This digest contains three articles on gender equity in vocational education, especially in relation to the provisions of the Vocational Education Act of 1976 and the Carl Perkins Act of 1984. "Gender Equity in Vocational Education" (Debra J. Robbin) describes interviews with students at a New England vocational school, in which they reported a generally equitable school environment, but some striking gender differences appeared in opinions about the roles of females and males in the workplace; "Vocational Education in the School Reform Movement" (Sundra Flansburg) highlights some of the equity issues raised in school reform discussions and their implications for vocational education; and "Shaping a New Decade: Women in Construction" (Susan Eisenberg) provides a perspective on the status of women in the building trades. An annotated list describes 11 publications on gender equity available from the Women's Educational Equity Act Publishing Center. (KC)
Gender Equity in Vocational Education

By Debra J. Robbin, Ed.M.

Vocational education has historically been characterized by a high degree of sex segregation. Before Title IX of the Education Amendments in 1972 and the Vocational Education Act in 1976, access to nontraditional courses as well as to some vocational schools was legally denied to females. These barriers led male students to be concentrated in industrial and agricultural education and females in home economics and entry level clerical occupations.

The passage of the Vocational Education Act in 1976 specifically addressed sex equity programming in vocational education. Then in 1984, the Carl Perkins Act gave equity work vital support by providing funds for program development to eliminate sex-role stereotyping in vocational education and to promote enrollments in nontraditional career programs.

Researchers have found that these early efforts to eliminate sex-role stereotyping were somewhat successful in raising initial awareness of the problem. Female enrollments did increase. There was still, however, considerable lack of progress in the area of nontraditional enrollments.

From the "trenches"

In order to investigate if and how equity issues have shown themselves in vocational education, I went to a vocational school to interview students. The school I chose is a regional vocational technical high school, and is located in the New England region. A working class community, the area has suffered severe hardship from the economic recession, registering an unemployment rate the second highest in the nation. The school offers a range of programs, from appliance repair technology and carpentry to data processing and electronics.

There are currently 1,088 males (64 percent of the total) and 601 females (36 percent of the total) enrolled. Of this number, 41, or 2.4 percent of the students (all females), are considered to be in nontraditional shops, which is well below the national average (13 percent) of nontraditional student enrollment. I studied 103 students ranging from ages 14 to 17—34 females (33 percent) and 69 males (67 percent).

The students speak

The students in this school generally agreed that their school environment is equitable in a number of areas—in teachers expecting the same achievement from males and females (75 percent agreed); in encouragement to enroll based on one's abilities and interests (72 percent); in equal encouragement to participate in athletic activities (75 percent); and in students' right to enroll in any shop in the school (92 percent). Fewer students thought that teachers treat males and females the same (55 percent). Finally, few students felt that their junior high school guidance counselor helped students consider a wide range of career choices, including nontraditional (22 percent).

In terms of knowledge of or interest in nontraditional careers, there were both similarities and differences according to gender. While overall only 18 percent have a family member working in a nontraditional career, 56 percent know someone in a nontraditional career. However, 47 percent of the females and only 17 percent of the males were interested in learning more about a nontraditional career.

Next issue: Violence Against Women and Girls. If you would like additional copies of the WEEA Digest, to be added to our mailing list, or to receive our free catalog of gender-fair materials, call 800-225-3088.

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Gender equity... continued

In opinions about the "working world," there was general agreement among males and females that women work for the same reasons that men work (64 percent agreed). A large portion of the students felt that equal pay for equal work is not prevalent, showing they know at least one of the consequences of occupational segregation. Only 30 percent overall felt that men and women in the same job earn the same pay.

Despite the similarities in these results, there were striking gender differences in opinions about the roles of females and males in the workplace. While 64 percent of the students believed that sexual harassment is a serious problem for many working women, 82 percent of the females felt this way compared with 55 percent of the males. Thirty-six percent overall thought that only men should work on construction sites because they are stronger, but this broke down to only 12 percent of the females, compared with 48 percent of the males. And although 44 percent of the students felt that there are some jobs only men should do, only 21 percent of the females held this view compared with 55 percent of the males.

While only 23 percent overall felt that women should not work when they have small children, 15 percent of the females felt this way, compared with 28 percent of the males.

