



The Future Workforce of North Dakota

North Dakota's labor force and economy are strengthened when the state's high school graduates are prepared for college and are interested in pursuing available jobs in North Dakota. Academic preparation is critical, given that many of the projected high growth job openings in North Dakota will require a 2-year college degree or more. In North Dakota, five of the expected highest growth career fields will be education, management, health care, computer specialties, and engineering. Do North Dakota's future workers have the necessary skills to fill positions in these high-growth careers? Are North Dakota's future workers interested in jobs in these fields?

Using 2008 ACT results for 3,745 North Dakota high school graduates with career interest information, and 2006-2016 North Dakota state long-term occupational projections (based on job growth and job replacement), here is what we know so far.

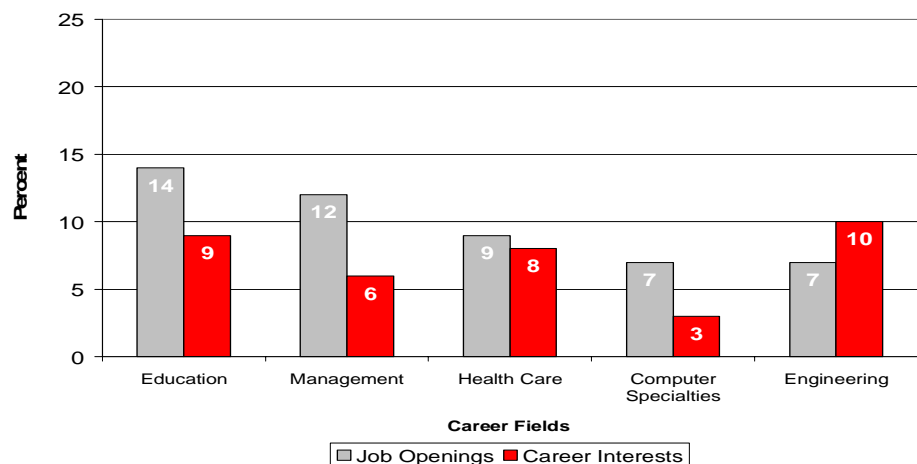
- There is some interest among North Dakota high school students in pursuing these high-growth career fields, but not enough to meet the demand.
- Of North Dakota students expressing interest in these high-growth career fields, more than two-thirds are ready for first-year college English courses, while less than two-thirds are prepared for college-level social science courses.
- Of North Dakota students expressing interest in many of these high-growth career fields, less than one-half are ready for college-level math or science courses.

North Dakota educators should continue to encourage their students to pursue high-growth North Dakota career fields.

Students' Interests

- Gaps between expected jobs and interested students are apparent for careers in education (secondary teachers, administrators, etc.), management (convention planners, hotel/restaurant managers, etc.), health care (nurses, occupational therapists, etc.), and computer specialties (computer programmers, database administrators, etc.), with more jobs expected than students interested in jobs in these fields (Figure 1). North Dakota may be faced with potential labor shortfalls in fields where skilled individuals are most needed.

Figure 1: Projected Annual Job Openings and North Dakota High School Students' Interests in High Growth North Dakota Career Fields^{1, 2}

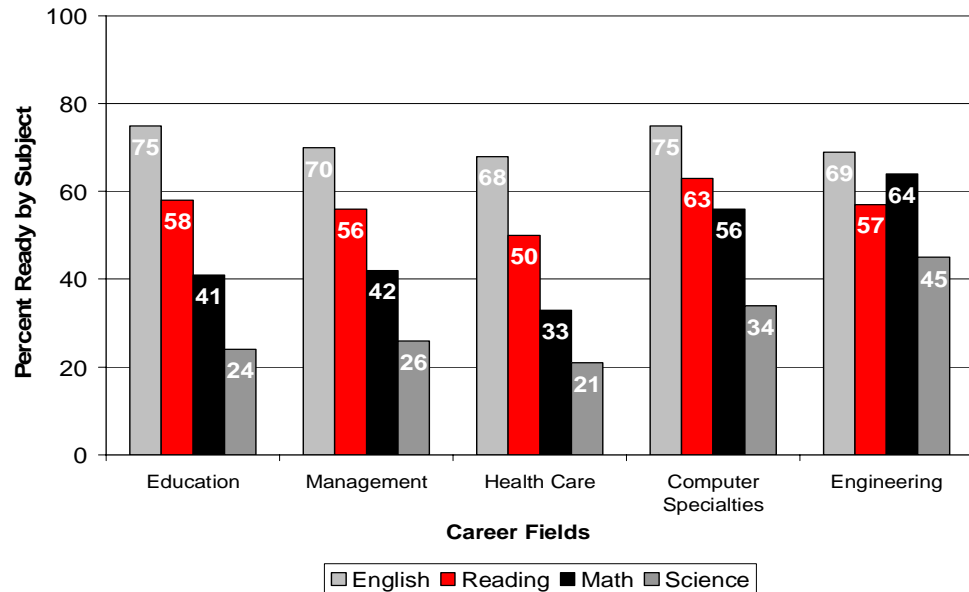


¹State projections 2006-2016 provided by Job Service North Dakota.

²Based on 2008 ACT-tested North Dakota students ($n = 3,745$) with valid career information.

- There are more students interested in the engineering field (architects, mechanical engineers, etc.) than jobs that will be available in this field, but many of these students are not ready to meet or exceed one or more of ACT's College Readiness Benchmarks in English, reading, mathematics, or science, as shown in Figure 2. Students who are interested and college ready are more likely to be successful in the coursework needed to enter this high-growth career field.

Figure 2: ACT College Readiness Benchmark Performance of North Dakota High School Students Interested in High Growth North Dakota Career Fields by Subject³



³Based on 2008 ACT-tested North Dakota students ($n = 3,745$) with valid subject scores and career information.

North Dakota educators should continue to encourage their students to achieve the highest level of preparation for college, in order to meet North Dakota Workforce demands.

Students' Skills

- Students are ready to succeed in entry-level college courses if they meet ACT's College Readiness Benchmarks. In North Dakota, three-quarters of students are prepared for first-year college coursework in English for two of the five high-growth career fields, and more than two-thirds of students are prepared for college-level English for the other three career fields. Fewer students interested in these high-growth fields are prepared to succeed in college-level social science courses (indicated by ACT Reading Benchmark), with students pursuing health care careers being the least prepared and students pursuing computer specialties careers being the most prepared.
- Over one-half of students wanting to enter computer specialties and engineering are ready for college-level math courses, while less than one-half of these students are ready for college-level science. Less than one-half of students pursuing careers in education, management, and health care are ready for college-level math, and approximately one-quarter or less are ready for college-level science courses.
- Overall, the pattern of readiness for college coursework is similar across the five high-growth career fields: Student preparation is highest for English and social sciences, and much lower for math and science. The lower levels of preparation among graduating high school students is alarming, given the high demand for science- and math-intensive careers such as nursing, pharmacy, and teaching.