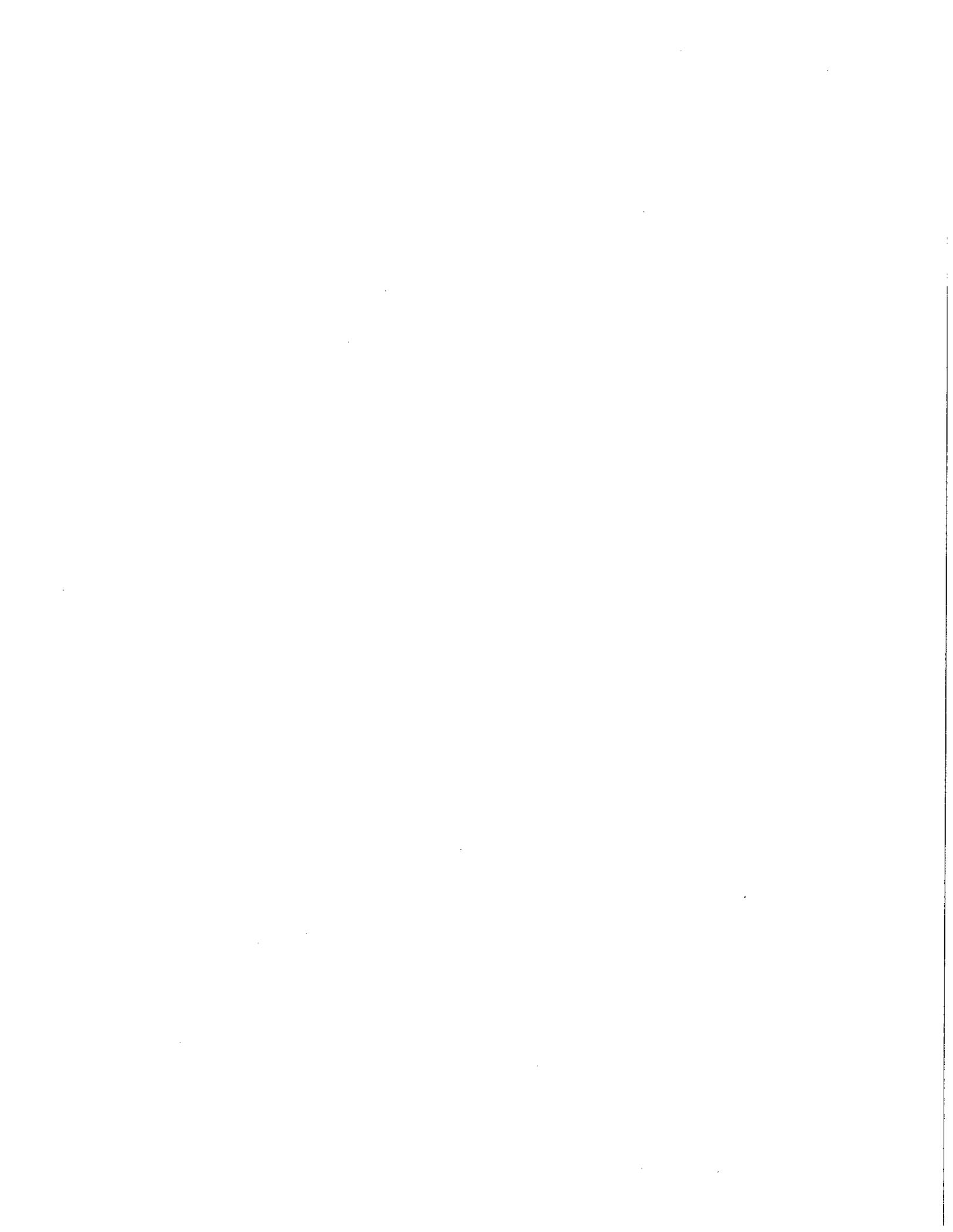# Analysis Guide Sheets

The analysis guide sheets in this appendix are designed to help you interpret the numbers that you logged into the data collection forms in Appendix E and the data tabulation work sheets in Appendixes F and G.

Follow the directions on each sheet, analyzing and highlighting data, drawing and recording conclusions, and generating needs statements.

Analysis Guide Sheet 1

This guide sheet is for use with data collection charts 1 (Student Enrollment by Course, Appendix E1), 2 (Student Enrollment by Discipline, Appendix E2), and 3 (Student Organization Membership, Appendix E3).

