourly wages Weakness: -over 3000 black students were in NLS-72, but there were only good wage observations in 1986 for about 1192 of them (therefore, small sample size for this survey)
Crouse, J. (1985). Does the SAT help colleges make better selection decisions? Harvard Educational Review, *55* (2), 195-219.	EJ317811	None cited.
Dawkins, M.P. (1989). The persistence of plans for professional careers among blacks in early adulthood. Journal of Negro Education, *58* (2), 220-231.	EJ390020	Strength: -Good for studying a wide range of characteristics of young people (including family background, aspirations and expectations, post-high school educational and occupational plans and experiences, other attitudes and activities) as they move into early adulthood -large database Weakness: -no measure of the respondents' perceptions of the openness of society's occupational structure
Ehrenberg, R.G, and Sherman, D.R.	EJ346597	None cited.

(1987). Employment while in college, academic achievement, and postcollege outcomes: A summary of results. Journal of Human Resources, *22* (1), 1-23.		
Fitzgerald, Robert, And Others. (1994.) Descriptive Summary of 1989-90 Beginning Postsecondary Students: Two Years Later. Contractor Report. Statistical Analysis Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED372691	NLS72 and HS&B are limited to members of a single high school class/cohort.
Frazis, H. (1993). "Selection Bias and the Degree Effect." Journal of Human Resources, 28(3), 538-554.	EJ466386	"As the 1986 survey followed up less than 70 percent of college dropouts and nonattenders, the wage data come from the fourth followup in 1979....The major disadvantages are the youth of the respondents (seven years out of high school), and the lack of cross-sectional age variation, which makes estimation of potential experience terms in the wage equation impossible....The NLS-72 categories for college-goers who stopped short of a BA distinguish only between two or more and less than two years of college."
Gifford, A.G. et al (April 1989). Course enrollment patterns in secondary schools 1975-1987.	ED315546	Strength: None cited. Limitation: Not enough cases to estimate credits for the class of 1975 separately.
Grubb, N.W. (1992). Correcting conventional wisdom: Community college impact on students' jobs and salaries. Community, Technical, and Junior College Journal, *62* (6), 10-14.	EJ446297	Strength: -Includes transcripts of every postsecondary institution an individual attended -Includes wages and earnings as of 1986 -Includes a large number of demographic characteristics, family background, high school performance, labor market experience Weakness: -Does not include older students -Reflects many now-dated college experiences from the mid-1970's -Fail to consider labor market variations from community to community -Cannot distinguish between community and technical colleges

Grubb, W. (1993). "The Varied Economic Returns to Postsecondary Education: New Evidence from the Class of 1972." Journal of Human Resources, 28(2): 365-382.	EJ462059	"The NLS72 data have some limitations, notably their restriction to a single cohort passing through postsecondary education during the 1970s"
Grubb, W. (1995). "Postsecondary Education and the Sub-Baccalaureate Labor Market: Corrections and Extensions." Economics of Education Review, 14:285-299.	EJ514681	"The complications of using data based on a single cohort and of 'uncleaned' versus 'cleaned' versions, the problems of incomplete transcripts, the enormous amounts of missing data, the complexity of using information on credits from non-comparable institutions, the problems caused by non-random sampling and non-random response rates - all these make any definitive analysis virtually impossible. In this as in other areas of empirical works, therefore, the only real solution is to use several data sources to investigate patterns of interest.... The major advantage of SIPP data is that they include all age groups, rather than a single cohort like the NLS72.
Grubb, W. Norton. (1989.) The Causes and Consequences of Enrollments in Higher Education: Evidence From the National Longitudinal Study of the Class of 1972. Final Report. Institute for the Study of Family, Work, and Community, Berkeley, CA.	ED318371	The tremendous advantage of this data is that it provides finely detailed information about postsecondary education, not merely an estimate of years in school. A disadvantage of the data is that it provides information about only one graduating class. Consequently there is no real variation in age in the sample, so it is impossible to analyze the effects of education on employment over many years. And although the fifth follow-up occurred 14 years after high school, this is still not long enough to come close to maximum individual earnings. The results reflect the experiences of a cohort passing through postsecondary education in the 1970s. This may not be valid for cohorts of the 1980s, when postsecondary education conditions changed. There is no comparable dataset.

