



**Issues Dealing with Gender Equity:
Institutional Self-Study
Highlights**

Georgia State University

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1990-1998

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Table of Contents

	Page
Introduction	
Self-Study Key Findings	
Administrative Representation	
Faculty and Departmental Issues	
Distribution of Faculty by Gender	
Recruitment/Retention Strategies for Women Faculty	
Perception of Gender Differences Among Faculty	
Perception of Gender Differences Among Students	
Structural Issues	
Policies and Patterns of Sexism	
Perception of Sexism and Sexual Harassment	
Student Issues	
Distribution of Majors by Gender	
Graduation Rates	
Change of Major	
Perception of Gender Equity Among Majors by Faculty	
Faculty Classroom Interaction Assessment	
Reasons Students Change a Major	
Perception of Gender Equity Among Majors by Students	
Student Classroom Interaction Assessment	
Academic Participation	
Curricular Issues	
Challenges for Georgia State University	
Administrative	
Faculty	
Students	
Structural	
Student Issues	
Curricular Issues	
Data Collection	

Institutional Self-Study Highlights

Introduction

Research demonstrates that organizational structure and culture can encourage or discourage girls and women from pursuing educational programs and careers in science, mathematics, and technology. Therefore, Georgia State University examined five aspects of their institutional climate relative to women's participation in science and mathematics. These include administrative, faculty and departmental, structural, student, and curriculum issues that have been shown to impact women's involvement in higher education, as well as science and mathematics educational programs and careers.

Findings from the gender equity self-study may be used as institutional baseline data to identify local needs, inventory existing resources, and provide the foundation for program development and policy reform.

Self-Study Issues

Administrative Representation

What is the distribution of the university administrators by gender (President, Provost, Vice Presidents, and Deans)?

Faculty and Departmental Issues

What is the distribution of faculty by gender and rank?

What are the recruitment/retention strategies for women faculty?

What are the faculty perceptions of gender differences?

What are the student perceptions of gender differences among faculty?

Structural Issues

What support is provided for women students and faculty?

What is the perception of sexism and sexual harassment?

What are the policies and procedures pertaining to sexual harassment?

Student Issues

What is the distribution of majors (science/mathematics/education) by gender?

What is the change of major by gender in these majors?

What is the rate of graduation by gender of these majors?

What is the faculty perception of gender equity among these majors?

What is the student perception of gender equity among these majors?

How do faculty self-assess their interactions in the classroom?

How do students self-assess their interactions with faculty?

Curricular Issues

How many and in which departments are the courses that include gender related issues in the content?

Data Sources

Existing data from Georgia State University catalogs, institutional *Fact Books*, and the Student Information System were collected. Surveys were designed and conducted of faculty in 1996 and undergraduate and graduate students in 1997 in the College of Education and the College of Arts and Sciences. Student surveys were completed by 505 students and seventy faculty. Interviews were conducted in 1995 of key university administrators (Provost, Deans, Department Chairs, Office of Affirmative Action, and the Ombudsperson).

Methodology

Used quantitative and qualitative methods of study including interviews and survey instruments. Analysis of quantitative data was done with the Statistical Package for the Social Sciences (SPSS).

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InGEAR Project

Integrating Gender Equity and Reform (InGEAR), as experimental project funded by the National Science Foundation, promotes quality science and mathematics education for all students in Georgia. The project is a collaboration between five Georgia universities to address the issue of equal access and gender equity in science, engineering, and mathematics. The purpose of the project is to change the way in which preservice teachers learn to teach by transforming universities in Georgia that sponsor teacher preparation programs by integrating strategies for equity and excellence. Two main objectives are: 1) to facilitate the redesign of teacher preparation programs in ways that will enhance the interest, motivation, and success of both women and men who are in science, engineering, and mathematics majors and prepare future teachers who will promote equal access and gender equity in K-12 science, engineering, and mathematics classes; and 2) to provide professional development opportunities for faculty and teaching assistants that will equip them with positive support and interventions strategies.

To achieve the objective, an institutional self-study, professional development, a toolkit of material, and a framework for teacher education were the components that were implemented. InGEAR began with an institutional self-study in which each of the institutions examined campus demographics, policies, special initiatives, and personal perspectives affecting the productivity and opportunity in math and science for women. Georgia Southern University developed a template for the self-study and each institution selected from the template those items which seemed to be of most interest to the particular institution. Georgia State University selected to collect general demographic information, interview key personnel, survey undergraduate and graduate students, and survey faculty.