Analyzing Enrollment Data

The following questions provide guidelines for analyzing enrollment patterns. Make a copy of data collection charts 1 through 3. On the copy, highlight items of particular significance using the following questions.

● How do course enrollments by male/female compare with total school enrollment by male/female? Also, compare course enrollments with male/female enrollment in each grade.

● Which courses have enrollments of more than 75 percent of one sex? Also, compare male/female enrollments between entry-level and advanced courses.

● Are discipline enrollments by male/female representative of overall school male/female enrollment?

● In which disciplines are the enrollments more than 75 percent of one sex?

● What are the male/female enrollment trends during the past five-year period (or the period of time that you have data for)? Have they changed? Remained the same?

● What are the male/female membership trends in student organizations? Which organizations have a membership comprised of more than 75 percent of one sex?

● Compare your school's/district's enrollment patterns with statewide data.

Criteria for Determining Needs

Use the enrollment to identify potential areas of need in your school. In an equitable school, male/female enrollments in courses and discipline areas should reflect

● the same proportions as the overall male/female enrollment in the school. For example, if the total school enrollment is 48 percent male and 52 percent female, individual course enrollments should reflect that balance.

● not more than 75 percent of one sex in any class or discipline.

● a growth toward balance in male/female enrollment patterns. For example, if the enrollment in technology education five years ago was 2 percent female, that figure should grow over time.

● equitable enrollments in both entry-level and advanced courses.

Course enrollments refer to individual courses, such as keyboarding.
Discipline enrollments refer to all the courses in one discipline, such as business education.

Draw Conclusions

Use the forms in Appendix H4 to record your conclusions and generate needs statements.

Analysis Guide Sheet 2

This guide sheet is for use with data collection charts 4 (Staffing Patterns by School, Appendix E4) and 5 (Staffing Patterns by District, Appendix E5).

Staffing Profile

The following questions provide guidelines for analyzing staffing patterns. Make a copy of data collection charts 4 and 5. On the copy, highlight the items of particular significance.

- Are staffing patterns segregated by sex? What positions do the majority of females hold in the district? The majority of males?
- Identify the disciplines or job categories that have a disproportionate number of either males or females.
- Staff members act as role models for their students. What messages are being sent to students in your district about role modeling by staff members?
- What are the male/female staffing trends during the past five-year period (or the time period for which you have data)?

Criteria for Determining Needs

In an equitable school, staffing patterns should reflect

- both men and women in leadership roles, with growth shown in the female (or under-represented) leadership role over time.
- both men and women in staff support positions, such as male and female clerical workers and male and female maintenance staff.
- both men and women in a wide variety of jobs, providing a visible role model of equity for students.
- employment practices that encourage equal male/female staffing patterns, rather than practices that perpetuate male/female segregation by job category.

Draw Conclusions

Use the forms in Appendix H4 to record your conclusions and generate needs statements.

This guide sheet is for use with data collection chart 6 (Advisory Committee Membership, Appendix E6).

Advisory Committee Membership

The following questions provide guidelines for analyzing advisory committee membership. Make a copy of data collection chart 6 and highlight items of particular significance.
- Do advisory committees represent both males and females?
- Do advisory committees reflect changes in the labor market?
- What has been the trend in advisory committee membership by male/female during the past five-year period (or the period of time for which you have data)?
- Do your programs promote expanding career choices by encouraging advisory committee membership that represents those employed in nontraditional occupations?

Criteria for Determining Needs

In an equitable school, advisory committee membership should
- reflect current employment and labor market trends and include males and females employed in nontraditional areas.
- have a balanced number of males and females.
- serve as an example to students, especially in nontraditional occupational areas for both men and women.

Draw Conclusions

Use the forms in Appendix H4 to record your conclusions and generate needs statements.

Conclusions and Needs Statements
from Analysis Guide Sheets 1-3

Draw conclusions based on the responses to the guideline questions in analysis guide sheets 1 through 3. Then determine appropriate needs statements from each conclusion. For example:

Conclusion	Needs Statements
Student enrollments are highly segregated by sex in the discipline areas of technology education and family and consumer education.	There is a need to balance male/female enrollment in technology education and family and consumer education.
There are no female administrators in our school; there is only one in our district.	There is a need to work toward balancing the male/female staffing pattern at the administrative level.

