COLLEGE READINESS

CASE STUDY

Statewide Administration of the ACT: A Key Component in Improving Student Access to College and Work

Since statewide administration of the ACT began in Colorado and Illinois, one or both states have seen the following improvements:

- *Increases in students' academic achievement that parallel national trends*
- *Increases in college readiness that parallel national trends*
- *Increases in the numbers of students considering college*
- *Increased college enrollment and steady retention*

In addition, statewide administration of the ACT can offer the following benefits:

- *Improved workforce planning and career counseling information*
- *Increased economic benefits to students and states*

ACT®

Introduction

In recent years there has been an increasing focus among states on the importance of preparing all students for college and work. The educational aspirations of American young people have never been higher, and they continue to grow (U.S. Department of Education, 2005). However, for many, the dream of graduating from college remains a dream. Lacking adequate academic planning and preparation, many students do not even see college as an option. And, unlike college graduates, those who do not go to college or who drop out before completing college face greater obstacles throughout their lives, including higher levels of unemployment (U.S. Department of Labor, 2004), dependence on social assistance (Vernez, Krop, & Rydell, 1999), and incarceration (Harlow, 2003).

These converging issues have led a number of states to raise the expectations of students when they graduate from high school and to use a college admissions and placement program as their high school student assessment program.

Statewide administration of the ACT provides all students, including those who have never considered college as an option, with the opportunity to identify academic strengths and weaknesses, explore educational and career interests, set high standards for academic achievement, and prepare to meet their educational and career goals. Statewide ACT administration also increases awareness among educators and policymakers of the important role that educational planning and preparation play in ensuring college readiness. And, since the ACT is accepted by virtually all postsecondary institutions across the U.S. for college admission and course placement, it provides students with a credential that they can use when they leave high school.

Five states—Colorado, Illinois, Kentucky, Michigan, and Wyoming—currently administer the ACT to all their public high school students. This case study focuses on results from Colorado and Illinois, where statewide administration has been in place the longest (since 2001). Colorado uses the ACT in the Colorado Student Assessment Program (CSAP) as an eleventh-grade achievement-based assessment that gives the state an indication of how well its public schools are performing at educating students at the K–12 level. Illinois also administers the ACT to all of its public high school juniors as part of its Prairie State Achievement Exam (PSAE). Illinois uses the ACT to measure student progress on meeting state learning standards.

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Average ACT scores in Colorado and Illinois have increased since statewide administration began.

In the years since statewide ACT administration began, improvements have occurred in one or both of the two states in the following areas:

- student academic achievement
- student readiness for college
- the number of students considering college
- college enrollment and retention

In addition, statewide administration of the ACT can offer the following benefits:

- improved workforce planning and career counseling information
- economic benefits to students and states

1. Increases in academic achievement parallel national trends

Since statewide administration of the ACT for high school juniors in Colorado and Illinois began in spring 2001, average ACT scores increased for all high school graduates from both states. As shown in Tables 1 and 2, from 2002 to 2007:

- Average ACT Composite scores increased from 20.1 to 20.4 in Colorado and from 20.1 to 20.5 in Illinois.

- Increases in average ACT scores for *all* Colorado and Illinois students were similar to those seen for all ACT-tested *college-bound* high school graduates nationally. (Average scores nationally increased from 20.2 to 20.7 in English, from 20.6 to 21.0 in Mathematics, from 21.1 to 21.5 in Reading, from 20.8 to 21.0 in Science, and from 20.8 to 21.2 for the Composite score).

- Increases in average ACT scores occurred for all racial/ethnic groups and for both males and females. In Illinois, average ACT English, Science, and Composite scores increased for lower-income students.