Self-Study Key Findings

Administrative Representation

In 1995, 5 out of 20 top university administrators were women. Three of these were at the assistant level, and two were at the associate level but filled part-time positions. In 1998, only one high-level administrator, the Registrar, was a woman and the part time associate vice president positions were changed to full time status.

Two of the six college deans were women in 1995. They were in the College of Law and the College of Public and Urban Affairs. Their associate deans were men. In 1998, only one dean was a woman. The College of Public and Urban Affairs no longer exists.

Three of the 13 associate deans across colleges were women in 1995. They were in the colleges of Health Sciences, Arts and Sciences, and Education. In 1998, these three associate dean positions were still held by the same women and a female associate dean had been hired in the new School of Policy Studies.

There were no women administrators in the College of Business Administration over the past four years.

In 1995, the university librarian was a man and the associate university librarian was a woman. In 1998, both the university librarian and the associate university librarian are women.

Faculty and Departmental Issues

Distribution of Faculty by Gender

Over a four-year period (1992-1995) the total number of women in full-time faculty positions increased, but the higher percentage remained at the instructor level. The percentage slightly increased at the assistant professor level.

Over a four year period (1992-1995), the College of Arts and Sciences employed 25% to 26% women; the College of Business Administration employed 15% to 16% women; the College of Health Sciences employed 78% and increased to 81% women; the College of Education employed 42% and increased to 50%; the College of Law had 33% women faculty with an increase to 42%; and the College of Public and Urban Affairs had 45% women faculty with an increase to 49%. Even when the total number of positions increased the number of women remained relatively constant for Arts and Sciences and Business Administration.

In 1996, full-time faculty by gender in the mathematics and four science departments only

consisted of 15 women out of 94 faculty. The physics and geology departments employed only male faculty, and chemistry had only one female out of 18 faculty. Biology was the only department where women (3) are full professors. Non-tenured instructor positions were held by 75% women but 80% of tenure track instructor positions were held by men. The chairs in each of these five departments were male and continue to be in 1998.

Recruitment/Retention Strategies for Women Faculty (1996)

The university has no formal procedure for recruiting and hiring women candidates.

There are no plans to create special efforts at the university level for recruitment of female faculty and no initiatives have been suggested.

The university does not provide any formal support services for newly hired women.

- ◆ Departments find it difficult to recruit women due to small pool of applicants and tough competition from other schools.

Gender balance of tenure track faculty found to be unacceptable by university administrators, deans, and two of the departments interviewed.

The Affirmative Action Office is heavily relied upon by colleges and departments to manage recruitment and hiring policies. Departments and colleges do not see the importance of their own efforts or knowledge in these areas.

A farsighted strategy offered by a tenured male chemistry professor referred to the lack of qualified female candidates for faculty positions, long-term program to increase women graduates in science.

Administrators are knowledgeable on what avenues are available on campus for women students and faculty in the event of sexual harassment.

Both female and male faculty chose their own gender or neither gender when asked to respond to who has heavier teaching loads, who is more likely to teach lower level courses, who has a heavier undergraduate teaching load, who has a heavier committee load, and who has more research assistance.

Science and mathematics faculty responded that men are more likely to mentor graduate students, while education and liberal arts faculty responded that women do more mentoring of students.

Science/math faculty indicated a perception that males have heavier committee loads, while faculty in liberal arts/education departments indicated that females have heavier loads.

Perception of Gender Differences among Faculty (1996)

Regarding the gender balance of faculty, science faculty recommended more female faculty and education faculty recommended more male faculty.

Education faculty saw a need for greater gender balance among faculty and indicated courses and programs should and could offer information about equity issues.

Most male and female faculty responded in the direction of neither gender having higher salaries; however, when one gender was endorsed as having a higher salary both males and females were more likely to respond that males have higher salaries.

Science faculty were more likely to respond that males have better promotion rates.

Females were more likely to respond that males have better tenure rates, but males, although they were more likely to respond that neither gender has a better rate of obtaining tenure, also responded that males had better rates when they indicated a preference for one of the genders.

Female faculty seem to perceive that male faculty have more space allocated for their work and greater equipment allocations.

