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Accuracy of Self-Reported Activities and Accomplishments of College-Bound Students

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ABSTRACT

This paper examinês the accuracy of student-reported demographic characteristics, activities, and accomplishments provided through the ACT Assessment Program. It was found that students generally reported such data with a high degree of accuracy. The typical rate of incongruent responses when school- and student-reported data were compared was about 10%; of these, only about 6% of students claimed credit for an activity or accomplishment that the school did not confirm. The results suggest that, for most purposes, colleges can be fairly confident that the reports of activities and accomplishments provided on students' ACT Assessment records are accurate.

ACCURACY OF SELF-REPORTED ACTIVITIES AND ACCOMPLISHMENTS OF COLLEGE-BOUND STUDENTS

Introduction

A substantial amount of educational and social research is based on self-reported data. Subjects may, for example, be asked about their demographic characteristics (age, nationality, sex), their accomplishments (degrees, activities, awards), or their plans (education, career, community service). Naturally, researchers are concerned about the accuracy of such data and have conducted a variety of studies comparing self-reported data with data obtained from "official" sources such as school records, census data, and supervisors. In this paper, we examine the accuracy of data reported by college-bound students when they registered to take the ACT Assessment. In particular, we focus on the accuracy of student-reported demographic characteristics, activities, and accomplishments.

Accuracy of self-reported data by college-bound students has practical, as well as theoretical, importance. Not only are self-reported data used in research, but they are an important part of the college admissions materials at most, if not all, institutions (Breland, 1981). Such information can help these institutions identify potentially successful students (Willingham, 1985).

As colleges often rely on self-reported data to identify applicants with certain characteristics, there is a large body of literature related to accuracy of self-report by college-bound students. One of the first major studies on this topic was that of Astin (1965). He reported (p. 14) that "Student reports of 'factual' items (about high school class size, father's occupation, extracurricular achievements in high school, etc.) are highly reliable; reporting of 'non-factual' items (about future plans and aspirations) is somewhat less reliable."

Later studies tended to confirm Astin's findings. Walsh (1967, 1968) conducted experiments in which subjects were presented with social and financial incentives to distort their responses. He found that accuracy of self-reported data was high and that, in general, the accuracy of experimental groups did not differ from that of control groups; that is, the incentives offered did not lead to greater discrepancies between self-reported and "official" data. These findings are particularly important because they imply that incentives such as college admission and scholarship eligibility may not adversely affect the accuracy of self-reported data as much as might be expected.

Further evidence that college-bound students do not, in general, tend to "fake good" on self-reported items was presented by Maxey and Ormsby (1971). They found that the median level of agreement between student-reported data and school records was about 90% across items. In the remaining cases, students claimed an achievement not confirmed by the school about 6% of the time, and schools credited the students with accomplishments that they themselves did not claim about 4% of the time. As the participants in this study reported their achievements as part of registration for a college admissions test, it appears that they did not, as a rule, exaggerate to appear more attractive to the colleges of their choice.

Maxey and Ormsby further noted that, when discrepancies occurred, it was not always clear that the student had reported inaccurately. In some cases, it appeared

that official records were inaccurate or incomplete; in others, the wording of items was such that the student and school could have legitimately interpreted it differently.

In some cases where a discrepancy between student self-report and official records has been found, it appears that students simply did not have access to the information that was being requested. For example, Armstrong, Jensen, McCaffrey, and Reynolds (1976) found the accuracy level of self-reported class rank to be 54.8%. Underreporting as well as overreporting was common. The authors pointed out that although schools generally keep a record of the class rank of their students, many do not regularly disseminate this information to the students themselves. They noted that, comparatively speaking, students in their study reported their high school grades more accurately than their class ranks; Maxey and Ormsby (1971) and Valiga (1987) also found a high level of accuracy for student-reported grades.

Baird (1976) examined the concurrent and predictive validity of self-reported information. He concluded that: "It is often as valid as more extensive and expensive tests in similar areas. This evidence suggests that one can believe and make decisions based on self-report information in a wide variety of areas as much as one can believe and use test information (p. 4)."

Conger, Conger, and Riccobono (1976) evaluated the test-retest reliability of self-report as a function of data collection procedures (mail-in or personal interview), item characteristics, respondent characteristics, and the interaction of these factors. They reported that reliabilities of contemporaneous factually-based items ranged from .67 to .92, and concluded that research findings should not be generalized across populations differing on respondent characteristics. Fetters, Stowe, and Owings (1984) also reported differences in accuracy by respondent characteristics. They found complex interactions; for example, the validity coefficients for "parental education" were higher for high SES students than for low SES students, but the opposite was true of "family income."

Pace, Barahona, and Kaplan (1985) provided an interesting examination of a variety of factors that may affect the accuracy of student self-report. They concluded their report with this statement: "The quality of questionnaire answers (reliability, validity, credibility) depends most of all on the quality of the questions." That is, students report most accurately when asked questions that are clearly worded and unambiguous, and that request information that is generally known by the students.

The study described in this report was designed to determine the accuracy of the self-reported demographic characteristics, high school activities, and accomplishments of college-bound students who took the ACT Assessment. It was undertaken to determine whether the results reported by Maxey and Ormsby (1971) still generalize to students now seeking to enter college, or whether admissions officers might be placing too much--or too little--confidence in the accuracy of these self-reported data. A further goal of this study was to determine whether different subgroups of ACT-tested students (categorized by sex, test date, and ACT Composite score) differ significantly in the accuracy of their self-reported data.