Table 1: Average ACT Scores for Colorado High School Graduates

	English		Mathematics		Reading		Science		Composite	
Group	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**
All Students	19.3	19.7	19.8	20.1	20.4	20.8	20.2	20.4	20.1	20.4
African American	16.0	16.2	16.8	16.9	17.0	17.3	17.2	17.7	16.9	17.2
Asian American	18.8	19.6	21.0	21.6	19.8	20.6	20.2	21.1	20.1	20.9
Hispanic	15.6	15.8	17.0	17.3	17.0	17.3	17.5	17.7	16.9	17.2
White	20.6	21.4	20.8	21.3	21.7	22.2	21.2	21.7	21.2	21.8
Lower-Income	17.0	16.9	17.9	17.8	18.3	18.3	18.5	18.4	18.1	17.9
Female	19.9	20.4	19.4	19.7	20.8	21.3	19.9	20.2	20.1	20.5
Male	18.7	19.0	20.3	20.4	20.0	20.1	20.5	20.6	20.0	20.2

Note: race/ethnicity and family income are self-reported by ACT-tested students; "Lower-Income" refers to an annual family income of $30,000 or less.

Table 2: Average ACT Scores for Illinois High School Graduates

	English		Mathematics		Reading		Science		Composite	
Group	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**
All Students	19.4	20.2	20.2	20.4	20.3	20.5	20.0	20.4	20.1	20.5
African American	15.9	16.4	16.5	16.7	16.6	16.8	16.6	17.1	16.5	16.9
Asian American	21.1	22.4	23.5	23.8	21.5	22.1	21.7	22.5	22.1	22.8
Hispanic	16.4	17.2	17.7	18.1	17.6	17.8	17.7	18.1	17.5	17.9
White	21.0	21.8	21.4	21.7	21.7	22.0	21.3	21.7	21.5	22.0
Lower-Income	16.6	17.2	17.8	17.8	17.8	17.6	17.9	18.0	17.6	17.8
Female	19.9	20.5	19.8	19.9	20.6	20.6	19.7	20.0	20.1	20.4
Male	18.8	19.7	20.6	20.8	19.9	20.3	20.4	20.7	20.1	20.5

Increases in average ACT scores in Colorado and Illinois parallel national trends even though all public high school graduates in the two states take the ACT while the majority of ACT-tested students in the nation as a whole are college bound.

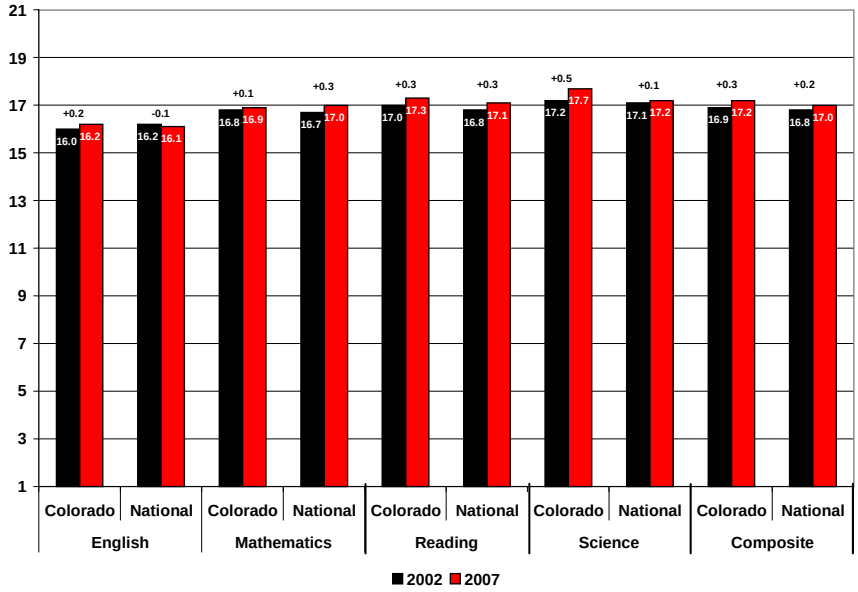
Whereas the score trends are parallel, however, the groups being compared differ. In Colorado and Illinois, *all* public high school graduates, regardless of college intentions, took the ACT. For the nation as a whole, the vast majority of test takers were college-bound students.