Male, female, and science faculty were more likely to respond that female faculty are taken less seriously by faculty and administrators within their departments, and that male faculty are taken more seriously by undergraduate and graduate students.

Perception of Gender Differences among Students (1997)

Students' comments suggest that science/math majors are more dissatisfied with the gender balance among faculty and/or students in their departments.

Strategies that would offer long-term ways of increasing the participation of women in particular majors and improve the gender balance among both faculty and students and the need to reduce bias in the curriculum.

Through addressing gender equity issues early in the educational process, students believed a better balance would be found at the university level.

Male and female graduate students agreed that male faculty mentor men more than women.

More male students perceive the gender balance among faculty to be ideal, and more females perceive the balance as acceptable.

Students perceive the gender balance more positively than do faculty, with 92% of students rating the gender balance as ideal or acceptable while only 81% of faculty do so.

Both education and liberal arts students and faculty saw the balance more positively than those from science departments.

Structural Issues

Policies and Patterns of Sexism

For the past 25 years, the university has supported a program to provide child care for children of students, staff, and faculty.

Perception of Sexism and Sexual Harassment (1996-1997)

There was a significant difference between the genders on the part of students in the perception of the prevalence of sexual harassment among women students at the university, with female students endorsing a higher prevalence.

More males than females reported actually being harassed, and most of them reported the harassment was by someone in a position of equal or less power than themselves.

Women who reported experiencing sexual harassment were more likely to report the harassment was by someone in a position of equal or greater power.

Twice as many science majors than education majors and three times as many liberal arts majors than education reported experiencing sexual harassment at the university.

The majority of the faculty respondents, regardless of gender or department, indicated that they did not know how effective the policies and procedures are that address sexual harassment.

Male faculty were more likely than females to respond that sexual harassment is moderately to very common, but a higher percentage of female faculty reported being harassed.

Of those faculty who reported that they had been sexually harassed, females responded that the harassment was by a faculty member or administrator (someone with equal or more power in

the organization) while males responded that the harassment was by a student or staff member (someone with less power in the organization).

When the student and faculty survey results were combined, males felt sexual harassment policies at GSU were more effective than females did. There were no significant differences among departments or between students and faculty in their view of policy effectiveness.

Women faculty and students felt that sexual harassment was significantly more common than did men.

Faculty reported significantly more harassment than students with 20% of faculty and 8% of students reporting having been harassed.

When student and faculty results were combined, there were no differences between genders or academic areas in the amount of harassment reported.

Most faculty reported harassment by other faculty while students reported being harassed by someone other than university personnel.

Student Issues

Distribution of Majors by Gender (Fall Quarters 1990-1995)

The number of undergraduate students admitted to biology and chemistry increased over six years, with more women than men admitted to both biology and chemistry.

The number of students admitted to geology, physics, and mathematics tended to fluctuate. This was true for both male and female students but overall more women than men were admitted to mathematics.

The number of majors in biology, chemistry, geology, and physics remained relatively stable over the six-year period. More men than women are in geology and physics, but chemistry and biology are approximately the same number of women and men. In mathematics the numbers have increased. More males than females are majoring in mathematics but more women are majoring in mathematics education and science education.

Graduation Rates (Fall Quarters 1990-1995)

Over six years, the number of graduates has increased in biology, geology, physics, and mathematics. More females have graduated in biology and chemistry, and more males have graduated in geology, mathematics, and physics.

Change of Major (1990-1995)

More women than men students have changed out of biology to another major. Most of the women who changed majors selected nursing and psychology. Most male students changed to psychology.

More women than men changed out of chemistry. Most of the women and men who changed majors selected biology in which to major.

More men than women changed their major from geology. Most of the women who changed selected biology but most men selected geography.

More men than women changed majors from mathematics but selected computer information systems, accounting, computer science, economics, or physics as their major. Women who changed from mathematics majors predominantly selected middle childhood education.

More men than women changed major from physics. Computer science was the major most frequently changed to by men but there was not a single major that women tended to select after changing from physics. The changes of women were toward mathematics, biology, chemistry, or medical technology.

Perception of Gender Equity among Majors by Faculty (1996)

Male faculty made stronger endorsements about the perceived support for women at the university and community level.

