

# 2

## Women and Education

### *Highlights*

- Collectively, Iowa females over the age of 25 have a nearly equivalent percentage rate to males in obtaining post-secondary degrees.
- In the 2004-2005 school year, Iowa women were conferred 59.1 percent of all degrees in higher education.
- The 2005 *Iowa Youth Survey* found that 85.9 percent of young women felt safe at school.
- Large gaps are evident in girls' 2005-2006 enrollment in upper-level computer courses. While a virtual split exists between the percentages of boys and girls in Basic Computer courses statewide, 55.3 percent and 44.7 percent respectively, female participation drops in Basic Programming to 13.0 percent.
- Although women make up the majority of elementary school teachers, they are not equitably represented at the top administrative level. In the 2005-06 school year, women comprised 49.5 percent of all public elementary school principals. Only 17.7 percent of high school principals were women in that same year.



—Chapter 2—

# Women and Education

## 2.1 Education Introduction

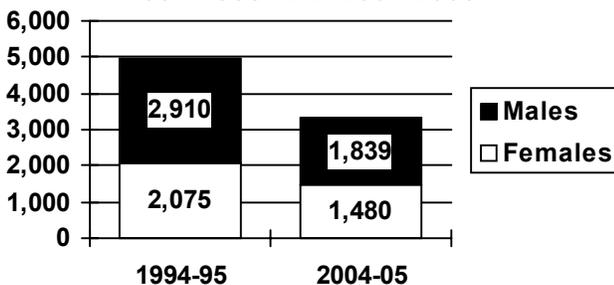
More Iowa women than ever before are graduating from high school and receiving post-secondary education. Nevertheless, many barriers still exist toward the equal education of males and females. A lack of female administrators and female teacher role models in traditionally male-dominated fields, sexual harassment, and gender role stereotypes all impact the educational experience of Iowa females.

## 2.2 Educational Attainment

Educational enrollment and attainment among Iowa women is on the rise. Young women today are more likely to graduate from high school and college than their mothers and grandmothers. 2005 American Community Survey Census data reveals that 12.2 percent of women ages 45 and above do not have a high school degree compared with 6.3 percent of those ages 25-44. It also shows that 11 percent of females 65 and older had four or more years of college, while 30.7 percent of females ages 25-34 had four or more years of post-secondary education.

The proportion of females to males who obtain high school degrees increased over the past several years as the number of women and men who drop out of school decreased (SEE FIGURE 2.1). Males account for the majority of dropouts for grades 7-12, making up 55.4 percent of the total number of dropouts in the 2004-05 school year. Females that same year constituted 44.6 percent of the total number of dropouts, up from 41.2 percent in the 2002-03 year.

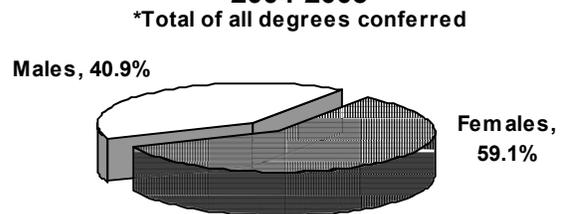
**Figure 2.1**  
**DROPOUTS BY GENDER, IOWA,**  
**1994-1995 AND 2004-2005\***



\*Grades 7-12 SOURCE: Iowa Department of Education  
SEE TABLE 2.1 IN APPENDIX

The 2005 U.S. Census shows that women over the age of 25 are at a slightly higher percentage rate than men having at least a high school education (or equivalent), with 90.1 percent for women and 89.0 percent for men. Males over age 25, on the other hand, had a higher percentage rate than women in obtaining post-secondary degrees. Significant movement has been made, however, in closing that gap. In the 2004-2005 academic year, more females than males obtained degrees in higher education (SEE FIGURES 2.2 AND 2.3).