Among lower-income students, average ACT Composite scores declined slightly between 2002 and 2007 in Colorado, while they rose slightly in Illinois. At the same time in the nation as a whole the trend for lower-income students was generally flat (ACT, 2007).[1]

For some underrepresented racial/ethnic groups, increases in average ACT scores in Colorado and Illinois were larger than those seen for underrepresented minority ACT-tested high school graduates nationally. For example, Figure 1 presents average ACT score increases for African American students in Colorado and the nation. Relative to African American students nationally, larger increases were observed for Colorado African American students in English, Science, and the Composite score; similar increases were observed in Reading. In Mathematics, Colorado African American students still lagged behind the achievement of African American students nationally.

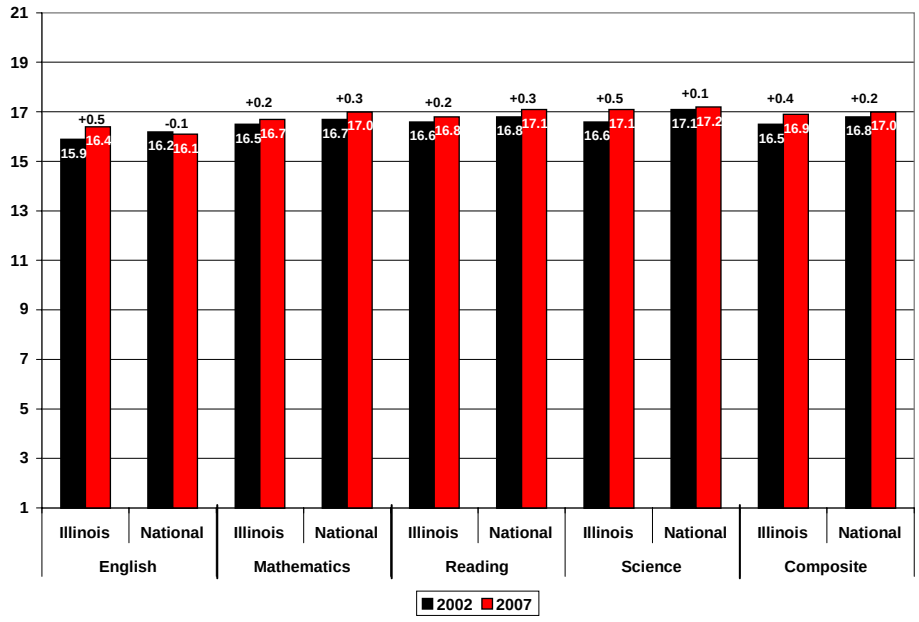
[1] However, in Colorado there was a 21 percent increase between 2002 and 2007 in the number of students in the lower-income group. Illinois saw a 9 percent increase in number over the same time period. Meanwhile, in the nation as a whole, the number of students in the lower-income group increased by only 3 percent between 2002 and 2007.

Figure 1: Average ACT Scores for ACT-Tested African American High School Graduates in Colorado and the Nation



Comparable results were also found for Illinois African American students (Figure 2).

Figure 2: Average ACT Scores for ACT-Tested African American High School Graduates in Illinois and the Nation



Trends in educational achievement, as measured by ACT test scores, in the years since statewide ACT administration began in Colorado and Illinois have roughly paralleled those for the nation as a whole. This is encouraging because unlike in other states, the test-taking populations in Colorado and Illinois include students not planning to attend college.

2. Increases in college readiness parallel national trends

Students who complete the college preparatory core curriculum improve their chances of meeting the ACT College Readiness Benchmarks. Each Benchmark is an indicator of whether a student has the knowledge and skills needed to have a reasonable chance of success in a particular college course. The ACT Benchmarks (English = 18, Mathematics = 22, Reading = 21, and Science = 24) represent the scores required for at least a 50 percent chance of achieving a B or higher grade—or at least a 75 percent chance of a C or higher grade—in entry-level, credit-bearing college English composition, algebra, social sciences, and biology courses, respectively. Therefore, students who meet the ACT Benchmarks are considered to be ready for college and are much more likely to be successful in college.

