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ABSTRACT

This resource handbook provides a brief overview of ideas, facts, and resources offered during the Partnership for Academic and Career Education's (PACE) 10th annual Summer Institute. The institute's goal was to inform participants about nontraditional careers open to students, with special emphasis on midlevel technology careers and to recommend strategies to help students prepare for these rewarding and lucrative careers. The handbook includes six sections that cover the following: (1) descriptions of industry tours at three companies; (2) descriptions of technology demonstrations at Tri-County Technical College; (3) summaries of 13 general institute sessions, including tech prep and school-to-work, a self-esteem workshop, the South Carolina educational story from 1961-1996, campus resources, using community resources to build career awareness, keeping kids in school, nontraditional careers, gender fairness in the classroom, integrative learning, work-based learning models (school-to-work, youth apprenticeship, and other), strategies for funding classroom projects, enterprise zones and economic development, and attracting industry to South Carolina; (4) a list of participant projects; (5) a list of 64 resources; and (6) participant comments. Three appendixes include the institute schedule and flyer; list of participants, staff, and presenters; and sample materials. (KC)

June 17-28, 1996

Resource Handbook
for Teachers & Counselors

PACE 96

Summer Institute

Partnership for Academic and Career Education (PACE)
& Tri-County Technical College

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INTRODUCTION

The Partnership for Academic and Career Education's (PACE) tenth annual Summer Institute, funded through a Carl D. Perkins grant awarded by the State Department of Education, Office of Vocational Education, was conducted at Tri-County Technical College June 17-28, 1996. Nine teachers and counselors from Anderson, Oconee and Pickens counties schools participated in the Institute.

The Institute's primary goal was to inform participants about non-traditional career opportunities open to students with special emphasis on mid-level technology careers and to recommend strategies to help students prepare for these rewarding and lucrative careers. The Institute also focused on improving all students' motivation and self-esteem.

To meet these goals, participants in this year's Institute took part in a variety of activities including industry tours and presentations, lab demonstrations, and discussions led by Institute staff. Sessions covering such diverse topics as self-esteem, using community resources effectively, gender fairness, integrative and work-based learning and non-traditional careers were covered during the two-week program. A two-day program entitled "Self-Esteem--The Transferable Skill" involved participants in an active learning environment.

On completion of all scheduled activities and submission of a project, participants were awarded 3 semester hours for the Institute course--Psychology of Individual Achievement (PSY 222). Projects, designed to follow up one or more topics presented during the Institute, included appropriate activities to enhance teaching or counseling approaches in the coming school year.

This booklet provides a brief overview of ideas, facts, and resources offered during the 1996 Summer Institute. ***APPENDIX A*** includes the Institute schedule. ***APPENDIX B*** provides a descriptive flier and list of Institute participants, staff and presenters. ***APPENDIX C*** contains a sampling of the handouts given to Institute participants.

For additional information on any topic addressed in the Institute, or plans for the 1997 Summer Institute, contact:

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INDUSTRY TOURS

Torrington Manufacturing

Started in the 1860's to manufacture sewing machine needles, Torrington has now grown to be the largest manufacturer of bearings in the United States and the second largest worldwide. In addition, the company manufactures other precision metal parts including steering mechanisms for automobiles, computer components, and surgical equipment. The plant, located in West Union, was the first Torrington plant in the South and primarily manufactures bearings for automatic transmissions and steering columns for automobiles. The plant employs approximately 400 people and is currently working three shifts, 6 or 7 days a week.

Jim Smith, Human Resources Manager, emphasized that Torrington is committed to further education for its employees. Each employee gets two weeks of training each year. Adult Education provides two teachers for computer training and preparation for the general education diploma (GED). These services are also available to family members of employees. Torrington hires high school graduates with good communication and math skills, two-year graduates of Tri-County Technical College with Machine Tool Technology and Electronics associate degrees, and four-year graduates with engineering degrees.

Employees work in teams to solve problems throughout the plant. Before becoming a member of a team, an employee must complete a class in Total Quality Management and Team Building. The company also provides a state-of-the art Wellness Center for employees.

Orian Rugs, INC.

Rhonda Deaton Gibby, Human Resources Manager, described the operations at Orian Rugs. Orian has three plant operations in Anderson: Yarn, Weave, Distribution. The company makes area, oriental-type rugs for customers such as Wal-Mart, Home Depot, and Lowes. Orian opened in 1988 and has grown very rapidly until now it employs 300 individuals. Ms. Deaton is a Tri-County Technical College graduate who continued her education at Clemson University and Southern Wesleyan College.

Rick Gilbert, Extrusion Process and Technical Manager in the Yarn Plant, is also a Tri-County graduate. He completed Textile Management and Industrial Electronics degrees while working. In the Yarn Plant, the raw material is a plastic pellet which is

melted, dyed and extruded into yarn. This operation is highly automated and uses teams for many self-management functions. The Yarn Plant sells 60% of its yarn to Orian Carpets and 40% to other customers.

Mike Johns, Weave Department Manager, escorted the group on a tour of the Weave Plant. The plant has a mixture of old style Jacquard looms and new computerized looms. A team of two people works each loom. The new looms produce better quality rugs with less waste. In addition to the tour, Mr. Johns discussed education and training qualifications for the Weave Plant.

Mike Moon, Center Manager, described the operations in the Distribution Center. The work at the Distribution Center is much more labor intensive than at the other plants with the carpets being cut and the fringe sewed on within the center. The carpets are then labeled and stored in finished inventory. The Center has a new inventory control system which uses scanners and bar codes. Some computer knowledge will be very helpful to future employees. There is also a retail outlet store located at the center.

Champion Aviation Products

Jack Carson, Human Resources Manager and Lynn Sanders, Personnel Assistant, described the operations at Champion Aviation Products. The company makes spark plugs, igniters, oil filters, leads and exciters for jet engines. Ninety percent of airplanes in the world today use products from this plant in Liberty. Champion employees have completed ISO 9000 certification and the company is a member of the parent company Cooper Industries. ISO certification means the plant has met very stringent specifications to be a parts supplier. In addition to ISO 9000 certification, each employee must be certified by the Federal Aviation Association.

Quality is vital to production and the plant maintains 100% inspection of its products. Any change in process or material must be approved by the FAA and engine manufacturer. Champion uses a Safety Committee to identify problems and ensure that these problems are fixed. The facility is currently making some major changes in its operations. A team of 12 people in a work area are selected. The first week, the employees train together and the second week they completely redesign their work area to achieve greater efficiency. The most recent change reduced the time to make leads from 79 days to 3 days.

There are 212 production associates and 113 office associates in the plant. The average wage in the plant is $10.48 per hour with excellent benefits and all employees are salaried. The educational level of the employees in the plant ranges from a junior

high school education through a college degree. Prospective employees are tested for reading, communication and math skills. Mr. Carson stated that employee morale is very high and that employees have a great deal of pride in their product. He said no airline accident has ever occurred because of a defect in a Champion product.

Champion is always looking for qualified workers. The company is moving towards having a computer at every work station. In the future, all employees must have computer training and knowledge. Champion also sponsors a training program at the B. J. Skelton Career Center in conjunction with Tri-County Technical College Special Schools and is eager to enter into an apprenticeship program with the public schools.

TECHNOLOGY DEMONSTRATIONS AT TRI-COUNTY TECHNICAL COLLEGE

Success In Technical Careers: What Does It Really Take?

John Norris, Tri-County Technical College Instructor of Computer Aided Design and Computer Aided Manufacturing, gave an overview of how computers have become a powerful tool in design and manufacturing. They can do stress analysis, 3-D studio, and company presentations as well as many other applications. Mr. Norris then introduced Roger Hines, an instructor at the College and also at B. J. Skelton Career Center in Pickens County.

Mr. Hines explained that students should be math oriented and good problem solvers. The students are taught in traditional ways first and then move to computers. This helps to transfer the knowledge from manual to the more abstract concepts and calculations. Students can finish the program in two years including summers. High school students can get advanced placement credit through the Technical Advanced Placement (TAP) program for some of the courses at Tri-County. Other opportunities are available for apprenticeships and cooperative education programs. Typical entry-level jobs are junior engineer positions.

Most departments at Tri-County work with industry and their Advisory Committees to be sure programs are meeting current needs. The students leave school knowing theories and software. They will learn specific applications by experience. A student shared with the class his work experience in the nuclear energy field. He lost his job due to downsizing and decided to come to Tri-County to enroll in the Engineering Graphics program. Mr. Norris added that the student would probably have a job waiting for him during his second year at Tri-County

Dave Walker, Department Head, Machine Tool Technology, took the participants through his department where he also emphasized the excellent job opportunities in this area for graduates. Machinists today need good math skills as well as an ability to work with their hands. Many of the machines used today are operated by computers which students must learn to program the computers.

Students have classroom work to learn concepts and safety and then have "hands-on" practice on all kinds of machines. After one year, students can earn a certificate; after two years they have an associate degree. This degree qualifies them for highly-skilled, high-paying jobs. There are many job openings in the machining industry for each graduate. All Tri-County instructors hope that public schools can direct more students into these programs where good jobs are available in this area.

Welding at Tri-County Technical College

Bob Humphrey, Instructor in Welding, gave a very detailed discussion and demonstration of what welders actually do. Mr. Humphrey reported that there is high demand for welders in the tri-county Area. All graduates get very good jobs upon completing the program at Tri-County because of the high quality of the instruction.

There are at least 200 different certification tests for the welding area. All work has to be done according to code both in school and on the job. Therefore, to get a job or to acquire certification, a student must demonstrate an ability to perform welding operations according to code. Tri-County trains its students to be able to take a blueprint, select the appropriate metal, cut it, and then weld the medal to code as a finished product that can pass inspection. Quality is emphasized throughout the curriculum.

GENERAL INSTITUTE SESSIONS

TECH PREP and School-To-Work

Dr. Johnny Wallace, Executive Director of the Partnership for Academic and Career Education (PACE), gave a brief history of how Tech Prep and School-to-Work have evolved in recent years. PACE was organized in 1987 to address changes in the workplace: a change from "hand" to "hand and head" work with emphasis on the team concept; stronger academic and career related skills requirements; and the need for additional training for many jobs. Grants supply much of the funding for the

consortium. In addition, there are several major committees: the Coordinating Board, Curriculum and Counseling Committees and a School-to-Work Planning Committee. Staff provide in-service as well as many other types of assistance to area schools.

TECH PREP is an educational reform movement designed to address dropout prevention, workforce changes, career counseling, curriculum enhancement, access and equity. One of the main goals of Tech Prep is to eliminates gaps and overlaps between high school and college coursework. By eliminating the gaps and overlaps, the educational process truly becomes seamless. Another area of emphasis is mid-level technology careers, those careers which require a high school diploma with occupational training up to and including an associate degree for entry and/or advancement.

Components of Tech Prep include: tuition assistance, TAP (the opportunity to gain advanced placement in college course for competencies completed during high school), curriculum development, and Technical Advanced Study (the opportunity for selected high school seniors to take college courses before graduation).

Both federal and state School-to-Work Acts, passed in 1994, build on many of the basic concepts of Tech Prep. Program elements include academic coursework comparable to college prep but taught in a different way which targets "forgotten half" of high school students; linking school-based and work-based learning; integrating occupational and academic education; and addressing the various learning styles of students. Tech Prep meets all the components of school-to-work except a work-based learning component.

School-to-work contains: school-based component, work-based component, and connecting activities. In South Carolina, the goal is to have every student experience at least one type of school-to-work activity before completing high school. After outlining the requirements in the S. C. School-to-Work Act and its impact on education, Dr. Wallace ended his discussion by listing some of the wide-ranging activities included in school-to-work: curriculum development, career planning, and work-based learning activities such as internship, youth apprenticeship, cooperative education, service learning, mentoring and job shadowing.

A short video on local school-to-work opportunities completed the session.

Self-Esteem Workshop

Butch Merritt, Director of Cooperative Education and Work-Based Learning at Tri-County Technical College and PACE Industry Liaison, conducted sessions on building self-esteem. Low self-esteem is the number one problem among adults and adolescents today. Although self-esteem is defined as what an individual thinks of himself and how much he values himself, self-esteem is shaped from a very early age by personal experiences and is conditioned by others' comments. Low self-esteem in adolescence and adulthood is a major factor in child abuse, drug abuse, and alcoholism. Less dramatically, it can also cause difficulty in forming relationships, career problems, and various neuroses. Low self-esteem can also contribute to females failing to pursue lucrative careers in non-traditional fields.

Although self-esteem is formed throughout life, with patience, a person can improve the way she thinks and feels about herself. Everyone can identify the influential people in his/her life and can choose positive instead of negative role models to emulate. As individuals, a person can access the characterization of day-by-day living and begin to make positive changes slowly and deliberately. Once goals for improving self-esteem have been set, a person must listen to the self-talk and choose positive ways to talk that will help to confidently claim the goals and keep them in mind.

By choosing realistic, incremental goals and giving encouraging self-talks, individuals can mold positive and confident self-images instead of defeated, negative ones. If educators can learn these concepts and techniques themselves, they will then be able to pass on the same skills to their students. Educators should strive to provide a caring environment; then, students will care about learning.

Mr. Merritt utilized videos, a workbook, and team problem-solving techniques to illustrate and develop the above concepts.

The S. C. Story: 1961-1996

Dr. Don Garrison, President of Tri-County Technical College, discussed the history and evolution of the community college. He explained the nature of the "open door" policy and the challenge it presents. In the 1960's, one new community college opened per week. More than 50% of students enrolling this Fall in higher education will be in community colleges.

Changing from a junior college concept to a community college resulted in more emphasis on employer needs. Currently in this area, strong growth is occurring in the

transfer programs. The S. C. Technical College system mirrors community colleges in other states except they do not offer programs such as athletics and cultural activities.

Dr. Garrison showed slides on the S. C. Story. It began in 1960 with the State's economy being very poor and dependent on textiles and agriculture. At that time, the State made a commitment to attract manufacturing industry, train employees and keep young people in the State. Since that time, the Tech system has gained national and international recognition.

The Tech mandate covers three areas: Special Schools, Graduation, and Continuing Education. Dr. Garrison discussed in detail the training package Special Schools offer a new expanding company free of charge. There is an urgent need for more graduates with associate degrees for technician jobs. Tech Prep needs to provide incentives to more students to satisfy these needs. The Upstate is growing: from 1990-2010, Pickens County will experience 16% growth, Oconee County, 26%, and Anderson County, 21%. In addition, Dr. Garrison emphasized the importance of manufacturing to this State and the local area.

Campus Resources

Melissa Monroe, Graphic Designer, PACE, outlined the professional assistance she can provide participants. She can help with the preparation of brochures, pamphlets, transparencies and presentation material. By using clip art, computer scanners and programs, and photography, high-quality presentation materials can be produced at little expense. She will be available during the two-week course to assist participants with their projects.

Carolyn Scharer, Librarian, conducted a tour of the Tri-County Technical College Learning Resources Center (LRC) to highlight the available resources. The LRC has a variety of computer search programs that access many articles on CD-ROM as well as materials in the LRC holdings. Participants can use these research facilities as well as the PACE Resource Room which also has many appropriate publications and books.

Debbie Coyle, Tri-County Technical College's Director of Graphics, showed the students the facilities and assistance available in her department. These include computer scanner and programs, tracing machine, photography, clip art and other art media. Participants are welcome to make use of these materials for their project.

Using Community Resources Effectively to Build Career Awareness

Rebecca Eidson, PACE Career Specialist, conducted a workshop on tapping into community resources to make the classroom more "real world." Community resources can enhance classroom instruction in many ways.

Ms. Eidson divided the group into teams and with the use of a box of community resource materials, each group developed a classroom project. The project also identified how career awareness concepts can be integrated into daily classroom activities.

Some of the project ideas were:

> ***Civic Responsibility***: Using service learning to increase high school students' awareness of needs in the community and their responsibility to get involved. A list of community organizations that need volunteers would be developed and students would select one organization at which to volunteer their services based upon their own career goals.
>
> ***Explore and Improve Diets of Junior High Students***: This project would encompass a study of nutrition, healthy lifestyles, and various therapies. This would include not only knowledge about the diets and their effects, but also explore all the careers involved.
>
> ***Solid Waste & Recycling***: This project would start a recycling program for the entire school. Experience with implementing and operating a program would be achieved as well as a study of the many careers involved: environmentalists, engineers, mechanics, public relations, and equipment operators. This could also encompass an "Adopt a Highway" component.

Keeping Kids in School: What Makes the Difference?

Linda Shirley, Special Projects Director, National Dropout Prevention Center, briefly described the purpose of the Center and what it can do for educators in the area. She presented some statistics on dropout rates in the Tri-County area. Retention and social promotion are not the answer. The challenge is to get students who are not focused nor encouraged at home to be successful. Public school teachers may be these students' only hope.

Ms. Shirley addressed the problem of at-risk students and how to help them feel less alienated and insignificant. Some simple techniques can make these student relax and feel more comfortable. These students probably need more hands-on learning experiences. Some recent research indicates that service learning and mentoring might be ways to improve learning for at-risk students.

It is also important that teachers address multiple intelligences since all students do not learn in the same way. Education has done a very good job of addressing verbal/linguistic and logical/mathematical intelligences. However some students learn in the following ways that have not been addressed fully: spatial, bodily/kinesthetic, musical, interpersonal, and/or introspective. She gave some examples of how to prepare classroom materials to reach students that learn in these different ways. One technique is the use of music for relaxation and to promote learning. The right kind of teaching can keep students in school.