Twenty-four percent of the males thought that more men should work in nursing, childcare, and clerical jobs, compared with 56 percent of the females (34 percent overall). Although only 21 percent considered men the primary breadwinners "so women don't need to earn as much," only 9 percent of the females thought this, compared with 28 percent of the males.

There was general agreement among males and females concerning career plans. Eighty-nine percent planned to have a career, with 77 percent planning to combine this with a family. Seventy-eight percent viewed their career as a way to use and develop their skills and 79 percent felt their families would support them in whatever career they chose. However, when asked if their family encouraged them to explore different career possibilities, 62 percent overall said they did—but only 52 percent of the males reported this support, compared with 82 percent of the females.

A broader picture

Although the students in this school felt it equitable in terms of expectations, enrollment, and encouragement in athletic activities, one must carefully weigh these perceptions with other evidence. We have numerous studies that have indicated considerable differences in the ways in which males and females are treated in schools.8

I feel that the students are limited in their ability to make this assessment. Their youth, inexperience in critiquing their educational environment along gender lines, and lack of exposure to other models of vocational education are all factors that may have elicited these responses. Whether or not a student is in a nontraditional shop can also affect how these issues are perceived. In talking with the school's nontraditional support group—a group that meets weekly to share strategies and resources for increasing girls' participation in nontraditional careers—I heard views that expressed a somewhat different experience, especially in terms of achievement expectations.

There is tremendous societal pressure against men doing what are considered "feminine" jobs. That there is a sizeable majority of males in the school and none in nontraditional shops such as childcare, suggests subtle pressures not to violate the "norm." There was very mixed feeling among the students on whether men should even work in these areas. Often, in discussing nontraditional occupations, we place more emphasis on encouraging women rather than men, because these jobs pay better. But income is not the sole reason for advocating equity, and it is important to remember the benefits of promoting flexibility of sex-roles and reducing sex-role stereotyping on the whole.

I found that the female students feel strongly and positively that they have a significant role in the working world. They are not advocates of occupational segregation, despite many of them having chosen traditional shops in this school. This was, in some respects, a surprising finding for me. Although further study is needed to explain what motivates both males and females to attend a vocational high school, it may be that males and females have different reasons for obtaining the skills they are studying in vocational school. Without doubt, these students are aware that they are learning an employable skill.

Students generally felt that the hardest part of choosing to enroll in a nontraditional shop was the peer pressure one would have to endure. The most common comment was that other students would laugh. Though the nontraditional students I met did not mention this kind of treatment specifically, they did indicate that it was an isolating experience and that they did not feel generally accepted.

The issue of sexual harassment must also be dealt with. There were significant differences in whether males and females defined sexual harassment as a serious problem. In an open-ended question asking for the "best way to deal with sexual harassment," many students answered, "Tell someone" or "Report it." However, several males, but no females, answered with comments such as "leave the job," "avoid it," or "don't bother with it," indicating a stronger belief that harassment is easy to eliminate or that leaving one's job is an option for most women.

In conducting this project, I had the support, openness, and interest of the superintendent, the head of guidance counseling, the head of academic instruction, and the nontraditional guidance coun-

Continued p. 5, "Gender equity"
Vocational education in the school reform movement

By Sundra Flansburg, Center for Equity and Cultural Diversity

Reform agendas and strategies for improving education in the United States have not generally focused on vocational education as an integral part of the education picture. Many of the challenges vocational educators are grappling with, however, are very similar to those being faced by reformers looking at other areas of our education system.

The equity lens
The changing demographics of our citizenry are forcing us to examine how well our educational system serves those who are not white, middle-class males, as well as how changing work force needs should be addressed within schools. Vocational education in particular has seen two decades of legislative efforts designed to increase access and expand the definition of vocational education.

This article will highlight some of the equity issues being raised in the larger school reform discussions and note some of the implications of these issues within vocational education. By examining some of these critical issues, we can begin to develop new approaches to vocational education that benefit all of our students.

Role of the teacher
For over two decades we have known that teachers, like the rest of us, have learned well the biases present in our dominant culture. This fact has been reaffirmed in How Schools Shortchange Girls, a recent study by the American Association of University Women. Vocational teachers are subject to the same messages about who is most "able" and who has little promise.