Method

The ACT Assessment Program is a comprehensive evaluation, guidance, and placement service for students and educators involved in the transition from high school to college. It consists of four academic tests (English Usage, Mathematics Usage, Social Studies Reading, and Natural Sciences Reading), self-reported high school grades, the Student Profile Section, and the ACT Interest Inventory. At present, approximately a million college-bound students take the ACT Assessment each year.

The Student Profile Section (see Appendix A) is completed when registering for the ACT Assessment. Through the 190 items included in the Student Profile Section, students provide information about their backgrounds, extracurricular accomplishments, special academic needs, academic plans, planned majors and careers, and satisfaction with their high schools. Twenty-nine items dealing with background characteristics, extracurricular activities, and special accomplishments were selected as the focus of this study.

Sample

The target population for this study consisted of students who took the ACT Assessment in February or April 1986. These two test dates were chosen to represent two distinct groups of college-bound students: February-tested students tend to be high school seniors and to have lower than average ACT scores, while April-tested students tend to be high school juniors and to have higher than average ACT scores. Students who took the ACT on other test dates during the year (October and December 1985, and June 1986) were not included because the students from these two test dates combined are fairly representative of students from all test dates; furthermore, restricting the study to two test dates substantially reduced the resources required.

The target population was operationally defined as students who took the ACT Assessment in February or April 1986, and who stated that they were enrolled in a high school in the sampling frame. The sampling frame for this study was constructed by matching two national high school files, one of which provided ACT test volume data and one of which provided information on affiliation (public, Catholic, and private non-Catholic) and SES. A stratified systematic random sample of high schools was then selected from this sampling frame. The stratification variables were: affiliation, SES, and location (region of the country). The strata and number of schools selected from each are summarized in Table 1.

TABLE 1

Stratification and Sample Sizes for High School Sample

Stratum number	Affiliation	Region	SES level[a]	Number of schools desired	Number of schools obtained
1	Public	non-Northeast	A	4	5
2			B	15	13
3			C or unknown	23	20
4			D	9	8
5		Northeast	All	8	8
6	Private, non-Catholic	non-Northeast	All	8	6
7		Northeast	All	2	0
8	Catholic	non-Northeast	All	4	5
9		Northeast	All	2	2
			Total	75	67

[a] The SES codes are defined in the text.

The geographic stratification--Northeast U.S. versus the rest of the country--was chosen in the expectation that it would be more difficult to obtain the cooperation of Northeast U.S. schools because of the lesser use of the ACT Assessment in that region. In fact, the targeted number of public and Catholic schools in the Northeast was obtained for the sample, but we were unable to get any private non-Catholic schools in this region to participate. For the analyses, the private non-Catholic and Catholic Northeastern strata were merged and the weights adjusted accordingly.

The SES stratification was based on the estimated percentage of the population below the official federal poverty level (BFPL) in the district served by a school. Four levels of SES were used: 0 - 4.9% BFPL (A); 5.0 - 11.9% BFPL (B); 12 - 24.9% BFPL (C); and 25% or more BFPL (D). There were a few schools for which SES characteristics were not available; they were assigned to level C.

The desired sample sizes for each stratum were taken to be proportional to the total number of schools assigned to the stratum in the sampling frame. Within each stratum, schools were selected with probability proportional to the 1984-85 ACT test volume. This was done to minimize variation in sample size, which could have adversely affected the accuracy of results based on the sample data.

The sampling was accomplished by cumulating estimated enrollments for schools in the sampling frame. Those schools for which the cumulated enrollment first exceeded critical values were selected for the sample. The critical values for a stratum "h" were $k \cdot E_h/n_h$, for $k = 1,\ldots n_h$. Here, E_h is the total cumulated enrollment for stratum h, and n_h is the desired number of schools to be selected from stratum h.

Four times as many schools were selected and invited to participate in the study as were actually needed for the sample. We sent a letter to each school, inviting it to participate and explaining the goals and methods of the study. In some strata, the desired numbers of schools were not achieved from the primary sample, and schools from a back-up sample were contacted. However, quotas were still not attained in two of the strata (see Table 1).

Within each sampled high school, a systematic (1-out-of-N) subsample of the February and April ACT-tested students was selected. The sample size was taken to be either 9 or 10 for each school with 10 or more students, depending on which number more nearly evenly divided the total number of ACT-tested students in the school. At schools with fewer than nine ACT-tested students, all were selected.

The sample was designed so that the following precision in estimated student proportions would be attained: For a proportion (p) of students near .50, there would be a 95% chance that the estimated proportion p would differ from p by .05 or less. Because the number of schools participating in the study (67) was slightly less than specified by the sampling design (75), the actual precision attained was also somewhat less than originally planned.

Data Collection

In this study, we examined the accuracy of five background characteristics, nine extracurricular activities, and 15 special accomplishments reported by students completing the ACT Assessment Student Profile Section. We determined the accuracy of students' responses by comparing them with the responses of high school staff to a questionnaire that requested information on these same characteristics. The 24 activities and accomplishments were selected to be those about which the school would be most likely to have a written record. To minimize "guessing" on the part of high school staff, a "don't know" response option was provided for each item. A copy of the questionnaire appears in Appendix B. Data were collected on 477 students enrolled at 67 high schools.

Analyses

For each item, the student's and school's responses were compared and assigned to one of three categories:

Congruent responses--Student and school both responded "yes" or both responded "no."

Incongruent responses--Student responded "yes" and school "no," or vice versa.

Incomplete responses--School responded "don't know," school left item blank, or student left item blank.