Hanniford, Barbara E.; Sagaria, Mary Ann D. (1994.) The Impact of Work and Family Roles on Associate and Baccalaureate Degree Completion among Students in Early Adulthood. Paper presented at the 1994 Annual Meeting of the American Educational Research Association (New Orleans, LA, April, 1994).	ED370520	p. 26 and 27: "Measures of academic integration and finances applicable to the entire sample were not available. Also, any errors in recall of dates affected the reliability of measures constructed from data information. Moreover, because the sample was selected on the basis of students' stated degree goals, its validity is subject to the accuracy and honesty with which students reported these goals. Likewise the dependent variable measure relies on students accurately reporting degree outcomes. Finally, the cohort studies and age range of the sample are important. Results may not be generalizable to more recent cohorts and to older populations of students."
Heyns, B. (1988). Educational defectors: A first look at teacher attrition in the NLS-72. Educational Researcher, *17* (3), 24-32.	EJ372883	Strength: -Extensive work history information -Rich data base for study of career mobility
Hollenbeck, K. (1992). Postsecondary education as triage, Returns to academic and technical programs. Staff working papers. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.	ED381687	None cited.
Jackson, G. (1988). "Did College Choice Change During the Seventies?" Economic of Education Review, 7:15-27.	EJ376197	"Identifying Dropouts requires data on individuals' high school experiences. Distinguishing Completers from Starters requires data on college persistence over several years. But such longitudinal data are rare, and so we make do (here as elsewhere) with analyses of high school graduates' college entry decisions - which means Dropouts do not exist, and Starters are equivalent to Completers. ...We have only a dichotomy between no college entry and college entry, and samples that exclude high school dropouts. Exacerbating this problem, college entry by high school students is in a sense the least important of the three major decision points involved in college degrees: high school completion, college entry, and college completion. "
Kim, M., and Alvarez, R. (1995). Women only colleges: Some unanticipated findings. Journal of Higher Education, *66* (6), 641-668.	EJ516405	Strength:

Knepper, Paula R. (1989.) Student Progress in College: NLS-72 Postsecondary Education Transcript Study, 1984. Survey Report. National Center for Education Statistics (ED), Washington, DC.	ED309710	Because of the unique nature of college transcripts many inconsistencies exist in the data which may affect the estimates reported. Missing dates for specific terms lead to problems in determining length of time required to complete a given level. Missing transcripts of undergraduates who transfer lead to time and credit inaccuracies. Schools that were not on semesters created problems.
Manser, M, Pergamit, M., and Bland-Peterson, W. (1990). National Longitudinal Surveys: development and uses. Monthly Labor Review, *113* (7), 32-37.	EJ412643	Strength: -Can obtain detailed information on how individual's lives evolve over time -Can examine the interaction of a variety of economic and social forces -Response rates have remained relatively high -exceptional database for labor market analyses due to breadth of information collected, event/history format, and the high retention rate -includes child care information -considerable information is collected to help locate the respondent in subsequent years (including family, friends, and employer contact information)
McAdams, K. (1981). National longitudinal study of the high school class of 1972: An historical overview and summary. Washington, D.C.: National Center for Education Statistics.	ED217051	None cited.

Rindfuss, R., Kavee, A, and Cooksey, E. (1995). "The First Year after College: Activities and their Subsequent Effects." Journal of Higher Education, 66(4):415-446.	EJ508563	"The primary limitation of the NLS72 is the exclusion of those who did not reach their senior year of high school....We expect that omission of these dropouts enhances the social attainments, such as wage-earnings, of the sample and leads to somewhat later timing of family transitions....A second limitation of this sample is the sparsity of Hispanic, Native American, and other minority students.....As a result, the analyses presented here are restricted to the white population. Finally, because of budget constraints, the 1986 follow-up sampled a subset of the original panel members. Because of special interests of the various funding sources, the following groups were retained with certainty: Hispanics, teachers and potential teachers, college graduates, and persons who had already experienced a divorce, widowhood, separation, or an out-of-wedlock birth. All others were sampled."
Rothstein, D.S. (1995). Do female faculty influence female students' educational and labor market attainments? Industrial and Labor Relations Review, *48* (3), 515-30.	EJ500809	Strength: -Includes name of the college attended by the respondent -Includes locational variables (respondent's state of residency) in each follow-up through 1979 -Fourteen year time span of survey facilitates analysis (can examine mid-career, post-undergraduate labor market, and educational attainments) Weakness: -Individuals in the first four follow-ups were included in fifth follow-up subsample with unequal probabilities
Savoca, E. (1990). Another look at the demand for higher education: Measuring the price sensitivity of the decision to apply to college. Economics of Education Review, *9* (2), 123-134.	EJ411664	None cited.