She emphasized that the Dropout Prevention Center has many resources available and encouraged teachers to call on the Center for assistance and materials.

Non-traditional Careers

Two individuals currently working in jobs that have been held traditionally by people of the opposite sex gave presentations followed by a lively discussion. David Huff, registered nurse, Anderson Area Medical Center, discussed his motivation for entering the nursing profession at mid-life. He had many other jobs during his life as well as being a small business owner. He experienced the devastation of a "pink slip" because of increased automation and downsizing. After running a successful business with no vacations for several years, he decided to return to school and study nursing.

Mr. Huff had to finish his GED, take all the prerequisites for nursing and then complete the Associate Degree at Tri-County Technical College. In addition, he worked at Cannon Memorial to acquire some experience while he was going to school. After receiving professional certification, he was offered a position at Anderson and is currently working in the cardiac step down unit.

Mr. Huff shared with the group his love of nursing and the many rewards he finds in this profession. Male nurses are currently accepted by most people and he has encountered very few problems because of his sex. He also discussed briefly some of the other opportunities in health care for high school and two-year graduates.

Ms. Anna Bowen from the Anderson Police Department described the work environment for women in criminal justice. Some departments have many women,

but these opportunities are very limited in the City of Anderson. She has experienced some discrimination and harassment but finds her career very rewarding. She has been working with children recently and trying to build up a better rapport by showing young people what police officers actually do.

The requirements for women police officers are the same for men. An applicant must be 21 years old, a high school graduate or the equivalent and have certification from the Policy Academy, which involves passing an eight-week training program. Some law enforcement jobs require a college degree. All employees must maintain the same level of physical fitness and up-to-date training. Ms. Bowen feels that women have the advantage in many situations because they are less threatening. Good police officers must learn a large part of their job by experience.

Both of these presenters emphasized that young people should pursue a career that interests them. Stereotypes are passing away with time, and, more and more in today's world of work, people with strong desires and qualifications tend to be considered for jobs regardless of gender.

Gender Fairness in the Classroom

Rebecca Eidson, PACE Career Specialist, discussed the concerns that educators face today in treating male and female students fairly. Educators and parents are still generally reluctant to encourage students into non-traditional courses and career training. This reluctance may be changing slowly. Although the numbers of females entering technical classes and fields are increasing, boys are still discouraged from taking traditionally female courses. Curriculum materials, too, often are discriminatory in presenting only stereotyped depictions of males and females.

Research shows that teachers treat boys and girls differently. Boys tend to demand more attention in the classroom. The reasons for this are very complicated--developmental, societal, etc. Girls tend to do better academically until junior high; then, girls feel pressured not to compete with the boys. Educators may inadvertently show discrimination in the classroom through different expectations and treatment of students based on gender. Some ideas for making the classroom less competitive include:

1. Use cooperative learning--team concept
2. Address the "silence ghetto." Some students take a longer time to formulate answers to questions and therefore do not volunteer to answer questions in class. These tend to be predominantly female students.

Most women will work in today's society and that appears to be true in the future as well. Most jobs today require computer skills, technical skills and strong computational skills which are the areas in which females are traditionally weaker.

Some ideas to make the classroom freer of sex bias:

- Videotape yourself and evaluate your response to boys versus girls
- Use cooperative learning--develops leadership skills
- Think of examples you bring in class and purposefully show examples of non-traditional career people
- Look at your course materials for gender bias

Ms. Eidson also showed a video highlighting women in non-traditional careers.

Integrative Learning--Finding the Everyday Genius in Your Students

Eugene Grant, Technical Trainer for Bosch Corporation, gave a presentation on using integrative learning. He taught several years at Tri-County Technical College and used many of these techniques in his classroom. He now is implementing some of them at Bosch in technical training, needs assessments for technicians and engineers, Statistical Process Control and multi-media development.

Mr. Grant began by defining integrative learning (IL). IL utilizes the whole brain as well as the multiple intelligences of students. The three components of learning are input, synthesis, and output. There is a learning cycle that determines the instructional sequence. Teachers probably have students with all types of learning styles in their classroom.

How do teachers change their methodologies to best serve all these students? Some examples include:

Kinesthetic:	integrate games as a learning tool
Music:	playing music helps move short-term memory to long-term
Spatial:	role playing helps retention
Intrapersonal/ Interpersonal:	Industry is demanding students be able to work in teams so intrapersonal learners need to work on team projects.

Mr. Grant gave practical examples of how he has used different teaching methods to address the multiple intelligences of students. He suggested starting the first day with an ice-breaker to make the classroom experience fun.

Some simple techniques Mr. Grant has used:

Props	he throws balls to students instead of calling on them when reviewing - kinesthetic
Wear signs	he has signs with concepts printed on them and students wear them. He also posts many signs and posters around the room using peripheral environment as a reinforcement of concepts - visualization/spatial
Music	music with 60-90 beats per minute is calming and he uses it in the lab. He feels that written responses are more complete when written with music in the background. Music can also relieve test anxiety.
Put errors in tests	give students points for finding errors--improves competency in communication
Keep a journal	students write once a week what they learned - improves written communication. Students are graded on effort but instructor corrects for mechanics to help student improve.
Games and skits	provides fun and improves learning and retention

Mr. Grant feels many of these simple exercises will improve student learning and he is constantly trying new ideas. In addition, teachers need to become facilitators of learning.

David Shirley, Assistant Dean of Students, Tri-County Technical College, discussed some integrative learning concepts, particularly as they involve brain theory, multiple intelligences, accelerated learning process, and learning styles. A lot of research has recently been done on the brain. Individuals are born with all the brain cells they will ever have, but stimulating the connections between brain cells develops multiple intelligences all during our lives.

Through activities, David illustrated that there is usually more than one way to solve any problem. The left and right hemispheres of our brain control different functions. Teachers who use a left brain mode of teaching probably are not successful with right brain learners.

After an exercise which identified the type of learners the participants were, David emphasized that teachers need to be cognizant of individual student needs.

School-to-Work, Youth Apprenticeship and Other Work-Based Learning Models

Rebecca Eidson, PACE Career Specialist, gave a brief overview of School-to-Work and its importance in South Carolina educational systems. Unskilled jobs will change from 60% of the labor force in 1950 to 15% in 2000. School-to-Work is a system to encourage more students to get training beyond high school, especially for mid-level technology jobs. It is a comprehensive program that has many components, including school-and work-based components. Work-based learning is a pyramid of different programs which includes: cooperative education, apprenticeship, internships, service learning, mentoring, and shadowing. Collaboration is essential between the high school, employers, students, parents and the two-year college.

Three representatives from local school sites gave presentations on local school-to-work programs. Judy Adkins, School-to-Work Coordinator, Career & Technology Center, Anderson School Districts One and Two, reviewed what the school districts are doing with school-to-work opportunities. Shadowing and career planning usually occurs at the local school level. Apprenticeship and co-operative education will be done at the Career Center. Service learning occurs at the middle school level. In addition, Ms. Adkins gave some examples of the types of activities being implemented in her school districts.

Wayne Frady, Business/Industry Coordinator, School District of Oconee County, gave a brief description of the Ford Academy of Manufacturing Sciences (FAMS) program, a vehicle to identify students interested in manufacturing careers and then assist them with schooling and job training. Industry has a vested interest in this program because it spends ten times as much money on training as public education does. Oconee County Schools are also implementing an Academy of Finance. This academy will provide students interested in banking/finance and related fields with the opportunity to develop specific skills related to, and a better understanding of, the various career opportunities related to banking and finance.

Donn Griffith, School-to-Work Coordinator, Anderson School Districts Three and Four, talked about his districts' unique shadowing program. All educators are urged to provide more career guidance through knowledge, awareness, sampling and exploration of careers. Awareness begins in the middle schools with career days and other career awareness activities. A more intensive experience occurs in the ninth and tenth grades. After consultation with industry on needs, Mr. Griffith prepares a lesson plan which he teaches in a classroom, followed by an industry tour. The student is able to see how the classroom links to the "real world" and is given insight into different careers. In the eleventh grade, students have a shadowing experience which is highly structured. Shadowing can then be followed by an internship

experience in the twelfth grade, providing students with the opportunity to explore the career in more depth.

Make Your Ideas Work. . .Strategies for Funding Your Classroom Project

Sandy Addis, Director of Special Projects, Anderson School District One, conducted an informative session on sources of funding, as well as techniques for being successful in applying for competitive grants.

Although there are many sources of funding, in most cases it is very competitive and may be very time-consuming. There are three major sources:

Federal Grants. These are usually for large amounts of money and fairly difficult to write. Less than 5% are funded and there are many accountability and evaluation components required.

Foundation/ Private Grants. Many sources available, but research may be time-consuming. There are relatively few grants made, and many have limiting restrictions that applicants must meet.

State Grants. Each year the State of South Carolina awards $2000 grants to teachers and counselors under the auspices of the Education Improvement Act Competitive Teacher Grants Program. The grants are four pages long, easy to prepare and have a good chance of being funded. Of the proposals submitted approximately 28% - 30% are funded.

After this broad overview, Mr. Addis led the participants in a step-by-step preparation of a State Teacher Grant. He emphasized that innovation is critical and that the graders also look for grants that will do the most good and reach the most people for the dollars. The participants actually graded some sample grants from past years as a means of developing better grant-writing skills.

Mr. Addis then explained in detail the preparation of the grant document, injecting many helpful tips from his experience in grant writing and grading. The participants were encouraged to prepare a grant proposal to fund the projects they are planning during this course as a means to make their projects a reality.

Enterprise Zones and Economic Development

Neil Lark, Dean of Continuing Education, Tri-County Technical College, began his discussion by asking what economic development is. After a short discussion, he described the Tech System as a tool for economic development. Governor Carroll Campbell started an economic development program particularly addressing literacy, but was it was limited in scope and financing. Governor David Beasley signed the Enterprise Act in April, 1995, which expanded on the earlier legislation.

The Enterprise Act is essentially economic development with four major incentives:

> Funding for the purchase of real property, infrastructure, pollution control equipment, and employee training.
>
> Fifty percent reduction in the investment and employment requirements for a fee-in-lieu of property taxes agreement.
>
> Additional Job Tax Credit and additional credits for hiring recipients of Aid to Families with Dependent Children.
>
> Funding for training an existing workforce not to exceed $2,000 per employee within a five-year period.

These incentives apply to certain geographical zones determined by census information based on income, level of development, unemployment, etc. Areas that meet the established criteria will be classified as Enterprise Zones and are reviewed and adjusted annually. Over 80% of the State qualified. However, controversy developed among some industries that were not included.

The Tech System is primarily involved with the fourth item. Tech provides training to maintain competitiveness or to teach new technologies. The application form for training is relatively simple and inexpensive. In Anderson, Oconee and Pickens counties, there are 314 manufacturing and health care companies, of which 200 meet the criteria for enterprise zones. There are currently five companies that have submitted five-year training plans and have been approved and other companies will soon submit plans.

Due to some of the controversy surrounding the Enterprise Zone Act, the Rural Development Act was proposed this year. This Act will actually erase Enterprise Zones and make the incentives available to all companies. This bill is designed to steer companies toward the State's poorer counties. These companies will receive more tax cuts and benefits for locating in more rural counties of South Carolina.

Mr. Lark concluded with a question and answer session. The participants requested that a booklet be developed that would identify industries in their school district and include some of the following information: products, entry-level job requirements, and tuition reimbursement plans. The participants felt this would be most helpful in directing students as well as serving as a resource for their schools to develop better lines of communication between school and industry.

Attracting Industry to South Carolina

Burris Nelson, Pickens County Director of Economic Development, also worked in the same capacity in Anderson County. He related some problems that arise in economic development. Industry in interested primarily in three things:

Market being served
Human Infrastructure
Physical Infrastructure

Mr. Nelson was involved with the recruiting of BMW to S. C. Consultants would contact the Economic Development Office for extensive information. In order to respond to these requests, detailed technical information must be gathered and explained. Very detailed information often requiring outside professionals is typical and often political issues make negotiations very difficult.

The work ethic and anti-union feelings of people in this area are big attractions to industry. The educational system, teacher commitment and quality of schools has a lot of influence in attracting companies. Organizations discussing coming to the state are not only looking for qualified workers but quality schools in which their children will be enrolled.

Incentives to new industry are solely a means to stay competitive with neighboring states. The creation of multi-county industrial parks, with a special tax status, is another means to be competitive. Although these incentives may appear to reduce taxes in the short-run, the jobs and capital they bring into an area far outweigh any losses.

PARTICIPANT PROJECTS

Listed below is a summary of the projects designed by the 1996 Summer Institute participants. Participants received assistance in data base searches, graphics design of brochures and posters, and identification of resources from Institute and College staff. Each Institute participant will implement the project during the 1996-97 academic year and will complete a follow-up survey in March of 1997 to assess the project's success.

Two middle school teachers plan to take a 20 minute time period before lunch to teach team-building skills. After developing some "team spirit" and ownership, each team will work to reduce absenteeism and increase completion of homework through peer pressure.

A primary teacher plans to teacher a unit on career awareness for first graders. She will use different activities to develop awareness of school jobs and home jobs. She will weave nontraditional careers and jobs into her classroom discussions.

An alternative school teacher plans to emphasize self-esteem to students. By using surveys and activities, she will get to know students' strengths and weaknesses. By using this knowledge, the teacher can promote positive feelings, motivation, productivity and goal-setting.

Another alternative school teacher plans to implement a unit on career awareness. She will emphasize job requirements and expectations and show the "real-world" applications of curriculum subjects. The teacher will also do a series on self-discovery to help student find out who they are. Students will then examine career clusters to identify where the various jobs "fit" into the curriculum.

A ***middle school counselor*** will add a strong guidance component to the current program. She plans to use the "I Can" curriculum to develop social and motivational tools of students to help them attain the career they desire. As part of the activity, each student will prepare and maintain a career folder.

A ***Communications for the Workplace teacher*** will initially convince students that this will be an English course taught in a non-traditional way. She will stress the importance of communication skills in the workplace. Oral and written presentations will be integrated throughout the year. The second unit will be on personal awareness. She will use inventories and other materials to get students thinking about who they are and what kind of life they want.

A ***junior high language arts teacher*** will implement a unit to teach the skill of self-evaluation, particularly in writing. Students will explore goal-setting, self-esteem, and teamwork as components of evaluation. One unit will also integrate career awareness into some writing activities.

A ***high school studies teacher*** will expand a Civic Responsibility course to include self-esteem, career awareness and a service learning project. The service learning component will involve using community business and industry to help students learn not only about careers but also what it means to be a good citizen.

RESOURCES

Most of the resources below were provided to participants over the course of the 1996 Summer Institute. In some cases, particular articles or books were referenced by Institute presenters and, therefore, are also included in this list.

Journal Articles

Cosca, Theresa. "High Earning Workers Who Don't Have a Bachelor's Degree." Occupational Outlook Quarterly. Winter, 1994-95.

Craig, Annette. "Tech Prep and Youth Apprenticeship: Opening New Doors to Success." Palmetto Administrator. Winter, 1993.

Dabney, Gina A. "Skills Training for Women." Tech Direction. May/June 1996.

Dede. Christopher. "The Evolution of Information Technology: Implications for Curricula." Education Leadership. September, 1989.

Drake, Susan M. "How Our Team Dissolved the Boundaries." Educational Leadership. October 1991.

Duncan, Jane. "How to Use Transparencies: A Refresher Course." Training. 1985.

Finkel, David. "Young, Gifted and Female." Teacher Magazine, August 1993.

Fogarty, Robin. "Ten Ways to Integrate Curriculum." Educational Leadership. October 1991.

Green, Kathleen. "Should You Build a Future as a Construction Tradeswoman?" Occupational Outlook Quarterly, Spring, 1993.

"Growth in Occupations, 1988-2000" chart. (Adapted from: Career Opportunities News, Garrett Park, MD: Garrett Park Press, 1990.)

Harp, Lonnie. "Women's Work." Teacher Magazine. April, 1995.

Jacobs, Heidi H. "Planning for Curriculum Integration." Educational Leadership. October, 1991.

Kirkley, Jere and Walter, Diana M. "The School-to-Work Transition Act: Blending Tradition and Innovation." Palmetto Administrator. Fall 1994.

Manquardt, Deborah. "Earn up to $38,000: The Best Jobs Are Now in Health Care." Family Circle. February 1, 1994.

Marshall, Paula. "Not Right for College?" Better Homes and Gardens. February 1994.

Meier, Deborah. "Beyond Academics." Teacher Magazine. April 1995.

Owen, Jean. "Women in Engineering." Manufacturing Engineering, March 1993.

Palmer, Joan M. "Planning Wheels Turn Curriculum Around." Educational Leadership, October 1991.

Pierce, Alan J. "Celebrating Women's Technological Contributions." Tech Directions. May/June 1996.

Purkey, William W. "Miracle at Herbert Hoover High." Alpha Delta Kappan, 3, (2) p. 9-12, 1972.

Vars, Gordon F. "Integrated Curriculum in Historical Perspective." Educational Leadership, October 1991.

Wanket, Phillip C. and Frank S. Oreovicz. "A Different Way of Teaching." ASEE Prism, January 1994.