Faculty in science departments responded that there was more support for women from the administration at the college level. Faculty in non-science departments endorsed more perceived support from the administration at the departmental level. These differences were significant.

Non-science faculty more strongly disagreed with the statement that their fellow faculty members and the staff within their departments were not supportive of women.

The faculty as a whole perceived the students as supportive of women.

There was no significant difference between faculty in science and education fields with respect to the amount of perceived support for women in the community in which the institution is located.

Faculty Classroom Interaction Assessment (1996)

Faculty indicated that men undergraduate students were more likely to volunteer as group leaders in science departments while women were more likely to volunteer in education departments.

All faculty members agreed that women (or both genders) visited more during office hours no faculty member responded that males visit more.

All faculty members also indicated that women (or both genders) perform well academically again, no one singled out males as performing well academically.

Female faculty were more likely to respond that they mentored and socialized with women undergraduate students.

Female faculty were more likely than male faculty to respond that they prefer women graduate students as teaching and research assistants, and to report that they socialize with and mentor women graduate students.

Female faculty indicated that they make job contacts for men graduate students more than women graduate students.

Both genders perceive that they co-author publications with more men graduate students.

Science and education faculty are more likely to mentor women graduate students.

Reasons Students Change a Major (1996-1997)

The majority of faculty indicated that women students leave undergraduate and graduate programs when the program is too difficult, their performance is weak, they lack competence, or they have math difficulties.

None of the respondents felt the faculty or school had any responsibility for students leaving the program.

In explaining why women students leave their major, students identified gender-based problems for women.

Several males felt women's inability to grasp difficult scientific subject matter led to their changing majors.

Female students felt more flexibility in class scheduling would increase the likelihood of retaining female majors.

All of the student groupings cited personal reasons as the most common reason undergraduate women change majors.

When faculty and student survey results were combined, no significant differences were found in the reasons women students leave when responses were grouped by academic area.

Interestingly, undergraduate males were more than twice as likely to cite gender inequity as the reason for an undergraduate woman changing her major. Science majors were about twice as likely as education majors to cite gender inequity, while liberal arts majors were almost three times as likely to respond that undergraduate women change majors because of gender inequity.

Male faculty and students perceived personal reasons and immaturity as more common reasons than females did.

Female faculty and students perceived future financial potential or current financial problems as more common than did males.

Students and faculty differed in their perceptions of women students leaving their programs. Both groups felt personal reasons was the most common reason that women students transfer, but faculty felt current financial problems and immaturity were more common than did students. Students felt future financial potential was also a common reason for women leaving. No faculty felt gender inequity was a common reason for undergraduate women to leave while 3.2% of students did.

Among the faculty, none of the respondents indicated that women *undergraduate* students leave their majors because of gender inequity. A much higher percentage of males than females and science than education faculty indicated that women *graduate* students leave their majors because of gender inequity

Perception of Gender Equity among Majors by Students (1997)

Males perceive the administration of the university to be more supportive of women than women do.

Students in education responded that the administration within their department was supportive of women.

Both genders responded that female students visit during office hours more than male students

do; however, there was a statistically significant difference with more females endorsing this perception.

Males perceive greater environmental support for women than females do, when reviewing the combined results from the faculty and student data. Education faculty and students perceived greater environmental support for women, while science faculty and staff perceived lower environmental support for women. The administrations supportiveness at both the college and departmental level showed education students and faculty perceived greater support for women.

The faculty perceive more support for women from the administration, faculty and staff than do students. There were no significant differences in the way faculty and students perceive the students across campus and the community's supportiveness toward women.

Education majors were more likely to strongly endorse items related to their competence and confidence in their chosen field, and to perceive that their major is a good choice for women. They were also most likely to strongly endorse a high expectancy for success.

Science majors were least likely to strongly endorse items related to their competence, confidence, and expectancy of success. They were also least likely to respond that the contributions of women are included in their coursework.

Student Classroom Interaction Assessment (1996-1997)

Male faculty and graduate students of both genders perceived differences in the gender with whom male faculty spend office hours, mentor professionally, for whom they make job contacts, and serve as committee chair. Females believe that male faculty spend their office hours with men more, and education majors agree. Females also believe that male faculty serve as committee chair, mentor, and make job contacts for men more than for women.

Students believe that male faculty mentor men graduate students professionally, and make job contacts for men. Male faculty did not perceive these differences.

