

How do women fit into Minnesota's changing job market?

Every two years the Minnesota Department of Employment and Economic Development (DEED) releases ten-year employment projections for Minnesota. The most recent projections highlight 44 high-demand high-pay occupations¹. These occupations are expected to see higher job growth than the 12.8 percent predicted Minnesota average through 2014 and have median salaries higher than the state average of \$33,782¹.

This raises the question of whether women are prepared to take advantage of openings in these high-pay occupations. Are women currently working in these growing jobs? Are women pursuing education that will lead them to these positions?

Most of the high-demand high-pay occupations identified by DEED fall into five major categories: 1) health care practitioners; 2) health technologists & technicians; 3) computer specialists; 4) business, business support, and financial operations; and 5) skilled labor, particularly construction trades. Overall, business and financial operations occupations dominated the list, accounting for 12 of the 44 highlighted occupations. Net job growth in this area is expected to be 20.1 percent through 2014. Computer and information jobs, however, weighed heavy at the top, filling five of the top ten spots. This occupational group is expected to see the greatest net job growth of 31.5 percent through 2014. (See Table I)

Four of the 44 high-demand high-pay occupations identified by DEED are among the top ten professions of women in Minnesota. The occupation expected to see the highest number of openings, approximately 24,000 through 2014, is registered nurses. According to Census 2000, 90.2 percent of Minnesota's registered nurses are women, and the occupation employs the third highest number of women in the state. The remaining three high-demand high-pay occupations with a high number of female employees are 1) accountants and auditors, 2) human resources, training and labor relations specialists, and 3) marketing and sales managers. Dental hygienists, dental assistants, and payroll and timekeeping clerks were also listed as high-demand high-pay occupations, and more than 90 percent of workers in these occupations were women. Overall, women are well repre-

<u>Occupational Group</u>	<u>Net Growth</u>
Computer Specialists	31.5%
Healthcare Practitioners	25.5
Health Technologists & Technicians	23.6
Business & Financial Operations	20.1
Construction Trades	11.5

Data from Minnesota Department of Employment and Economic Development, 2006

Table I: Projected net job growth rates of occupational groups that include high-demand high-pay occupations in Minnesota, 2004-2014

sented in health care and business occupational groups and their respective support and technical occupations.

However, women are not well represented in two of the other high-demand high-pay occupational groups, computer specialists and skilled labor. According to Census 2000, women accounted for only 28.3 percent of network systems and data communications analysts, the occupation predicted to have the highest net growth in Minnesota at a rate of 52.8 percent. This trend is consistent throughout computer and information systems occupations.

Women are underrepresented in high-demand high-pay construction trades as well. Women accounted for only 1.8 percent of the state's plumbers, pipefitters, and steamfitters, 0.7 percent of the state's cement masons and concrete finishers, 3.4 percent of the state's sheet metal workers, and 2.2 percent of the state's highway maintenance workers.

DEED projects that the two occupations currently employing the most Minnesota women, secretaries and administrative assistants and elementary and middle school teachers, will see lower than average growth through 2014. Secretaries and administrative assistants are expected to see an 8.7 percent growth rate through 2014, while elementary and middle school teachers are expected to see 7.9 percent and 2.8 percent growth rates, respectively.

Occupation	Projected Net Growth	Total Projected Openings
Network Systems and Data Communications Analysts	52.8%	3,116
Computer Software Engineers, Applications	47.4	9,173
Dental Hygienists	38.1	1,618
Dental Assistants	37.6	3,375
Community & Social Service Specialists, Other	36.4	2,415
Network & Computer Systems Administrators	35.3	2,813
Computer Software Engineers, Systems Software	35.3	2,822
Medical & Clinical Laboratory Technicians	32.3	2,045
Computer Systems Analysts	31	3,815
Radiologic Technologists & Technicians	30.2	1,695

Data from Minnesota Department of Employment and Economic Development, 2006

Table II: Ten occupations with highest projected net growth in Minnesota, 2004-2014