Newspaper Articles

Allison, Wes. "More Men Taking Up Nursing, Schools Say." The Greenville News, June 6, 1993.

Bass, Alison. "Women, Men Rely on Different Skills to Perform Spatial Tasks." The Greenville News, March 21, 1993.

Bovee, Tim. "Women's Salaries Trail Men's at All Levels."

Genasci, Lisa. "Campaign Introduces Girls to Career Opportunities." Anderson Independent. March 28, 1993.

Ingley, Kathleen. "Feminists Win Some, Lose Some." Anderson Independent. February 14, 1993.

Kennedy, Erin. "Women Must be Ready to Meet Demands of Future Job Market." Anderson Independent. January 1, 1994.

Meltz, Barbara F. "Protecting Your Daughter from Discrimination." Anderson Independent. March 4, 1992.

Munn, Lisa H. "Reflections on the Glass Ceiling." The Greenville News, March 14, 1993.

Lenhard, Elizabeth. "Gender Stereotypes Persist." The Greenville News, April 11, 1993.

Richardson-Moore, Deb. "Down to a Science." The Greenville News, March 1, 1992.

Roberts, Cindy. "Respect for Woman Mechanic Came Grudgingly, After Years." Anderson Independent, March 4, 1993.

Sadker, Myra and Sadker, D. "You're Smart, You Can Do It." USA Weekend. February 4-6, 1994.

Handouts

"Active Learning." Partnership for Academic and Career Education.

"Blending Tech Prep and School-to-Work." Partnership for Academic and Career Education.

Coyle-Williams, M. and Maddy-Bernstein, C. "The 1990 Perkins: Raising the Academic and Occupational Achievements of Women and Girls." Technical Assistance for Special Populations Programs. Volume 4, Number 1. December 1992.

Cunanan, Esmeralda, S. and Maddy-Bernstein, Carolyn. "Career Guidance and Counseling: Recent Legislation." Office of Special Populations Brief. January, 1995.

Cunanan, Esmeralda, S. and Maddy-Bernstein, Carolyn. "Individualized Career Plans: Opening Doors for All Students." Office of Student Services' Brief. May 1995.

"Education: The Decreasing Pyramid." National Center for Educational Statistics, as reported by Career Opportunities News. October, 1991.

"Education and Earnings: What's the Link?" Career Opportunities News. January/February, 1995.

"Facts on Working Women." U. S. Department of Labor Women's Bureau, January 1991.

"Fastest Growing Occupations: Mid-Level Technologies." S. C. Employment Commission, 1992.

"Fifty Ways to Increase Students' Understanding of Careers." Partnership for Academic and Career Education, May 1993.

Gray, Kenneth. "The Gender Gap in Yearly Earnings: Can Vocational Education Help?" Office of Special Populations Brief. 1993.

"How Much Do They Earn?" Career Opportunities News. September, 1994.

"Integration of Academic and Vocational Education: Models, Types of Practices and Levels of Implementation." from Schmidt, J.R., Finch, C.R. and Faulkner, S.L. Teachers' Roles in the Integration of Vocational and Academic Education.

"School-to-Work Opportunities Act of 1994." American Vocational Association.

"School-to-Work: Expanding Opportunities for Students, Employers and Communities." Partnership for Academic and Career Education, 1995.

"The School-to-Work Program: Federal." from the American Vocational Association School-to-Work Opportunities Act of 1994.

"SCANS Commission: Workplace Know-How." WorkAmerica. September 1991.

"Students Shadowing: A Community Project Linking Classrooms to Careers." Anderson School District Five. Anderson, SC.

"Tech Prep: The Other Right Choice." Partnership for Academic and Career Education.

Tech Prep News. Volume VIIII, Number 1, Spring, 1996.

Tech Prep News. Volume VIII, Number 2, Winter, 1994.

Tech Prep News. Volume VIII, Number 1, Fall, 1994.

"Tech Prep: The Role of Counselors." Partnership for Academic and Career Education. Tri-County Technical College.

"Twenty Ways to Help Your Child Explore Career Interests." Partnership for Academic and Career Education.

"Types and Definitions of Work-Based Learning." Partnership for Academic and Career Education.

Walter, Diana M. "Myths About Tech Prep." Tri-County Technical College, 1994.

Walter, Diana M. "The Partnership for Academic and Career Education and Tech Prep Programs." Tri-County Technical College. November, 1994.

Walter, Diana M. "Tips for Teachers." Tri-County Technical College. 1992.

"What Employers Want: A Summary." Partnership for Academic and Career Education.

"Youth Apprenticeship...Preparing Today's Students for Tomorrow's Career." Career and Technology Center.

SELECTED COMMENTS FROM THE 1996 SUMMER INSTITUTE

The comments below were offered by participants in their project summaries or in the evaluation surveys completed at the conclusion of the two-week institute.

- ✩ Touring the area businesses has opened my eyes to what's (occupations) available in the world. I plan to give my students the same opportunity by planning field trips to area businesses.

- ✩ The entire two weeks have been most rewarding—having various speakers, seeing industries first hand, sharing experiences with our fellow teachers in the class.

- ✩ All of the activities have been very informative. They have motivated new ideas to be used in my classroom, to share with others in higher grades, and to broaden my knowledge and awareness of careers.

- ✩ The presentation on integrative learning gave me many ideas to try to address different learning styles.

- ✩ The activities of the most value to me were those on self-esteem and team building. The effectiveness of these skills is absolutely profoundly evident in the jobs your staff perform here. These have helped me feel better about me, so I know I can pass these hints on to others with the same results.

Appendix A

PACE 96 Summer Institute

PACE
Partnership for Academic
and Career Education &
Tri-County Technical College

SCHEDULE
Week I

Monday, June 17, 1996

8:30-9:00	Welcome/Announcements	Johnny Wallace
9:00-11:00	Project Presentations	Susan McClure
11:00-12:00	Campus Resources to Support Projects	Nancy Griese Melissa Monroe Johnny Wallace
12:00-1:00	LUNCH	
1:00-2:30	Tech Prep/School-to-Work Overview	Johnny Wallace

Tuesday, June 18, 1996

8:30-12:30	Self-Esteem: The Transferable Skill	Butch Merritt
12:30-1:30	LUNCH	
1:30-2:30	The South Carolina Story	Dr. Don C. Garrison (Board Room)

Wednesday, June 19, 1996

8:30-12:30	Self-Esteem, Part II	Butch Merritt
12:30-1:30	LUNCH	
1:30-2:30	Using Community Resources Effectively	Rebecca Eidson

Thursday, June 20, 1996

8:30-12:30	Torrington Company	Jim Smith
12:30-1:30	LUNCH	
1:30-2:30	Keeping Kids in School: What Makes the Difference?	Linda Shirley

Friday, June 21, 1996

8:30-9:30	Non-traditional Careers Panel	
9:30-12:00	Project Report Conferences	Susan McClure
12:00-1:00	LUNCH	
1:00-2:30	Individual work on projects	

SCHEDULE
Week II

Monday, June 24, 1996

8:30-9:30	Gender Fairness: Preparing Students for Non-Traditional Careers	Johnny Wallace
9:30-9:45	BREAK	
9:45-12:00	Integrative Learning: Finding the Everyday Genius in your Students	Eugene Grant David Shirley
12:00-1:00	LUNCH	
1:00-2:30	School-to-Work, Youth Apprenticeship and Other Work-based Models	Judy Adkins Rebecca Eidson Danny Fahey Wayne Frady Donn Griffith

Tuesday, June 25, 1996

8:30-12:30	Orian Rugs, Inc.	Rhonda Gibby
12:30-1:30	LUNCH	
1:30-2:30	Make Your Ideas Work...Strategies for Funding Your Classroom Project	Sandy Addis

Wednesday, June 26, 1996

8:30-12:30	Economic Development	Woody Dillard Burris Nelson
12:30-1:30	LUNCH	
1:30-2:30	Success in Technical Careers	John Norris

Thursday, June 27, 1996

8:30-12:30	Champion Aviation Products	Jack Carson
12:30-1:30	LUNCH	
1:30-2:30	Industrial Welding at TCTC	Earl Gilbert Bob Humphrey

Friday, June 28, 1996

8:30-12:00	Project Presentations	Participants
12:00-1:00	LUNCH	
1:00-2:30	Wrap-Up and Evaluation	Susan McClure

Appendix B

Priority for admission:

1st Priority: presently certified, employed teachers and counselors in middle, junior high, high schools, alternative schools & career centers in Anderson, Oconee & Pickens counties.

2nd Priority: presently certified, but not presently employed (e.g., on leave but returning in upcoming year) for school levels listed above in tri-county area.

3rd Priority: presently certified and employed teachers & counselors in all other South Carolina counties.

4th Priority: all other interested persons willing to pay their own costs (should enrollment not exceed the limit of 20 participants).

For pre-registration, please contact the PACE office or mail the application below to:

Kathy Young, PACE Office Manager (Ext. 2107)
PACE Consortium
P.O. Box 587, Highway 76
Pendleton, SC 29670
646-8361 • 882-4412 • 225-2250 • 859-7033

(*Classes held at Tri-County Technical College.*)

PACE 96 Summer Institute

Name _____

Social Security No. _____

Title _____

Home Address _____

Home Phone _____

School _____

School Address _____

Subject area & grade levels _____

Admission Category (see explanation above)

____1st Priority ____2nd Priority ____3rd Priority ____4th Priority

June 17-28, 1996 8:30 a.m. - 2:30 p.m.

PACE 96 Summer Institute

Sponsored by the
Partnership for Academic and Career Education (PACE)
& Tri-County Technical College

You Will Participate In:

- ***field trips*** to local industries for first-hand observation of manufacturing operations;
- ***demonstration tours*** through technical labs of Tri-County Technical College;
- ***presentations*** by business & industry leaders, technology instructors and successful men & women in technical areas;
- ***the video series*** "Self-Esteem: The Transferable Skill - A Program for Educators," a program focusing on self-improvement and motivation.

PACE Summer Institute 96 will help you:

- increase your awareness of technical & industrial career opportunities, especially for females, in the tri-county area;
- increase your knowledge of academic & technical preparation students need for entry into technology careers;
- increase your understanding of gender fairness in the curriculum, textbooks, course materials, & in teaching strategies;
- develop strategies to improve students' self-concepts, encourage goal setting and self-discipline & increase motivation.

You will learn about:

- existing & emerging careers in technology;
- the Tech Prep (*PREParation for TECHnologies*) program;
- School-to-Work options (Co-op, Youth Apprenticeship, Shadowing, Mentoring);
- gender fairness in the secondary school curriculum;
- strategies that boost students' self-esteem & motivation through the Psychology of Winning series "Self-Esteem: The Transferable Skill."

You will earn credit:

On completion of the Institute course, (PSY 222-Psychology of Individual Achievement), you will be awarded 3 semester hours of undergraduate credit. Recertification credit may be obtained in the following categories:

Specific Content/Methods (those certified in psychology, social studies and guidance);

Nature of Teaching/Learning (those certified in other areas).

Participate tuition-free:

Through a Carl D. Perkins mini-grant awarded to PACE by the State Department of Education's Office of Occupational Education, tuition costs and instructional materials will be fully covered for 20 participants.

PACE 96
Summer Institute

PARTICIPANTS

Sally Brown
Teacher
Anderson Christian School
4523 Liberty Highway
Anderson, SC 29621
224-7309

Linda Combs
Teacher
D.W. Daniel High School
1819 Six Mile Highway
Central, SC 29630
654-2362

Sherri Herd
Teacher
R.C. Edwards Jr. High School
1157 Madden Bridge Road
Central, SC 29630
654-1400

Marilyn Raines
Teacher
R.C. Edwards Jr. High School
1157 Madden Bridge Road
Central, SC 29630
654-1400

Wanda Vickers
Teacher
Simpson Academy
200 West D Avenue
Easley, SC 29640
855-8190

Martha Butts
Teacher
Westminster Middle School
501 Westminster Highway
Westminster, SC 29693
647-3050

Barbara Dansby
Counselor
Powdersville Middle School
135 Hood Road
Greenville, SC 29601
269-1821

Dianne King
Teacher
Westminster Middle School
501 Westminster Highway
Westminster, SC 29693
647-3050

Ann Rash
Teacher
D.W. Daniel High School
1819 Six Mile Highway
Central, SC 29630
654-2362

PACE 96

Summer Institute

Staff/Presenters

Sandy Addis — Special Projects Coordinator, Anderson School District One, (847-7344)

Judy Adkins — School-to-Work Coordinator, Career and Technology Center of Anderson School Districts One and Two, (847-4121)

Anna Bowen — PFC, Anderson City Police Department, (231-2280)

Woody Dillard — Special Schools Manager, Tri-County Technical College, (646-8361, ext. 2140)

Rebecca Eidson — PACE, Career Specialist, (646-8361, ext. 2456)

Danny Fahey — Youth Apprenticeship Coordinator, School District of Pickens County, (855-9195)

Wayne Frady — Business/Industry Coordinator, School District of Oconee County, (885-5011)

Don Garrison — President, Tri-County Technical College, (646-8361, ext. 2100)

Earl Gilbert — Welding Instructor, Tri-County Technical College, (646-8361, ext. 2240)

Eugene Grant — Technical Trainer, Robert Bosch Corporation, (260-8000, ext. 8211)

Nancy Griese — Head Librarian, Tri-County Technical College, (646-8361, ext. 2254)

Donn Griffith — School-to-Work Coordinator, Anderson School Districts Three and Four, (348-6196 or 646-8000)

David Huff	RN, Telemetry Department, Anderson Area Medical Center, (261-1000)
Bob Humphrey	Welding Instructor, Tri-County Technical College, (646-8361, ext. 2240)
Susan McClure	Institute Coordinator and Accounting Department Head, Tri-County Technical College, (646-8361, ext. 2186)
Butch Merritt	Director of Cooperative Education Work-based Learning, Tri-County Technical College and PACE Industry Liaison (646-8361, ext. 2381)
Melissa Monroe	PACE, Graphic Designer, (646-8361, ext. 2459)
Lane Neamand	PACE, Project Assistant, (646-8361, ext. 2448)
Burris Nelson	Executive Director, Economic Development Alliance of Pickens County (898-5593)
John Norris	CAD/CAM/Machine Tool Technology Instructor, Tri-County Technical College, (646-8361, ext. 2392)
David Shirley	Assistant Dean of Students, Tri-County Technical College, (646-8361, ext. 2196)
Linda Shirley	Special Projects Director, National Dropout Prevention Center, Clemson University, (656-2737)
Johnny Wallace	PACE, Executive Director, (646-8361, ext. 2247)
Connie Watkins	Engineer and Special Projects Coordinator, Square D Company, (882-2781)
Kathy Young	PACE, Office Manager, (646-8361, ext. 2107)

Appendix C

This program for displaced homemakers and single parents in Oklahoma provides job training and support to women who must suddenly return to the workforce to support themselves and their families.

Skills Training for Women

By Gina A. Dabney

Carmaleta Walker (left) presents a Job Readiness Certificate to a DH/SP program client.

SEVERAL years ago, a woman found herself in a desperate situation. Her husband, who was the family's financial provider, was taken out of the picture for an indefinite period of time. Because she chose to raise a family, she had been out of the workplace for almost ten years. Overnight, she became responsible for providing an income to care for her family.

Many women find themselves in similar situations, where they are suddenly thrust into the role of breadwinner. But there is help. The Displaced Homemaker/Single Parent (DH/SP) program in Oklahoma provides training and courses to update skills of those who are recently divorced, widowed, or in a situation that has made them the sole provider for their family.

Program history. The Displaced Homemaker programs in Oklahoma were placed in vocational-technical schools because many of the women didn't have time to get a two-year or four-year degree. They needed to get training and a job quickly.

In 1978, representatives Cleta Deatherage and Don Davis introduced a bill to set up a model program for displaced homemakers in Oklahoma. The Oklahoma Department of Vocational and Technical Education was enthusiastic about the potential of this program. Charles Hopkins, planning coordinator, assisted by Fern Green, sex equity coordinator, led the agency's effort in acquiring state funds to pilot the first Displaced Homemakers program.

"We're going to try to do as much of this as possible through the vo-tech program. If they don't have a skill, we're going to have to provide them a skill. If they have a skill but haven't used it for some time, they're going to have to have a refresher," said Hopkins in an article in the *Oklahoma City Times* on February 1, 1978.

The Oklahoma Legislature passed the Displaced Homemaker Act in the spring of 1978. It appropriated $65,000 to open a pilot center at Moore-Norman Vo-Tech school. The pilot was designed to see if the state's limited resources could provide necessary counseling, training, services, and support programs to help the displaced homemaker gain productive employment. The center's staff would evaluate its success after one year of operation. The evaluation would determine if the program should be expanded, terminated, or modified.

The program was successful. In 1980, 12 programs were added around the state. Almost each year after that, DH/SP programs popped up throughout the state with the latest one established in 1994. Currently, the state has 30 thriving DH/SP programs. Robin Freeman, president of the Oklahoma Displaced Homemaker Association, said in the March 1995 *VEEC* newsletter, "We have proven our programs make a difference to displaced homemakers, single parents, and single pregnant women. . . ."

Metro Tech Vo-Tech, one of the 12 programs that opened in 1980, serves the Oklahoma City area along with the Francis Tuttle Vo-Tech Center, which opened in 1982. According to Carmaleta Walker, coordinator of the DH/SP program at Metro Tech, the primary goal of the program is "training that leads to employment."