Tables 3 and 4 illustrate trends in the college readiness of high school graduates in Colorado and Illinois. Improvements in college readiness were found for students from most racial/ethnic groups. The general trend in college readiness for *all* students in Colorado and Illinois was similar to that of college-bound students nationally.

Table 3: Percentages of ACT-Tested Colorado High School Graduates Meeting the College Readiness Benchmarks

	English		Mathematics		Reading		Science		No Benchmarks		All Benchmarks	
Group	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**
All Students	61	63	34	37	49	47	24	24	33	33	18	20
African American	37	38	13	13	25	21	07	07	59	58	05	04
Asian American	57	62	42	48	45	46	20	28	34	31	17	23
Hispanic	35	36	14	15	25	23	07	08	60	60	05	05
White	71	75	41	46	57	57	29	31	23	21	23	26
Lower-Income	45	43	19	19	34	30	12	10	49	52	08	07
Female	65	67	31	35	51	50	20	22	31	30	16	18
Male	57	58	38	39	46	43	27	26	36	36	21	21

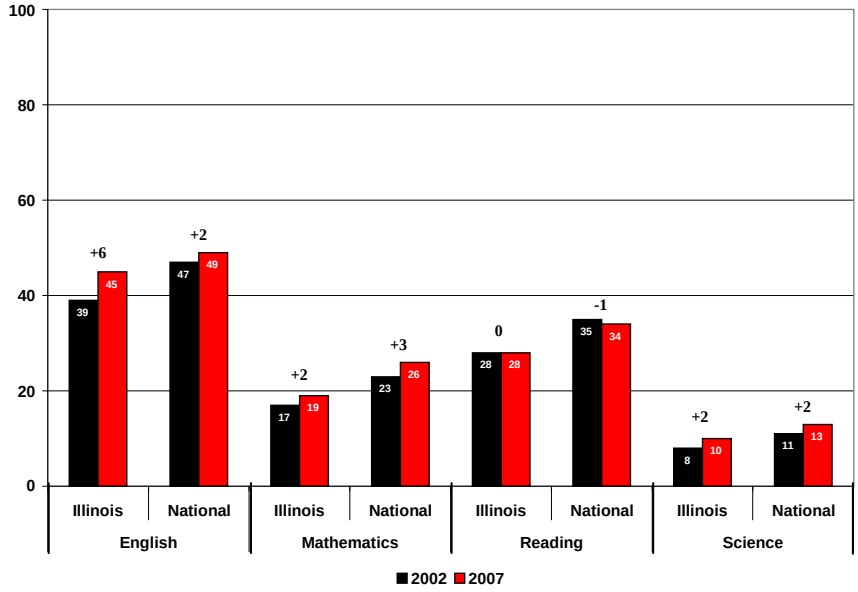
Table 4: Percentages of ACT-Tested Illinois High School Graduates Meeting the College Readiness Benchmarks

	English		Mathematics		Reading		Science		No Benchmarks		All Benchmarks	
Group	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**	**2002**	**2007**
All Students	60	65	36	38	46	47	23	25	34	31	19	21
African American	35	39	10	10	20	20	04	05	61	58	03	03
Asian American	70	75	59	61	54	57	34	41	23	20	29	35
Hispanic	39	45	17	19	28	28	08	10	55	50	06	07
White	72	76	46	48	56	58	30	33	23	20	25	28
Lower-Income	41	45	18	17	29	27	10	09	53	51	07	07
Female	64	67	34	34	48	47	20	22	32	30	17	19
Male	57	62	39	41	44	46	27	28	37	33	21	23

For some underrepresented racial/ethnic groups, improvements in college readiness in Colorado and Illinois were greater than those seen for college-bound underrepresented minority ACT-tested high school graduates nationally. For example, Figure 3 presents increases in the percentages of Hispanic

students who are college ready in Illinois and the nation. Relative to Hispanic students nationally, greater improvement in college readiness in English was observed for Illinois Hispanic students, while similar improvement was observed in science. College readiness levels in Reading remained the same for Illinois Hispanic students but decreased by one percentage point for Hispanic students nationally. This happened while *all* students were taking the ACT in Illinois and only college-bound students were taking the ACT in most other states.