Although most teachers don't consciously act on, or even hold, biases about students determined by their skin color or gender, students do pick up unconscious signals and perform according to teachers' expectations of them. Researchers Myra Sadker and David Sadker have found a hierarchy at work in the classroom, with white males receiving the most attention from teachers, and females of color receiving the least—this while the teachers studied felt they treated their students equitably.

Tracking and ability grouping
Tracking of students by academic ability, although widely used across the United States, has been criticized by reformers and equity advocates alike. Although this issue is larger than this article, some major criticisms have been that students of color are disproportionately placed in the lower tracks. The criticism of racial segregation within tracking is supported by the fact that the practice of tracking students gained wide favor only after the 1954 desegregation order from the Supreme Court.

Rather than helping students placed in lower tracks build skills, tracking relegates them to failure. In fact, the system does not improve performance of lower and average tracked students and only improves performance of higher tracked students by a small fraction, if any.

While the standardized tests often used to separate students by "ability" are biased against females, males of color, and low-income students, these tests are one of the primary instruments used to determine tracking position. This, coupled with unconscious bias in teacher perceptions, means that placement in tracks cannot be free from the biases and prejudices of the dominant culture.

It's clear that the answer to addressing students' needs lies not in more extensive tracking systems as some educators propose, but in making our instruction equitable, accessible, and intellectually challenging to students with varying learning styles and abilities.

"Special" students
Much of the recent legislation affecting vocational education has contained provisions for eliminating discrimination against certain populations of students, including females, low-income students, students with disabilities, and students of color. This legislation has been important for opening the doors for students not traditionally well served by vocational education, as it has been within the larger educational structure.

Much of the literature that focuses on vocational education and select populations looks at females and at students with disabilities. Research on females has highlighted a number of areas related to vocational education that require immediate and continuing attention, for example, sex-segregation of class enrollment, sex-biased assessments and counseling, and sexual harassment within the school.

Other research looks at students with mental and physical disabilities. This attention is partially the result of federal legislative requirements, as well as the fact that many students with disabilities are tracked into vocational education. Studies have shown that vocational training helps to ease the transition between school and work for disabled students.

But female students with disabilities face hurdles both because of their gender and because of their disabilities. A recent study by researcher Mary Wagner found that young women with disabilities do not receive either the same quality or quantity of vocational education as male students with disabilities. For example, vocational training for female students with disabilities falls mainly in the low-paying service sectors, like food service and office work, while that for male students with...
disabilities falls mainly in skilled professions, like construction. This segregation may lock females with disabilities into a cycle of poverty and dependence.\(^7\)

Finally, recent studies have shown that students who speak languages other than English are increasing in number within the vocational education system, although these students are still underrepresented. The Carl Perkins Act stipulates that vocational schools must actively recruit, counsel, assess, and provide support services for students who have little or no English. While many new approaches are now being tested to meet this legislative requirement, many schools are still not in compliance.\(^6\)

While schools may still be working as if large groups of students are "special" students, they are, in fact, the majority of students in our schools. As we move to ensure that instruction, services, and benefits are equally available and accessed by all groups of students, we will need no longer consider so many as "special."

**Counseling and assessment**

Interest and skill assessment is part of every student's entry into vocational school. And, although it is now illegal to use assessment materials that differ by gender, a practice which was popular prior to Title IX and the Vocational Education Act of 1976,\(^8\) assessment still depends on the assessor's interpretation of data and on the student's interests.

In terms of counseling, research has shown that, compared to adolescent males, adolescent females were aware of many fewer occupations open to them, and they had lower expectations for their probability of succeeding in them.\(^9\) We must work very hard to ensure that all students are aware of the possibilities open to them and that it is students' abilities and interests that decide their course of study, rather than biases of the school and society. One of the ten policy recommendations in a report by the National Center for Research in Vocational Education is that "school counselors must...[lean] over backward to avoid being influenced by stereotypes that pervade the entire culture when they offer educational and labor market advice to young women of all racial and ethnic backgrounds."\(^10\)