Employment is vitally important because it creates personal and financial independence. There is no cost for the client to participate in the DH/SP program except for training. But thanks to many available resources, seasoned coordinators like Walker are often able to provide free training. The DH/SP program at Metro Tech begins with an assessment and job readiness class.

Assessment and job readiness class. The assessment, which costs $75 and is paid for by the DH/SP program, gives clients an idea of the area or type of work in which they will be successful. They are then enrolled in the appropriate classes, or if they have skills and need no training, they are referred to the job coordinator for job placement.

Next, the client attends a job readiness class, which is a three-day event. Walker stresses to the client the importance of attending all three days since there are teachings on motivation, self-esteem, and goal setting. Since many clients have never worked or have not worked in a long time, these commitments help them to start a routine and ". . . to start making some responsible decisions. . . ," said Walker.

Enrollment. Metro Tech has allocated money in its DH/SP program budget to pay for the $100 deposit required per client for daytime classes. According to Walker, Metro Tech is only one of six DH/SP programs in the state that

Gina A. Dabney is the owner of GAD Desktop Publishing Services, Edmond, OK.

provides free enrollment. "We have very good support from the Metro Tech school board and community," said Walker.

The deposit money helps, since many times the client is waiting for money from a grant that may not arrive for up to eight weeks after classes have started. The program also pays $50 for books. Walker knows first-hand that for some clients, money is scarce. The $150 grant gets them enrolled and started in training.

Tuition and job assistance. Clients may get tuition money through a Pell Grant, scholarship, church, or employer. Sometimes they work to pay the tuition themselves. Walker helps clients by referring them to funding agencies like Job Training Partnership Act (JTPA) or Vocational Rehabilitation.

Metro Tech does not offer its clients a loan program. In most instances, tuition and books fall within the amount given by the Pell Grant. With the DH/SP program's payment for enrollment and books, Pell Grants for training, the Department of Human Services or the DH/SP program for transportation, and the emergency fund to assist in some situations, "There is not a lot of expense for the client," Walker proudly states.

This past year, the Pell Grant was $2,300. Metro Tech tuition for one year, which is a nine-month school term, is $800. So, as Walker explained, even with books, this leaves money for a client to pay bills, buy work clothes, school lunches, or a car battery.

Short-term classes, which are from two to 15 weeks or several consecutive Saturday classes, don't meet enough hours to qualify for the Pell Grant, which requires 600 class hours. Some of the longest short-term classes are 96 hours. In order to help the client, the DH/SP program reduces the tuition—for every $100, the client pays $25. The program pays for all books for short-term classes. Walker said that the most a client has paid for short-term tuition is $100.

The program helps clients with job search and résumé preparation as well as job skills necessary to get hired. Also available to program clients is a library and counseling, both at no cost to the client. Walker states, "We try to take a personal interest in the client." And by doing that, many are able to get employment right away and start providing for their family.

Emergency fund. Metro Tech has established an emergency fund to provide money to clients when all other resources have been tapped. The emergency fund was established through the sale of a video produced about three years ago. The video, *If You Ain't Getting Better You're Getting Worse*, provides valuable basic job skill information such as appropriate dress, personal grooming, and interview techniques. According to Walker, they have sold 260 copies nationwide at $25 a copy.

The emergency fund, also known as the Metro Tech Displaced Homemaker Foundation Fund, helps in situations when no other agency like the Salvation Army or Neighbor for Neighbor can assist. Emergency fund money does not have to be repaid, and active clients can ask for assistance of up to $100 per year. Recently, Metro Tech paid utility cut-off notices for three clients. That money kept their electricity on and their bills caught up. Also this year, the program has helped two clients buy eye glasses.

Support group meetings. Active clients must attend the monthly support group meeting. To better serve her clients, Walker has clients fill out a survey of topics. She then invites area experts to speak on subjects of interest to clients, such as time management, money management, parental issues, child abuse, co-dependency, and couponing.

Such training is imperative for these

women. In a recent article in *Parade* magazine, "Sex-Education Programs That Work—And Some That Don't," Earl Ubell states that "most children who are parents before they leave high school—and before marriage—face a harsh future: less education, less chance of getting a job, dismal prospects for a happy marriage. Most of the hardship falls on the female."

The minimum age requirement to enter the DH/SP program is 19. Walker stated that services, which can be provided to women under 19, are limited. Metro Tech has filled the need with other programs, however, like the Nontraditional Careers (NTC) program. The NTC program works with women from 14 to 25 years old who are interested in training in traditionally male-dominated careers, such as drafting, carpentry, electronics, and aviation. The main concern for clients under 19, according to Walker, is that they have high school diplomas. If not, they are promptly enrolled in a general education diploma (GED) class.

GED program. Metro Tech offers several GED preparatory classes at no charge. Some are in association with other programs, each meeting at different times to accommodate different needs. The DH/SP program offers the class during the day so that mothers can attend while their children are in school.

Walker discusses an upcoming support seminar with a DH/SP program client.

"We've been really successful," said Walker. Recently, Metro Tech had five graduates of the GED program, and in June, they will attend a graduation ceremony. The DH/SP program clients stay as long as they need. For some, it may be months before they pass the test, while others take just three weeks. Walker explained that because some have personal difficulties, such as transportation and child care, there has been a slight attendance problem. "For the most part," Walker said, "90 percent of our clients want to be here; they want to change their lives."

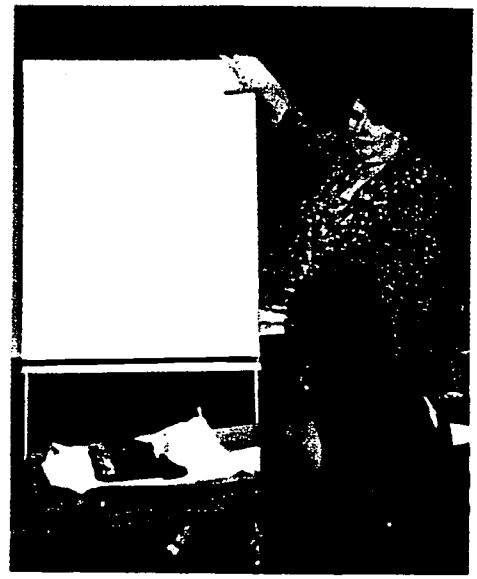
Growth and success. During the first year, the DH/SP program at Metro Tech helped 160 clients, and in the last three years, there have been 300 clients. According to Walker, approximately 45 percent of the clients get jobs and go on to be self-sufficient after entering the program.

Next year, there may be a sudden increase in enrollment because of new welfare reform legislation tying welfare payments to job skills training. With more people to serve, more financial resources will be needed. If that legislation is enacted ". . . there is going to be a greater need [for the DH/SP program] than ever before," said Walker.

The total budget for the DH/SP program at Metro Tech is $106,000. Federal money from the Carl Perkins Act amounts to $36,500, and state and local taxes pay the remainder. State Equity Coordinator Lou Ann Hargrave commented, "Already, grants [$50 million from JPTA and $50 million from Carl Perkins] have been allocated to states to develop models from other states." The grants, which target high density and poverty areas, were awarded to Oregon, Wisconsin, Michigan, Kentucky, Pennsylvania, Massachusetts, New York, New Jersey, Maine, and Maryland, pending the results of federal on-site visits.

Moreover, the Displaced Homemakers program was a model for another state program—The Nontraditional Careers Program, also called the Careers Unlimited program. Both programs are administered by the Vocational Education Equity Council (VEEC), a state network. The Careers Unlimited program started in 1984 at three vo-tech schools—Metro Tech, Francis Tuttle Vo-Tech Center, and Kiamichi Area Vocational Technical School, McCurtain County campus. Currently, there are eight NT programs in the state.

National focus. By the year 2005, 47 percent of the workforce will be women. Hispanic and minority women will have 80 percent growth in the labor market. Displaced homemakers are among the most economically vulnerable workers. They face sex, age, and race discrimination, occupational segregation in low-wage, no-benefit jobs, and hiring practices that undervalue the skills and experience gained in raising children and managing a household.



Outlining program services is part of the three-day orientation for the Metro Tech DH/SP program.

Olivia White, President of Women Work!, stated in her message to members, "One of my goals as Women Work! National Governing Board President is to increase our membership so that decision-makers in the nation's capital and throughout America hear our concerns loud and clear."

For more information about the Displaced Homemaker/Single Parent Program, contact Women Work! The National Network for Women's Employment, 1625 K Street, NW, Suite #300, Washington, D.C. 20006; (800) 235-2732. TD

"We're working on automovie repairs at school. Can I borrow the car?"

50 Ways to Increase Students' Understanding of Careers

1. Establish an information resource center as part of the guidance office, with videos, brochures, and career software programs.

2. Sponsor a Career Day; invite area business people to bring handouts, do demonstrations, or show sample materials that people use in various jobs at their companies.

3. Sponsor field trips or site visits to an area business, industry, health care facility, or social service agency. (If possible, try to include small businesses, too!)

4. Assign class projects where students "shadow" a business person employed in an area of interest.

5. Sponsor a "Parent's Workday," when students go to work with one of their parents; follow up with a class assignment or discussion on the kinds of jobs held by the parents.

6. Have speakers from the school's business partner or other area companies address classes, clubs, or other student groups.

7. Design career games, puzzles, or other career-related activities (or use commercially-prepared games in classroom assignments).

8. Establish a mentoring program with an area business partner and have each student complete a semester- or year-long project related to the career area of his/her mentor.

9. Have students research local careers by examining the want ad section of the newspaper; conduct a class exercise using information gathered from different job ads. (Example: Have students write for job descriptions and do reports on what is involved in the jobs; or, have students rewrite the job descriptions to make them clearer, after doing research on the careers.)

10. Have students write for free career brochures available from professional associations, such as the Tooling & Machining Association, and compile the results for a classroom or guidance office resource. (NOTE: Directories of professional associations are available from most public libraries and technical college libraries.)

11. Arrange tours of area career centers, two-year colleges, and/or four-year colleges; have students ask specific questions about the career fields related to the specific departments that they visit.

12. Conduct role-playing simulations in which students act out the role of career advisor to their peers. (This exercise is described in the facilitator's guide for PACE's "Planning for the Future: A Student Awareness Program for Tech Prep and Mid-Level Technology Careers," which should be available in each school's guidance office.)

13. Conduct interactive career exploration activities with a panel of business persons.

14. Encourage students to take occupational courses at their high schools or career centers.

15. Ask school alumni to make presentations to classes or student groups.

16. Design a bulletin board featuring one or more careers or assign teams of students to design a new career bulletin board every month.

17. Have students write to different companies in their area and request career brochures; keep brochures in a binder as a classroom resource. (NOTE: Large companies, such as Michelin or Duke Power, often publish these kinds of brochures.)

18. Obtain copies of professional or technical journals; have students read selected articles and report on career-related aspects of their assigned articles. (NOTE: Back issues of professional or technical journals can be obtained from Tri-County Technical College by contacting the librarian.)

19. In collaboration with a business person, develop applications for various academic concepts, using career-related examples from the company.

20. Develop a career newsletter or include a section on careers in an existing high school newsletter/publication.

21. Using SCOIS or another career software program, develop a career data bank folder to be maintained by students.

22. Conduct a "problem bucket" exercise in which students anonymously contribute concerns or fears about choosing a career; about entering a career in a specific field, such as electronics; or about continuing their education after high school. Conduct a class discussion to address common fears and concerns.

23. Develop a "tips sheet" to help students consider career interests when choosing part-time employment; in addition, delineate how they could expand their career awareness through their current part-time employment.

24. Sponsor a student summer internship program with area businesses.

25. Encourage students to volunteer with hospitals or social service/community agencies in order to explore career fields in the health and human services area.

26. Have career materials available in the library; or, feature new materials in the library for a specified period of time before they are transferred to the guidance office.

27. Load career exploration software (SCOIS, C-LECT) on PCs in computer classrooms or in open computer labs.

28. Have the guidance office or library subscribe to career magazines, such as *Career Opportunities News.*

29. In high school academic or occupational classes, have students conduct research on careers of interest and then design information sheets or brochures for middle school students.

30. Have students interview someone from the school's business partner about his/her position and how it relates to the product or service offered by the company; then, have the students write an article for a class or school publication. (Or, submit the article to the company newsletter as a feature on one of their employees.)

31. Have teams of students develop "career spots"— one student would interview someone in a career field of interest, while the other student would video the interview. Career spots could be broadcast over Channel One during Career Awareness Week.

32. As a class activity, have students list careers typically not held by males or females; identify persons employed in these nontraditional fields and invite them to speak to the class.

33. Have students identify unusual career fields and ask them to guess what the salary and educational requirements might be for these areas. Then, have students conduct research and compare what they learned to what they originally had thought about these careers.

34. Ask each student to write down two careers that he/she has considered. Identify the group's top two or three choices. As a class project, have students research these careers, identifying five positive and five negative aspects of each career.

35. Assign students into teams of two and have one play the role of peer career counselor for his/her partner. After the students identify and discuss current career plans, interests, and goals, reverse the roles. Let the class discuss the results.

36. Identify a product made in our area (e.g., power drill by Ryobi in Anderson). Identify all the jobs involved in converting this product from raw material to finished good.

37. Have students read a series of futuristic articles and ask them to project the types of careers required to support the changes predicted in the articles. (For example, how would a cashless society, in which people used only credit cards, affect careers in the banking industry? Other fields?)

38. Have students identify a product developed 100 years ago and still used today; then, have them trace this product's growth and development in terms of careers and technology.

39. Conduct a "career charades" game for elementary or middle school students. Have high school students use costumes or props to reflect a career area. Be sure to select careers that are not immediately obvious (police officer) or that are not too obscure for young children (surface process mount technician). Have younger students ask questions to try and identify each career area.

40. Have students choose a primetime drama or sitcom to watch. Ask students to identify the professions of the four main characters. Discuss these careers, possible stereotypes, and the comparison of TV image to reality.

41. Have students interview a business person who works in a totally different career field from the one in which he/she started. Ask students to determine why the person changed fields and what, if anything, the person would do differently in hindsight. Assign written or oral reports based on the interview project.

42. Assign students to identify career areas in which they are interested and to design and use persuasive advertising materials in order to convince others of the value of a particular career.

43. Divide students into groups. Assign each group a "glamour career" to research (e.g., football player, actor, lawyer, or model). Since each team will already know the positive side of their assigned career, ask them to identify the **negative** aspects of the career. Compare results from each group and lead a classroom discussion, helping students understand that it's important to understand **both** positive and negative aspects of potential careers.

44. Divide students into groups and ask them to identify everything that they would **hate** in a job; ask teams to identify realistic ways of avoiding the things they would NOT like in a job or career field.

45. Have students develop a mock company that would produce a specific product. Ask them to identify and research all the jobs required to produce that product, obtaining information from a local company which produces a similar product.

46. Ask students to watch a movie video of their choice and to identify five movie-related jobs by watching the credits at the end of the movie. Have students do research on these careers for a written or oral project.

47. Ask students to watch one of the local news shows and to identify one or two career fields (other than reporter) associated with producing the news show. Have students do research on those careers, or conduct a site visit to the TV studio so that students can learn more about these fields.

48. For a class or club project, let two-person teams of students identify and interview a business person employed in a position or career field which the students find interesting. Have each team trace all the jobs that the person has held, leading up to the individual's current position. Let the group of students discuss their findings and conclusions.

49. Have teams of students identify all the jobs or career fields associated with operating the school, the district office, or other agencies which work closely with the school system. Let the class discuss the findings of each team.

50. Ask students to list two career fields which they are considering. Then ask students to list two hobbies or outside activities which they enjoy. Assign students to groups for information sharing. Ask them to examine whether or not a relationship exists between their career interests and their outside interests. Have each group discuss whether there **should** be a relationship between the two or how a vocation and an avocation can be combined.