Sharp, L., and Weidman, J. (1989). "Early Careers of Undergraduate Humanities Majors." Journal of Higher Education, 60(5); 544-564	EJ396801	"There appears to be a rather random pattern of missing data throughout the data file so that the numbers of missing responses vary from one item to another....A second problem has to do with the representativeness of the samples of majors that are used.....The NLS72 data file did not yield a clean unemployment measure, because the category 'waiting for work' included persons who were looking for work as well as persons who were 'waiting to report to work.'"
St. John, E. and Noell, J. (1989). "The Effects of Student Financial Aid on Access to Higher Education: An Analysis of Progress with Special Consideration of Minority Enrollment." Research in Higher Education, 30:563-581	EJ407141	"There is not a sufficient subsample of this population (Native Americans) in HSB or NLS for separate analyses of this population. With the databases used for this study - the National Longitudinal Survey of the High School Class of 1972 and the High School and Beyond study - it is only possible to conduct separate analyses of blacks and Hispanics in the 1980s. NLS did not contain the additional sampling of these subpopulations that is necessary to analyze these groups separately." "There are three limitations that influence our ability to analyze the effects of aid offers on college attendance decisions. One limitation is that high school classes are studies infrequently....A second limitation is that the CES data contained self-reported data on aid offers. Presumably students might not recall their exact amount or type of aid offered, especially aid offered by schools they did not attend. Unfortunately, most databases that can be used to assess progress on access have this limitations. It would be necessary to survey the financial aid offices of every college to which a student applied to overcome this deficiency. Third, there are missing values for many of the variables in our statistical models in all three surveys."
Suter, L.E. (Ed.) (1992). Indicators of science and mathematics education 1992. First Edition. Washington, D.C.: National Science Foundation	ED365511	None cited.
Thomas, G., and Gordon, S.A. (1983). Evaluating the payoffs of college investments for black, white, and hispanic students. Report No.344.	ED235733	None cited.

Baltimore, MD: Center for Social Organization of Schools, Johns Hopkins University.		
Thomas, G.E. (1981). Choosing a college major in the hard and technical sciences and the professions: A causal explanation. Baltimore, MD: Center for Social Organization of Schools, Johns Hopkins University.	ED206829	Strength: -None cited Weakness: -Need to include variables which allow analyses of the effects of tracking students at the secondary school level, particularly tracking which may lead to stratification of students by race, sex, or social class
Thomas, G.E. (1982). Determining the college destination of black students. Atlanta, GA: Southern Education Foundation.	ED215031	Strength: -Ability to investigate the college destinations of black students Weakness: -During the base year and subsequent follow-up surveys, a limited number of questions were asked regarding the type of financial aid that students expected to receive to support their college education. The authors of this study found these questions to be inconsistent and unreliable and were, therefore, not included -Conventional measures of "significant others' influence" are not enough -More extensive information is needed regarding the impact of HS officials, parents, and peers on students' college choice -Need more detailed information on students' perceptions and motivations for their college choices - this should include retrospective data from students currently enrolled in various colleges as well as data from prospective entering freshmen
Transfer from Sub-Baccalaureate to Baccalaureate Institutions in Minnesota Post-Secondary Education, Fall 1984-Fall 1988. (1993.) Minnesota Higher Education Coordinating Board, St. Paul.	ED371787	"It is possible that high school students taking part on the PSEO program were erroneously counted as new entering students." "Because of the difficulty of determining whether or not an individual truly was a new entering student, the analysis includes all reported new entering students."
Tuma, J.E. (April 1989). Secondary schools. Course enrollment patterns in public. 1969-1987.	ED315545	Strength: Limitation: Does not include high school transcript data.

Zemsky, Robert; Shapiro, Daniel. (1994.) On Measuring a Mirage: Why U.S. Training Numbers Don't Add Up EQW Working Papers WP20. Office of Educational Research and Improvement (ED), Washington, DC.	ED372191	Authors cite an increased demand for data to measure the current scale and scope of how and when the nation invests in the educational quality of the workforce, and include recommendations focused on constructing more reliable instruments.

NPSAS

Andrew, Loyd D.; Russo, Rocco";. Who Gets What? Impact Of Financial Aid Policies.	ED309717	None cited.
Apling, Richard N. Nontraditional Students Attending Postsecondary Institutions. CRS Report for Congress.	ED342303	None cited.
Brick, J. Michael. (1989.) Comparison of Fall and Academic Year Student Aid Estimates. 1987 National Postsecondary Student Aid Study. Contractor Report. Technical Report. National Center for Education Statistics (ED), Washington, DC.	ED311834	NPSAS contains fall enrollees only. This creates problems comparing NPSAS data to federal aid award reports.
Byce, Chuck; Khazzoom, Aziza. (1993.) Changes in Undergraduate Student Financial Aid: Fall 1986 to Fall 1989. National Postsecondary Student Aid Study. Statistical Analysis Report. Contractor Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED360902	NPSAS87 contains only fall 86 enrollees, while NPSAS90 contains enrollees throughout the 89-90 academic year.
Byce, Chuck; Schmitt, Carl M.. Students at Less-Than-4-Year Institutions. National Postsecondary Student Aid Study. Statistical Analysis Report. Contractor Report.	ED351957	None cited.
Byce, Chuck; Schmitt, Carl. Financing Undergraduate Education: 1990. National Postsecondary Student Aid Study. Statistical Analysis Report.	ED357728	The purpose of this report is to present data from the 1990 NPSAS survey. Although both report have a similar format, the data contained in them are not comparable, because the design of the samples in the two surveys is different. The earlier NPSAS surveyed a sample of students from the fall term and therefore presents data only on those students who were enrolled in that term, while the 1990 NPSAS provides information about students who were enrolled throughout the academic year.