**Figure 2.2**  
**HIGHER EDUCATION DEGREES**  
**CONFERRED BY GENDER, IOWA,**  
**2004-2005\***



SOURCE: Iowa College Student Aid Commission, Integrated Postsecondary Education Data Systems Completions

**Figure 2.3**  
**HIGHER EDUCATION DEGREES**  
**CONFERRED BY LEVEL, IOWA, 2004-2005**

DEGREES	FEMALES	MALES
Certificates	13.9%	7.8%
Associate	25.4%	24.5%
Undergraduate	48.1%	51.0%
Graduate	12.7%	16.6%

SOURCE: Iowa College Student Aid Commission and Integrated Postsecondary Education Data Systems Completions  
SEE TABLE 2.2 IN APPENDIX

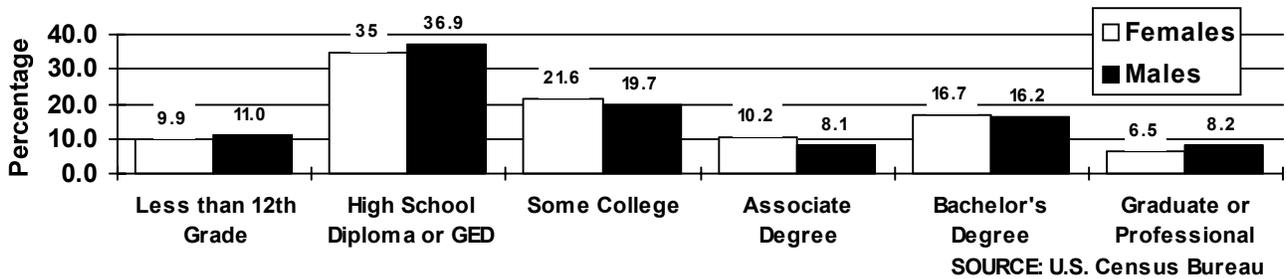
The gender gap has continued to close for recent college graduates, in the number and type of post-secondary education received; females and males ages 25 and older are nearly equal in the likelihood of having obtained an undergraduate degree. However, the gap remains; males over the age of 25 are more likely to have degrees beyond the undergraduate level, while females tend to hold two-year degrees, a factor that can contribute to lower paying jobs (SEE FIGURE 2.4).

While the overall levels of educational attainment are increasing for women, dramatic differences still exist among females of different ages, races, and ethnicities. For example, older women are living the effects of an educational gap that widens

between females and males with age. Furthermore, white women over the age of 25 are much more likely than African-American, Asian-American, and American-Indian women to have a high school degree. In 2005, 90.8 percent of all white women over the age of 25 had a high school degree or more, while only 81.1 percent of African-American women, 82.1 percent of Asian-American women, and 75.1 percent of American-Indian women had high school degrees or more. Similarly, women of Hispanic origin over the age of 25 were 33.2 percent less likely to have at least a high school degree than white women not of Hispanic origin (SEE FIGURES 2.5 AND 2.6).

