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ACT INFORMATION TRENDS SUMMARY

Colorado High School Students, 1968-69 Through 1973-74

Occasional Report No.1

Colorado Commission on Higher Education
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Background

Each year the American College Testing Program administers a battery of tests to high school students who anticipate attendance at college after high school graduation. Most colleges in Colorado and throughout the nation require prospective students to submit scores on either the ACT battery or the College Entrance Examination Board (CEEB) battery of tests or both. Students applying to various colleges can have their test scores sent to the colleges of their greatest interest. Colleges and universities use the tests for several purposes, some as an instrument in the selection and admission of freshmen and others as general information about incoming students for guidance and counseling purposes.

Since the ACT is generally taken by those high school students who intend to go to college, its representation is limited to the "college bound" high school students. Not all colleges in the State require ACT scores to be submitted as part of the admissions process. For example, urban colleges generally do not require the test because many incoming students to these colleges are older and have not previously taken the test or have taken it so long ago that the results are not valid because of the lapse of time. Nevertheless, the information presented on the following pages, because it is a sampling of college bound Colorado high school students, is useful for planning purposes in higher education at the statewide and institutional levels. The summary contains a brief analysis of the information on Tables A-E.

The information includes all high school juniors and seniors who took the ACT battery during the years identified, and approximately 40% of high school seniors took the test during those years. Students from virtually all school districts in the State took the examination and the information includes a large majority of high school seniors in Colorado who attended Colorado institutions of higher education in the year following that in which the test was taken. While the information is not as extensive or complete as we would like to have, it is the best available at the State level on characteristics and intentions of high school seniors who will be attending Colorado institutions of higher education.

It is doubtful that the population characteristics of the ACT examination groups have changed significantly during the years identified. Thus it is appropriate to compare information and identify trends from year to year in the ACT examination results. There is a need for more and better information about high school students so that adequate planning can be made in higher education to meet the needs of students and respond effectively to the needs of the regions, State, and nation.

Significant Findings

A. Table A--

Test Score Means and High School Grade Averages

1. In composite scores on the ACT exam there have been no significant trends upward or downward from 1968-69 to 1973-74.
2. Boys had higher composite scores than girls.
3. Boys scored higher on mathematics, social studies, and natural sciences and girls were higher on English.
4. Girls had higher high school grade averages than boys.
5. There was a significant rise each year in high school grade averages although the ACT composite scores remained relatively unchanged. This suggests that there has been more lenient (or "non-punitive") grading in the high schools. (Note: This phenomenon is also evident in the colleges and universities in the State and suggests that grade averages are less meaningful for purposes of differentiation of student ability at the high school and college levels. Whether this trend is desirable may be debatable, but the data suggests that teachers are providing less differentiation among students in their evaluations.)

B. Table B--

Comparisons with National Test Score Means

(Note: National norms do not represent an accurate national sampling since most of the students who take the examinations are concentrated in the Midwest, Rocky Mountain, Southwest and Southeast regions. However, the table does provide information on how Colorado students compare with

a broader sampling of students in the United States.)

1. Colorado students scored slightly higher on each of the area tests and the composite than the national norms during all years data were available except 1970-71, when the national norms were higher.
2. There was a slight downward trend in national norm area and composite scores, while Colorado scores were more stable.
3. National high school grade averages rose in a similar manner to Colorado averages during the six-year period.

C. Table C--

Proposed Major

1. There was a significant decrease over time in those students proposing to major in teacher education in college.
2. There was a slight increase in interest in agriculture and forestry as proposed majors.
3. There was an increasing interest over time in health related majors.
4. There was an increasing interest in business, politics, and disciplines related to persuasion from 1968-69 to 1971-72, but the proportion interested in those majors declined during the last two years.
5. Most other proposed majors were relatively stable in terms of interest of high school students.
6. The above information suggests that market conditions are related to student choice of proposed major. For example, the current condition

of apparent over-supply of teachers is reflected in the decreasing proportion of high school students choosing education as a proposed major. Likewise the increased occupational opportunities in health related occupations is related to the increasing percentage of students proposing to enroll in health related occupational training and education. This is perhaps due to the visibility and publicity of the supply and demand of the occupational market conditions and the information and career counseling provided in the high schools.

D. Table D--

Educational Plans

1. The proportion of students intending to pursue a two-year college degree remained relatively unchanged.
2. The proportion of students intending to pursue a bachelors degree diminished slightly over the six-year period.
3. The proportion of students intending to complete a year or two of graduate study (master's degree) diminished consistently over the six-year period.
4. The proportion of students intending to pursue doctor's degrees, medical degrees, and law degrees increased year by year during the period.
5. The information suggests that there has not been a significant shift in interest toward vocational-technical education or in two-year degree programs on the part of high school students planning to attend college. A need may still exist for students to be apprised of career opportunities

and expected developments in technical, professional and other occupations. The information may also reflect the fact that a large proportion of individuals interested in vocational-technical education in community colleges are those older students who are returning to formal education following a period of time after high school graduation.