Choy, Susan B.. Characteristics of Students Who Borrow To Finance Their Postsecondary Education. Postsecondary Education Descriptive Analysis Reports. Statistical Analysis Report.	ED377778	None cited.
Choy, Susan P., and Gifford, Antoinette G. (1990.) Profile of Undergraduates in American Postsecondary Institutions. Survey Report. National Center for Education Statistics, Washington, DC.	ED325483	"Because the NPSAS data were collected in the fall, they do not represent all students who enrolled in a postsecondary institution during the 1986-87 school year. Students who did not enroll until after the fall term or who enrolled in short term programs not in session at the time of the data collection are not represented in the sample."
Choy, Susan P.; And Others. Student Financing of Graduate and First-Professional Education, 1992-93. with an Essay on Student Borrowing. National Postsecondary Student Aid Study: 1992-93. Statistical Analysis Report.	ED389241	None cited.
Choy, Susan P.; Henke, Robin R. (1992.) Parental Financial Support for Undergraduate Education. National Postsecondary Student Aid Study, Research and Development Report. Contractor Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED345623	Parents of students aged 25 or older are not included. NPSAS87 only includes students enrolled on 15 October 1996.
Choy, Susan P.; Premo, Mark D.. How Low Income Undergraduates Financed Postsecondary Education: 1992-93. Postsecondary Education Descriptive Analysis Reports. Statistical Analysis Report.	ED394473	None cited.
Davis, Jerry S., Ed.. Proceedings for the Annual Conference of the NASSGP/NCHELP Research Network (6th, Washington, D.C., June 7-9, 1989).	ED359887	In approaching a study with NPSAS 87 data one should remember their limitations—they are cross-sectional and cover only one point in time. To facilitate research on Hispanic students' educational financing, in the next NPSAS survey the list of nationalities of Hispanics should include Central and south Americans. The expansion of the sample of NPSAS 90 institutions to included those in Puerto Rico should provide much better data on Puerto Rican stduents.
Dynarski, Mark. Analysis of Factors Related to Default.	ED354801	None cited.
Dynarski, Mark. Who Defaults on	EJ483390	Additional research may be helpful to

Student Loans? Findings from the National Postsecondary Student Aid Study. Economics of Education Review, v13 n1 p55-68 Mar 1994 .		gain a better understanding of the factors leading to higher default rates among minority groups.
Fitzgerald, Robert; And Others. Descriptive Summary of 1989-90 Beginning Postsecondary Students: Two Years Later. Contractor Report. Statistical Analysis Report.	ED372691	None cited.
Flint, Thomas. Legacies of Paying for College. AIR 1995 Annual Forum Paper.	ED387012	None cited.
Greene, Bernard; Zimbler, Linda. (1989.) Profile of Handicapped Students in Postsecondary Education, 1987. National Postsecondary Student Aid Study. Survey Report. Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402	ED310616	NPSAS allows self reporting of disabilities. Questions and data in this regard may differ from other sources.
Horn, Laura J.; And Others. Profile of Undergraduates in U.S. Postsecondary Education Institutions: 1992-93. With an Essay on Undergraduates at Risk. Statistical Analysis Report.	ED392852	None cited.
Horn, Laura; Maw, Carlyle. Minority Undergraduate Participation in Postsecondary Education. Statistical Analysis Report.	ED383276	In the survey, Asian/Pacific Islanders and Hispanic students were asked for their specific subgroup identity. However, those who chose not to identify themselves, those belong to groups too small to be disaggregated, or students of mixed identify were categorized as "other/non-specified".
Horn, Laura; Maw, Carlyle. Undergraduates Who Work While Enrolled in Postsecondary Education:1989-90. Contractor Report.	ED374727	None cited.
Korb, Roslyn, And Others. (1988.) Undergraduate Financing of Postsecondary Education. A Report of the 1987 National Postsecondary Student Aid Study. Analysis Report. National Center for Education Statistics (ED), Washington, DC.	ED298819	NPSAS87 does not represent entire year's enrollment.
Korb, Roslyn, And Others. (1989.) Student Financing of Graduate and Professional Education. A Report of the 1987 National Postsecondary Student Aid Study. Analysis Report. Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED309721	NPSAS87 does not represent entire year's enrollment. Only about 70% of students at traditional 4 year colleges and universities enroll in the fall.