Education and liberal arts majors perceive that women are interrupted more than men, while science majors responded that men and women are interrupted approximately equally.

The majority of both male and female students responded that both genders receive praise, of those who choose one gender over the other, more females and more males indicated that males are praised by faculty in class.

Academic Participation (1996-1997)

When data from the student and faculty results are combined, findings include that women perceive themselves as volunteering more comments, answers, and to lead groups in class. Men perceived themselves as volunteering more comments and to lead groups.

Science and liberal arts majors said that men volunteer more as group leader, while education majors felt women volunteer more.

Science majors believe that men have serious career goals, compared to education and liberal arts majors, who felt that women have more serious career goals.

Significantly more students felt that faculty mentor and socialize with men than with women. Faculty indicate that they mentor and socialize with women more.

Curricular Issues

In the 1995-96 undergraduate and graduate catalogs a total of 74 courses were identified as investigating, historically or theoretically, issues relating to gender. 49% were undergraduate and 51% graduate courses.

The Center for Teaching and Learning provides videotapes targeted for university-level course instructors. Five of the videos were reviewed and found to be useful for assisting faculty in meeting the needs of individual students. Four of the videos could be used for training in classroom interaction.

Challenges for Georgia State University

Administrative

Few of the senior university administrators (President, Provost, Vice Presidents, Deans, and Chairs) are women. The exceptions are usually in traditionally female fields (e.g. Chairs in Early Childhood Education, Registrar, Librarian) or in the more administrative assistant or associate positions. The College of Business has no women administrators.

Faculty

Females in full-time faculty positions increased over four years but highest percentage remains at instructor level.

In biology, chemistry, geology, mathematics, and physics, a disproportionate percentage of female faculty are at the lower ranks, 75% of non-tenured positions are held by females while 80% of the tenure track are held by males.

Only the College of Health Sciences and the College of Education have 50% or more female faculty.

The number of female faculty have not increased over a four-year period in the College of Business (16%) nor in the College of Arts and Sciences (26%).

The university has no formal procedure for recruiting and hiring women and provided no support services for newly hired female faculty.

Perceptions of student and faculty need to be examined to determine if climate is supportive of these perceptions in the following areas:

- gender balance within departments (faculty and students)
- teaching loads
- research assistance
- allocation of space
- committee loads
- salaries
- promotion rates
- tenure rates

Students

Perception differed by faculty and students on mentoring of students, classroom interactions,

and in job contacts/recommendations

Develop strategies that would offer long-term ways to increase participation of women in particular majors (e.g. geology, physics).

Address gender equity issues early in educational process.

Structural

Continue to support the child development center and examine other programs and resources that will provide support for women students, faculty, and staff.

Sexual harassment issues are perceived to be of concern for female students.

More male students reported actually harassment than females.

The university needs to examine existing sexual harassment policies and procedures and determine their effectiveness. Preventative programs need to be put in place.

Higher percentage of female faculty reported being harassed. Usually they are harassed by another faculty member or administrator. Male faculty who were harassed were harassed by a student or staff member.

Student Issues

More women than men change out of biology and chemistry majors than men.

Women who change out of mathematics major usually change to middle childhood while men change into more lucrative fields, e.g. computer science, computer information systems, economics, or physics.

Understanding why students change majors would impact on misconception by gender and allow for support services to be put in place to deter stereotyping.

Curricular Issues

Only 74 courses out of the thousands of courses at Georgia State address issues related to gender.

Support through the Center for Teaching and Learning needs to be provided to faculty on course content and classroom interaction for gender equity. Based on additional research on the

campus, faculty who are trained in gender equitable interactions do make a difference for their students.

Strategies need to be put in place to address gender equity issues early in the educational process and to reduce gender bias in the curriculum.

Data Collection

Access to data was a challenge. *Fact Books* were not readily accessible. Suggest putting on website. Difficult to obtain data on students and faculty.

Information needs to be collected and available by gender at all levels (e.g. university, college, department, major).

Communication is weak on what information is available, where to obtain information and resources already compiled on similar data. Need a clearinghouse of data accessible to researchers.

Findings from this self-study may be used to identify needs within the overall university, each college, each department, and each major, to inventory existing resources and support, and to provide for program development and policy reform to accomplish an equitable environment on campus.