**Student self-segregation**

Although schools no longer have different requirements based on gender or race, vocational education remains one of the most segregated areas of education. Females make up more than 90 percent of the students in programs for training in cosmetology and in secretarial and nursing assistant training. Males make up over 90 percent of the students in electrical technology, electronics, appliance repair, auto mechanics, carpentry, welding, and small engine repair. This division concentrates females in training for fields with low pay, while males are in courses with more high-paying job opportunities.\(^12\)

There is also a substantial difference when transferability and career ladders are examined. One of the discussions currently taking place within vocational education concerns the question of whether vocational instruction should be training students for a specific job, or in broader job skills that are more readily transferable. This issue takes on particular significance when considered in terms of the segregation now in place. A student trained in electronics has more chance for transferring skills to another job, as well as advancement in the workplace, than someone who is trained in cosmetology.

Although on the surface students are, for the most part, selecting the areas they are interested in, we must remember they do not operate in a vacuum. The reasons females tend to select female-dominated courses span the range from wanting to be with their friends to experiencing sexual harassment when trying nontraditional classes.

Another key reason is lack of female teachers as role models for young women. As with students, female instructors are concentrated in traditionally female job areas, while making up less than 10 percent of all the teachers in industrial arts, agriculture, trade and industry, and technical occupations. And teachers of color are significantly underrepresented among vocational school faculty.\(^13\) While the lack of role models for students of color overall, and for females in nontraditional courses, does not automatically exclude them, many students feel more enthusiasm for trying something new when they see "someone like me" as a classroom leader.

Educators concerned with the gender distribution among courses have found that by talking to girls realistically about job opportunities, advancement, and salaries, girls become much more interested in exploring nontraditional areas. At the same time, however, we need to create supportive, accepting behavior on the part of male students. Without focusing on this, many classrooms may remain unfriendly to female students.

**Making vocational education equitable**

Educational administrators and teachers can do much to change the inequities that now exist. Training programs that have proven effectiveness are already available to help change this pattern (GESAGender/Ethnic Expectations and Student Achievement—is but one).\(^14\)

Vocational education is entering a challenging and exciting period, when big questions are being asked, and new approaches proposed. As vocational educators discuss and evaluate the directions to go—looking at issues such as the relationship they have with traditional schools, whether or not students should be encouraged to mix vocational and academic courses, how to prepare and support teachers—the equity issue must remain central to the discussion.
Gender equity ... continued from p. 2

A graduate of the masters program at the Harvard Graduate School of Education, Debra J. Robbin has been active in women's issues for the past 15 years.

Notes
2 American Association of University Women.
6 Beck.
7 Douglass.
Shaping a new decade: Women in construction

By Susan Eisenberg, Tradeswomen Research and Education Project

The following article gives one woman's perspective on nontraditional occupations. It offers vocational educators an important view of life after vocational school.

I remember the first time I heard my business agent refer to us as "Pioneers of the Industry." It was ten years ago, when I was a third-year apprentice electrician. It made me feel incredibly affirmed and claimed, as though, finally, our presence was accepted. As a phrase that's still being used for women entering the construction trades in the 1990s, though, "pioneer" has an uncomfortable tone. By its nature, pioneering is meant to be transitional, a role one moves on from.

National affirmative action guidelines opened the building trades to women in 1978. If we look at the definition of pioneer—"those who clear and prepare the way for the main body"—after 12 years we have to say that the "main body" has yet to arrive, much less be heard coming down the road.

Let's take a leap and claim this new decade as a time to put pioneering behind us. We have cleared and recleared the same land enough times. Women entering the trades today need to be seen as settlers.

Let's take a look for a moment at the early history and where we expected to be by now. This is important because a lot of explaining and justifying is going on, since things didn't happen according to plan.

Statistics, compliance, goals

In April 1978, in response to lawsuits filed by tradeswomen in Washington, D.C., within a climate created by a strong women's movement, Jimmy Carter extended Executive Order 11246 of the Office of Federal Contract Compliance Programs to set national job goals for women on federally funded construction projects over $10,000. These standards were progressive. Increasing every year, so that by 1981, 6.9 percent of the workers on these job sites were to be female. These goals were meant as beginning figures, as a way to open up the industry with a wedge where the federal government could exert pressure. That support was pivotal and is something we must fight to keep or institute. Most important, Title 29 of the Apprenticeship Regulations of 1978 stipulated that apprenticeship slots were to be filled by women in numbers equal to half their representation in the local labor force, or that approximately one-quarter of every class be female.