The percentage of item pairs falling in each category was then computed. All percentages were weighted to reflect the sample design. Percentages of congruence were also calculated separately for student subgroups defined by sex, by ACT Composite score range, and by test date. Finally, results of these analyses were compared with those reported by Maxey and Ormsby (1971).

Results

In general, the results of this study parallel those described in the Introduction. The median percentage of student-school incongruent responses (Student "Yes" - School "No" and Student "No" - School "Yes") across items was about 10% (see Table 2).

Inspection of Table 2 shows that there was a considerable range of incongruent and incomplete responses by item. Items for which student and school least often gave incongruent responses (10% or less) were:

Participated in a National Science Foundation summer program for high school students (2%)
Placed first, second, or third in a regional or state speech or debate contest (4%)
Debate (5%)
Won a prize or award in an art competition at high school (6%)
Received a superior rating in a state music contest (7%)
Instrumental music (8%)
Vocal music (8%)
Participated in a state music contest (8%)
Had a work of creative writing published in a school literary magazine or newspaper (8%)
Participated in a work-study, distributive education, cooperative work program while enrolled in high school (8%)
Varsity athletics (10%)
Dramatics, theatre (10%)

Two activities ("Departmental clubs" and "Intramural athletics") appeared to present by far the most difficulty to both students and schools. Students claimed them without school confirmation; schools credited students who did <u>not</u> claim them; and schools indicated that they had insufficient information to respond. For both activities, responses were classified as incongruent or incomplete in over 40% of the pairs.

There were four other items that students claimed without school confirmation more than 10% of the time:

Exhibited a work of art at school (11%)
Was appointed to a student office (12%)
Worked on the staff of a school paper or yearbook (12%)
Participated in one or more varsity athletic team events (12%)

Finally, there were two other items that were checked "don't know" or left blank by the schools more than 10% of the time:

Had a work of creative writing published in a school literary magazine or newspaper (11%)
Received all-city league, county, or state team awards (12%)

The mean number of incongruent responses per student was 2.8 (out of 24 activities/accomplishments); the median was 2; and the range 0-14. The mean number of congruent responses was 18.6, and the median 20. The mean number of responses for which congruence could not be determined was 2.6.

TABLE 2

Background Data Verification Study
Student/School Agreement Percentages for Selected Activities and Accomplishments
(Weighted Analysis; N = 477)

Item	% Congruent responses			% Incongruent responses			% Incomplete responses		
	Total	Student "yes" School "yes"	Student "no" School "no"	Total	Student "yes" School "no"	Student "no" School "yes"	School "don't know"	School "blank"	Student "blank"
Extracurricular activities									
Instrumental music (band, orchestra)	85	16	68	8	5	3	3	3	1
Vocal music	84	14	70	8	6	3	3	3	2
Student government	77	12	64	13	8	5	6	2	2
Publications (newspaper, yearbook, literary magazine)	76	13	63	15	10	4	5	2	2
Debate	86	2	84	5	2	3	5	3	2
Departmental clubs (science club, math club, etc.)	59	21	37	29	11	18	8	3	1
Dramatics, theater	79	11	69	10	7	3	5	3	2
Intramural athletics	57	16	42	28	17	11	9	3	2
Varsity athletics	81	45	36	10	8	2	5	2	2
Special accomplishments									
Was appointed to a student office.	73	7	66	16	12	4	6	3	2
Was elected to one or more student offices.	76	11	65	13	7	6	7	2	2
Participated in a state music contest.	82	9	73	8	3	5	5	2	3
Received a superior rating in a state music contest.	82	4	77	7	4	3	7	3	2
Entered a school speech or debate contest.	78	4	74	11	6	5	7	3	2

(Continued on next page)

TABLE 2
(Continued)

Item	% Congruent responses				% Incongruent responses				% Incomplete responses		
	Total	Student "yes" School "yes"		Student "no" School "no"	Total	Student "yes" School "no"		Student "no" School "yes"	School "don't know"	School "blank"	Student "blank"
Special accomplishments (continued)											
Placed first, second, or third in a regional or state speech or debate contest.	85	1		84	4	2		2	7	3	2
Exhibited a work of art at school.	72	7		65	17	11		6	6	3	2
Won a prize or award in an art competition at high school.	83	1		81	6	4		2	6	3	2
Worked on the staff of a school paper or yearbook.	75	12		63	16	12		3	6	2	2
Had a work of creative writing published in a school literary magazine or newspaper.	79	4		74	8	4		4	9	2	2
Participated in a National Science Foundation summer program for high school students.	87	1		87	2	1		1	6	3	2
Won a prize or award (of any kind) for scientific work or study.	75	2		72	14	8		6	6	3	2
Participated in one or more varsity athletic team events (football, basketball, etc.) while attending high school.	78	43		35	14	12		2	5	2	1
Received all-city, league, county, or state team award (including honorable mention).	75	7		68	12	6		6	9	3	2
Participated in a work-study, distributive education, cooperative work program while enrolled in high school.	82	4		78	8	4		4	4	3	2

Percentages of congruence for activity/accomplishment items were calculated separately for males and females, for the two test dates, and for different ACT Composite score ranges (less than 15, 15-22, greater than 22). There was a tendency for males to have a lower percentage of incongruent responses than did females, with statistically significant differences at the .05 level for seven items:

Vocal music
Departmental clubs
Was appointed to a student office
Worked on the staff of a school paper or yearbook
Had a work of creative writing published in a school literary magazine or newspaper
Won a prize or award for scientific work or study
Participated in one or more varsity athletic team events

Females had a significantly lower percentage of incongruent responses than males for two items: "Exhibited a work of art at school" and "Won a prize or reward in an art competition at high school."