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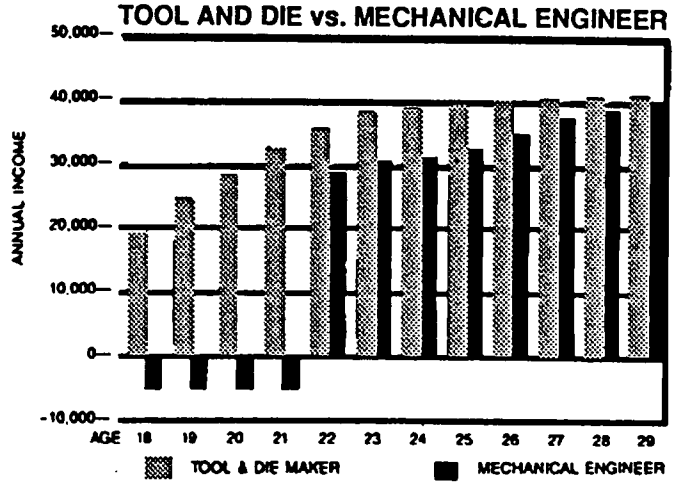
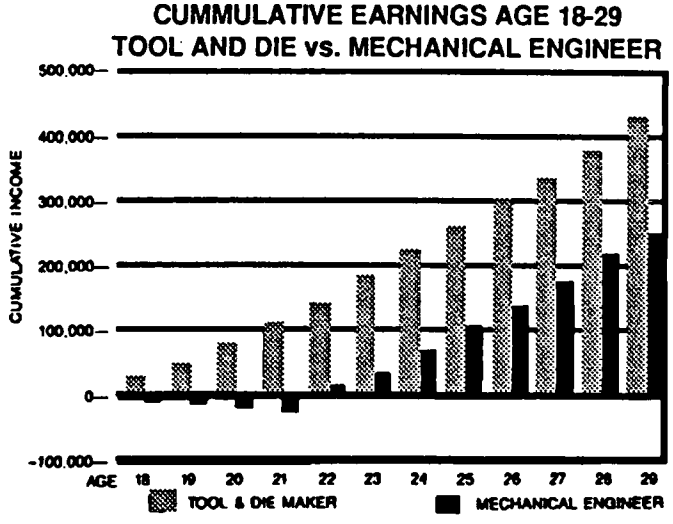
COMPENSATION POTENTIAL:

Tool & Die Maker vs. Mechanical Engineer

The graphs to the right compare the annual income of a tool and die maker with that of a mechanical engineer over a twelve year period. On a year by year basis, the tool and die maker earns while he learns, while the student engineer remains in debt until he finds a job after graduation. At the end of six years, a tool and die maker has accumulated over $178,296 in income, while a mechanical engineer is far behind at $39,450. The $138,846 differential is an important consideration in planning career alternatives. Looking ahead to a degreed engineer and a tool and die maker at the age of 29, or twelve years after high school, the engineer has almost "caught up" in terms of annual income—$40,806 for the engineer and $41,137 for the tool and die maker. However, the cumulative earnings gap still remains—now at $162,174. The advantages accrued early by the tool and die maker may never be overcome by the engineer. (NOTE: These figures are for illustration only and may vary from case to case.)

(Source: Tooling & Manufacturing Association, 1989. Reprinted with permission. Tool & die makers typically receive training through vocational programs and job experience, associate degree programs and/or apprenticeship programs.)





NCRVE

National Center for Research in Vocational Education

University of California, Berkeley

Office of Special Populations' BRIEF

Volume 5 Number 2

THE GENDER GAP IN YEARLY EARNINGS: CAN VOCATIONAL EDUCATION HELP?

by Kenneth Gray

Despite women's wages growing 140% since 1960, there is little call for celebration. Thirty years after the passage of the Equal Pay Act, women today still earn, on average, 70 cents for every dollar earned by men. Why has this wage gap persisted? Does secondary and postsecondary education have a role to play in correcting this inequity? Recent research conducted by Gray and Huang (1993) from The Pennsylvania State University provides new insights into these questions.

Since the early 1960's one focus of efforts to narrow the gender gap in wages has been education. Economists argued that women earn less because they, as a group, were less likely to hold advanced degrees or training. Thus, a way to narrow the gap was to encourage more women to go on to higher education. This policy has been very successful. Today, more women go to college and graduate than men, and the United States graduates higher percentages of women even in the sciences than any other industrialized nation. No doubt this progress is one reason why the gender wage gap has narrowed since the 1960's. But men still make about almost a third more than women. Why?

The more women in a job, the lower the wage

One explanation is offered by Terrell (1992) who suggests that the issue now is not equal educational opportunity, but inequality in the distribution of women among all occupations. Only four percent of skilled craft workers, for example, are women. Furthermore, the wage gap is narrowest in occupations where the distribution of men and women is about equal: on average, women cashiers earn 95 cents for every dollar a male cashier makes compared to 62 cents on the dollar for women stockbrokers. This was the hypothesis tested by The Pennsylvania State University researchers.

The study examined the variables that affected the yearly wages of men and women who were in their mid thirties. Included were both high school and postsecondary education, demographic variables such as marital status, and finally, occupation. The findings confirm Terrell's research. While education, including high school vocational education, positively affects earnings of both women and men, its effect was greater for men. This means that, on average, the return in earnings from an additional year of education is greater for men than women. Thus, unless the educational levels of women begin to dramatically exceed that of men, little further progress in reducing the gender gap can be expected from higher education.

Occupation not education affected men's and women's earnings the greatest

In Gray and Huang's study, the most important variable affecting earnings of both genders was not education but occupation. It is important to note that the magnitude of this effect was larger for women than men. The implication being that narrowing the gender gap further will require breaking down gender barriers in certain higher paying occupations. This is where secondary and postsecondary vocational technical education has a role to play.

The press has given a lot of attention to the "glass ceiling," but Barbara Noble points out that while equal access to top corporate positions is an important gender issue, it is not one of relevance to most women. To the majority of women, the relevant issue is being stuck on what Noble calls

Vocational education critical in decreasing the wage gap

the "sticky floor" of low wage occupations. High school and postsecondary vocational technical education has great potential to free women from the "sticky floor" by opening doors to high skills/high wage blue-collar technical occupations in the manufacturing, construction, communications, and transportation sectors of the economy. Labor market advantages in gaining this type of work depends on entry level skills that include an appropriate set of occupational and basic academic skills. Applicants that have this set of skills will be hired first. The new integrated Tech Prep model* developed by the National Center for Research in Vocational Education is designed to deliver this set of skills and thus, deserves close attention by those who seek to further narrow the gender wage gap.

**For more information on the integrated Tech Prep model see: Bragg, D. Emerging tech prep models: Promising approaches to educational reform. Forthcoming in the National Center for Research in Vocational Education's* Center Focus, *December 1993.*

References

Gray, K. & Huang, N. (1993). The gender gap in yearly earnings: Is it lack of education or occupational segregation? Forthcoming in the *Journal of Vocational Educational Research.*

Noble, B. (1992, November 22). And now the sticky floor. *The New York Times.*

Terrell, K. (1992). Female-male earnings differentials and occupational structure. *International Labor Organization,* 131(4-5), 387-405.

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The Office of Special Populations (formerly Technical Assistance for Special Populations Program - TASPP) of the National Center for Research in Vocational Education, University of California, Berkeley, is housed at the University of Illinois. The Office of Special Populations works nationally to increase the accessibility, quality, and availability of vocational programs for youth and adults from special populations.

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TYPES AND DEFINITIONS OF WORK-BASED LEARNING

Introduction

This document was developed to facilitate the use of common definitions for various work-based learning options throughout the PACE Consortium. As a result of several months of review and discussion, members of key PACE committees, including the Coordinating Board, approved this information for use in planning and developing school-to-work activities and programs.

Purpose

This document was originally written to help explain to employers the different work-based learning options and the relative benefits and required levels of company commitment associated with each option. The information may, however, be used

- as a basis for developing brochures, flyers and other promotional materials
- by STW coordinators and others as a basis to explain various options to employer partners, students, parents and community members

Hierarchy of Work-based Learning Options

A graphic follows this introduction which shows the types of work-based learning in terms of the potential level of benefit to the company and the required level of commitment. (Commitment in this case is defined as the amount of company staff time required for training, duration of the training experience, and expenditures for student wages and other expenses.)

Among the nine types of work-based learning illustrated in the hierarchy, three of the options—coordinated co-op, personal mentoring and part-time work—may require additional explanation.

Coordinated co-op was included because this type of work-based learning has been operating on a limited basis within the PACE Consortium for several years. (This option is unique to the local area and is rarely described in national publications.) In addition, coordinated co-op was included because of its potential for expansion throughout the local area.

Personal mentoring was included because it is an option described in the S.C. School-to-Work Transition Act of 1994, and because numerous businesses (especially those affiliated with county-wide business and education partnerships) are already participating in mentoring programs. We defined this option as "personal mentoring" to differentiate it from workplace mentoring, which plays a critical role in registered and youth apprenticeship programs.

Part-time work was included because it is the option that businesses (and students) are the most familiar with when it comes to youth employment. This type of work-based learning activity is listed on the bottom of the hierarchy for several reasons. First, there is typically no company effort extended to link job tasks with the school curriculum. Second, the type of work is usually very basic, routine and/or task-specific rather than exploratory or broad-based in nature. And third, most companies hiring teenagers do so on a part-time, temporary basis in order to meet an immediate employment need. As a result, the long-term benefit to the company is not nearly as significant as it can be with more sophisticated work-based learning options.

STW Coordinators should understand that while most jobs held by teenagers are not currently linked in any formal way with classroom instruction, the potential exists to make these experiences more educational in nature. Also, STW Coordinators should recognize that it may be necessary to help a business meet an immediate employment need through part-time employment and then seek opportunities to"grow" a school-to-work opportunity.

When working with local employers to establish work-based learning opportunities, STW Coordinators should help them realize that it possible to run multiple options simultaneously. (For example, a company might participate in a youth apprenticeship program while sponsoring periodic shadowing activities for younger students.)

Other Options and Future Editions

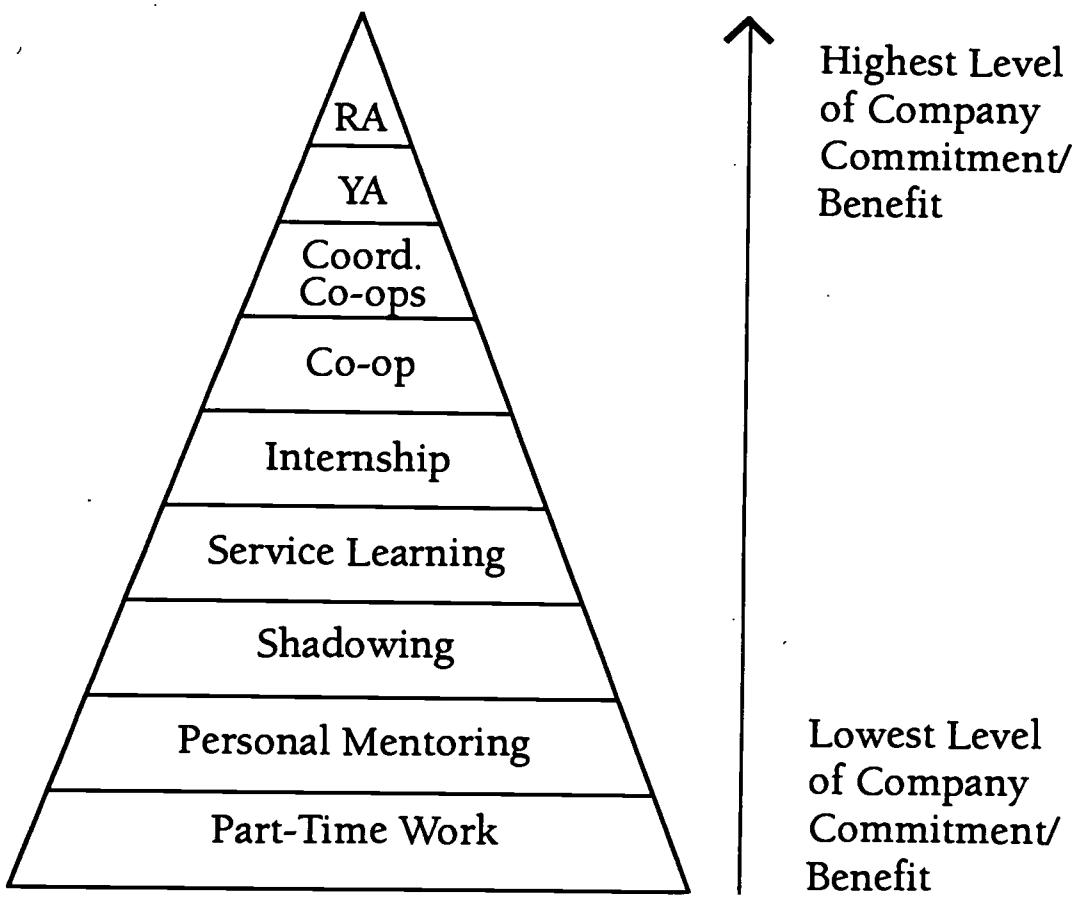
Some school-to-work publications, particularly those used on a national level, often include career academies as one of the options available to students. The career academy model stresses a number of key elements, including work-based learning. Because the work-based option featured in career academies is usually internship, which is described in this document, a separate category for career academies was not included.

This information on the types and definitions of work-based learning is considered to be a "working document." Revisions will be made as necessary in response to state and federal trends and to changing local needs.

TYPES AND DEFINITIONS OF WORK-BASED LEARNING

Types of Work-Based Learning

- Registered Apprenticeship (grade 11+)
- Youth Apprenticeship (grades 12-14)
- coordinated co-ops (grades 12-14)
- cooperative education (grades 11-12)
- internship (grades 10-12)
- service learning (grades 3-12)
- shadowing (grades 7-12)
- personal mentoring (grades 1-12)
- part-time work (grades 10-12)



Definitions

I. Registered Apprenticeship

(NOTE: While registered apprenticeship programs typically require participants to be at least 18 years old with a high school diploma/GED, youth options are possible.)

Time Commitment:

- 1 to 6 years (for persons 16 and older), involving between 1000 and 12,000 hours of continuous classroom and work-based instruction

Work-Based Component:

- focuses on all aspects of a particular occupation with a specified range of skills
- job tasks and work processes are determined and documented by the employer or apprenticeship advisory group
- complements related (classroom) instruction
- on-the-job training supervised by a journeyman worker
- work-based instruction involves modeling the procedure, having apprentice perform the task with supervision and repeat the task numerous times, and having the apprentice independently demonstrate proficiency following all safety precautions
- work experience gained through high school cooperative education assignments may, with appropriate documentation, count toward apprenticeship hours

School-Based (Related Instruction) Component:

- (pre-apprenticeship educational experiences may include completion of specific academic and vocational coursework in high school)
- requires a minimum of 144 hours each year, which may or may not count toward certification or result in compensation through apprentice wages
- may be taught as part of a formal, postsecondary experience (i.e., associate degree program) or may be offered as related hours of instruction at the worksite, through a high school career center, or through a technical college continuing education division
- typically involves instruction on techniques of the trade, theories and concepts behind the techniques, analysis of work processes, safety, and study of appropriate trade manuals

Agreements:

- prior to offering an apprenticeship contract (agreement), the employer may require pre-employment testing (which may include basic skills, aptitude and/or drug screening), an interview to determine level of interest and commitment to the program, a physical exam and/or other program prerequisites
- requires a signed training agreement between the student (apprentice), the employer and the parent (if the student is a minor), which is submitted to a U.S. Department of Labor approved registration agency

- training agreement specifies previous credit awarded (if appropriate), total hours required for certification including number of hours of related instruction, probationary period, and progressive wage scale for the duration of the program
- agreement may be terminated by either party without cause during the probationary period, and with cause and opportunity for corrective action following the probationary period; in either case, the registration agency must be notified

Credential(s):
- Certificate of Completion of Apprenticeship, awarded by the United States Department of Labor Bureau of Apprenticeship and Training (completion enables the apprentice to qualify and be known as a "journeyperson" or "journeyworker")
- associate degree, if the apprenticeship program has been fully integrated with this type of formal educational experience

Wages and other financial support:
- wages paid by employer based on a percentage of the current journeyworker rate, but not less than the minimum wage
- compensation follows a progressively increasing schedule of wages with increases at least every 6 months
- employer provides fringe benefits, vacation time, and other benefits in accordance with stated company policies
- employer sponsor may choose to cover all costs associated with the apprenticeship program, or may require apprentices to pay tuition for related study, buy textbooks and other materials required for classroom instruction, and/or to purchase their own tools

Evaluation:
- work-based tasks are supervised by a qualified employee who is usually a certified journeyworker
- written appraisals of the apprentice's progress in work-based and related instruction are completed prior to advancing into each training phase; appraisals are discussed with the apprentice, signed and added to the permanent record

Transportation:
- student provides own

Insurance:
- accident insurance (to and from the worksite) provided by the apprentice
- accident insurance (on-the-job) provided by the employer through employee health insurance and workers' compensation plan

Benefits to student and employer:
- students develop versatility by learning all aspects of a particular trade

- students gain interpersonal skills and the ability to handle different situations through experience in real work environments
- students obtain a recognized credential(s)
- employers benefit from meaningful, productive work performed by the apprentice
- employers experience reduced turnover rates, increased versatility of workers and the benefit of employing individuals who are well-versed in company preferences and practices

Full-time employment upon completion:

- students in registered apprenticeship programs are employees of the sponsoring company so the likelihood of continued employment after graduation is very high. (NOTE: Employers reserve the right to terminate or suspend employment if conditions of business should make such action necessary.)
- (some employers may require students to sign an agreement stating that they will work for the company for a specified amount of time following completion of the program.)

Regulations:

- registered apprenticeship programs are developed locally but are required to meet the national apprenticeship and training guidelines established by the U.S. Department of Labor Bureau of Apprenticeship and Training
- federal regulations require that employers follow equal opportunity guidelines in accordance with Title 29 of the Code of Federal Regulations, Part 30 as amended
- employers sponsoring five or more apprentices must develop and adopt an Affirmative Action plan, which may be a required attachment to the apprenticeship agreement

(Sources: U.S. Bureau of Labor Statistics, Occupational Outlook Quarterly, Winter 1991-92; Bureau of Apprenticeship and Training, "Officially Recognized Apprenticeable Occupations List," March 1994; U.S. Department of Labor, Setting Up an Apprenticeship Program, 1989; Treblig, Inc., Greenville, SC: "Apprenticeship and Training Standards for Treblig, Inc., for the Trade of Machinist (600-280-022)," March 1994; Sample of the "National Apprenticeship Guidelines," developed in Cooperation with the Bureau of Apprenticeship and Training, Employment and Training Administration, and the U.S. Department of Labor.)