Conclusions and needs grids appears on the following page. Be sure to photocopy enough for your needs.

Conclusions and Needs Statements
from Analysis Guide Sheets 1-3

Check one:

☐ Results of Analysis Guide Sheet 1
☐ Results of Analysis Guide Sheet 2
☐ Results of Analysis Guide Sheet 3

Conclusion	Needs Statements

Analysis Guide Sheet 4

This guide sheet, in conjunction with the attached research summary, is for use with student career surveys 2/3/4, 5/6/7, 7/8/9, 9/10/11, and 11/12 in Appendix C.

There are four basic steps involved in using Analysis Guide Sheet 4.
1. First, review the research summary on the following page to familiarize yourself with how students' responses may reflect national research trends.
2. Analyze student survey responses using the criteria listed below.
3. Review the student competencies on pages 33 to 35 to assist in determining "what should be."
4. Develop conclusion statements (see samples below) and record them for each grade level using the forms provided in Appendix H6.

Criteria for Analyzing All Student Survey Responses

Analyze the data on the data tabulation sheets in Appendix F for each group of student surveys by grade. For example, analyze all third-grade surveys together, all sixth-grade surveys, and so forth.
- Examine differences in male and female responses and response patterns.
- Determine how realistic students' answers are.
- Conclude how student responses reflect the equity research discussed in the research summary.

Keep a clean copy of the original data tables; make as many photocopies as you need.

The following criteria will help you examine the student survey data. Highlight an item if there is
- a ten to 20 percent difference in male and female responses;
- a significant number of identical responses to a statement;
- a high level of agreement or disagreement in responses;
- a high level of unsure responses; or
- an opposite response pattern for males and females (for example, a high number of males agree and a high number of females disagree).

Sample Conclusion Statements

Draw tentative conclusions based on the items you have highlighted in accordance with the criteria listed above.

School. For example, more third-grade girls felt encouraged to be good at mathematics, but more boys than girls felt they were good at math. One conclusion might be that although girls often feel encouraged and comfortable in school, boys are "taught" that they are more competent.

In an another example, 39 percent of the girls and 23 percent of the boys in the sixth grade agreed with the statement, "It is important that girls learn to be leaders." However, one-third of both groups disagreed. One conclusion may be that both males and females have biases and stereotypes about female leaders; that is, that females shouldn't and can't be leaders. Needs statements to address this conclusion may include that students need to see role models who are leaders and female, and females in class need to be encouraged to be leaders.

Work. In one sample, 70 percent of sixth graders agreed with the statement, "The amount of money I will make is important to me when thinking about my career." However, this percentage breaks down differently along gender lines: 78 percent of the males and 63 percent of the females agreed.

One conclusion that might be drawn is that pay levels for work are not as important to females as they are to males. Another conclusion is that females are not making the necessary connection between economic self-sufficiency and career selection or are continuing to believe someone will take care of them and will not need to work at the same pay level as males.

Family. For example, 67 percent of the boys and girls and only 55 percent of the girls in the 12th grade agreed that their parents had helped them explore possible careers.

Several conclusions are possible. Females may perceive that their search for a career is not important to their parents. Career-planning encouragement may be lacking overall. Or, parents may be helping to perpetuate the myth that daughters don't need to plan for a career because someone will take care of them.

Self-awareness. In response to the item "My future career is important, so I want to start preparing for it now by taking the right classes," 92 percent of females and 89 percent of males agreed. Responding to "I would like to have help in planning my career," 82 percent of females agreed but only 74 percent of males.

One conclusion is that females may be well aware of their career future and recognize the need for help in this area.

Research Summary

School. (Use these statements with the *school* section questions on the student surveys.) Research on male/female differences in educational achievement shows the following.

• Girls start out ahead of boys in speaking, reading, and counting. In the early grades, their academic performance is equal to that of boys in mathematics and science. However, as they progress through school, their achievement tests scores show significant decline. Boys' achievement test scores, on the other hand, continue to rise and eventually reach and surpass those of their female counterparts, particularly in mathematics and science.

• In spite of performance decline on standardized achievement tests, girls frequently receive better grades in school. This may be one of the rewards they receive for being more quiet and docile in the classroom than boys are. However, this compliance may be at the cost of independence and self-reliance.

• Although girls achieve better grades than boys do, they are less likely to believe that they can do college work. In fact, of the brightest high school graduates who do not go on to college, 70 to 90 percent are women.