There was also a tendency for a lower percentage of incongruent responses to occur for students testing in April than in February. However, there were statistically significant differences between the two test dates for only three items: April-tested students had a lower percentage of incongruent responses for "Student government" and "Was appointed to a student office," and February-tested students had a lower percentage of incongruent responses for "Entered a school speech or debate contest."

No consistent trends in percentages of incongruent responses were found when data were examined by ACT Composite score range.

The authors originally planned to examine congruence of activity/accomplishment items by class rank, as well. The level of agreement between student and school on this item was 60%, a level somewhat higher than the 54.8% level of accuracy reported by Armstrong et al. (1976). However, as the analysis by class rank would have involved only students with verified class ranks, thus eliminating 40% of the student sample, this analysis was not done.

The sample size in this study was too small to examine differences in accuracy by race, economic level, educational aspirations, etc. Previous research suggests that such variables may be related to accuracy of self-report, although results have not consistently favored one group over others.

The other background items for which data were collected were High school program, Race, United States citizenship, and Handicapped/Learning Disabled. Levels of incongruence were: High school program--25%; Race--7%; U.S. citizenship--1%; Handicapped/Learning Disabled--1%.

Ten of the accomplishment items examined in this study parallel items examined in Maxey and Ormsby's 1971 research report. Although the Maxey and Ormsby procedures and analyses differed somewhat from those in the present study, the level of accuracy appears to be similar for these 10 items when a correction is made for the lack of an "incomplete" category in the Maxey and Ormsby study.

Discussion

Previous researchers have generally reported a high level of accuracy in self-reported information when the information requested was known to the respondents and the request was phrased clearly and unambiguously. The present study confirms these findings. The typical rate of incongruent responses over items is about 10%, with about 6% of students claiming credit for an activity or accomplishment that the school said they were not entitled to. The authors of this study, like Maxey & Ormsby (1971), had no way of determining whether the student or the school had reported incorrectly in such cases. Thus, it appears that, for most purposes, colleges can accept at face value students' reports of their activities/accomplishments provided on their ACT Assessment records.

Nevertheless, a few caveats should be noted. The level of accuracy for activity/accomplishment items varied by item; most notably, the items related to departmental clubs and intramural athletics appeared to be confusing for both students and high school personnel. Until these items can be revised, it would be appropriate to consider responses to them as less likely to be accurate. Background items with a high level of incongruence were High school rank and High school program. It is probable that, in the former case, students often are not provided with class rank information, even though the school keeps it on file. In the latter case, the categories used in the item may not correspond with those used at a given school.

Moreover, while reporting was usually accurate, it was not so in all cases. Recall that the number of incongruent responses for a student ranged from 0 to 14. When a major decision (e.g., admission to college, granting of a scholarship) relies heavily on self-reported activities and/or accomplishments, it would seem appropriate to verify the accuracy of these data with the high school, where feasible.

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Appendix A

Student Profile Section Items

ACT Student Profile Section

The Student Profile Section asks you for information about your background, interests, needs, and plans. It is designed to help you think about your educational future and to help colleges in their planning.

Information on racial/ethnic background, native language, marital status, religious preference, and physical disability is released only to institutions that request it in accordance with federal guidelines. These institutions have promised to keep this information confidential. You are not required to provide this information.

Be sure the information you provide is as accurate and complete as possible, because it will be used in various ways. For example, a college may use your ACT Assessment information as your application for admission; the information would then become part of your basic record at the college. And some scholarship programs may need your answers to certain SPS questions in order to consider you for an award. (See the **notes to the college and agency code listing on page 31 of *Registering for the ACT Assessment* for program requirements.**)

Mark your answers to the SPS on page 3 of your registration folder. Although you may skip any question that you do not wish to answer, ACT can provide colleges with the most complete profile of you only if you answer every question.

Admissions/Enrollment Information

1. I plan to enroll as a
   - full-time student 1
   - part-time student 2
2. I plan to attend classes primarily during the
   - day 1
   - evening 2
3. I plan to enter college in
   - January/February 1988 0
   - March/April 1988 1
   - May/June/July 1988 2
   - August/September/October 1988 3
   - November/December 1988 4
   - January/February 1989 5
   - March/April 1989 6
   - May/June/July 1989 7
   - August/September/October 1989 8
   - I am currently enrolled in college 9
4. Upon entering college, I plan to live in
   - residence hall 1
   - off-campus room or apartment or own home 2
   - parents' or relative's home 3
   - married student housing 4
   - fraternity or sorority 5
5. My current marital status is
   - unmarried 1
   - married 2

Use the responses below to answer items 6-10 below.

- Yes, applies to me ..... Y
- No, does not apply to me ..... N

6. I am a United States citizen.
7. I am a legal resident of the state I recorded on my registration folder.

Many colleges make special provisions or offer programs for students with certain types of physical disabilities. The following item provides colleges with a way to communicate with prospective students about these provisions and programs. Colleges have indicated to ACT that your response will be used only for this purpose.

8. I have a physical handicap or diagnosed learning disability that may require special provisions or services from the college I attend.
9. I have served or am currently serving on active duty with the military forces.
10. I have previously earned college credit.

Educational Plans, Interests, and Needs

The items in this section deal with your special plans, interests, and educational needs.

College Major and Occupational Choice

For questions 11-13, examine the list of majors on the next page that begins with number 100 and ends with number 370. When you have decided on your answers, blacken the appropriate ovals on your registration folder.