E. Table E--

Estimated Family Income, Financial Aid, Employment

1. A decreasing percentage of students from families of less than \$3,000 per year intended to pursue a college education.
2. A significant decrease was also evident in the proportion of students from families between \$3,000 and \$7,500 estimated family income who intended to pursue a college education.
3. The proportion of students in the \$7,500-\$15,000 estimated family income range was relatively unchanged during the six-year period.
4. The proportion of students with estimated family incomes over \$15,000 increased significantly during the six-year period.
5. Part of the shift toward higher family incomes of students intending to pursue college can be explained by the fact that the average family income increased in Colorado over the years. Whether the entire shift can be explained by the increase in income is unknown without further information about the socioeconomic status of the population in Colorado during the six-year period. This information is not readily available at this time, but will be pursued along with its potential

implications for state policy in regard to access of low income students to the higher education system.

6. An increasing proportion of students indicated a need to obtain financial aid throughout their college years.
7. There was a dramatic increase in the proportion of students who indicated a need for employment while attending college.

TABLE A
 ACT PROFILE - COLORADO HIGH SCHOOL STUDENTS
 TEST MEANS AND HIGH SCHOOL GRADE AVERAGES

	English	Math	Soc. Studies	Nat. Sci.	Composite	H.S.G.A.
1968-69						
Boys	17.6	20.2	20.1	21.6	20.0	2.41
Girls	19.9	18.7	19.4	19.8	19.6	2.73
Total	18.7	19.4	19.8	20.7	19.8	2.58
1969-70						
Boys	17.6	21.4	20.6	22.3	20.6	2.53
Girls	19.5	18.8	19.2	20.7	19.7	2.78
Total	18.5	20.1	19.9	21.5	20.1	2.66
1970-71						
Boys	17.1	20.7	19.3	22.3	19.9	2.59
Girls	19.3	18.3	19.0	20.7	19.4	2.85
Total	18.2	19.4	19.1	21.4	19.7	2.72
1971-72						
Boys	17.2	20.9	20.0	23.0	20.4	2.70
Girls	19.1	18.3	19.1	20.9	19.5	2.94
Total	18.2	19.6	19.5	21.9	19.9	2.82
1972-73						
Boys	17.8	20.9	19.6	23.0	20.5	2.78
Girls	19.4	18.5	18.3	21.0	19.4	3.00
Total	18.6	19.6	18.9	21.9	19.9	2.90
1973-74						
Boys	17.5	20.6	19.7	23.5	20.4	2.86
Girls	19.1	17.8	18.0	20.7	19.0	3.03
Total	18.3	19.1	18.8	22.0	19.7	2.95

TABLE B

ACT PROFILE - NATIONAL & COLORADO HIGH SCHOOL STUDENTS
 TEST MEANS & HIGH SCHOOL GRADE AVERAGES

	English		Math		Soc. Studies		Nat. Sci.		Composite		H.S.G.A.	
	Nat'l	Colo.	Nat'l	Colo.	Nat'l	Colo.	Nat'l	Colo.	Nat'l	Colo.	Nat'l	Colo.
1968-69												
Boys	*	17.6	*	20.2	*	20.1	*	21.6	*	20.0	*	2.41
Girls	*	19.9	*	18.7	*	19.4	*	19.8	*	19.6	*	2.73
Total	*	18.7	*	19.4	*	19.8	*	20.7	*	19.8	*	2.58
1969-70												
Boys	17.6	17.6	21.1	21.4	20.3	20.6	21.6	22.3	20.3	20.6	2.51	2.53
Girls	19.4	19.5	18.8	18.8	19.0	19.2	20.0	20.7	19.4	19.7	2.78	2.78
Total	18.5	18.5	20.0	20.1	19.7	19.9	20.8	21.5	19.9	20.1	2.64	2.66
1970-71												
Boys	17.7	17.1	21.0	20.7	20.4	19.3	21.6	22.3	20.3	19.9	2.53	2.59
Girls	19.7	19.3	19.0	18.3	19.2	19.0	20.2	20.7	19.7	19.4	2.80	2.85
Total	18.6	18.2	20.1	19.4	19.9	19.1	21.0	21.4	20.0	19.7	2.66	2.72
1971-72												
Boys	*	17.2	*	20.9	*	20.0	*	23.0	*	20.4	*	2.70
Girls	*	19.1	*	18.3	*	19.1	*	20.9	*	19.5	*	2.94
Total	*	18.2	*	19.6	*	19.5	*	21.9	*	19.9	*	2.82
1972-73												
Boys	17.3	17.8	20.2	20.9	19.0	19.6	21.7	23.0	19.7	20.5	2.69	2.78
Girls	18.9	19.4	18.0	18.5	17.7	18.3	19.9	21.0	18.8	19.4	2.92	3.00
Total	18.1	18.6	19.1	19.6	18.3	18.9	20.8	21.9	19.2	19.9	2.81	2.90
1973-74												
Boys	17.1	17.5	19.7	20.6	19.1	19.7	22.2	23.5	19.7	20.4	2.76	2.86
Girls	18.6	19.1	17.1	17.8	17.3	18.0	19.6	20.7	18.2	19.0	2.96	3.03
Total	17.9	18.3	18.3	19.1	18.1	18.8	20.8	22.0	18.9	19.7	2.86	2.95