• Girls who are gifted in mathematics are far less likely to be identified than are gifted boys. Girls who are identified as gifted are far less likely to participate in special or accelerated mathematics classes to develop this special talent.

• Girls with learning disabilities are less likely to be identified or to participate in special education programs than are boys with learning disabilities.

• Boys are far more likely than girls to be identified as exhibiting learning disabilities, reading problems, and mental retardation.

• Learned helplessness exists when failure is perceived as insurmountable. Girls are more likely than boys to exhibit this pattern. They attribute failure to internal factors, such as ability, rather than to external factors, such as luck or effort. Boys tend to attribute failure to external factors.

Girls who exhibit learned helplessness tend to avoid failure situations: they stop trying. Research indicates that teacher-student interaction patterns may contribute to the learned helplessness female students exhibit.

• By high school, young women demonstrate a decline in career commitment. This decline is related to their feeling that males disapprove of a female using her intelligence.

- Females are more likely to enroll in elective English, reading, and communications classes and males more often enroll in elective science and mathematics. By failing to enroll in science and mathematics courses, especially at the advanced level, females reduce their occupational opportunities in fields related to these critical filter areas.

There exists "historical" sex bias, stereotyping, and discrimination in schools. In the recent past there were

- separate courses for males and females;
- separate graduation requirements; and
- reinforcement of traditional male/female roles through
— extracurricular activities,
— teacher-student interactions,
— student-student interactions,
— instructional materials,
— staffing patterns,
— career and vocational education,
— differential treatment of males and females, and
— curriculum content.

Schools need to focus more on education for employment knowledge and skills, with special emphasis on nontraditional occupations and sex fairness.

Work. (Use these statements with the *work* section questions on the student surveys.) Research has shown there is a gap between myth and reality of work force facts that leads both female and male students to underestimate

- the number of years females will work for pay;
- the importance of higher wage, higher benefit jobs for females; and
- females' sole or contributory role to economic self-sufficiency.

There is occupational segregation by job category.

- More than one-third of the disparity in earnings between men and women is attributable to sex segregation by job type.
- Currently, about half of all men work in jobs with a work force of 80 to 100 percent men. The same holds true for women: about half work in jobs primarily employing women.

In preparing for careers

- there is a lack of acceptance of nontraditional careers.
- it is more acceptable for females to select or prepare for a male-oriented career than for a male to prepare for a female-oriented career. Both males and females devalue traditional female occupations.
- 86 percent of both males and females indicate they would like to know more about future career possibilities.

There is a lack of knowledge about equal employment laws and benefits. The preparation and counseling girls receive in school contribute to the economic penalties they encounter in the workplace.

Although more than 90 percent of the females in classrooms will work in the paid labor force for all or part of their lives, the following statistics reveal the cost of the bias that they encounter.

- More than one-third of families headed by women live below the poverty level.
- A woman with a college degree will typically earn less than a man who is a high school dropout.
- The typical working woman will earn 70 cents for every dollar earned by a male worker.
- A majority of women work because of economic necessity, not for "extra" cash. Nearly two-thirds of all women in the labor force are single, widowed, divorced, separated, or are married to spouses earning less than $15,000 per year.

Family. (Use these statements with the *family* section questions on the student surveys.) Both males and females have unrealistic views of family roles by holding traditional views that do not reflect

current work force participation. For example, both males and females will likely have both a family and a career.

We know that families teach gender roles and can encourage or discourage the future generation's career paths.

However, there is a general lack of knowledge of family trends and facts.
- Most women work because of economic need. Nearly two-thirds of all women in the labor force in March 1985 were either single (25 percent), divorced (12 percent), widowed (5 percent), separated (4 percent), or had husbands whose earnings were less than $15,000 (17 percent).
- Women represented 61 percent of all persons 16 years and older who had incomes below the poverty level in 1984.
- In 60 percent of the married couples with children younger than 18, both parents work for pay.
- The number of one-parent households increased by 175 percent between 1960 and 1983. The number of households increased by 58 percent in that time.

Families are key influences in promoting ideas about work and family and in planning for a career or exploring career choices.

Students report that television and other media provide career information through current programs. Consider "Picket Fences," set in Rome, Wisconsin, with two professional parents, or other shows where there are single parents raising children. It is important to point out where these portrayals may be realistic or not.