Let's stop and do a little math, and we'll appreciate how important training program statistics are. Imagine that for the past 12 years the federal regulations had been effectively monitored. If 25 percent of the apprentices since 1978 had been women (and if we assume a 30-year rotation of the industry work force) then today there would already be over 8 percent of women in every trade nationally, with the assurance that, in twenty more years, women would make up 25 percent of the trades.

Instead of 25 percent, only 3.8 percent of the apprentices since 1978 have been female, so that after 12 years, women make up less than 2 percent of the industry work force. Proceeding at this pace, in 20 more years—after 30 years of "clearing and preparing the way"—we would reach 4 percent nationally. We would never reach a critical mass, the size of settlement that can sustain organization and become comfortable. It's not hard to figure out that without the tradeswomen population growing to an acceptably significant size, organizational work cannot be sustained, isolation increases, and aging pioneers begin to look for more comfortable surroundings.

Temporary isolation, longtime frustration

We entered the industry in 1978 with the reasonable expectation that our isolation was temporary. For each woman currently in the trade, three other women belong here as well—not by feminist fantasy, but by federal regulation. What a different—and more appropriate—discussion we could be having now if 8 percent of the trained work force were already women, and we were on a clear path moving forward.

Population forecasters are estimating that only 10 percent of new U.S. workers in the year 2000 will be white males. By power of numbers, of who will make up the working population—larger numbers of minorities, of immigrants, or women working outside the home—it is predicted that the construction industry will be drastically changed in composition by gender and race within a decade.

How do we reconcile these two opposite predictions? This is where ideology and history play a crucial role. On the one hand, I have said that, continuing at the present rate, women will only achieve 2 or 3 percent by 2000. On the other hand, I stated that, no matter how much we are opposed, women will be entering the industry in significant numbers by 2000. The entrance of women into the work force can occur in one of two ways. Either we unlock this stalling on women's entry into skilled and higher paid positions in the trades and really integrate the work force, which means not just in numbers, but in a more inclusive work environment, or we follow the other plan, introducing a lot of hierarchies into the work, segregating it internally, with women and other workers of color in the least organized, least skilled, least safe, lower-paid end. We have to make sure that doesn't happen.

Continued p. 8, "Shaping a new decade"
Vocational education can use the products of the Women's Educational Equity Act (WEEA) Publishing Center to create equitable education and offer innovative career options for women and girls interested in nontraditional fields. Developed with funds from the WEEA Program, the materials may be purchased by mail or phone. Orders under $25 must be prepaid. For prepaid orders, add $2 shipping for orders under $25; add $4 for orders $25 and over. For a complete listing of our materials contact the WEEA Publishing Center at 800-225-3088 (in Massachusetts call 617-969-7100).

Chart Your Course and Building Partnerships (set), #2703 $16.00
High-tech industry/educational equity models the actual workplace and career counseling to encourage women to enter and succeed in nontraditional education and career choices.

It's Her Future, #2645 purchase $43.00 #2647 rental $7.00; #2115 booklet, packet of 20 $23.00
This 17-minute video spurs high school, vocational school, and community college young women to explore the range of training opportunities and benefits available in nontraditional careers.

Spatial Encounters, #2434 $27.00
Spatial skills are highly correlated with success in technical and professional occupations. The exercises here show how perceptual and visualization skills apply in real world math, geography, acoustics, landscape architecture, and telecommunications.

Steppin' Up and Moving On: A Career Education Program for the Urban, Noncollege-bound Student, #2435 $7.50
A comprehensive curriculum with a range of creative and varied activities such as vocational interest assessments, resume analyses, and career game exercises, to expand the career options of urban students of color, especially females who are not college-bound.

Don't Go to Your Room... And Other Affirmations of Empowerment for Women with Disabilities, captioned #2728 purchase $63.00 #2729 rental $10.00
noncaptioned #2730 purchase $63.00 #2731 rental $10.00
This 60-minute video introduces disabled students and their teachers to a wide range of careers. A dozen women discuss the myths about people with disabilities; experiences with bias, stereotyping, and the manifestations of these myths; and ways to confront and dispel these problems.