Figure 3: Percentages Meeting ACT Benchmarks for ACT-Tested Hispanic High School Graduates in Illinois and the Nation



The same pattern did not hold for Colorado's Hispanic students. Relative to Hispanic students nationally, their improvements in college readiness in English, mathematics, and science were not as large, and their college readiness in reading declined slightly.

Trends in college readiness in the years since statewide ACT administration began in Colorado and Illinois have roughly paralleled those for the nation as a whole. Again, this is particularly noteworthy because *all* students took the ACT in these two states, whereas only college-bound students took the ACT in other states.

For some groups, increases in college readiness exceeded the national trend. They include:

- Asian American students in English, mathematics, and science in Colorado, and in reading and science in Illinois
- All students in Illinois in English
- White and female students in Colorado in mathematics

Other groups, however, actually saw decreases in college readiness between 2002 and 2007. They include, most notably, lower-income students in both Colorado and Illinois in science and social science, and in Colorado in English, as well as African American and male students in Colorado in social science.

3. Students considering college

More Colorado and Illinois students are in the college pipeline since statewide administration of the ACT began.

Statewide administration of the ACT for high school juniors in Colorado and Illinois began in spring 2001. As a result, the numbers of high school graduates completing the ACT increased substantially in both states (see Table 5).

Table 5: Number of High School Graduates Taking the ACT

Colorado	**2001**[A]	**2007**
All students	27,260	49,146
African American	845	1,840
Asian American	965	1,585
Hispanic	2,602	6,571
White	19,702	26,304
Lower-Income	4,162	7,977
Illinois		
All students	89,311	140,483
African American	9,871	16,856
Asian American	4,650	5,097
Hispanic	6,597	14,025
White	61,167	72,863
Lower-Income	16,102	24,454

Note: The counts do not sum to the reported totals because of missing data.
[A] Before statewide administration of the ACT.

As shown in Table 5, from 2001 to 2007 the numbers of ACT-tested high school graduates from all racial/ethnic groups increased substantially in both states. This was especially true for African American students and Hispanic students. The number of ACT-tested, lower-income students also increased substantially.

Taking the ACT can encourage many students to explore their educational and career interests, define goals for further education, and begin to think about how to reach these goals. Statewide ACT administration also fosters collegiate outreach to targeted populations. Because most postsecondary institutions begin their recruitment efforts before grade 12, statewide junior-year administration of the ACT facilitates earlier contact between postsecondary institutions and students.

For many students, the statewide administration of the ACT is the only administration of the ACT® test in which they participate. Statewide ACT administration may remove barriers that previously prevented some students from testing (cost of test, Saturday testing, low or no college aspirations or awareness, low self-confidence, etc.). Table 6 presents the percentages of 2007 ACT-tested high school graduates who took the ACT only once, by state and for the nation. Relative to ACT-tested students nationally, more students in Colorado took the ACT only once (70 percent versus 57 percent). In Illinois, where a voucher program exists to support students who wish to retake the ACT, 56 percent of ACT-tested students took the ACT only once. In both Colorado and Illinois, Hispanic students and lower-income students are much more likely to rely on statewide administration as their sole source for ACT testing.

Each year, hundreds of high school graduates in Colorado and Illinois enroll in college who before taking the ACT had not planned to attend college.

Table 6: Percentages of 2007 ACT-Tested High School Graduates Who Took the ACT Only Once

Group	Colorado	Illinois	National
All students	70	56	57
African American	67	60	58
Asian American	61	32	57
Hispanic	80	69	73
White	66	50	52
Lower-Income	85	79	67

Statewide ACT administration is a key step towards making college enrollment a reality for high school students from all backgrounds, including many who might otherwise have not considered college as an option. Students who would not ordinarily plan to continue their education beyond high school may become aware of their potential for success in college. This benefit is reflected in the results shown in Table 7; this table records the numbers of students who indicated later that they had no plans for college at the time of statewide testing, but then later enrolled in college.