Self-Awareness. (Use these statements with the *self-awareness* questions on the student surveys.)
Self-esteem is directly related to confidence.
- Females achieve higher grades, but are less likely than males to believe they can do college work.
- Learned helplessness exists when failure is perceived as insurmountable.
- Girls tend to attribute failure to internal factors, such as ability, rather than to external factors, such as luck or effort. Boys tend to attribute failure to external factors and success to internal factors. Girls who exhibit learned helplessness avoid failure situations; they stop trying. Teacher-student interaction patterns may contribute to the learned helplessness that female students exhibit.
- Society socializes boys into an active, independent, and aggressive role. However, this behavior is not congruent with school norms, rules, or expectations that stress quiet, docile behavior. This results in a role conflict for boys and in boys being identified more often for behavior problems.
- Males build career expectations beyond their abilities, while females build career expectations below their abilities. The result is compromise, disappointment, and poverty.
Sex-role stereotyping produces negative outcomes.
- There is evidence of more pressure among males to conform to the masculine stereotype earlier in life than for females to conform to the feminine stereotype.
- It appears to be more difficult for males than females to unlearn stereotyped behaviors.
- Generally, males are encouraged to be competitive, aggressive, independent, and physically strong; females are discouraged from exhibiting the same characteristics.
- Generally, it is acceptable for females to express fears, anxieties, weaknesses, affections, or tenderness. It usually is unacceptable for males to express such feelings.
- There have been differences in the past between male and female perceptions of leadership ability, independence, economic self-sufficiency, decision making, and risk taking.
- Stereotyping of occupations exists in career choice and career purpose.

Sources

Farris, Charlotte. *Expanding Adolescent Role Expectations: Information, Activities, Resources for Vocational Educators*. Ithaca, NY: Cornell University, Project MOVE, 1978.

Sadker, Myra Pollack and David Miller Sadker. "Cost of Sex Bias in Schools: The Report Card" in *Sex Equity Handbook for Schools.* New York, NY: Longman, 1982.

"Women's Work, Men's Work: Sex Segregation on the Job." Washington, DC: National Research Council, National Academy of Sciences, 1986.

Wisconsin Department of Public Instruction/University of Wisconsin-Stout Gender Equity Survey Data Base, 1986. Unpublished data.

These reproducible work sheets are provided for each grade level surveyed. They also can be used to summarize trends across grade levels. At the top of each sheet, fill in the grade level(s) of the data you are analyzing. Be sure to photocopy enough sheets for your needs.

After generating conclusions and needs statements for each grade level, observe and compare them. What trends do you see? How do response patterns vary from grade to grade? Use the same sheets to summarize these overall trends.

A sample statement appears below.

Conclusions	Needs Statements
School About two-thirds of all students feel different activities are expected of boys and girls.	Assess school environment for equitable activities for males and females.

Analysis Guide Sheet 4—Conclusions and Needs Statements

Grade _____

    Using the highlighted items from each section in the student survey, draw conclusions and determine need statements for each conclusion.

Conclusions	Needs Statements
School	
Work	

Analysis Guide Sheet 4—Conclusions and Needs Statements

Grade ____

      Using the flagged items from each section in the student survey, draw conclusions and determine need statements for each conclusion.

Conclusions	Needs Statements
Family	
Self-Awareness	

Analysis Guide Sheet 5

Use this analysis guide sheet to interpret the staff surveys in Appendix G for administrators, guidance counselors, and teaching staff. Provide conclusions and needs statement forms for each.

Analyzing Data from Staff Surveys

Analyze each group of staff surveys. Examine all administrator surveys together, all teaching staff surveys together, and all guidance counselor surveys together. Make a copy of each set of staff survey data, highlighting significant items.
- Note differences in male and female responses within a job category, such as the teaching staff.
- Note differences in male and female responses between job categories, such as between guidance counselors and teaching staff.
- Correlate staff responses with student survey responses (for example, staff members responding that males and females are being equally encouraged, while female students respond that they are more encouraged in school).
- Look at what has been done and what needs to be done.
- Look at specific training or lack of training staff have received.

Drawing Conclusions

Based on staff responses, draw conclusions and determine appropriate needs statements. Attach additional pages as needed.

Analysis Guide Sheet 5—Conclusions and Needs Statements for Staff

Check one:

❑ Administrators
❑ Guidance Counselors
❑ Teachers

Conclusion	Needs Statements