Lee, John B.; Clery, Suanne B.. Packaging of Undergraduate Student Financial Aid: 1989-90. Postsecondary Education Descriptive Analysis Reports. Statistical Analysis Report.	ED386083	None cited.
Malizio, Andrew G.. National Postsecondary Student Aid Study: Estimates of Student Financial Aid 1992-93. E.D. TABS.	ED384292	Two design features of the 1993 NPSAS sample suggest that the estimates in this tabulation, while generally comparable to NPSAS 90, are not comparable to published estimates from the 1987 NPSAS. These design changes were made to the 1990 NPSAS to improve full-year estimates. The 1987, and 1990 NPSAS sampled students enrolled in the fall (October). However, the 1990 NPSAS also sampled students who were enrolled in the summer (August), Winter (February), and spring (June). In NPSAS 93, institutions were asked to provide one list (if possible), that represented students enrolled at any time during 1992-93 academic year. The 1990 and 1993 NPSAS samples also included a small sample of students from Puerto Rico. Students from Puerto Rico were not included in the 1987 NPSAS.
Malizio, Andrew G.. Who Gets Financial Aid? And Why Low-Income Students Don't Apply for Student Aid?: Key Findings from the National Postsecondary Student Aid Study.	ED362969	Students from Puerto Rico were not included in the 1987 NPSAS.
Marshall, Robert E. (1989.) Guide to Databases Containing Data on Vocational and Adult Education Maintained by the U.S. Department of Education. Office of Vocational and Adult Education (ED), Washington, DC.	ED311257	NPSAS87 does not represent entire year's enrollment, but just fall 1986 students.
McCormick, Alexander C.; And Others. Profile of Part-Time Undergraduates in Postsecondary Education: 1989-1990. Postsecondary Education Descriptive Analysis Reports. Statistical Analysis Report.	ED386117	None cited.
Millett, Catherine M.; MacKenzie, Susan. An Exploratory Study of the Role of Financial Aid in Minority Doctoral Education. ASHE Annual Meeting Paper.	ED391411	While cross-sectional data like NPSAS does give us a sense of what is happening to these students at one point in time, it does not allow generalizations about many of the pressing issues such as the financial aid role in time to degree and completion rates overall. A followup of the same individuals would represent a significant leap forward in this area, allowing

		researchers to fill in these gaps.
Net Cost of Attending Postsecondary Education. Indicator of the Month	ED387026	None cited.
Research Findings from the 1987 National Postsecondary Student Aid Study.	ED350943	None cited.
Ross, Laurent; And Others. Federal Student Aid Packages: Academic Year 1986-87.	ED323829	None cited.
St. John, Edward P. and others. The Influence of Prices on within-Year Persistence by Traditional College-Age Students in Four-Year Colleges. Journal of Student Financial Aid, v22 n1 p27-38 Win 1992	EJ448777	
St. John, Edward P.; And Others. The Influence of Prices and Price Subsidies on Within-Year Persistence by Students in Proprietary Schools. Educational Evaluation and Policy Analysis, v17 n2 p149-65 Sum1995 .	EJ511049	NPSAS-87 does have a few limitations for persistence research on proprietary schools. First, NPSAS-87 did not include all the types of information that would be needed for an "ideal" persistence study. The national longitudinal studies have included additional variables related to high school experiences (e.g., grades, test scores, and academic track), but these data were not available from NPSAS-87. Second, there were missing values for the variables in the model. Third, because NPSAS-87 was a fall sample, it was not representative of all college students. This was a more serious problem for proprietary schools than for other types of colleges, because students often enroll in proprietary schools at times other than the fall semester. Thus the reader is reminded that this sample, even with the use of sample weights, is not necessarily representative of all students attending proprietary schools. Rather, it is representative of the population of proprietary students who enrolled at the start of the fall semester. Fourth, some fall enrollees were excluded from the sample because of NPSAS-87 data collection procedures. Any student enrolled in fall 1986 who was no longer enrolled at the time of data collection was not included in NPSAS-87. As a result, some early dropouts were not included in the study. Fifth, because most students with work study responded affirmatively to the question asked about current work, there was an overlap between the economic

		background variables for working and the receipt of college word study.
St. John, Edward P. and others. The Nexus Between College Choice and Persistence. Research in Higher Education, v37 n2 p175-220 Apr 1996	EJ523071	First, the NPSAS-87 database did not include measures of precollege student ability such as school grades or entrance test scores that have been used in many persistence studies. Second, although NPSAS-87 did include some indicators of the social and academic integration processes in the Tinto and Bean frameworks—such as on-campus residence, attendance at private colleges, years in college, and college grades (all included in this study—comprehensive measures of social and academic integration were not available. Third, although there were some missing values for each of the variables included in the study and students with missing values for one or more variables had to be excluded, the number of missing values in NPSAS-87 is small. Fourth, NPSAS-87 was a sample of students identified in the fall semester and, therefore, was not representative of college students who enrolled in the spring semester. This could have been a more serious problem in a study of students attending two-year colleges and proprietary schools where more students enroll in the spring semester....Furthermore, students who enrolled in a college at the beginning of the fall semester, but dropped out before the time of data collection in the first half of the fall semester, were not included in the sample. This means some very early-semester dropouts were excluded from the analysis. Fifth, when a sample student is at extremely high or low values on other independent variables, the validity of the estimated effect of the variable on the probability of persistence(delta-p) is reduced. The delta-p measure is of questionable validity when sample members are at extremes on other variables. This condition warrants the use of caution in the application of the delta-p statistic in extreme cases.
St. John, Edward P. Andrieu, Sandra Carlin. The Influence of Price Subsidies on Within-Year Persistence	EJ503328	First, NPSAS-87 does not include all of the variables needed to predict persistence. Ideally a model of graduate