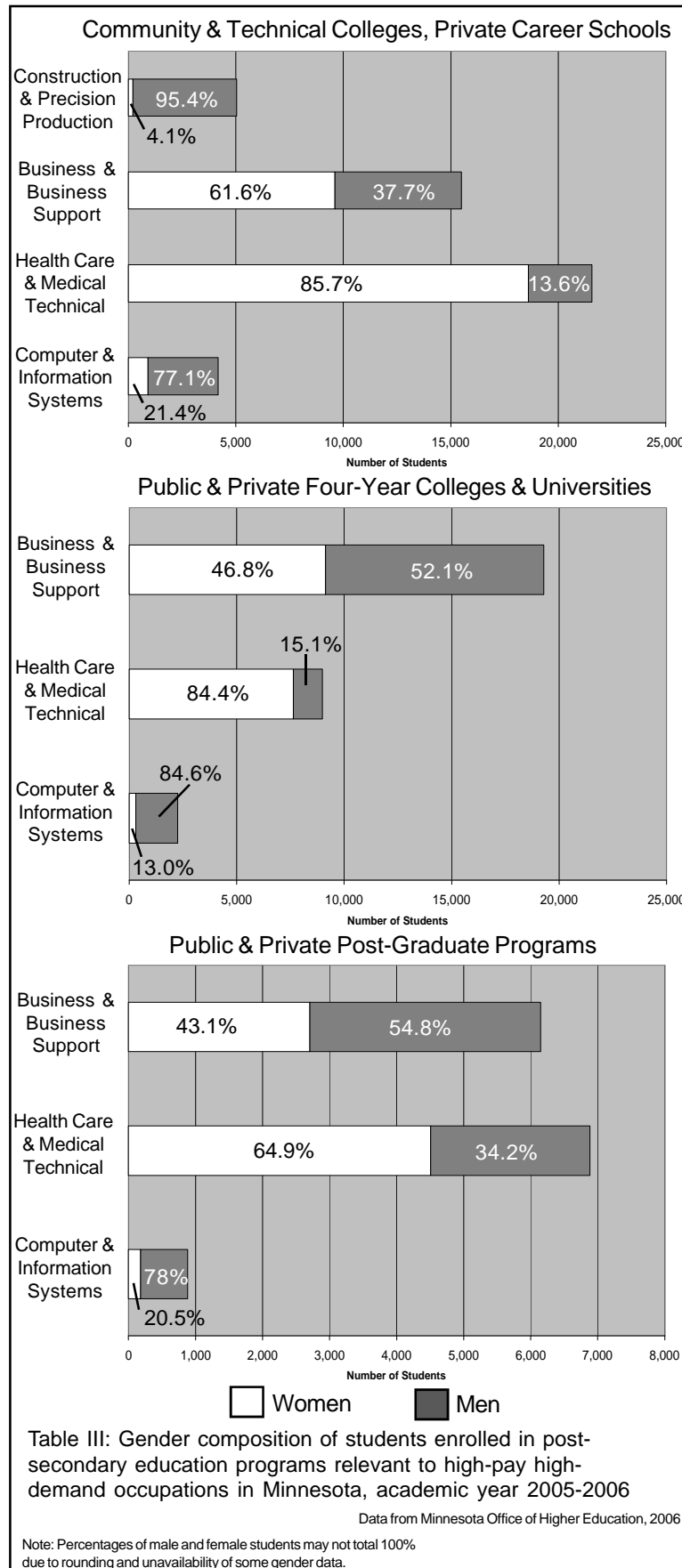
Four of the high-demand high-pay occupations are among those with high numbers of male workers in Minnesota: 1) sales representatives of wholesale and manufactured products; 2) accountants and auditors; 3) marketing and sales managers; and 4) automotive service technicians and mechanics. Other occupations on the high-demand high-pay list are filled primarily by men. In addition to the skilled labor occupations previously mentioned, more than 90 percent of Minnesota's mechanical engineers are men.

Women and higher education in Minnesota

According to the 2000 Census, 11.6 percent of women and 12.5 percent of men aged 25 and over in Minnesota had less than a high school diploma. These figures are substantially lower than the national rates of 19.3 percent for women and 19.9 percent for men. More women than men are currently seeking higher education in Minnesota, a trend common throughout the country. In academic year 2005-2006, women accounted for 56.6 percent of resident enrollees at Minnesota's public and private higher education institutions.