Table 7: Students with No College Plans at Time of Statewide Administration Who Enrolled in College

Colorado	2002	2003	2004	2005	2006	Total
Number of students[A]	1,478	1,764	1,684	1,750	1,528	8,204
Number of college enrollees[B]	223	232	237	205	185	1,082
Percent of Total						13
Illinois						
Number of students[A]	3,593	3,940	3,524	3,162	3,310	17,529
Number of college enrollees[B]	643	726	624	563	618	3,174
Percent of Total						18

[A] This row includes the number of students who took the statewide test in 11th grade and who graduated the next year.
[B] Students enrolled in college during the first or second fall term after high school graduation.

By any standard, the number of Colorado and Illinois high school students taking the ACT increased substantially after the implementation of statewide testing, thereby exposing some students to the world of college admissions who would otherwise not have been exposed. In Colorado and Illinois, 13 and 18 percent, respectively, of students who had not planned to attend college at the time they took the ACT ended up enrolling in college. In states without statewide ACT testing, such students generally do not take the ACT.

In the section that follows, we examine college enrollment and retention data for ACT-tested high school graduates from Colorado and Illinois.

4. Increased college enrollment and steady retention

Since statewide implementation of the ACT, both Colorado and Illinois have experienced steady increases in the numbers of ACT-tested high school graduates from all backgrounds enrolling in college the fall following high school graduation (Table 8). From 2002 to 2007, the percentage of Colorado

and Illinois high school graduates who enrolled in college the fall following high school graduation increased by 1 and 2 percentage points, respectively.

College retention rates in Colorado and Illinois held steady even as college enrollment increased.

Table 8: Percentages of ACT-Tested Colorado and Illinois High School Graduates Who Enrolled in College[A]

State	2002	2006	2007	Increase from 2002–2007
Colorado				
ACT-Tested H.S. Graduates[A]	43,253	47,105	49,146	5,893
ACT-Tested Fall Freshmen	23,373	25,757	26,899	3,526
Percent Enrolled	54	55	55	1
Illinois				
ACT-Tested H.S. Graduates[A]	127,219	137,399	140,483	13,264
ACT-Tested Fall Freshmen	77,386	85,933	88,270	10,884
Percent Enrolled	61	63	63	2

[A] Counts differ from those in the ACT High School Profile Report for 2002; duplicate records with differing Social Security numbers were dropped.

Not only are more students in Colorado and Illinois enrolling in college after high school graduation, but most are also returning for their second year of college. In Table 9, we display the numbers and percentages of students who enrolled in college in the fall of their high school graduation year and who returned to college the subsequent fall, whether to the same college or to another.

- 69 percent of Colorado's 2002 and 2006 high school graduates who enrolled in college returned to the same college for their second year, and 83 percent returned to any college for their second year.

- 75 percent of Illinois's 2002 high school graduates and 74 percent of Illinois's 2006 high school graduates who enrolled in college returned to the same college for their second year, and 85 to 86 percent returned to any college for their second year, representing slight declines in both measures.

- The retention rates in Illinois and Colorado are close to those for 2006 ACT-tested high school graduates nationally even though there was a substantial increase in the number of public high school graduates enrolling in college who had not originally planned to enroll.

Table 9: ACT-Tested High School Graduates Who Enrolled in College and Returned for Second Year[A]

	2002		2006	
	No.	**Pct.**	**No.**	**Pct.**
Colorado				
Returned to Same College in Year 2	16,134	69	17,874	69
Returned to Any College in Year 2	19,349	83	21,270	83
Number Enrolled	23,373		25,757	
Illinois				
Returned to Same College in Year 2	58,151	75	63,859	74
Returned to Any College in Year 2	66,615	86	73,387	85
Number Enrolled	77,386		85,933	
National[A]				
Returned to Same College in Year 2			624,788	73
Returned to Any College in Year 2			721,249	85
Number Enrolled			850,108	

[A] Retention data were not available for 2002 ACT-tested high school graduates nationally.