II. YOUTH APPRENTICESHIP

Time commitment:

- 3 years (grades 12-14) including summers

Work-based component:

- broad in scope (encompasses all elements of the industry/business); increases in sophistication throughout the program
- competencies mutually agreed upon by employer and participating secondary/postsecondary institutions
- complements and extends classroom learning (academic and occupational)
- learning guided by trained employer mentor
- students selected by employer based on a mutually agreed upon process

School-based component:

- appropriate academic and occupational/technical foundation provided in grades 9-14 (may include specific enhancements to meet employer needs)
- academic and occupational course content and/or class schedules modified to blend with worksite experiences
- guidance and career counseling provided in grades 6-14
- course credit for work-based learning typically provided in grades 12-14
- periodic seminar sessions guided by teachers to help students explore/synthesize experiences in the workplace
- technical college and school district collaborate to provide opportunities for early/advanced entry into associate degree programs
- provisions for students to continue their education (baccalaureate degree)

Agreements:

- worksite training agreement developed collaboratively and signed by employer, school, parent, student, and postsecondary representative

Credential(s):

- high school diploma, vocational certificate, associate degree (and option for advanced technology certificate) and/or journeyworker certification or locally-developed certificate of workplace competency

Wages and other financial support:

- wages set and paid by employer
- tuition and/or other financial assistance for postsecondary study (associate degree) provided by employer

Evaluation:

- worksite learning evaluated by employer mentor
- regular on-site monitoring by school/postsecondary personnel

Transportation:

- student provides own

Insurance:

- health/life insurance provided by student's family, however, employers are responsible for offering coverage for students in paid work-based learning experiences **if** similarly classified employees are eligible for these benefits (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1).
- accident insurance (to and from worksite) provided by district
- students participating in **paid** worksite experiences are covered for workers' compensation under the Code of Laws of S.C., section 42-7-60, 1976, as amended; students who are participating in **unpaid** worksite experiences are **not** currently covered under this law (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994). NOTE: A revision of the S.C. law regarding workers' compensation for unpaid student workers is rapidly making its way through the General Assembly.
- students participating in [paid worksite experiences] are covered for workers' compensation by the School District's policy (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1), but **may** be covered under the employer's policy; however, regardless of whichever party agrees to provide coverage (school district or employer), that party "must notify its insurance carrier or self-insured fund in order that coverage is recognized and appropriate premiums determined." (Correspondence of Michael Grant LeFever, Executive Director of the South Carolina Workers' Compensation Commission, August 17, 1994, p. 2).
- parents should be required to sign a waiver for each student's participation in a worksite learning experience (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994).

Benefits to student and employer:

- student gains specific workplace skills, exposure to broad elements of the industry, an appreciation for the company "culture," and advanced standing/tuition assistance for postsecondary study
- employer benefits from meaningful work completed by the apprentice, and the potential to hire a skilled technician with 3 years work experience who is well-versed in company preferences and practices

Full-time employment commitment upon completion:

- generally there is no commitment for full-time employment on the part of employer or student. However, some employers may require students to work for the company for a specified amount of time following the program completion

Regulations:

- locally-developed and agreed upon unless employer chooses to enter into a formal apprenticeship arrangement through the Department of Labor/Bureau of Apprenticeship and Training
- state and federal child labor laws, if student is under 18

NOTE: When students enter the postsecondary component of the program, responsibilities of school districts as described above would be assumed by the postsecondary institution.

III. COORDINATED CO-OPS

Time commitment:

- 3 years (grades 12-14) including summers

Work-based component:

- complements and extends classroom learning, particularly in occupational/technical subjects
- learning guided by workplace supervisor
- participants selected by employer based on a mutually agreed upon process

School-based component:

- appropriate academic and occupational/technical foundation provided in grades 9-14
- guidance and career counseling provided in grades 6-14
- course credit for work-based learning typically provided in grades 12-14
- periodic seminar sessions guided by teachers to help students explore/synthesize experiences in the workplace
- college and school district collaborate to provide opportunities for early/advanced entry into associate degree programs
- provisions for students to continue their education (baccalaureate degree)

Agreements:

- worksite training agreement signed by employer, school, parent, student
- separate, informal training agreement mutually agreed upon by employer and student for post secondary component

Credential(s):

- high school diploma, vocational certificate, associate degree (and option for advanced technology certificate)

Wages and other financial support:

- wages set and paid by employer
- tuition and/or other financial assistance for postsecondary study (associate degree) provided by employer

Evaluation:

- worksite learning evaluated by employer mentor
- on-site monitoring by school or postsecondary personnel

Transportation:

- student provides own

Insurance:

- health/life insurance provided by student's family, however, employers are responsible for offering coverage for students in paid work-based learning experiences **if** similarly classified employees are eligible for these benefits (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1).
- accident insurance (to and from worksite) provided by district

- students participating in **paid** worksite experiences are covered for workers' compensation under the Code of Laws of S.C., section 42-7-60, 1976, as amended; students who are participating in **unpaid** worksite experiences are **not** currently covered under this law (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994). NOTE: A revision of the S.C. law regarding workers' compensation for unpaid student workers is rapidly making its way through the General Assembly.
- students participating in [paid worksite experiences] are covered for workers' compensation by the School District's policy (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1), but **may** be covered under the employer's policy; however, regardless of whichever party agrees to provide coverage (school district or employer), that party "must notify its insurance carrier or self-insured fund in order that coverage is recognized and appropriate premiums determined." (Correspondence of Michael Grant LeFever, Executive Director of the South Carolina Workers' Compensation Commission, August 17, 1994, p. 2).
- parents should be required to sign a waiver for each student's participation in a worksite learning experience (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994).

Benefits to student and employer:

- student gains technical and general workplace skills and advanced standing/tuition assistance for postsecondary study
- employer has specific tasks completed for reasonable wage and opportunity to hire full-time a student with three years' structured work experience

Full-time employment commitment upon completion:

- no commitment on the part of employer or student

Regulations:

- locally-developed and agreed upon (except for the high school part of the program which requires the school to keep specific records in accordance with State Department of Education

NOTE: When students enter the postsecondary component of the program, responsibilities of school districts as described above would be assumed by the postsecondary institution.

IV. COOPERATIVE EDUCATION

Time commitment:

- 9 weeks to one year (typically excluding summers)

Work-based component:

- training plan typically developed by the teacher and agreed to by employer, parent, student and school officials
- relates specifically to student's occupational major in school
- assignments usually focus on a series of specific tasks related to a particular job or position in the company
- learning guided by workplace supervisor

School-based component:

- academic and occupational foundation provided in grades 9-12
- guidance and career counseling provided in grades 6-12
- periodic seminar sessions guided by teachers to help students explore/synthesize experiences in the workplace
- credit for work-based learning provided in grade 12

Agreements:

- training agreement typically signed by employer, school, parent, and student

Credential(s):

- high school diploma and vocational certificate

Wages and other financial support:

- wages set and paid by employer
- (no other wages/benefits typically provided)

Evaluation:

- worksite learning evaluated by supervisor
- periodic on-site monitoring by school personnel

Transportation:

- student provides own

Insurance:

- health/life insurance provided by student's family, however, employers are responsible for offering coverage for students in paid work-based learning experiences **if** similarly classified employees are eligible for these benefits (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1).
- accident insurance (to and from worksite) provided by district
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- parents should be required to sign a waiver for each student's participation in a worksite learning experience (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994).

Benefits to student and employer:

- student gains technical and general workplace skills
- employer has specific tasks completed for a reasonable wage

Full-time employment commitment upon completion:

- no commitment on the part of employer or student

Regulations:

- locally-developed and agreed upon (except for the high school which is required to keep specific records in accordance with State Department of Education regulations.)

V. INTERNSHIP

Time commitment:

- 1 week to six months (often occurs over the summer)

Work-based component:

- typically focuses on exposing the student to the responsibilities and duties of one or two positions within the company
- usually relates to the student's coursework (e.g., a student may, for example, participate in an internship at a bank after completing introductory finance or other business courses).
- learning guided by workplace mentor
- participants selected by employer based on a mutually agreed upon process

School-based component:

- appropriate academic and occupational foundation provided in grades 9-12
- guidance and career counseling provided in grades 6-12
- periodic seminar sessions guided by teachers to help students explore/synthesize experiences in the workplace
- (credit is not typically awarded for internship experiences; however, students may receive a grade for a class project or term paper based on the internship experience.)

Agreements:

- a written agreement between the student, school or teacher, and the employer is usually developed prior to the internship

Credential(s):

- (no special credentials are awarded)

Wages and other financial support:

- may be paid by the employer, or unpaid without any special benefits or financial support. (NOTE: Summer internships are almost always paid.)

Evaluation:

- worksite experience evaluated by the student and workplace mentor/supervisor
- limited on-site monitoring by school personnel

Transportation:

- student provides own

Insurance:

- health/life insurance provided by student's family, however, employers are responsible for offering coverage for students in paid work-based learning experiences **if** similarly classified employees are eligible for these benefits (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1).
- accident insurance (to and from worksite) provided by district

- students participating in **paid** worksite experiences are covered for workers' compensation under the Code of Laws of S.C., section 42-7-60, 1976, as amended; students who are participating in **unpaid** worksite experiences are **not** currently covered under this law (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994). NOTE: A revision of the S.C. law regarding workers' compensation for unpaid student workers is rapidly making its way through the General Assembly.
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- parents should be required to sign a waiver for each student's participation in a worksite learning experience (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994).

Benefits to student and employer:

- student gains a general understanding about what is involved in one or more specific positions, as well as an appreciation for the company's type of business
- employer benefits by helping the student clarify his/her interests and goals, and may have some specific tasks completed by the intern for a reasonable wage

Full-time employment commitment upon completion:

- no commitment on the part of employer or student

Regulations:

- other than state/federal child labor laws for students under 18 years of age, any other regulations would be locally-developed and agreed upon

VI. SERVICE LEARNING

Time commitment:

- 1 hour up to several weeks

Work-based component:

- often project-based (developing a community park or helping with a food drive for the homeless), but may involve observing or assisting with specific duties in a civic organization or social service agency (providing supervised peer counseling to at-risk teens)

School-based component:

- appropriate classroom study provided prior to and concurrently with service learning experience
- credit not usually awarded unless experience is part of a class
- for more involved experiences (particularly for older students), periodic seminar sessions guided by teachers may be held to help students explore/synthesize experiences in the workplace

Agreements:

- an informal agreement or understanding is usually reached between the school, employer, parent and student prior to the activity (if non-school agencies are involved).

Credential(s):

- none

Wages and other financial support:

- typically unpaid without any special benefits or financial support

Evaluation:

- worksite experience evaluated by the student and employer sponsor (when appropriate)
- on site monitoring by school personnel at all levels; intensity of monitoring may decrease from elementary through high school

Transportation:

- provided by school, district, parent or student

Insurance:

- health/life insurance provided by student's family, however, employers are responsible for offering coverage for students in paid work-based learning experiences **if** similarly classified employees are eligible for these benefits (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1).
- accident insurance (to and from worksite) provided by district
- students participating in **paid** worksite experiences are covered for workers' compensation under the Code of Laws of S.C., section 42-7-60, 1976, as amended; students who are participating in **unpaid** worksite experiences are **not** currently covered under this law (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994). NOTE: A revision of the S.C. law regarding workers' compensation for unpaid student workers is rapidly making its way through the General Assembly.

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- parents should be required to sign a waiver for each student's participation in a worksite learning experience (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994).

Benefits to student and employer:

- student gains insight into the need for and the rewards of community service; student may also benefit from learning more about requirements of one or more service-oriented professions
- student benefits from opportunity to apply classroom knowledge to "real-world" situations
- older students benefit from networking with community leaders and may, as a result, develop valuable job contacts
- employer or agency benefits from student contribution to specific projects or activities
- employer gains personal satisfaction from helping a young person explore his/her career interests and learn a little more about the "real world."

Full-time employment commitment upon completion:

- no commitment on the part of employer or student

Regulations:

- if any, they would be locally-developed and agreed upon

VII. SHADOWING

Time commitment:

- 4 to 8 hours

Work-based component:

- designed to expose the student to one working person's duties and responsibilities
- may or may not relate directly to the student's school coursework (e.g., a student may, for example, shadow a secretary without taking any business courses in school)
- experience guided by employee being shadowed
- students selected by school personnel based on a process agreed upon by participating employers

School-based component:

- appropriate academic and occupational foundation provided, particularly when experience is linked to classroom studies. (Preparatory or follow-up assignments may also be required.)
- guidance and career counseling provided in grades 6-12
- no course credit awarded although students may receive a grade for a course project or assignment related to the shadowing experience.

Agreements:

- a relatively informal agreement is usually developed between the business person and the school coordinator which may describe the types of outcomes expected from the experience

Credential(s):

- none

Wages and other financial support:

- none

Evaluation:

- worksite experience evaluated by the student and career (business) person
- limited on-site monitoring by school personnel

Transportation:

- younger students may have transportation provided by school, district or parent, otherwise students provide their own

Insurance:

- health/life insurance provided by student's family, however, employers are responsible for offering coverage for students in paid work-based learning experiences **if** similarly classified employees are eligible for these benefits (S.C. Department of Commerce, "School-to-Work Transition Act Recommendations", January 11, 1995, p. 1).
- accident insurance (to and from worksite) provided by district
- students participating in **paid** worksite experiences are covered for workers' compensation under the Code of Laws of S.C., section 42-7-60, 1976, as amended; students who are participating in **unpaid** worksite experiences are **not** currently covered under this law (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December

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- parents should be required to sign a waiver for each student's participation in a worksite learning experience (S.C. Business Center for Excellence in Education, "Report of the Tech Prep Business Recommendations Committee", December 13, 1994).

Benefits to student and employer:

- student gains insight into an employee's duties and responsibilities as well as a general understanding of what the company does, and what is required in the workplace
- employer gains personal satisfaction from helping a young person explore his/her career interests and learn a little more about the "real world."

Full-time employment commitment upon completion:

- none

Regulations:

- if any, they would be locally developed and agreed upon

VIII. PERSONAL MENTORING

Time commitment:

- up to 5 hours per week for approximately 1 year

Work-based component:

- time is usually spent off-site in activities such as a cook out, outdoor hike, visit to the zoo, etc.
- mentor serves as a role model to the student by providing encouragement and guidance on a variety of personal, social, and educational issues

School-based component:

- typically, no structured relationship exists between school curriculum and mentor activities except for basic academic foundation. However, in some cases the mentor may help reinforce specific concepts taught in the school curriculum, with assistance from the teacher.

Agreements:

- clear agreement between the mentor, school/teacher and/or parent is reached, but may or may not be formally signed by all parties

Credential(s):

- none

Wages and other financial support:

- typically unpaid without any special benefits or financial support

Evaluation:

- mentor periodically completes a written evaluation
- school personnel typically remain in close contact with the mentor on a regular basis

Transportation:

- usually provided by the parent for younger students

Insurance:

- provided by family or school district policy

Benefits to student and employer:

- student benefits from greater self-confidence, improved decision-making abilities, and/or enhanced academic skills
- mentor benefits from personal satisfaction in helping a young person become more motivated, focused and successful

Full-time employment commitment upon completion:

- no commitment on the part of employer mentor or student

Regulations:

- if any, they would be locally-developed and agreed upon

IX. PART-TIME WORK

Time commitment:
- up to 20 hours per week for undetermined amount of time

Work-based component:
- supervisor assigns all duties and oversees performance

School-based component:
- no structured relationship exists between school and work except for basic academic foundation and/or some occupational skills training (e.g., computer keyboarding)

Agreements:
- no agreements exist between the school and the employer

Credential(s):
- none

Wages and other financial support:
- wages set and paid by employer

Evaluation:
- work supervisor evaluates performance in accordance with standard company policy

Transportation:
- student provides own

Insurance:
- accident insurance (to and from worksite) provided by student's family policy
- accident insurance (on-the-job) provided by company worker's compensation plan

Benefits to student and employer:
- student earns a wage and gains a general understanding about workplace requirements
- employer gets specific tasks completed for a reasonable wage

Full-time employment commitment upon completion:
- no commitment on the part of employer or student

Regulations:
- none, other than what employer would normally comply with for any part-time employee

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NCRVE

National Center for Research in Vocational Education

University of California, Berkeley

Office of Student Services'

BRIEF

Volume 7, Number 1

INDIVIDUALIZED CAREER PLANS: OPENING DOORS FOR ALL STUDENTS

by Esmeralda S. Cunanan and Carolyn Maddy-Bernstein

Schools need to assist students with:

- making informed career decisions
- developing job skills
- occupational exploration
- developing job-finding skills
- job placement

All young people need help to be successful in school and, ultimately, in life. Teachers, counselors, school administrators, and parents are key to assisting all students in finding meaningful careers. Critics of American education frequently blame schools for not doing enough to assist students – particularly those not bound for college and students with disabilities – with developing job skills, making informed career choices, developing job-finding skills, and job placement. Regardless of gender, ethnic or cultural background, or socio-economic status, all students should set goals towards a rewarding career path. Proactive schools provide services, programs. and activities that are focused on students' needs. Like the individualized education program (IEP) mandated for students with disabilities, an individualized career plan (ICP) can serve as a guide to a student's education. While all students and adults need to plan, the ICP process is critical for students at risk of failing. Through this process, they can gain hope and look to a brighter future. The career planning process is a pivotal step in opening doors to more promising and challenging careers for the young.