by Graduate Students. Higher Education, v29 n2 p143-68 Mar 1995.		student persistence would also include information on undergraduate student achievement, but unfortunately this type of information was not collected as part of NPSAS-87. Second, there were missing values for each of the variables included in the model. Third, NPSAS-87 was a fall sample and was not representative of all college students. Fourth, some fall enrollees were excluded from the sample due to the data collection procedures used in NPSAS-87. Any student enrolled in a postsecondary institution in fall 1986 who was no longer enrolled at the time of the data collection was not included in NPSAS-87. This means some early drop outs were not included in the study. Fifth, there was an overlap between the background variables for working and the receipt of graduate assistantships. This happened because most students with assistantships responded affirmatively to the question asked about current work.
St. John, Edward P.; Starkey, Johnny B.. The Influence of Costs on Persistence by Traditional College-Age Students in Community Colleges. Community College Journal of Research and Practice, v18 n2 p201-13 Mar-Apr 1994 .	EJ479909	First, NPSAS-87 does not include all of the variables needed for an ideal persistence model. In particular, variables related to standardized test scores and high school grades are missing, These missing variables are not considered sufficiently problematic as to detract from the analysis of the influence of prices on persistence. Second, NPSAS-87 sampled students a few weeks after the start of the fall semester, therefore missing some students who enrolled initially then dropped out. Third, NPSAS-87 was a fall sample with a spring follow-up student survey. This sampling procedure missed some students who enrolled in the spring for the first time, s phenomenon that is more common at community colleges than 4-year colleges and universities. Our findings may not be applicable to students who enroll for the first time in the spring.
Stowe, Peter; Zimbler, Linda";. Characteristics of Stafford Loan Recipients, 1988. 1987 National Postsecondary Student Aid Study, E.D. Tabs.	ED322859	Estimates for the in-school portion of NPSAS are based on students enrolled in postsecondary education in the fall of 1986, rather than for the entire 1986-87 school year.

Stowe, Peter;. Undergraduate Financial Aid Awards: A Report of the 1987 National Postsecondary Student Aid Study. Analysis Report	ED326145	Because the sample is of students enrolled in the fall, it does not represent all students enrolled in a postsecondary institution at all times during the 1986-87 school year.
Student Aid and the Cost of Postsecondary Education. A CBO Study	ED329158	The data collected in the 1987 NPSAS were only on students enrolled in the fall of 1986, and hence are not representative of all students enrolled over the 1986-87 academic year.
Student Education Expenses, 1987. 1987 National Postsecondary Student Aid Study. E.D. Tabs	ED309711	None cited.
Trammell, Mary Louise. Estimating the Enrollment Effects of a Mid-Year Surcharge: Using National Price Response Measures in Institutional Planning. AIR 1994 Annual Forum Paper.	ED373660	None cited.
Tuma, John E., And Others. (1989.) Student Financial Aid and Postsecondary Vocational Education. National Assessment of Vocational Education (ED), Washington, DC.	ED315542	NPSAS87 underestimates numbers of students in programs that do not follow the traditional academic term pattern, particularly vocationally-oriented programs.
Tuma, John. Patterns of Enrollment in Postsecondary Vocational and Academic Education. Journal of Vocational Education Research, v19 n3 p107-30 1994	EJ507747	
Tuma, John; And Others. Student Financing of Undergraduate Education, 1992-93, with an Essay on the Costs of Undergraduate Education before and after Student Financial Aid. National Postsecondary Student Aid Study: 1992-93. Statistical Analysis Report.	ED389240	None cited.
Undergraduate College Financing in New York State. A Report of the New York State Augmentation of the 1987 National Postsecondary Student Aid Survey. Executive Summary	ED321719	Unfortunately, the sample for CUNY community colleges was too small to be reliable and, therefore, no information on CUNY community college students is included in this report.
Undergraduate College Financing in New York State. A Report of the New York State Augmentation of the 1987 National Postsecondary Student Aid Survey	ED321720	Ibid.
Volkwein, J. Fredericks; And Others. Characteristics of Student Loan Defaulters among Different Racial and Ethnic Groups. AIR 1995 Annual Forum Paper.	ED386972	Research is needed on the dynamics of marital status and family size as influences on loan default. Our measures of marital status and family size are at the time of first loan repayment or default. We do not know the marital status or

		family size at the time of enrollment.
Volkwein, J. Fredericks; Szelest, Bruce P.. The Relationship of Student Loan Default to Individual and Campus Characteristics. AIR 1994 Annual Forum Paper.	ED373616	In over 1100 cases, the missing IPEDS and college Board information involves borrowers who attended proprietary institutions. This limits some of the power of our analysis.
Yankosky, Richard E.; Andrew, Loyd. The Proprietary School Sector: A Demographic and Financial Aid Profile	ED330269	None cited.