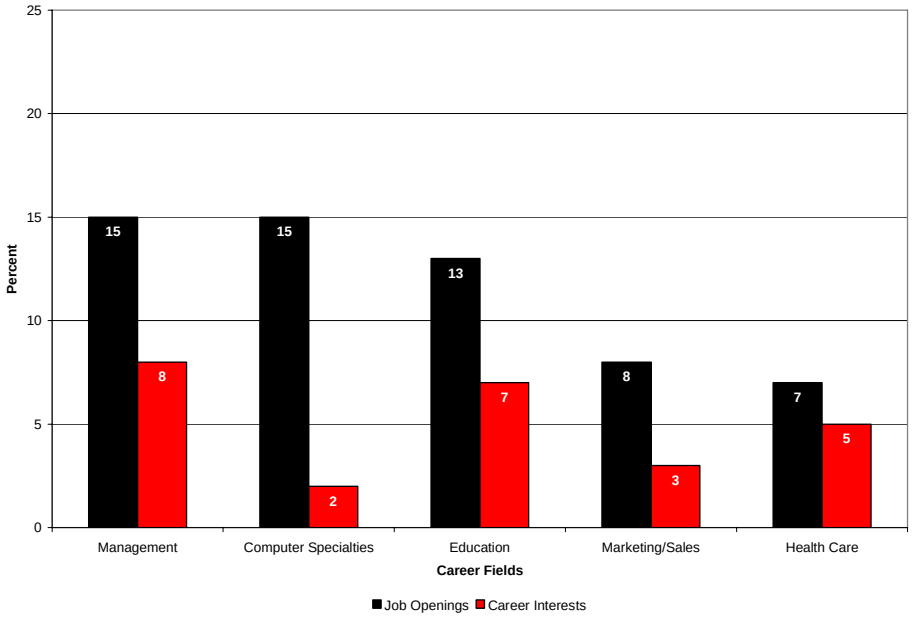
Statewide implementation of the ACT exposed some Colorado and Illinois students to the world of college admissions who would otherwise not have been exposed. Some of these students went further and explored the possibility of enrolling in college. Some of those students ended up enrolling, and some of them re-enrolled a second year. The second year re-enrollment rates for Colorado and Illinois college freshmen were close to the national average even with the addition of students new to the idea of going to college.

5. Improved workforce planning and career counseling information

As part of the ACT, students respond to questions about their occupational preferences. They also complete ACT's Interest Inventory, which provides results that allow them to explore programs of study and occupations that are in keeping with their interests. Career counselors can use this information to help guide students towards occupations and postsecondary education and training programs that are aligned with their interests. Further, they can identify students whose interests are congruent with expected opportunities in the state's job market. For example, the Colorado Department of Labor and Employment (2008) estimates that in Colorado over the next eight years there will be an annual average of 86,123 job openings, but opportunities will vary by occupation. Every high school student taking the ACT lists their occupational choices. With that information, career counselors can inform these students if there will be a strong demand for their preferred professions in their state and help them prepare for those careers or suggest others.

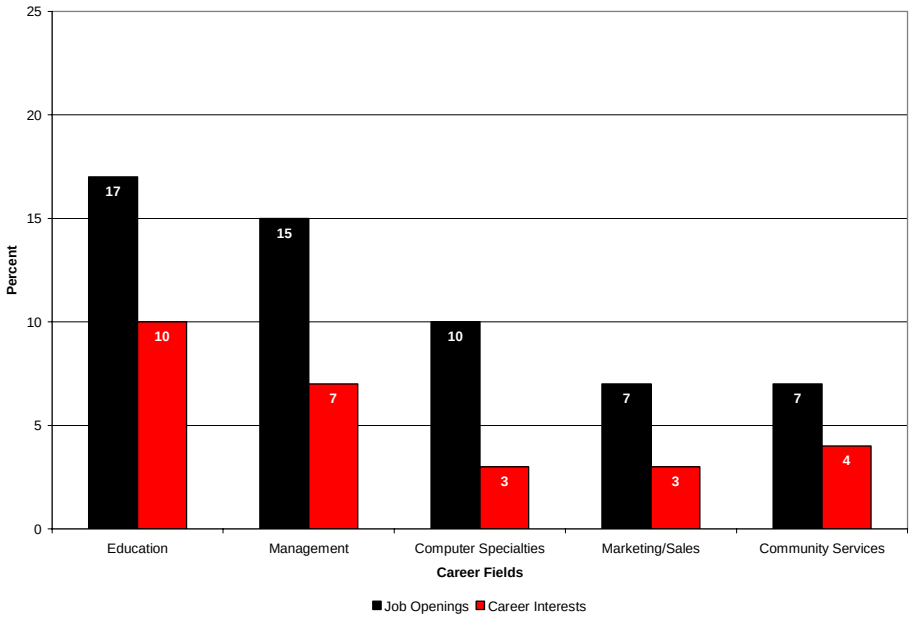
In addition to informing individual students, results from the statewide ACT can help states forecast the supply and demand of occupations. By comparing each cohort's career interests to expected career opportunities, state planners and policymakers can get a better idea of where shortages will occur. (ACT's most recent comparisons for Colorado and Illinois appear in Figures 4 and 5, respectively.) With such information, states can initiate programs that fulfill projected state workforce needs.