This BRIEF highlights the significance of individualized career plans for all students in preparing them for the world of work or further education. It contains a discussion of ICP development and an example of an ICP.

Background

Career planning – a must for *all* students

Career planning – an essential component of career development – is the cornerstone for making appropriate career, educational, and occupational choices. It is critical to effective transition. To this end, developing individualized career plans for each student is imperative.

Individual career plan development is not new in education. ICPs have been advocated by career counselors for the past three decades. Furthermore, the Individuals with Disabilities Education Act (IDEA), formerly the Education for All Handicapped Act (EHA), supports the concept of a career plan by mandating that schools develop individualized education programs for students with disabilities. Amendments to the IDEA require that the IEP, beginning no later than age 16 (and at a younger age if determined appropriate), must include a statement of **transition services** students need to prepare for postschool outcomes (e.g., postsecondary education, gainful employment, independent living, adult services, and community participation).

More recently, the School-to-Work Opportunities Act (STWOA) of 1994 was enacted to establish school-to-work systems that enable all students, including those at risk of failing, to identify and navigate paths to productive and progressively more rewarding roles in the workplace. The Act emphasizes career planning for *all* students that can facilitate their smooth transition from school to work or further learning.

Individualized Career Plans

An ICP takes into account the student's:
- needs
- goals
- interests
- preferences

An individualized career plan is a formalized written plan that fits the student's unique, specific needs. It relates learning experiences to career goals. The plan is designed to facilitate the transition of the student from high school to future learning or employment. It should be a comprehensive document based on both formal and informal assessment of the individual. The ICP should also include the areas in which the student most needs to increase his or her knowledge and skills in order to reach the identified goal. McDaniels and Gysbers (1992) explain that individualized career plans–

> can be thought of as both instruments and processes that people can use alone or with the help of others to monitor and carry forward their career development. As instruments, plans can provide places to organize and record the abilities, interests, and values identified during career assessment and counseling. They can become organizers for personal, education, and career and labor market information, which then can be updated periodically. As processes, plans can become pathways or guides through which individuals can use the past and present to look forward to the future. They can become vehicles for planning. (p. 25)

The ICP differs from a career portfolio. A career portfolio contains a more detailed documentation of the student's progress that includes work samples, certificates of completion including competencies mastered, and other indicators of actual work.

While career counselors will probably coordinate career planning in most schools, teachers, administrators, and parents should be a part of a collaborative effort to assist students in achieving a successful life. They must all participate in each step of the students' career planning. By working together they can accomplish more.

Career Planning Strategies

ICP planning team members can adopt NOICC's integrated approach to comprehensive career guidance and counseling.

A well-designed ICP entails specific, systematic, and formal planning. The National Occupational Information Coordinating Committee (NOICC) (1994) recommends an integrated approach to comprehensive career guidance and counseling. The career guidance and counseling processes (i.e., outreach, instruction, counseling, assessment, career information, work experience, placement, consultation, referral, follow-up) described in this approach can be adopted by counselors and other ICP planning team members to facilitate the career planning process. The following strategies are suggested:

1. **Outreach** – Inform parents and students of educational, career, and occupational opportunities and introduce the concept of ICP development. Present current labor market trends and statistics and relate these to future career decisions.

2. **Student Assessment** – Determine abilities, interests, aptitudes, and preferences related to postsecondary life and immediate employment. Use formal (e.g., COPS, CAPS, ASVAB) and informal measures (e.g., observations in class and workplace, anecdotal records, interviews with parents and the student) during the assessment.

3. **Parental Involvement** – Seek active participation of parents and guardians during the career planning process. Invite parents to attend career planning meetings. Alleviate parental concerns about their child's future by orienting them with (a) employment alternatives, (b) community agencies, and (c) financial aid information. Additionally, clarify parents' roles in the planning process. Provide parents with samples of work that reflect their child's progress.

4. **Intra- and interagency collaboration** – Solicit support of professionals and community agencies that can provide students with services and additional assistance.

Involve appropriate agencies in joint planning activities that affect the student's future.

5. **ICP Implementation** – Make sure that the ICP for each student reflects agreements made during the career planning process. Ensure that various services and activities that the student needs, in order to achieve desired outcomes are provided.

6. **ICP Update** – Annually evaluate the student's progress in realizing the goals of the ICP. Based on assessment results, monitoring, and follow-up activities, make appropriate modifications to the ICP.

Contents of an Individualized Career Plan

Use formal and informal assessment data in ICP development

The following components, adopted from the Northwest Arkansas Public Schools' *Career Portfolio, Florida Student Career and Education Planner,* Illinois' *Individualized Career Planning for Secondary Students*, and the Omaha Public Schools Guidance and Counseling's *Educational/Career Planning Folder,* are recommended for inclusion in a student's individualized career plan.

1. **Personal Data** – Student's name, birthdate, address, social security number or student identification number, middle grade or high school level, and telephone numbers are essential information.

2. **Career and Educational Goals** – This section contains a statement of the tentative career and educational goals of the student. Results from aptitude, career interests, and other relevant assessment instruments as well as the student's extra-curricular activities can guide the setting of goals. Career goals must be outcome-oriented and flexible based on changing student preferences.

3. **Assessment Information** – Data about the student's career interests, educational and vocational aptitudes, achievements, and special needs are reported in this section to provide counselors, transition specialists, and vocational educators baseline information. Assessment information is key in matching careers with the student's abilities, interests, and preferences.

4. **High School Course Plan** – Courses required for graduation as well as those that will lead to the achievement of the student's post high school career and educational goals must be determined. Establish a clear understanding of academic areas where the student is progressing and any areas where the student is not making adequate progress.

5. **Employment History** – This part reflects the student's work experience. This can include employment (paid and unpaid) gained through internships, apprenticeships, or part-time work. List employer's name and address, type of work, and dates of employment.

6. **Career Development Activities** – Examples of career-related activities that can help the student develop an unbiased perspective and self-confidence include: exploring occupational and educational options, investigating job requirements, writing resumes and letters of application, filling out application forms, participating in mock interviews, completing assignments in an accurate and timely manner, and communicating effectively with others.

The core of the career planning process is the development and implementation of a formal, individualized, comprehensive, written career plan. Individualized career planning is a means for a student to reflect on and examine important areas of life development and the value of education to one's future life style and career choices.

Example of an Individualized Career Plan

Personal Data

Last Name _____ First Name _____ M.I. _____ Date of Birth _____

Address _____ Student ID Number _____

City _____ State _____ Zip Code _____ Social Security Number _____

Projected Graduation Date _____ Home Phone Number _____

Career/ Educational Goal(s)

9th Grade	10th Grade	11th Grade	12th Grade
Career Goal/s	*Career Goal/s*	*Career Goal/s*	*Career Goal/s*
_____	_____	_____	_____
_____	_____	_____	_____
Educational Goal/s	*Educational Goal/s*	*Educational Goal/s*	*Educational Goal/s*
_____	_____	_____	_____
_____	_____	_____	_____

Assessment Data

	Name of Test/Inventory	Date Administered	Results
ACHIEVEMENT	_____	_____	_____
APTITUDES	_____	_____	_____
VOCATIONAL	_____	_____	_____
LEARNING STYLES	_____	_____	_____
CAREER INTERESTS	_____	_____	_____
OTHER TESTS	_____	_____	_____

PSAT: V _____ M _____ ACT Composite Score: _____ Date Taken: _____

Tentative High School Course Plan

9th Grade		10th Grade		11th Grade		12th Grade	
Courses	Credit	Courses	Credit	Courses	Credit	Courses	Credit
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
Total Credits	_____	Total Credits	_____	Total Credits	_____	Total Credits	_____
_____ / _____		_____ / _____		_____ / _____		_____ / _____	
Student's Signature Date		Student's Signature Date		Student's Signature Date		Student's Signature Date	
Comments: _____		Comments: _____		Comments: _____		Comments: _____	

Interests

Grade	School Activities (clubs, organizations, sports, committees)	Community Activities (clubs, committees, organizations)	Interests/Hobbies
9th	_____	_____	_____
10th	_____	_____	_____
11th	_____	_____	_____
12th	_____	_____	_____

Employment History

Employer & Address	Dates Employed	Type of Work & Responsibilities	Comments

Career Preparation Activities

TO PREPARE FOR MY CAREER, I NEED TO

- ❒ Enroll in a magnet program or Career Center.
  Area of Interest: _____
- ❒ Learn how to market my experiences and abilities. (Resume writing, Letter of application writing, Thank you letter writing. Interview)
- ❒ Pursue an on-the-job training program. (Bureau of Apprenticeship, Job fair, Job Placement Counselor)
  Training Desired: _____
- ❒ Enlist in the military service. (ASVAB, ROTC, Recruiter visit)
  Area of Interest: _____
- ❒ Attend a trade, technical, or vocational school. (Vocational college fair, School visits, Financial aid)
  Area of Study: _____
  School/s Considered: _____
- ❒ Go to work full-time. (Job fair, Shadowing, Job Placement Counselor)
  Type of work: _____
- ❒ Attend a two-year college to prepare for work. (Articulation Agreement/s, Vocational college fair, School visits)
  Area of Study: _____
  Schools Considered: _____
- ❒ Attend a two-year college and transfer to a four-year college. (Vocational college fair, School visits, College workshops)
  Area of Study: _____
  School/s Considered: _____
- ❒ Enroll in a four-year college. (PSAT, ACT, SAT, Achievement tests, Financial aid application, College fairs)
  Area of Study: _____
  School/s Considered: _____

VOCATIONAL TRAINING

Name of Courses/Program

Business Education/Marketing _____
Health Occupations _____
Home Economics _____
Trade & Industrial Occupations _____
Agriculture _____
Before Employment Skills Training (JTPA) _____

FUTURE PLANS (AFTER HIGH SCHOOL)

Employment
- ❒ Full-Time Job
- ❒ Part-Time
- ❒ Military

Education
- ❒ Vocational/Technical Training
- ❒ Apprenticeship
- ❒ On-The-Job Training
- ❒ Community College – 2 year
- ❒ University – 4 year

REFERENCES

Name	Address	Phone

References

Individuals with Disabilities Education Act. (PL 101-476). (1990).

Illinois State Board of Education. (1992, June). *Individualized career planning for secondary students*. Springfield, IL: Author.

Illinois Transition Project. (1990, September). *The transition planning guide (TPG): The key to individual planning, community needs assessment, and systems analysis*. Carbondale: Author.

Maddy-Bernstein, C., & Cunanan, E.S. (in press). *Exemplary guidance programs: What should they look like?* Berkeley, CA: National Center for Research in Vocational Education, University of California, Berkeley.

McDaniels, C., & Gysbers, N. C. (1992). *Counseling for career development: Theories, resources, and practices*. San Francisco: Jossey-Bass.

National Occupational Information Coordinating Committee. (1994, March). *Program guide: Planning to meet career development needs*. Washington, DC: Author.

Northwest Arkansas Public Schools. (no date). *Career portfolio*. AK: Author.

Omaha Public Schools Guidance and Counseling. (no date). *Educational/career planning folder*. Omaha, NE: Author.

State System of Public Education. (1991). *Florida student career and education planner*. FL: Author.

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Down to a science

Experts say parents can help their daughters maintain the interest and enthusiasm that young girls show early on in science classrooms

Related stories, Pages 10D, 11D

By Deb Richardson-Moore
Lifestyle staff writer

A poster of Warren Beatty as Dick Tracy hangs in the science lab at Taylors Elementary School.

That's certainly one way to stir up interest among the fifth-grade girls. But Beatty is hanging there for reasons other than sheer hunkiness. In his yellow-slickered detective persona, he illustrates a recent lab project on criminology: The students determined whodunit by comparing fingerprints on a cracked safe to the prints of "known suspects."

But that was last week. This week they're making ice cream (and learning how salt lowers the temperature of ice).

If science anxiety lies ahead for teacher Garrison Hall's elementary students, no one has told them yet. Asked their career plans, *even the girls* are calling out science-oriented vocations.

"Architectural engineer!" shouts one, over the noise of rattling ice.

"Science engineer!" yells another.

"Interior decorator!" calls another. "But I'm very interested in science." (Visions of wallpaper, perhaps, peppered with Einsteinian equations.)

Even the girls.

Even in 1992, the phrase is relevant. For by the time girls reach high school and college, they are staying away from higher-level science courses in droves. On the other hand, they make up two-thirds of the population in some science anxiety clinics, such as the one at Loyola University in Chicago.

The articles, the studies, the reports are numbing in their glumness: "The aspirations of high-achieving females often look more like those of low achievers than (the aspirations) of high achieving males," reports a May 1990 issue of Science magazine. "For instance, females, regardless of ability, are not very interested in engineering and physics."

Out in the job market, the statistics continue. While women make up half the workforce, according to the Triangle Coalition for Science and Technology Education, they comprise only 13 percent of U.S. scientists and engineers.

Mike Farmer, a 1987 winner of the Presidential Award for Excellence in Science and Mathematics Teaching and a former Discover magazine National Science Teacher of the Year, witnessed female turn-off to science over and over during his years at Riverside High.

"When they got to high school, girls still had a great interest in science," said Farmer, who now teaches at Greenville Technical College. "But by the time they got out of high school, they had washed out after biology or physical science."

Dr. Shelley Barbary, science consultant for the School District of Greenville

See Science, Page 16D

16D The Greenville News (3/1/92)

Science

Continued from Page 1D

County, thinks science anxiety hits a girl a even earlier than high school — coinciding with the onset of their interest in boys.

"I still think that society has this feeling that girls are going to grow up and get married, and they don't need to know all this," said Dr. Barbary. "Even now, I think that's still an issue even though you wouldn't expect it to be."

Whatever the causes, most concerned parents realize that such thinking unnecessarily closes doors to their daughters. They want their daughters to be as challenged by physics as by literature, as open to the study of a vacuum as to the use of a vacuum cleaner.

But even bright parents can hit a wall when it comes to science, unwittingly passing along their old anxieties over organic chemistry.

"Parents who do not like science (sometimes) say ... 'I wasn't good in it, so I can't expect my children to be good in it,' " said Hall, himself a 1991 winner of the Presidential Award. "I see that, yeah."

More often, the message is more subtle, even subconscious. And because there are few women scientists as role models, a mother's attitude becomes all the more influential.

"I think we need to be very careful not to hint that mom can't do it, so daughter can't do it," said Dr. Barbary, who bucked the tide in her own educational career by obtaining a Ph.D. in etymology. "Probably lots of moms out there don't have the background in algebra or chemistry or whatever. But they need to make it clear that they don't have the background not because they're women, but because they didn't take the courses."

Of course, it's one thing for the scientifically illiterate parent to give encouragement from the sidelines. It's another for her to delve into acids and bases and electrical charges.

The experts offer some concrete ideas.

Hall: Check out bookstores and libraries for books of simple science experiments that can be performed at home with your child. Future interest in science, he believes, is made or lost in the elementary years.

Farmer: Lobby for after-school opportunities in science, and its anxiety-producing sister, math.

"If a kid wants to learn how to dance or play the piano — and I'm not criticizing this now — there are plenty of places for him to go. We need the equivalent sort of opportunities in math and science."

Dr. Jeffry V. Mallow, author of "Science Anxiety: Fear of Science and How to Overcome It": Give chemistry, biology or physics kits as gifts; visit science museums; encourage children to watch science shows on television. Be wary, however, of placing psychological pressure on a child to perform well ("You *have* to do well in chemistry to get into medical school.")

"To sum up," said Dr. Barbary, "I would say that ... parents, particularly mothers, (should) say to their kids or convey to their kids, 'I value what you're learning in math and science, because math and science are the things we *have* to know to make our future better.' "

And if half the potential talent pool is arbitrarily left out, that future won't be half as good.

The Greenville News 6/16/93 p. 2B

More men taking up nursing, schools say

By Wes Allison
Anderson County staff writer

ANDERSON — Long a profession almost exclusively for women, nursing increasingly is becoming more popular among men and the stigma that kept many men out of the ranks is receding, local nurses and college administrators say.

"We've had maybe two or three to graduate in the past," said Karen R. Sorrow, director of the two-year, associate degree nursing program at Tri-County Tech. "For the past two years, we've had increased numbers."

Of Tri-County Technical College's 62 associate degree nursing graduates this spring, five were men, she said.

And 7 percent of those enrolled in Clemson University's College of Nursing undergraduate program, or 43 students, are male.

"It's not as high as we'd like," said Dr. Opal Hipps, dean of Clemson's College of Nursing. Nationally, the percentage of first-time college students enrolled in undergraduate nursing programs is 11 or 12 percent, she said.

Ms. Sorrow said the stigma and stereotypes associated with male nurses have become less pronounced as more men enter the profession.

"You will still find a little bit of it, but I think more people are becoming comfortable with men," she said.

"Sometimes the women (nurses) on units kind of closed them out. Patients weren't comfortable with them," she said.

"I think a lot of them felt they would be considered a wimp if they went into nursing. They couldn't be a macho-male and be a nurse."

Aside from the vanishing stigma, Ms. Sorrow pointed to heavy demand and competitive pay for nurses as reasons more men are enlisting.

Dr. Hipps said men also have been attracted to the profession as nurses gain more autonomy, and they enjoy the wide range of career opportunity and job security that nursing affords.

"Men that are career-orientated want to be their own boss, they want to have some autonomy in making decisions, and we are seeing nursing as a profession having that. For any gender," she said.