But are women pursuing higher education degrees that would land them in high-demand high-pay fields? According to iSeek, a career planning and economic development information system, most of the identified high-demand high-pay occupations require some schooling after high school. Of the 44 identified occupations, five require a high school diploma, 15 require an associate's degree or technical training, 13 require a bachelor's degree, and seven require a post-graduate degree.ⁱⁱ The education requirements for most of the high-demand high-pay occupations fall into five major categories: 1) medical technical degrees and certificates; 2) completion of skilled labor programs, specifically in precision production and construction trades; 3) health care degrees; 4) business and management degrees; and 5) computer and information science degrees.

Analysis of enrollment data from Minnesota's public and private higher education institutions reveals marked differences between majors chosen by



men and women. (See Table III) While health-care programs were among the three most popular at all levels of higher education, women were enrolled in this area at much higher rates than men. The difference is most pronounced at the community college and technical school and undergraduate levels and recedes at the graduate school level. (See Table III) In academic year 2005-2006, female students outnumbered male students by more than five to one at technical, two-year and baccalaureate levels.

Women are also well-represented in business and management programs. In academic year 2005-2006 business was the most commonly declared major among women seeking bachelor's degrees. Across all education levels, women accounted for approximately 51% of business students in Minnesota's public and private higher education institutions.

However, women are not enrolling in education programs necessary for high-demand high-pay occupations that currently employ few women. Students enrolled in computer and information systems higher education programs were five times more likely to be male than female in academic year 2005-2006. Skilled labor programs are not attracting women either. Only 4.0 percent of students in construction trade programs and 4.5 percent of enrollees in precision-production trade programs were women.

Education draws a particularly high percentage of female students, though it is among the three most popular majors at the undergraduate and graduate levels for all students. In academic year 2005-2006 education programs drew 10.0 percent and 22.0 percent of all female undergraduate and graduate students, respectively. However, education programs attracted only 4.9 percent of male undergraduate students and 13.8 percent of male graduate students.

Are women poised to take advantage of job growth in high-demand high-pay fields?

In the field of health care the answer is "yes," particularly in the areas of nursing and some medical support occupations. Women make up the majority of registered nurses, dental hygienists, and dental assistants in Minnesota. They also have a strong presence in health-related academic programs at all levels of education.

Women are also active in business and business support roles as well as business education programs. More than half of accountants and auditors and more than 70 percent of human resources, training and labor relations specialists in Minnesota are women. Women will likely continue to participate at high rates in this job field, as they account for approximately half of students in business programs at all levels.

However, women continue to work in traditional occupations expected to see lower than average job growth in Minnesota. Secretaries and administrative assistants, the occupational group employing the most women in Minnesota, are expected to see low growth rates through 2014. Positions in education, expected to see overall job growth rates of only 9.9 percent through 2014, are also predominately filled by women, and women are seeking education degrees at much higher rates than men.

In addition, women are underrepresented in some high-demand high-pay occupational areas. Few women work in computer and information systems jobs where some of the highest job growth is expected. In Minnesota women account for less than 25 percent of workers in most computer and information systems positions and less than 20 percent of students in computer and information systems education programs. Few women also work in skilled labor positions, an area that generally requires the least amount of education investment to obtain a high-pay job. Women make up less than 5 percent of workers in the high-demand high-pay construction positions identified by DEED and less than 10 percent of students in related training programs. Greater participation in these areas could allow

Minnesota's women to more broadly benefit from job growth through 2014.

Endnotes:

- i. Occupations included on the high-demand high-pay list have a higher than state average median income and are projected to have higher than state average job growth. They also account for at least 0.1% of the state's total employment. The total projected openings reflect openings due to both net growth and replacement needs from workers leaving an occupation.*
- ii. iSeek does not define educational requirements for four of the 44 occupations on the high-demand high pay list. Education requirement information can be obtained from iSeek's website at www.iseek.org.*
- iii. The Census does not use the Standard Occupational Classification system. While the Census uses similar classifications and does provide a comparison guide, direct comparisons are not always possible.*
- iv. Minnesota DEED's complete high-demand high-pay occupation list and other economic projections are available on their website at <http://www.deed.state.mn.us>.*
- v. All Census 2000 data cited in this report is from SF3, and can be obtained on the Census website at www.census.gov.*
- vi. All data on enrollment in public and private higher education institutions is from the Minnesota Office of Higher Education. Their student enrollment report generator is available on their website, <http://www.ohe.state.mn.us>.*