Figure 2.4

**EDUCATIONAL ATTAINMENT BY GENDER, THOSE 25+, IOWA, 2005**



Figures 2.5

**EDUCATIONAL ATTAINMENT OF FEMALES BY RACE/ETHNICITY, 2005**

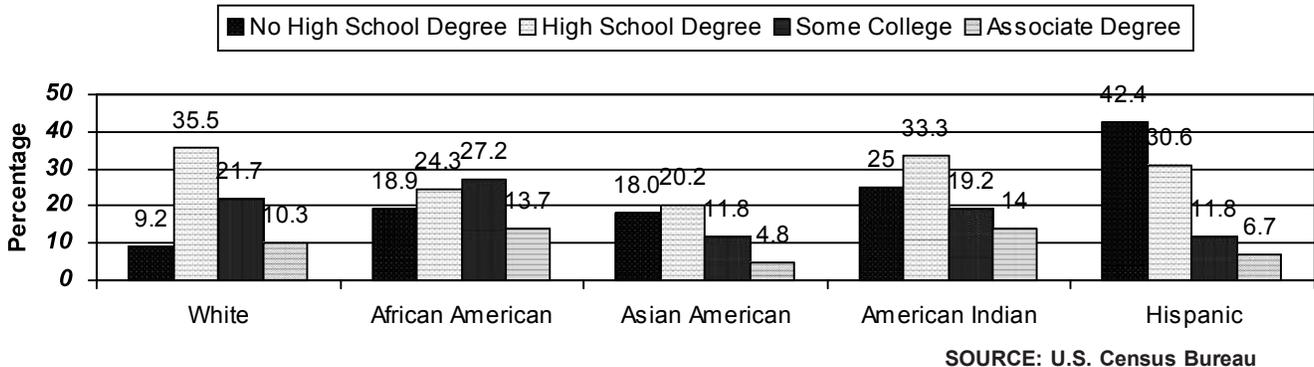
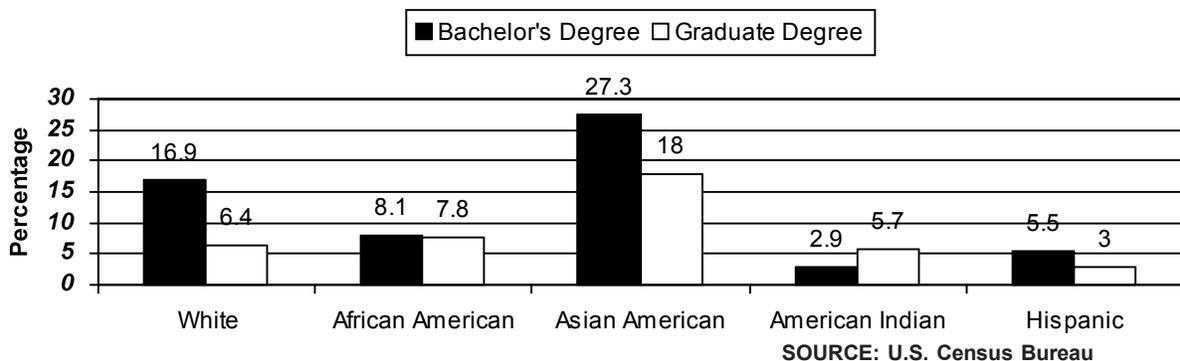


Figure 2.6

**EDUCATIONAL ATTAINMENT OF FEMALES BY RACE/ETHNICITY, 2005**



### 2.3 Success in Education

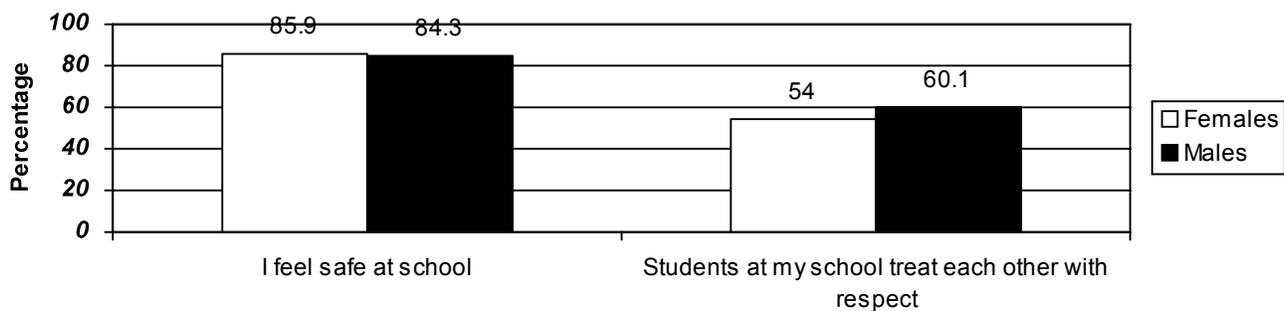
Students' success in school is dependent upon a number of factors, some of which include the overall safety within the educational environment, the prevalence of harmful deterrents, the availability of positive activities and student attitudes.

The 2005 Iowa Youth Survey (IYS) gathered information regarding some of these issues from 98,246 Iowa students in grades six, eight, and eleven. The statistics from this survey indicate that the majority of female students, 85.9 percent, felt safe at school. However, 6.7 percent of female students had been actively involved in a physical fight within the year and 18.1 percent had property stolen or damaged at school within the same period of time. (SEE FIGURE 2.7). A total of 13.5 percent of the female students in this survey said they had attempted suicide. Furthermore, 46 percent felt as though they were not treated with respect by the other students in school. If students do not feel safe and respected within the school system, they are not obtaining the quality education that should be guaranteed.

Overall, the statistics from this survey indicate that girls are doing well in school; 73.2 percent were involved in extracurricular activities, 94.9 percent said they tried to do their best, and 71.3 percent felt they had something to be proud of.