Since we could not list all possible occupations and majors (programs of study), you may not be able to find an exact description of the one you plan to enter. If that is so, you may choose a general area—for example, 100 (Agriculture, General), 200 (Engineering, General), 220 (Fine and Applied Arts). If you are completely undecided, mark 000.

11. Which college major (program of study) do you plan to enter?
12. What is your first choice of occupation (vocation)?
13. Many people consider more than one occupation or vocation. What is your second choice?
14. How sure are you about your current choice of *college major*?
    - I am **very sure** 1
    - I am **fairly sure** 2
    - I am **not sure** 3
15. How sure are you about your first *occupational* choice?
    - I am **very sure** 1
    - I am **fairly sure** 2
    - I am **not sure** 3
16. What is the highest level of education you expect to complete?
    - Vocational/technical program (less than 2 years) 1
    - Two-year college degree 2
    - Bachelor's degree 3
    - One or 2 years of graduate study (MA, MBA, etc.) 4
    - Professional level degree (PhD, MD, LLB, JD, etc.) 5
    - Other 6
17. I estimate my overall grade point average at the end of my first year in college will be:
    - 0.5-0.9 (D- to D) 1
    - 1.0-1.4 (D to C-) 2
    - 1.5-1.9 (C- to C) 3
    - 2.0-2.4 (C to B-) 4
    - 2.5-2.9 (B- to B) 5
    - 3.0-3.4 (B to B+) 6
    - 3.5-4.0 (A- to A) 7
18. I am interested in participating in ROTC, NROTC, AFROTC, etc. (Reserve Officers' Training Corps).
    - Yes ..... Y
    - No ..... N

Special Educational Needs, Interests, and Goals

Many colleges offer special assistance for the individual development of students. You may wish to seek such assistance. Please respond Y or N to *each* item (19-24).

- Yes, applies to me ..... Y
- No, does not apply to me ..... N

19. I need help deciding on my educational and occupational plans.
20. I need help in expressing my ideas in writing.
21. I need help in improving my reading speed and comprehension.
22. I need help in improving my study skills.
23. I need help in improving my mathematical skills.
24. I would like help with personal concerns.

The next questions (25-39) relate to special college programs designed for students who want and are able to pursue academic work of an enriched or accelerated nature. Please respond Y or N to *each* item.

- Yes, I am interested and would like to be considered ..... Y
- No, I am not interested ..... N

25. Independent study (a program of study with topics chosen by the student, approved by the college and supervised by a professor, often part of an honors program)
26. Freshman honors courses (designed to challenge academically superior students)
27. Study in a foreign country during undergraduate years in college
28. Advanced placement in English
29. Advanced placement in mathematics
30. Advanced placement in social studies
31. Advanced placement in natural sciences
32. Advanced placement in French
33. Advanced placement in German
34. Advanced placement in Spanish
35. Advanced placement in other language

Some colleges allow students to receive credit for certain courses through the use of special testing procedures. Indicate in which subject areas you would be interested in obtaining credit by examination.

36. Credit by examination in English
37. Credit by examination in mathematics
38. Credit by examination in social studies
39. Credit by examination in natural sciences

LIST OF COLLEGE MAJORS AND OCCUPATIONAL CHOICES

100 **AGRICULTURE,** general
101 Agricultural Business
102 Agricultural Economics
103 Agricultural and Farm Management (farming and ranching)
104 Agriculture, Forestry, and Wildlife Technologies
105 Agronomy (field crops and crop management)
106 Animal Science (husbandry)
107 Fish, Game, and Wildlife Management
108 Food Science and Technology
109 Forestry
110 Horticulture/Ornamental Horticulture
111 Natural Resources Management (soil conservation)

120 **ARCHITECTURE,** general
121 Architecture Technology
122 City, Community, and Regional Planning
123 Environmental Design and/or Landscape Architecture
124 Interior Design

130 **BIOLOGICAL SCIENCES,** general
131 Biology
132 Biochemistry
133 Botany
134 Ecology
135 Microbiology
136 Zoology

140 **BUSINESS AND COMMERCE,** general
141 Accounting
142 Banking and Finance
143 Business Economics
144 Business Management and Administration
145 Food Marketing
146 Hotel and Restaurant Management
147 Labor and Industrial Relations
148 Office Management
149 Marketing and Purchasing (sales and retailing)
150 Real Estate and Insurance
151 Recreation and Tourism
152 Secretarial Studies
153 Transportation and Public Utilities

160 **COMMUNICATIONS,** general
161 Journalism
162 Radio/Television (related to broadcasting)
163 Advertising

170 **COMPUTER AND INFORMATION SCIENCES,** general
171 Computer Programming
172 Information Systems and Sciences
173 Systems Analysis
174 Data Processing Technology
175 Computer Operating
176 Data Systems Repair

180 **EDUCATION,** general
181 Agricultural Education
182 Art Education
183 Business, Commerce, and Distributive Education
184 Elementary Education
185 English Education
186 Home Economics Education
187 Industrial Arts, Vocational/Technical Education
188 Mathematics Education
189 Music Education
190 Physical Education
191 Science Education
192 Secondary Education, general
193 Social Science Education
194 Special Education
195 Speech Education

200 **ENGINEERING,** general
201 Aerospace, Aeronautical, and Astronautical Engineering
202 Agricultural Engineering
203 Architectural Engineering
204 Chemical Engineering
205 Civil/Construction Engineering
206 Electrical, Electronics, and Communications Engineering
207 Environmental and Ecological Engineering
208 Geological Engineering
209 Industrial and/or Management Engineering
210 Mechanical Engineering
211 Metallurgical and Materials Engineering
212 Mining and Mineral Engineering
213 Nuclear Engineering
214 Ocean Engineering
215 Petroleum Engineering