* Not available

TABLE C

ACT PROFILE - COLORADO HIGH SCHOOL STUDENTS

PROPOSED MAJOR

Proposed Major	68-69		69-70		70-71		71-72		72-73		73-74	
	#	%	#	%	#	%	#	%	#	%	#	%
Education	2,459	19	2,851	17	2,560	15	2,292	13	1,956	12		13
Soc. Sci. & Religion	1,227	10	1,903	11	2,013	11	1,925	11	1,583	10		10
Business and Related	1,986	16	2,849	17	2,967	17	3,546	20	3,139	19		16
Scientific	716	6	1,105	7	1,308	7	1,307	7	1,111	7		7
Agriculture & Forestry	441	3	558	3	743	4	924	5	758	5		6
Health	1,037	8	1,553	9	1,778	10	2,420	14	2,463	15		13
Arts & Humanities	1,419	11	2,325	14	2,543	14	2,454	14	2,239	14		15
Engineering	637	5	1,199	7	1,066	6	821	5	771	5		7
Trade, Industrial & Technical	497	4	663	4	599	3	746	4	680	4		3
Other	188	1	268	2	194	1	148	1	297	2		6
Housewife	11	0	13	0	6	0	17	0	19	0		
Undecided	2,000	16	1,557	9	1,780	10	1,106	6	1,155	7		6
No Response			111		123		142		143			
Total No. of Students	12,618		16,844		17,557		17,706		16,171			16,795

TABLE D

ACT PROFILE - COLORADO HIGH SCHOOL STUDENTS

EDUCATIONAL PLANS

Degree Sought	68-69		69-70		70-71		71-72		72-73		73-74	
	#	%	#	%	#	%	#	%	#	%	#	%
H. S. Diploma	80	1	118	1	158	1	191	1	206	1		
VO/Tech. or Certificate	423	3	426	3	579	3	669	4	564	3	550	3
2 Yr. College Degree	1,559	12	2,322	14	2,509	14	2,696	15	2,251	14	2,208	13
Bachelor's or equivalent	5,946	46	7,386	44	7,410	42	7,202	41	6,815	42	6,833	41
1 or 2 Yrs. Grad. (MA, MBA)	2,074	24	3,850	23	3,746	21	3,582	20	2,916	18	3,042	18
Ph.D., Ed.D., MD, DDS, Law Degree, Bach. of Divinity (B.D.)	1,158	8	1,999	11	2,271	13	2,531	15	2,636	16	3,144	19
Other	565	4	772	5	879	5	849	5	826	5	1,026	6

TABLE E

ACT PROFILE - COLORADO HIGH SCHOOL STUDENTS

ESTIMATED FAMILY INCOME

	1968-69		1969-70		1970-71		1971-72		1972-73		1973-74	
	#	%	#	%	#	%	#	%	#	%	#	%
Less than \$3,000 yr.	448	3	448	3	411	2	401	2	391	2	438	3
\$3,000- \$7,500	3,157	24	3,155	19	2,777	16	2,350	14	1,811	11	1,933	12
\$7,500- \$15,000	4,200	33	6,025	36	5,773	33	5,930	33	5,340	33	6,069	36
\$15,000 & over	1,266	9	2,467	15	2,875	16	2,879	16	3,177	20	3,848	23
Confidential or Do Not Know	3,736	29	4,734	29	5,590	32	6,114	34	5,429	34	3,854	23

FINANCIAL AID

	1968-69		1969-70		1970-71		1971-72		1972-73		1973-74	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes, all through college		48	8,812	52	9,278	53	9,349	53	8,516	53		59
Yes, not first year		19	1,837	11	1,736	10	1,683	9	1,530	9		
Probably never		33	6,234	37	6,564	37	6,715	38	6,147	38		

NEED EMPLOYMENT

	1968-69		1969-70		1970-71		1971-72		1972-73		1973-74	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes			4,726	28	5,409	31	5,178	30	6,603	42		61
No			12,102	72	12,070	69	11,985	70	9,155	58		39