RCG

Brick, J. Michael, and Others. (1994.) A Study of Selected Nonsampling Errors in the 1991 Survey of Recent College Graduates. Technical Report. U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.	ED379314	Sampling errors in the RCG are due to nonresponse, random measurement errors, and systematic errors due to interviewers. Sampled units that do not participate in survey are a source of bias.
Stowe, Peter. (1993.) Estimates of 1985-86 Bachelor's Degree Recipients' Course-Taking Behavior. Recent College Graduates Study. National Center for Education Statistics (ED), Washington, DC.	ED354809	Many institutions and individuals refused to release their transcripts, or did not respond to requests for transcripts. Sampling error may result from using a sample of bachelor's degree recipients' transcripts rather than the transcripts of all bachelor's degree recipients. Some transcripts had missing course titles.

2. Faculty data sets

ACE-72

Leverenz, Theo R. and Lewis, Bruce R. (1981). An Analysis of Faculty Consistency in the Academic Professions.	ED201254	None cited.

HERI Faculty Survey

Arredondo, M. (1995). Faculty-student interaction: Uncovering the types of interactions that raise undergraduate degree aspriations. Paper presetned at the Annual Meeting of the Association for the Study of Higher Education, Orlando, FL.	ED391423	Need longitudinal data on faculty interaction to merge with student data to prove or disprove causation. (HERI faculty data used as a merge with CIRP.)
Dey, E. L. & Hurtado, S. (1996). Faculty attitudes toward regulating speech on college campuses. Review of Higher Education, 20(1), 15-32.	EJ532620	Faculty attitudes measures are often only single-item questions measuring broad areas or constructs Data is cross-sectional, so cannot deduce cause and effect relationships Response bias, which is corrected for with weights Lacking measures on campus dynamics related to context, such as historical legacy or institutional traditions of racism/sexism, history of activism, and institutional decision making process
Dey, E. L., Korn, J. S., & Sax, L. J. (1996). Betrayed by the academy: The sexual harassment of women college faculty. Journal of Higher Education, 67(2), 149-73.	EJ520133	Only has single-item measure of harassment and no information on timing, nature, or severity of harassment experience, status of harassment, nor the number of times harassment was experienced Not longitudinal, so cannot uncover history of harassment
Hurtado, S., Carter, D. F. & Sharp, S. (1995). Social interaction on campus: Differences among self-perceived ability groups. Paper presented at the Annual Forum of the Assocation for Institutional Research, Boston, MA.	ED387014	None cited. (HERI faculty data as a merge with CIRP.)
Opp, R. D. (1994). Promoting a talent development view of excellence for 2-year colleges. Community College Journal of Research and Practice, 18(3), 279-88.	EJ485343	None cited.
Tsui, L. (1995). Boosting female ambition: How college diversity impacts graduate degree aspirations of women. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Orlando, FL.	ED391429	None cited. (HERI faculty data used as a merge with CIRP.)

NSOPF

Blackburn, Robert and Others. (1994). Minority vs. Majority Faculty Publication Performance: A Research Note. *Review of Higher Education*, v17 n3 p271-82 Spr 1994	EJ481734	In the social knowledge domain, how much time faculty believe their organization wants them to devote research is a consistent predictor of output. The variables, unfortunately, are not contained in the NSOPF88 survey for in any other survey than NCRIPTAL's.
Fairweather, James S. and Rhoads, Robert A. (1995). Teaching and the Faculty Role: Enhancing the Commitment to Instruction in American Colleges and Universities. *Educational Evaluation and Policy Analysis*, v17 n2 p179-94, Sum 1995.	EJ511051	Longitudinal data are better suited for estimating relationships between early socialization and later performance. Although percentage of time spent on instruction does reflect effort and commitment above and beyond work requirements, the measure is an imperfect indicator of commitment to teaching.
Pollicino, Elizabeth A. (1996). Faculty Satisfaction with Institutional Support as a Complex Concept: Collegiality, Workload, Autonomy. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, April 8-13, 1996).	ED394428	

3. Institutional data set

IPEDS

Barbett, S. & Korb, R. A. Current Funds Revenues and Expenditures of Institutions of Higher Education: Fiscal Years 1984 through 1992. E.D. Tabs.	ED374726	STRENGTH: Revenue and Expenses lines are totaled and checked against Grand Total lines. Inconsistencies are followed-up on with the respective institution. Specific imputations are detailed in appendix--imputations only used for this report.