There do remain concerns, however, about the unhealthy behaviors which school-age girls may engage in. According to the 2005 IYS, 36.4 percent of girls had experimented with alcohol, 17.9 percent with cigarettes and 12.2 percent with marijuana, before the age of sixteen. This study also indicated that 41.9 percent of female students admitted to gambling within the last year.

**Figures 2.7**  
**SAFETY AND RESPECT AT SCHOOL, BY GENDER, 2005**



SOURCE: Iowa Youth Survey, 2005

Another significant issue in this realm is sexual harassment, which is defined as unwelcome sexual comments, requests for sex, and other verbal or physical conduct of a sexual nature when a person's success in classes or grades is at stake; when it interferes with students' class work, social life, or athletics; or when it creates a hostile environment.<sup>1</sup> Sexual harassment is a serious problem which continues to gain attention, along with the concern about bullying within schools.

### 2.4 Educational Enrollment

Though Iowa schools are required to have a plan to promote gender equity in their vocational courses, Iowa's record of female participation in nontraditional vocational courses is poor.

The number of females enrolled in nontraditional vocational courses, e.g., construction, drafting/drawing, and electronics, is low. Similar findings can be found for males in traditionally female-dominated vocational courses such as child development and family and consumer sciences. The statistics do, however, indicate that Iowa is doing a better job of attracting males to traditionally female-dominated courses than it does in attracting females to traditionally male-dominated vocational courses. (SEE FIGURE 2.8)

Enrollment of females in Iowa's upper level high school math and science courses continues to be high. (SEE FIGURE 2.8)

Large gaps, however, are evident in girls' 2005-06 enrollment in upper-level computer courses. While an almost equal percentage of boys and girls in Basic Computer and General Computer Application courses statewide, female participation drops dramatically in classes such as programming. (SEE FIGURE 2.9)

**Figure 2.8**  
**SELECT PUBLIC HIGH SCHOOL COURSE ENROLLMENT OF FEMALES, IOWA**  
**1995-1996 AND 2005-2006**

<u>VOCATIONAL</u> <u>COURSE</u>	<u>1995-96</u>	<u>2005-06</u>	<u>MATH/SCIENCE</u> <u>COURSE</u>	<u>1995-96</u>	<u>2005-06</u>
Home Economics	64.8%	50.6%	Algebra	49.7%	49.8%
Child Development	77.8%	80.5%	Advanced Algebra	52.4%	51.9%
Automotive	8.2%	13.4%	Calculus	44.7%	47.1%
Construction	4.8%	7.6%	Trigonometry	49.8%	51.4%
Drafting	13.2%	13.4%	Computer Science	N/A	41.6%
Electronics	4.0%	4.3%	Chemistry	52.5%	53.0%
Metals	2.5%	8.6%	Physics	42.7%	41.3%

SOURCE: Iowa Department of Education

**Figure 2.9**  
**PUBLIC HIGH SCHOOL COURSE**  
**ENROLLMENT IN COMPUTER & INFORMATION**  
**SCIENCES, BY GENDER, IOWA, 2005-2006**

<u>COURSE</u>	<u>MALES</u>	<u>FEMALES</u>
Basic Computer	55.3%	44.7%
General Computer App.	52.3%	47.7%
Business Computer App.	52.9%	47.1%
Business Programming	55.6%	44.4%
Data Processing	54.0%	46.0%
Computer Graphics	60.7%	39.3%
Computing System	66.4%	33.6%
Computer Technology	71.9%	28.1%
Network Technology	82.1%	17.9%
Computer Programming	78.7%	21.3%
Basic Programming	87.0%	13.0%
Pascal Programming	86.4%	13.6%
Other Programming	82.0%	18.0%
AP Computer Science	87.0%	13.0%
Computer-related Subject	66.3%	33.7%
Computer-Independent	57.4%	42.6%
Computer-Other	60.0%	4.0%

SOURCE: Iowa Department of Education

Although progress has been made, women and men are still clustered in traditionally male/female areas of study. Degree areas in which women are still severely underrepresented include mechanics and repairers, construction trades, and agribusiness and production.