220 **FINE AND APPLIED ARTS,** general
221 Applied Design (ceramics, weaving, commercial art)
222 Art (painting, drawing, sculpture)
223 Art History and Appreciation
224 Dance
225 Dramatic Arts (theater arts)
226 Music (liberal arts)
227 Music (performing, composition, theory)
228 Music History and Appreciation
229 Photography/Cinematography

230 **FOREIGN LANGUAGES,** general
231 French
232 German
233 Italian
234 Latin
235 Spanish
236 Russian

240 **HEALTH PROFESSIONS,** general
241 Dentistry
242 Dental Assistant
243 Dental Hygiene
244 Dental Lab Technology
245 Environmental Health Technologies
246 Medicine
247 Medical Assistant or Medical Office Assistant
248 Medical or Laboratory Technology
249 Nursing (registered)
250 Nursing (licensed practical nurse)
251 Occupational Therapy
252 Optometry
253 Pharmacy
254 Physical Therapy
255 Public Health
256 Radiology
257 Radiologic Technology
258 Surgical Technology (surgeon's assistant, etc.)
259 Veterinary Medicine

260 **HOME ECONOMICS,** general
261 Clothing and Textiles
262 Consumer Economics and Home Management
263 Family Relations and Child Development
264 Foods and Nutrition (including dietetics)
265 Institutional Management

270 **LETTERS** (humanities), general
271 Classics
272 Comparative Literature
273 Creative Writing
274 English, general
275 Linguistics
276 Literature, English
277 Philosophy
278 Religion
279 Speech, Debate, Forensic Science

280 **MATHEMATICS,** general
281 Applied Mathematics
282 Statistics (mathematical and theoretical)

285 **PHYSICAL SCIENCE,** general
286 Astronomy
287 Chemistry
288 Earth Sciences
289 Geology
290 Oceanography
291 Physics

300 **COMMUNITY SERVICE,** general
301 Criminal Justice and Law Enforcement (police science, corrections, etc.)
302 Parks and Recreation Management
303 Public Administration
304 Social Work
305 Military

310 **SOCIAL SCIENCES,** general
311 Anthropology
312 Area Studies (American civilization, African studies, etc.)
Criminal Justice (see code 301)
313 Economics
314 Ethnic Studies (Black studies, Hispanic studies, etc.)
315 Geography
316 History
317 International Relations
318 Law (prelaw)
319 Political Science
320 Psychology
321 Sociology

330 **TRADE, INDUSTRIAL, AND TECHNICAL,** general
331 Agricultural Mechanics and Technology
332 Air Conditioning, Refrigeration, and Heating Technology
333 Aeronautical and Aviation Technology
334 Appliance Repair
335 Automobile Body Repair
336 Automobile Mechanics
337 Business Machine Maintenance
338 Carpentry and Construction
339 Drafting/Engineering Graphics
340 Engineering Technology—Electrical
341 Engineering Technology—Aeronautical
342 Engineering Technology—Automotive
343 Engineering Technology—Civil
344 Engineering Technology—Industrial/Manufacturing
345 Engineering Technology—Mechanical
346 Graphic Arts (printing, typesetting)
347 Heavy Equipment Operating
348 Dry Cleaning, Laundry, and Clothing Technology
349 Industrial Arts
350 Leatherworking (shoe repair, etc.)
351 Machinework (tool and die, etc.)
352 Masonry (brick, cement, stone, etc.)
353 Metalworking
354 Plumbing and Pipefitting
355 Radio/TV Repair
356 Small Engine Repair
357 Upholstering
358 Watch Repair and Other Instrument Maintenance and Repair
359 Welding
360 Woodworking (cabinetmaking, millwork)

370 **GENERAL STUDIES**
000 Undecided

College Extracurricular Plans

The next questions (40-55) list student activities you may be interested in at college. Please respond Y or N to *each* item.

Yes, I do plan to participate ..... Y
No, I do not plan to participate ..... N

40. Instrumental music
41. Vocal music
42. Student government
43. Publications (newspaper, yearbook, literary magazine)
44. Debate
45. Departmental clubs
46. Dramatics, theater
47. Religious organizations
48. Racial or ethnic organizations
49. Intramural athletics
50. Varsity athletics
51. Political organizations
52. Radio-TV
53. Fraternity or sorority
54. Special-interest groups (ski club, sailing club, judo club, card section, drill teams, etc.)
55. Campus or community service organizations

Financial Aid

The next four questions ask for information about financing your college education, which will be useful to college financial aid officers. Use the responses below to answer items 56-57.

Yes, applies to me ..... Y
No, does not apply to me ..... N

56. I expect to apply for financial aid to help meet college expenses.
57. I expect to work while attending college and would like help in finding employment.
58. About how many hours per week do you plan to work during your first year of college?
    - None 1
    - 1-10 2
    - 11-20 3
    - 21-30 4
    - 31 or more 5
59. To plan financial aid programs for entering students, colleges need to know the financial background of their students. Please estimate as accurately as possible your family's income. (Indicate total income before taxes.)
    - Less than $6,000 0
    - $6,000 to $11,999 1
    - $12,000 to $17,999 2
    - $18,000 to $23,999 3
    - $24,000 to $29,999 4
    - $30,000 to $35,999 5
    - $36,000 to $41,999 6
    - $42,000 to $49,999 7
    - $50,000 to $59,999 8
    - $60,000 and over 9

Background Information

Items 60-65 request information about you and your family.