Barnes, Michael W. (1993). Expenditure Data and Their Accuracy for Peer Institutional Comparisons.	ED373681	This study found that error is still present and that the improvement predicted in the 1970's has not yet occurred. Institutions of higher education probably will never report expenditure data in a totally accurate manner, regardless of the rigidity of the guidelines. An analysis of data from the nine institutions that provided any information found discrepancies in reporting computing, academic administration, retiree and staff benefits, registration, and campus security and safety. It did not find public relations activities, and admissions.
Brown, P. Q. Salaries of Full-time Instructional Faculty on 9- and 10-Month Contracts in Institutions of Higher Education, 1982-83 through 1992-93. E.D. Tabs.	ED367202	N/A, but does give detailed information about imputations designed for the study that may be of benefit in future studies.
Broyles, S. G. Characteristics of the Nation's Postsecondary Institutions: Academic Year 1992-93. E. D. Tabs.	ED365265	None cited
Broyles, S. G. & Morgan, F. B. Basic Student Charges at Postsecondary Institutions: Academic Year 1992-93. Tuition and Required Fees and Room and Board Charges at 4-year, 2-year, and Public less-than-2-year institutions. Statistical Analysis Report.	ED365261	N/A - Only summary statistics on student charges at PSIs.
Cohen, Michael P. (1988.) Error Analysis of Estimates for Less-Than-Two-Year Postsecondary Education Institutions.	ED324353	"The reluctance of (less than two year) institutions to respond, the volatile nature of the population, the highly skewed distribution of sizes of the institutions, the sensitivity of the data to precise definitions, among other issues, all contribute to the difficulties (to get statistics)."
Fall Enrollment in Postsecondary Institutions: National Estimates for Fall 1987 and Reported Data for Fall 1986. Survey Report.	ED299942	Extremely small sample size for private 2-year institutions and standard errors large for that group. Enrollment data at <2-year institutions not collected by attendance status. Students enrolled in non-credit courses, students purely auditing for-credit courses, and students studying abroad not counted in enrollment figures.
Henderson, Cathy. (1993.) A Contemporary Profile of Baccalaureate Colleges. Research Briefs , 4(5).	ED382084	"Historically, response rates have been consistently high. (1978-1979 through 1991-1992 – 69%-95%)""All proprietary schools have been excluded from this analysis." (Unclear whether this has been done by IPEDS collectors or by the researchers for this study.)

Hurtado, S. & Others. Latino Student Transition to College: Assessing Difficulties and Factors in Successful College Adjustment. 1994 AIR Annual Forum Paper.	ED373663	No limitations referenced. Primary dataset used in study was National Survey of Hispanic Students.
Ingram, John A. (1995). Using IPDES Data for Selecting Peer Institutions. AIR 1995 Annual Forum Paper.	ED387010	None cited.
Orfield, Gary; Paul, Faith G. (1992.) State Higher Education Systems and College Completion. Final Report to the Ford Foundation. Ford Foundation, New York, N.Y.	ED354041	p 6-7: "All of the state level data was aggregate because Indiana was the only state with an individual level data base, which was very recent and still limited in important respects. We were, therefore, limited to descriptive statistics rather than multivariate regression or other methods in this first phase of the research."
Pena, Deagelia M. (1994). Factor Scores from Higher Education Finance Variables as Indicators of Salary. Presented at the AERA Annual Conference, New Orleans, Lousiana, April 5, 1994.	ED381090	The multiplicity of variables describing the financial conditions of post secondary institutions in the nation makes it difficult to assess changes in higher education finance from year to year.
Pluta, M. J. National Higher Education Statistics: Fall 1991. Early Estimates.	ED340314	None cited
Pluta, M. M. National Postsecondary Statistics, Collegiate and Noncollegiate: Fall 1991. Early Estimates.	ED350954	<2-year institutions are not surveyed on a "census" basis but on a sample basis. Weights for this populations are based upon "average" institutions.
Schantz, N. B., Brown, P. Q. Trends in Racial/Ethnic Enrollment in Higher Education: Fall 1978 through Fall 1988. Survey Report.	ED322834	Racial/ethnic data prior to 1986 was underreported/nonreported. Prior to 1984, in cases where the institution provided no racial/ethnic data, IPEDS imputed data from previous years. Students attending postsecondary institutions on a non-degree seeking basis were not included in the data.
Schantz, N. P. Fall Enrollment in Institutions of Higher Education, 19871. Survey Report.	ED315017	1987 data were imputed for total non-respondents (9.2% of HEGIS institutions) and for institutions that did not respond to specific items, based upon prior year responses. Some individual item non-responses were hot deck matched. Students enrolled in non-credit courses, students purely auditing for-credit courses, and students studying abroad not counted in enrollment figures Students enrolled in non-credit courses, students purely auditing for-credit courses, and students studying abroad not counted in enrollment figures. STRENGTH: All data edited for addition errors and for consistency with prior year's responses.

Williams, J. Academic Libraries: 1990. E.D. Tabs.	ED355943	N/A Info on academic libraries

U.S. Department of Education
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Educational Resources Information Center (ERIC)

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