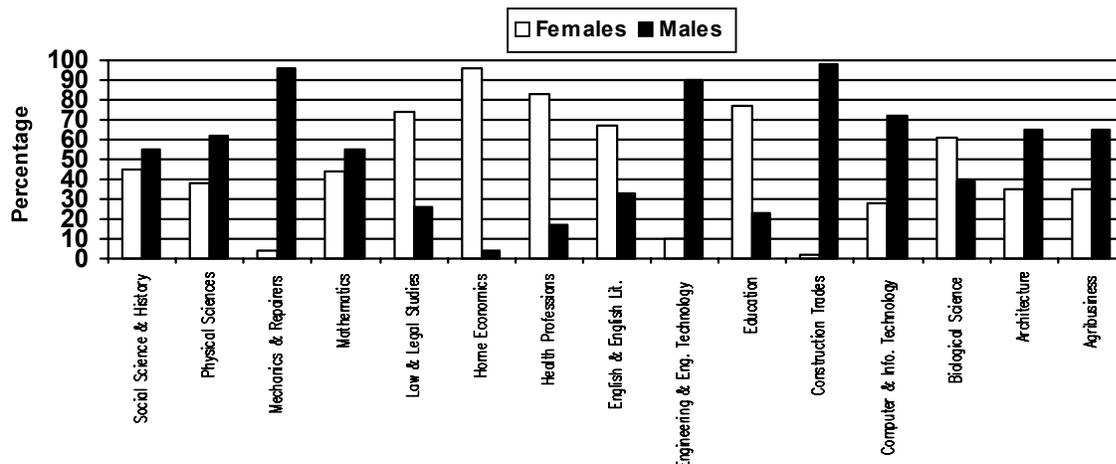
Low enrollment of women in nontraditional vocational education courses is one of the causes of wage disparity. The result is that women are concentrated in a relatively small number of occupations that are traditionally dominated by females and characterized by low pay, poor fringe benefits, and limited opportunities for advancement. As these numbers increase, the outcome should be greater parity in wages.

This trend remains significant, as statistics for the 2004-2005 academic year indicate that while 804 males earned a degree in mechanics and repairers, only 33 females obtained the same degree. Similarly, 1,171 men and only 259 women earned a degree in engineering and only six females graduated with a degree in construction trades in comparison to 318 males. Finally, a total of 417 females obtained a degree in computer and information sciences, while 1,072 males earned this degree. Female students, however, were more likely than their male counterparts to earn a degree in public administration and social services (614 to 175), as well as business, management, marketing and related services (4,602 to 3,934). Additionally, 2,869 females earned a degree in education, while only 857 males did. Females were also more likely to obtain a degree in legal professions (708 to 252) and overwhelmingly represent those who earned degrees in health professions (6,154 to 1,283). There are no areas of discipline that represent females and males proportionately (SEE FIGURE 2.10).

## 2.5 Higher Education by Program Area

Distinct differences exist in the post-secondary education of women and men. Post-secondary educational opportunities include vocational education programs and two- and four-year college, professional, and graduate programs.

**Figure 2.10**  
**DEGREES CONFERRED IN SELECT DISCIPLINES IN**  
**HIGHER EDUCATION, BY GENDER, IOWA, 2004-2005**



SEE TABLE 2.3 IN APPENDIX SOURCE: Integrated Postsecondary Education Data System Completions

## 2.6 Educational Personnel

Clear differences exist in the employment of women and men in secondary educational institutions, reflecting the traditional occupational specializations of women and men.

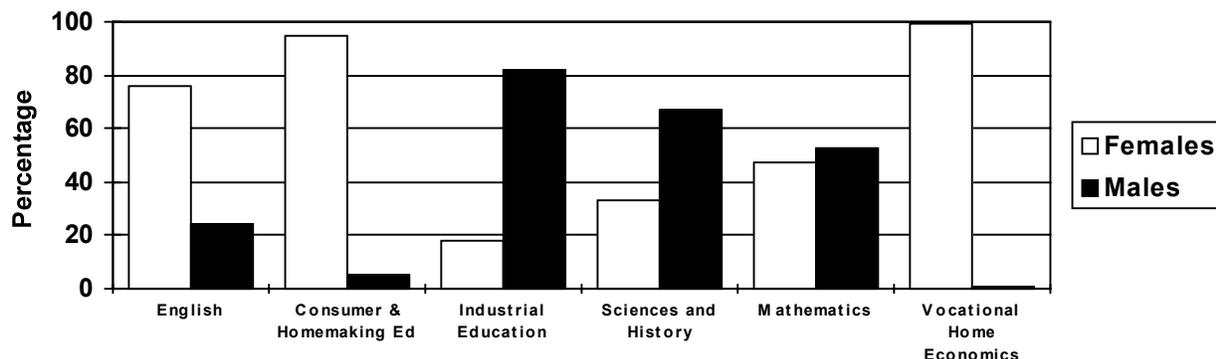
Women overwhelmingly comprise Iowa's public school teachers and are also the majority of English, consumer and homemaking education, and vocational home economics teachers. Men, on the other hand, dominate social science/history and industrial education classrooms (SEE FIGURE 2.11).