60. Which of the following best describes the community in which you live?
    - Farm or open country 1
    - Town or city of:
      - Less than 500 population 2
      - 500-1,999 3
      - 2,000-9,999 4
      - 10,000-49,999 5
      - 50,000-249,999 6
      - 250,000-499,999 7
      - 500,000-999,999 8
      - More than 1 million 9
61. How many brothers and sisters under 21 years of age do you have?
    - None 0
    - One 1
    - Two 2
    - Three 3
    - Four 4
    - Five 5
    - Six 6
    - Seven 7
    - Eight 8
    - Nine or more 9
62. Indicate your religious affiliation or preference.
    - Assemblies of God 01
    - Baptist 02
    - Southern Baptist 03
    - Christian (Disciples of Christ) 04
    - Christian Reformed 05
    - Church of the Brethren 06
    - Church of Christ 07
    - Church of God 08
    - Church of the Nazarene 09
    - Eastern Christian Orthodox 25
    - Episcopal 10
    - Friends 11
    - Jewish 12
    - Latter-Day Saints 13
    - Lutheran 14
    - Lutheran—Missouri Synod 15
    - Methodist 16
    - African Methodist Episcopal (A.M.E.) 17
    - Presbyterian 18
    - Roman Catholic 19
    - Seventh Day Adventist 20
    - United Church of Christ 21
    - Other 22
    - None 23
    - I prefer not to respond 24
63. How far away do you live from the college you expect to attend?
    - Less than 10 miles 1
    - 10-25 miles 2
    - 26-100 miles 3
    - More than 100 miles 4
    - I have no particular college in mind yet 5
64. Is English the language most frequently spoken in your home?
    - Yes ..... Y
    - No ..... N
    - I prefer not to respond 0

Colleges often provide special educational programs and opportunities for students from particular racial or ethnic backgrounds. The following item provides colleges with a way to communicate with you about these programs and opportunities.

65. Which of the phrases below best describes your racial/ethnic group as generally recognized by your family and friends?
    - Afro-American/Black 1
    - American Indian, Alaskan Native 2
    - Caucasian-American/White 3
    - Mexican-American/Chicano 4
    - Asian-American, Pacific Islander 5
    - Puerto Rican, Cuban, other Hispanic origin 6
    - Other 7
    - I prefer not to respond 8

Factors Influencing College Choice

Items 66-77 concern factors influencing your college choice.

66. I prefer to attend the following type of college:
    - Public college or university (4-year) 1
    - Private college or university (4-year) 2
    - Public community or junior college (2-year) 3
    - Private junior college (2-year) 4
    - Vocational-technical school (2-year or less) 5
    - School of nursing 6
67. I prefer to attend a college that is
    - coeducational 1
    - all male 2
    - all female 3
    - no preference 4
68. In which *state* do you prefer to attend college? You may indicate up to five states in order of preference. Use the state code list on page 1 of your registration folder.
69. I prefer to attend a college with a maximum yearly tuition of (do not include room and board):
    - $500 1
    - $1,000 2
    - $2,000 3
    - $3,000 4
    - $4,000 5
    - $5,000 6
    - $7,500 7
    - $10,000 8
    - No preference 9

70. The size of the student body of the college I prefer to attend is
    - under 1,000 students 1
    - 1,000 to 5,000 students 2
    - 5,000 to 10,000 students 3
    - 10,000 to 20,000 students 4
    - 20,000 students and over 5

In selecting a college, how important to you are (were) the following factors? Please rank items 71-77 by assigning a 1 to the most important one, 2 to the next most important, and so on. Do *not* assign the same rank to more than one item. If you wish to omit one or more items, you may.

71. Type of institution (private, public; 4-year, 2-year)
72. Male/female composition of student body (for example, all male, all female, coeducational)
73. Location (state or region)
74. Tuition, cost
75. Size of enrollment
76. Field of study (major, curriculum)
77. A factor other than those listed above

High School Information

Items 78-189 concern information about your high school education and activities. **If you have been out of high school for 4 years or more, items 78-189 are optional; you may go directly to item 190.**

78. The high school from which I will (did) graduate can be best described as a
    - public high school 1
    - Catholic high school 2
    - private, independent school 3
    - private, denominational school 4
    - military school 5
    - other 6

79. The number of students in my high school graduating class is (was)
    - fewer than 25 1
    - 25-99 2
    - 100-199 3
    - 200-399 4
    - 400-599 5
    - 600-899 6
    - 900 or more 7

80. The percentage of students in my high school who are (were) of racial background similar to mine is (was)
    - 10% or less 1
    - between 11% and 25% 2
    - between 26% and 50% 3
    - between 51% and 75% 4
    - between 76% and 90% 5
    - 91% or more 6

81. My class rank in high school is (was) (If you are not sure, give your best estimate.)
    - top quarter 1
    - second quarter 2
    - third quarter 3
    - fourth quarter 4

82. My overall high school average is (was)
    - D- to D (0.5-0.9) 1
    - D to C- (1.0-1.4) 2
    - C- to C (1.5-1.9) 3
    - C to B- (2.0-2.4) 4
    - B- to B (2.5-2.9) 5
    - B to B+ (3.0-3.4) 6
    - A- to A (3.5-4.0) 7

83. The program of high school courses I took can best be described as
    - business or commercial 1
    - vocational-occupational 2
    - college preparatory 3
    - other or general 4

Years Certain Subjects Studied (Grades 9-12)

Items 84-93 concern the number of years you **will have studied** certain subjects **by the time you graduate** (or have studied, if you have graduated) from high school. Use the responses below to answer *all* the items in this group.