Options: A Career Development Curriculum for Rural High School Students, Understanding People in Our Area, #2128 $14.25; Decision Making, #2129 $9.50; The Juggling Act: Lives and Careers, #2131 $19.75
Role-playing, case studies, classroom discussions, and activities help young rural students understand themselves better and use their understanding to make crucial decisions about work, marriage, family, and other aspects of their future.

Fair Play: Developing Self-Concept and Decision-Making Skills in the Middle School (12 books), #2498 $141.25
An innovative interdisciplinary approach that links career exploration and academic skill building. These units concentrate on communicating effectively, getting along with others, solving problems, and making decisions.

Hand in Hand: Mentoring Young Women, Guide for Planning, Implementing, and Evaluating a Mentoring Program, #2685 $17.50; IdeaBook for Mentors, #2686 $8.50; Student Career Journal, #2742 $6.00
Guide for Planning, Implementing, and Evaluating a Mentoring Program provides guidelines for setting up the program and establishing an active partnership between schools and businesses. IdeaBook for Mentors contains the basics for workshop activities, as well as guidance for mentors and students. A Student Career Journal helps students record insights as they learn about themselves.

ASPIRE: Awareness of Sexual Prejudice is the Responsibility of Educators (set), #2245 $27.00
An excellent curriculum for training teachers and future teachers to evaluate instructional materials, examine the effects of sex-role stereotyping on careers, and develop strategies for change.

Choosing Occupations and Life Roles (set), #2516 $45.00
A four-volume guide for teachers and counselors combats stereotyped thinking about career selection and helps stimulate informed, unbiased choices.

Freedom for Individual Development (set), #2095 $28.00
Highly effective materials focus on the role of the community, girls and vocational education, sex-fair teaching methods, and positive guidance and counseling techniques.
A gauge for our success as settlers will be not whether women who are extraordinary can enter the building trades, but whether it has become a reasonable option for any woman to consider.

From “Rosie” to today’s worker

Looking back to the 1940s can give us a sense of the roots of opposition to women’s integration into the trades. Relying on women’s labor to keep the industrial war effort going during World War II, the government was forced to admit and propagandize women’s ability and desire to do nontraditional work. What the government refused to acknowledge was women’s right to that work. Women were supposedly holding jobs for returning soldiers. More than 30 years after trained, skilled women were fired from their nontraditional jobs, affirmative action guidelines violated traditional ideology that reserves first choice of jobs to white males and said that women belonged there, not to save someone else’s place, but to finally fill their own place at a job with decent pay and benefits.

When six female apprentices entered my union local of 2,500 members in 1978, there was enormous agitation, comments like, “The women are taking over!” as though the six of us were a full-scale invasion force. At the time, I found the hysteria bizarre, but now I think that in some ways it reflects the depth, though certainly not the goals, of what was at stake.

We are a movement that by its very nature confronts the gender division in our personal as well as economic lives. I remember a carpenter on one of my first jobs saying, “You know why guys don’t want you here? Every day they go home, they tell their wife how hard they worked, then they sit down while she fixes dinner. They’ve got a good thing going. What’s she going to think when she finds out a girl can do his job?” And, taking it one step further, if she herself could have an earning power equal to his, would she still choose the relationship at all?

Tradeswomen issues fall at the fulcrum of the contemporary feminist movement. This is why, I believe, the opposition has been so determined, and why it is important for blue-collar affirmative action to be part of any progressive agenda for women or labor. We are a movement that unifies issues of class, gender, race, and sexual preference as our only path of growth. A gauge for our success as settlers will be not whether women who are extraordinary can enter the building trades, but whether it has become a reasonable option for any woman to consider.

Let’s admit that we’ve gotten stuck, we’ve been out-maneuvered, and we may have to get ornery again and give up some of the comfort we’ve achieved if we’re going to regain the initiative. As settlers, we’ll all need to be analytical thinkers. Anyone who can figure out the most efficient way to run pipe and how best to support it, who can figure out how to get something that weighs ten times their own weight up in the air and down safely, is an analytical thinker. We need to envision the kind of settlement we would feel comfortable in, where we feel as comfortable and at home as the most accepted person does on the jobs we’re on now.