The number of women teaching in certain male-dominated fields, however, has increased. More women are now teaching science and math than in past years. (SEE FIGURE 2.11).

In the 2005-06 school year, nearly half of elementary school principals, 49.5 percent, were women. Females as principals are found far less often at higher levels of education: 39.3 percent in middle schools, 19.4 percent in junior highs and 17.7 percent in high schools. Additionally, in the 2005-06 academic year, women filled only 9.0 percent of all school superintendent positions. (SEE FIGURE 2.12).

In 2006, 4 out of 29 members of the Iowa Association of Independent Colleges had females as presidents. Of the three regents universities, there were no female presidents. There were four female presidents at the 15 community colleges.

**Figure 2.11**  
**PUBLIC SCHOOL TEACHERS, BY GENDER, IOWA,**  
**2005-06\***

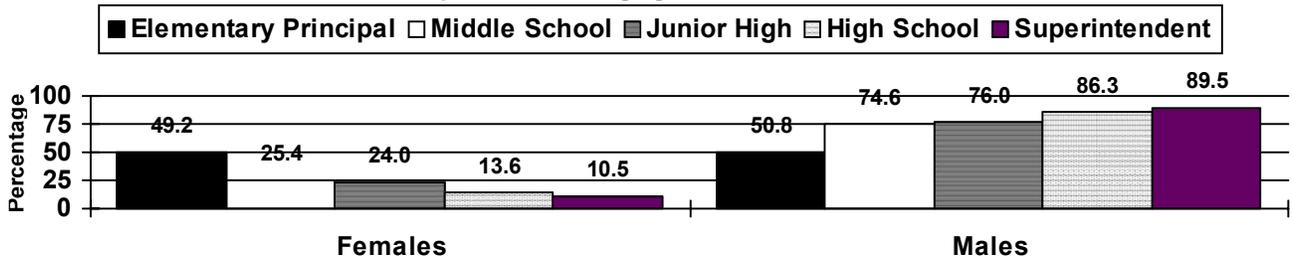


\*Full-time and part-time  
 SEE TABLE 2.4 IN APPENDIX

Source: Iowa Department of Education

**Figure 2.12**  
**PUBLIC SCHOOL ADMINISTRATORS, BY GENDER, IOWA, 2002-03**

\*Most communities have changed to or are in the process of changing to middle schools



SEE TABLE 2.5 IN APPENDIX

SOURCE: Iowa Department of Education

### 2.7 Salaries in Higher Education

For the most part, female post-secondary educators in Iowa received salaries that were less than their male colleagues in the 2005-06 school year. The differences in salaries among males and females at two and four year private/public colleges, however, have been decreasing over the past few years.

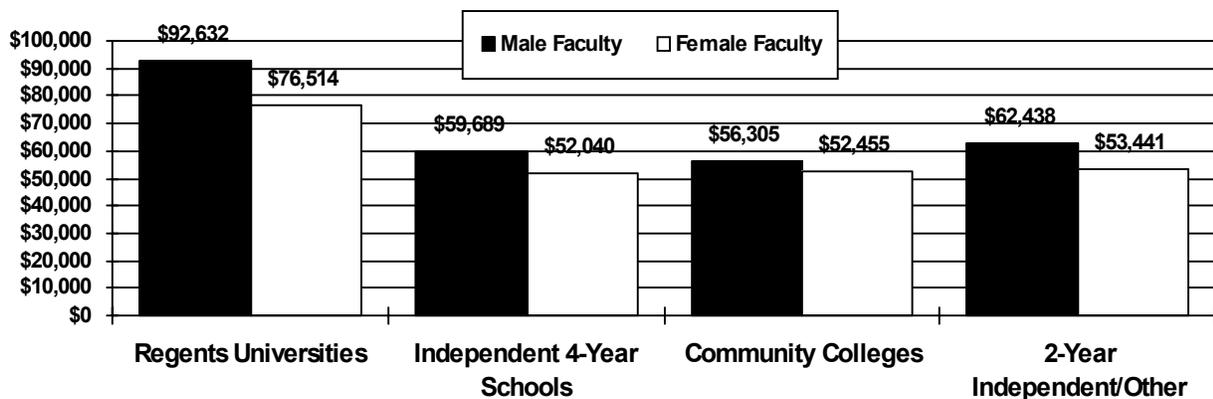
Overall, Iowa's post-secondary female educators earned on average, far less than men at all levels—professor, associate professor, and instructor—at all two and four year private/public colleges. However, at thirty-three of the colleges, women earned more than men in at