- Half-year 1
- One year 2
- One and a half years 3
- Two years 4
- Two and a half years 5
- Three years 6
- Three and a half years 7
- Four years or more 8
- I did not take any courses in the subject 9

84. English
85. Mathematics
86. Social studies (history, civics, geography, economics)
87. Natural sciences (biology, chemistry, physics)
88. Foreign language (Spanish)
89. Foreign language (German)
90. Foreign language (French)
91. Foreign language (other)
92. Business or commercial
93. Vocational-occupational

Advanced Placement, Accelerated, or Honors Courses

While in high school, I was enrolled in advanced placement, accelerated, or honors courses in the following areas. Use the responses below to answer all the items in this group.

- Yes ..... Y
- No ..... N

94. English
95. Mathematics
96. Social studies
97. Natural sciences
98. Foreign language

High School Extracurricular Activities

Items 99-114 list student extracurricular activities. Please answer Y or N to *each* item on the list.

- Yes, I participated in this activity ..... Y
- No, I did not participate in this activity ..... N

99. Instrumental music (band, orchestra)
100. Vocal music
101. Student government
102. Publications (newspaper, yearbook, literary magazine)
103. Debate
104. Departmental clubs (science club, math club, etc.)
105. Dramatics, theater
106. Religious organizations
107. Racial or ethnic organizations
108. Intramural athletics
109. Varsity athletics
110. Political organizations
111. Radio-TV
112. Fraternity, sorority, or other social clubs
113. Special interest groups (ski club, sailing club, judo club, card section, drill teams, etc.)
114. School or community service organizations

Out-of-Class Accomplishments

Items 115-177 deal with your high school out-of-class accomplishments. Please respond Y or N to *each* item.

- Yes, applies to me ..... Y
- No, does not apply to me ..... N

Leadership

115. Was appointed to a student office
116. Actively campaigned to elect myself or another student to a school office
117. Organized a school political group or campaign
118. Participated in a nonschool political campaign
119. Participated in a student movement to change institutional rules, procedures, or policies
120. Was elected to one or more student offices
121. Received an award or special recognition for leadership (of any kind)

Music

122. Composed music
123. Performed with a professional musical group (orchestra, band, choral group)
124. Performed in a school musical group
125. Gave a public recital (individual or group)
126. Played a musical instrument
127. Received a superior rating in a state music contest
128. Participated in a state music contest

Appendix B

Survey Questionnaire

ACT BACKGROUND DATA VERIFICATION STUDY

Student Name
Social Security Number of ACT ID Number
School Name
ACT School Code

Background Information

For the student named above, please check the appropriate blank for each item:

1. Rank in class:

   ___ Top quarter
   ___ Second quarter
   ___ Third quarter
   ___ Fourth quarter
   ___ Don't know

2. High school program:

   ___ Business or commercial
   ___ Vocational-occupational
   ___ College preparatory
   ___ Other or general
   ___ Don't know

3. Racial-ethnic background:

   ___ Afro-American/Black
   ___ American Indian, Alaskan Native
   ___ Caucasian-American/White
   ___ Mexican-American/Chicano
   ___ Asian-American, Pacific Islander
   ___ Puerto Rican, Cuban, Other Hispanic Origin
   ___ Other
   ___ Don't know

4. This student is a United States citizen:

   ___ Yes
   ___ No
   ___ Don't know

5. This student has a physical handicap or diagnosed learning disability that may require special provisions or services from the college that he/she attends:

   ___ Yes
   ___ No
   ___ Don't know

***** PLEASE COMPLETE OTHER SIDE *****

ACT BACKGROUND DATA VERIFICATION STUDY

In the following sections, check "Yes," "No," or "Don't know" for each item to indicate whether this student has taken part in the activity or achieved the accomplishment:

Extracurricular Activities

		Yes	No	Don't know
6.	Instrumental music (band, orchestra)	___	___	___
7.	Vocal music	___	___	___
8.	Student government	___	___	___
9.	Publications (newspaper, yearbook, literary magazine)	___	___	___
10.	Debate	___	___	___
11.	Departmental clubs (science club, math club, etc.)	___	___	___
12.	Dramatics, theater	___	___	___
13.	Intramural athletics	___	___	___
14.	Varsity athletics	___	___	___

Special Accomplishments

15.	Was appointed to a student office.	___	___	___
16.	Was elected to one or more student offices.	___	___	___
17.	Participated in a state music contest.	___	___	___
18.	Received a superior rating in a state music contest.	___	___	___
19.	Entered a school speech or debate contest.	___	___	___
20.	Placed first, second, or third in a regional or state speech or debate contest.	___	___	___
21.	Exhibited a work of art at school.	___	___	___
22.	Won a prize or award in an art competition at H.S.	___	___	___
23.	Worked on the staff of a school paper or yearbook.	___	___	___
24.	Had a work of creative writing published in a school literary magazine or newspaper.	___	___	___
25.	Participated in a National Science Foundation summer program for high school students.	___	___	___
26.	Won a prize or award (of any kind) for scientific work or study.	___	___	___
27.	Participated in one or more varsity athletic team events (football, basketball, etc.) while attending high school.	___	___	___
28.	Received all-city, league, county or state team award (including honorable mention).	___	___	___
29.	Participated in a work-study, distributive education, cooperative work program while enrolled in high school.	___	___	___