Figure 4: Projected Annual Job Openings and Colorado High School Students' Interests in High-Growth Colorado Career Fields[A,B]



[A] State projections 2004–2014 provided by Colorado Department of Labor and Employment (2008).
[B] Based on 2008 ACT-tested Colorado students (n = 30,771) with valid career information.

Figure 5: Projected Annual Job Openings and Illinois High School Students' Interests in High-Growth Illinois Career Fields[A,B]



[A] State projections 2004–2014 provided by Illinois Department of Employment Security (2008).
[B] Based on 2008 ACT-tested Illinois students (n = 87,718) with valid career information.

6. Increased economic benefits to students and states

Upon graduation from college, students have more career opportunities and are better able to pursue their interests. Over their working lives, high school graduates earn, on average, about $1.1 million; college graduates typically earn almost twice that amount (U.S. Department of Education, 2004). Aside from the obvious monetary awards, quality of life is enhanced for college graduates who achieve career satisfaction while providing security for themselves and their families.

Statewide ACT administration can lead to a long-term return on investment in the form of increased state tax revenues. Because they qualify for and typically occupy higher-paying jobs, college graduates have more disposable income and pay more local, state, and federal taxes (Institute on Taxation and Economic Policy, 2003). Table 7 shows that 1,082 students in Colorado and 3,174 in Illinois indicated that they had no college plans during statewide testing in the period 2002–2006 but went on to enroll in college. If one-fourth of these students were to graduate from college and each were to earn, on average, $1 million more over their lifetimes than if they had not graduated, this would bring increases in taxable income of over $270 million in Colorado and over $790 million in Illinois. Assuming a typical tax rate of 9.9 percent (Institute on Taxation and Economic Policy, 2003), this would give lifetime increases in state tax revenue of almost $27 million in Colorado and almost $79 million in Illinois. In addition, with better jobs and improved career satisfaction, governments could expect lower expenditures on welfare and other assistance programs. Further, the United States would be more competitive in the global marketplace with a more educated workforce.

Conclusion

Since 2001, the states of Colorado and Illinois have paved the way in adopting the ACT as part of their statewide assessment programs. These findings demonstrate that some positive changes have occurred since the introduction of statewide ACT administration in each state. The most dramatic change has been in the number of students considering college after statewide implementation. The pool of students interested in college in each state increased and subsequently so have college enrollments.

With the addition of non-college-bound students to the ACT test-taking population, moreover, one might have expected declines in Colorado and Illinois on other indicators, such as average ACT scores, percent of students who are ready for college, and second-year college re-enrollment. But Colorado's and Illinois's trends on these measures have paralleled national trends.

Certainly much work remains to be done. The benefits of statewide adoption have not impacted all groups equally, especially lower-income students. Statewide adoption of the ACT appears to benefit states by enlarging the pool of students who consider college and then take the necessary steps to prepare themselves for it. Helping lower-income students to take those steps could help them to take advantage of the benefits that other students already enjoy.

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