least one of the listed positions, which is a notable increase from 2000 when only six such cases were found. Still, an overwhelming majority of the female staff at Iowa colleges suffer from unequal pay. The average income of a female professor at a regents university was \$121,870 while the average salary for a male professor was \$126,492. A dramatic gap of at least \$10,000 is found between the salaries of male and female associate professors at regents universities (\$95,998 to \$85,726) and male and female professors at 2-year independent schools (\$68,494 to \$54,546). (SEE FIGURE 2.13).

**Figure 2.13**  
**MEAN SALARIES OF FACULTY MEMBERS, BY GENDER, IN HIGHER EDUCATION INSTITUTIONS, IOWA 2005-06\* \*\***

\*Salaries figures are for faculty on 12-month contracts.

\*\*Includes professors, associate professors, assistant professors, instructors, lecturers, and other.



SEE TABLE 2.6 IN APPENDIX

SOURCE: Integrated Postsecondary Education Data Systems Completions

## 2.8 Forward-looking Strategies

■ Affirmative action programs that promote opportunities for women in educational administration must be continued and strengthened. Having more women in administrative positions results in role models for students as well as a vehicle for change in the institutional environment.

■ Although measurable success has been made in the increased participation of females in math and science on national and state levels, Iowa needs to continue its programming designed to encourage female students to study math and science, especially beyond high school.<sup>2</sup> That could mean the difference between a low-wage job and one with economic advantages.

■ A need exists for specialized programming to encourage females to enroll in high-skill computer courses. Nationwide and in Iowa girls tend to cluster in lower-end data entry and word-processing classes that can lead to less stimulating, lower-paying jobs, particularly as our society becomes increasingly dependent upon those computer skills for work.<sup>3</sup>

■ More females should be encouraged to participate in vocational classes in junior high and high schools and to acquire post-secondary vocational education. By taking commonly male-dominated nontraditional vocational courses in high school, females may discover interests that transform into career options later on. Similarly, males must be encouraged to take traditionally female-dominated courses, such as home

economics, child care, and health care, at secondary and post-secondary educational institutions.

■ Equity and diversity training should be infused into college programs such as counseling, administration, teaching, media, and coaching.

■ There needs to be active recruitment of male teachers in elementary classrooms and female teachers in courses that are nontraditional for women.

■ Sexual harassment is an ongoing problem in Iowa's schools and colleges. Training and retraining of educators, students, and governing boards in a curriculum on harassment must take place in all school districts and at all post-secondary schools. All schools should adopt a comprehensive harassment policy; implement the policy; educate staff, students, parents, and the community in regards to harassment; and make each school a safe place.

■ The state should continue its effort in training women for nontraditional jobs. The increase in the gender educational gap with age translates into lower wages and even poverty for older women. Training programs allow women opportunities to acquire skills in a field that pays above minimum wage.

■ State funding should be made available for programs and educational equity, including monitoring and implementing the multi-cultural, gender-fair curriculum requirement mandated by the *Code of Iowa*.

<sup>1</sup> Iowa Commission on the Status of Women, *Iowa Women & the Law* (October 1997): 9-10.

<sup>2</sup> American Association of University Women Educational Foundation, *Gender Gaps: Where Our Schools Still Fail Our Children* (Washington, D.C., September 1998): 10.

<sup>3</sup> *Ibid*, p. 14.