David Stastny is a recent Tri-County Tech nursing graduate and former paramedic who now works in the emergency room at the Anderson Area Medical Center.

"I enjoyed the EMS part, but I didn't see the stability as far as the job 20 to 30 years from now that I in saw going back and becoming a nurse," said Stastny, who also worked in textiles after graduating from Clemson University in 1982.

"The nursing shortage is not as bad now as it was two-and-a-half years ago when I made the decision to go back to school, but as you can tell by the newspaper there's plenty of jobs," he said.

A survey of Clemson's senior nursing students who have accepted jobs show they will be making from $25,000 to $35,000 a year, Dr. Hipps said.

And the average starting salaries for Clemson's nursing graduates have been higher than for students in Clemson's other majors for the past several years, she said.

"Also, it's the only school whose graduates all walk into jobs if they want to. That should be underscored and bolded," Dr. Hipps said.

Like Stastny, many of the men who enter nursing are embarking on a second career, Dr. Hipps and Ms. Sorrow said.

"We are seeing a very slow but steady increase in the high school graduate males that choose nursing," Dr. Hipps said.

"I still think the new high school graduate has to have a fairly strong, intact ego. You've got to look at the student population, and also regionally it's a little slower to pick up in the South. Boy-girl roles are a little more accentuated in the South."

Ms. Sorrow and Dr. Hipps both project a continued increase in the number of male nurses.

Anderson Independent 4/25/93 p. 1, 7A

Campaign introduces girls to career opportunities

By Lisa Genasci
The Associated Press

NEW YORK - At Johnson Space Center in Houston, girls will see where astronauts prepare for space flights. At banks in New York they'll learn about jobs on Wall Street.

The visits are part of a nationwide campaign sponsored by the Ms. Foundation to encourage parents to take daughters ages 9 to 15 to work today.

Thousands of companies and government agencies are participating, according to Nell Merlino, a campaign organizer. The idea, she said, is to put the spotlight on girls, help build their self-esteem and introduce them to opportunities they otherwise might not consider.

Studies have shown that girls have lower self-esteem than boys. Advertising and society's idea of how girls should look and behave are blamed for focusing their attention on appearance and a quiet demeanor rather than their abilities.

Please see Daughters, Page 7A

From Page 1A

One study, by Wellesley College's Center for Research on Women, showed that among 230 college freshmen, 56 percent of women feared making a mistake when speaking up in class, compared with 39 percent of men.

Another study released by the American Association of University Women found that in elementary school, about 69 percent of girls reported they were "happy the way I am," but in high school, that figure was down to 29 percent.

The Ms. Foundation raised roughly $400,000 from corporate and other sponsors to promote the event. Businesses and agencies set up activities for the day.

The foundation helped match 2,000 girls from schools in Manhattan with 77 companies in New York. Businesses in Santa Fe, N.M., Tulsa, Okla., Spokane, Wash., and Philadelphia also set up programs with local schools, Ms. Merlino said.

At Johnson Space Center, about 50 daughters, other relatives or friends of employees will meet astronaut Kathy Thornton, learn about the different aspects of space travel and visit labs and other facilities.

"We hope these girls will be challenged by what they see and will explore ideas of new careers," said Pam Adams, manager of the center's women's program. "It's an investment in our future."

Bankers Trust Co. anticipates 90 girls ages 11 to 15 in its three New York-area locations. Daughters will work with their parents and explore other areas of the bank, said Joan Green, president of BT Brokerage Corp.

"The goal is to have girls see a variety of jobs they didn't realize existed," Ms. Green said. "Institutions are looking to encourage women in leadership positions."

Feminist Gloria Steinem will speak to about 100 girls at International Business Machines Corp. headquarters. A panel of IBM executives then will speak about the company.

Other participants were expected to include Chase Manhattan Bank, ABC News, the U.S. Department of Health and Human Services, The Harbor Master of the Port of New Orleans, The Body Shop and Giant Eagle Supermarkets in Youngstown, Ohio.

Companies randomly polled this week said they weren't concerned that the activities will affect productivity today. "Down the line it helps IBM," IBM spokesman Jim Keller said.

The Ms. Foundation said it hoped adults also learned from the day. "Fathers are having real conversations with their daughters for the first time," Ms. Merlino said.

And what will boys be doing while the girls are at work? Learning about girls, if the Ms. Foundation has its way.

The Greenville News 3/21/93 p. 1D, 9D

Reflections on the glass ceiling

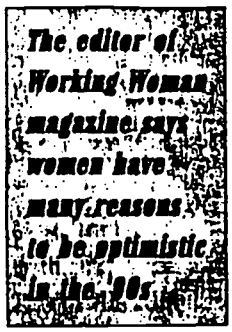
By Lisa Hammersly Munn
• Knight-Ridder

Despite cracks here and there, the glass ceiling still holds, says Kate Rand Lloyd, editor-at-large of Working Woman magazine and an international spokeswoman for women's issues.

Most men don't trust women to be their peers: "They've had women as mothers, wives, secretaries, lovers and daughters, but never as true pals," she says. As a result, they haven't often elevated women past that invisible barrier into the highest ranks of corporate management.

But Ms. Lloyd is optimistic about women's prospects.

Talking by phone from her home in Greenwich Village in New York, jumping energetically from topic to topic, the



60-year-old Ms. Lloyd jokes about old, discriminatory ways of thinking that have hurt women, talks seriously about why she believes times are changing, and cheers enthusiastically those women who have managed to find ways, despite glass ceilings and other barriers, to seize power and success.

"Hillary (Rodham Clinton) is so bright that she had the sense to pull the covers over her head during the campaign. But no more," says Ms. Lloyd. Referring to media swipes last year at Ms. Clinton's hairdo, Ms. Lloyd adds: "And she's even put her black headband back on. ... Good for her!"

Ms. Lloyd sounds excited as she talks about world events that have "absolutely altered the ways any of us can think."

She starts with the fall of the Berlin Wall — "an unbelievably liberating experience in the minds of men and women everywhere," then mentions the Persian Gulf war, "where women performed with equal gallantry

See Reflections, Page 9D

Reflections

Continued from Page 1D

to men, and there was no question about it."

She also talks about the Anita Hill-Clarence Thomas hearings, which "really changed women's minds in this country," and the November election, in which women again made up the majority of voters and made historic inroads into Congress.

In the process, women have acquired more power in the past few years than they are aware of, Ms. Lloyd says.

She points to Donna Shalala (U.S. secretary of health and human resources) and Hillary Rodham Clinton's lead role in the nation's health-care reform effort.

And also she points out that 5.4 million U.S. businesses are owned by women: "Those businesses employ about the same number of people as all of the Fortune 500 put together," Ms. Lloyd says. "I think that's very smart of women, and a fine way to break the glass ceiling: Start on the other side!"

Another reason for optimism, she says, is the competitive pressures that are rapidly restructuring corporations and corporate management. As U.S. companies work frantically to become more efficient and productive, for example, they open more opportunities for women, she says.

She cites a program by General Electric Co. Chairman John Welch Jr. to identify and promote the company's most effective workers, from top managers to the janitorial staff. "While he did it deliberately, I think it is happening anyway at a lot of corporations."

All the changes, Ms. Lloyd says, "have made it impossible for anyone who wants to remain current to think the same way. ... That doesn't mean there aren't millions of men and women who won't get through their lives successfully harboring old, false notions."

Ms. Lloyd is well-acquainted with the concept of the glass ceiling and has memorized studies about it. She points to one from the Greensboro, N.C.-based Center for Creative Leadership, which several years ago analyzed why both men and women fall off the upper executive track.

"For the women, they came up with laughable reasons," Ms. Lloyd says. "One I thought was the funniest: Men wanted the women to be tough decision-makers, to run their departments like military sergeants, but also to be demure. Go practice that in front of the mirror. It's a hoot.

"Another was that while the woman was also supposed to be totally in charge, she also must readily take advice. Very senior men said they felt miffed if she didn't immediately say, 'Yes, George, you're right, George.'

Yes, Ms. Lloyd knows the glass ceiling.

She says successful women who have cracked it have strategies in common, often involving quiet work from inside companies. Some she cites:

• Pick your fights. Don't let strong emotions interfere with choosing the fights that are most important, most winnable or best-timed.

"Young men learn much earlier than most young women to pick their fights. I've had this explained lots of ways, (including that it's) because women didn't play team sports as children," Ms. Lloyd laughs. "Of course I was forced to play field hockey as a child, so don't tell me about it."

• Don't underestimate the quieter, subtler ways of acquiring power and pursuing your goals.

"Some years ago, I had a strong sense of an underground feminism at work, women in corporations who had set goals for themselves ... So I called several of these women and they said, 'You're right, but don't use my name.'"

• Be careful how far you go in publicly criticizing the company; most successful corporate women are.

KRT PHOTO

Kate Rand Lloyd is editor-at-large of Working Woman magazine

"In a way, I don't think this is a man-woman thing. ... First you have to become a member of the team," Ms. Lloyd says.

"... I think we're still in a period where men have to learn to trust women."

Gender stereotypes persist

Children get implicit messages from favorite books

By Elizabeth Lenhard
© Cox News Service

ATLANTA — Don't let their scuffling, giggles and occasional nose-picking fool you. This group of students at Fulton County's Spalding Drive Elementary School is special. After all, at ages 5 through 8, they're the freshest faces in a gender-neutral, post-feminist generation.

So show them one of the books just tailored for their open young minds and...

"That's stupid!" they squeal as they look at "Daddy Makes the Best Spaghetti" by Anna Grossnickle Hines.

"Dads don't know how to make spaghetti," scoffs Maggie Savage, an imaginative kindergartner whose favorite character is the fearless Parisian orphan Madeline, created by Ludwig Bemelmans. "My dad doesn't even know how to cook," she says. Then reconsidering, she adds, "Well, sometimes my dad makes dinner. He knows how to make some things."

Ms. Hines's book — a portrait of a happy family in which a briefcase-toting mom arrives home to a meal prepared by her husband and son — is the kind that's all too rare on these kids' library shelves.

Admittedly, you'd be hard-pressed today to find the damaging imagery common in past decades. Consider this excerpt from a 1965 reader cited in the 1972 study "Dick and Jane as Victims": "When you mix the clay (to make a woman) mix in guile and cunning, a shameless mind and a deceitful nature."

Even the days of Dick and Spot romping outside while Jane helps her mother with the housework are long gone. But when it comes to representing feminist ideals —such as gender equality and strong, independent roles for girls and women — to young readers, it seems there's much room for progress.

Claire Heath, assistant head of the Atlanta-Fulton Public Library's children's department, says it may be the complacency of mainstream publishing houses that has prevented a great change in the female characters of today's books.

"There is a lot more awareness of gender stereotypes," Ms. Heath observes. But while publishers don't perpetuate sexist imagery in their books, she adds, many aren't actively attempting to counteract it.

Even when the traditional, sometimes sexist values don't apply in their own homes, kids are receiving the implicit messages from their beloved bedtime stories. Messages such as: A nuclear family is a normal one, boys don't play with dolls, and girls react to trauma with tears while boys respond with fists.

Attributing gender

"Even those kids whose mothers are scientists think the scientist character is male," says Sheri Crump, who is researching female images in children's literature at Spelman College. Ms. Crump has tested children ages 4 to 6 by asking them to apply genders to cartoon ghosts in various situations.

"If a ghost is in a tree, they say it's a boy. The one on the ground is always a girl," Ms. Crump says. "They've learned to attribute action to men and passivity to women."

And that's a problem, says Florence Howe, director of the 23-year-old Feminist Press. "We stopped publishing children's books in the 1980s," she says. "We thought the world was a changed place and certainly there were no more sexist children's books. In 1985, we decided we were wrong."

That decision proved to be a fairy godmother-like salvation to one feminist writer, Charlotte Pomerantz.

When she and Ms. Howe met, Ms. Pomerantz was about to give up hope of seeing her children's story — a Vietnamese legend in which a princess uses wit over violence to save her kingdom from invaders — stay in print.

Half-a-dozen publishers pronounced that "The Princess and the Admiral," winner of the 1975 Jane Addams Children's Book Award, is a great read, but would re-publish it only on the condition that the protagonist be changed from a cunning girl to a wily boy.

"The publishers told Charlotte, 'Children can only understand one idea at a time — if it's a book about peace, we shouldn't confuse them by having a female character in it,'" says Ms. Howe, who finally published the story —unchanged — in 1992.

Many adults with fond memories of such characters as Laura Ingalls, Anne Shirley and Ramona Quimby might wonder what all the fuss is about. After all, these feisty females have held places of honor on kids' bookshelves for years.

These readers may believe that a book need only have a female protagonist to be feminist.

Linda Bryant, owner of Charis Books and More, defines "feminist" more inclusively: "It's about accepting oneself and other people, an affirmation of the creative inner person, and it's a political stand — they're all interwoven."

For example, Robin Morgan, an author and the editor in chief of Ms. magazine, incorporated everything from racial division to ecological abuse to sensitivity toward the disabled into "The Mer-Child," published by the Feminist Press.

Children's book critic and author Kelly Frick Richards says a key point is not simply a female character's strength, but how she wields it. She points out the difference between characters such as Beverly Cleary's Ellen Tebbits or Madeline and new heroines such as Amazing Grace, an African-American girl who proves she can do anything when she lands the part of Peter Pan in the school play:

"I think the interesting thing is how people present a strong heroine. That's what's changed," Ms. Richards observes. "We're not satisfied with (Nancy Drew) who looks cute in her blue dress jumping into roadsters and solving mysteries."

Many parents have expressed little discontent with their kids' books. Homemaker Lesley Wheeler says she's happy with the engaging educational qualities of the books she buys for her children, ages 2 to 11.

"So far, I'm satisfied with the gender roles, but then I have a real strong sense of who I am, and I think I communicate that to my kids. In my opinion, women have all the rights we need," she says.

Other parents say that the issue of gender equality in their children's books hasn't even occurred to them.

Sunday, April 11, 1993

Strong females in books

© Cox News Service

A handful of classic tales and a growing number of contemporary tomes depict strong (rather than simply stubborn) girls and women who wield control over their lives and actions:

- "Amazing Grace" by Mary Hoffman and Caroline Binch: An imaginative African-American girl proves she can be anything she wants, from a doctor to Peter Pan in the school play.
- "Tatterhood and Other Tales" edited by Ethel Johnston Phelps with illustrations by Pamela Baldwin Ford: In this collection of international legends and folk tales, many of the take-charge heroes are female.
- "Sleeping Ugly" by Jane Yolen: A retelling of "Sleeping Beauty" that values female qualities beyond beauty.
- "My Mother the Mail Carrier" by Inez Maury, illustrated by Lady McCrady: In this bilingual book (English and Spanish), a little girl is proud of her single mother who works in a typically male profession.
- "We Are Mesquakie, We Are One" by Hadley Irwin: As the Mesquakie Indians are driven from Iowa, narrator Hidden Doe takes pride in her native heritage.
- "Little Women" by Louisa May Alcott: In this American classic, Jo March, a compassionate and creative tomboy, heads the adventures of four sisters and their mother living on their own.
- "The Witch of Blackbird Pond" by Elizabeth George Speare: An independent young woman confronts prejudice with peaceful strength in colonial America.
- "Bridge to Terabithia" by Katherine Paterson: A new female friend helps a rural boy cross gender barriers and overcome prejudice in this contemporary classic.

The School-to-Work "Program"

- **School-based component including:**
  - career awareness and exploration (grade 7+)
  - selection of career major involving at least 2 years of HS and at least 1-2 years postsecondary
  - academic coursework of sufficient quality to meet state/national standards and postsecondary requirements
  - instruction that integrates academic and occupational study, and directly relates to career major
  - regular meetings with students to assess overall progress and identify supplemental services required for success
  - leads to high school completion and postsecondary credential, if appropriate
  - placement services into post-high school training and higher education
- **Work-based component including:**
  - work experience, preferably paid
  - learning contract which correlates with school-based component, and which contains progressively more sophisticated experiences
  - mentoring by trained workplace personnel
  - instruction in general workplace competencies
  - instruction in "broad elements of the industry"
  - options for preparatory activities (shadowing, SBE, OJT)
  - leads to a recognized, portable skills certificate
- **Connecting activities including:**
  - establishment of an intermediary or local partnership
  - school site mentors to help place students and act as a liaison with parents, employers and other partners
  - assistance to employers and others in designing school- and work-based components, and counseling services
  - training programs for teachers, school and workplace mentors, and counselors
  - technical assistance in integrating curriculum (academic and occupational; school- and work-based)
  - placement assistance for graduates, and help in locating/using community support services
  - linking youth programs with employer strategies for upgrading current workers
  - program evaluation

School-to-work programs should target, to the extent practicable, "industries and occupations offering high-skill, high-wage opportunities" and should be accessible to all students, including special populations and the academically gifted.

(Source: American Vocational Association. School-to-Work Opportunities Act of 1994 [public law 103-239, May 4, 1994], Alexandria, VA: Author, 1994.)

Blending Tech Prep and School-to-Work

COMPONENT	T/P	S-T-W
Planning, Support Systems and Organization		
regional and site-based organizational structures that involve key groups and encourage collaboration	✓	✓
designation of site-based coordinator to facilitate program development	✓	✓
active support of major administrators (HS/Dist/CC)	✓	✓
active support of key business leaders	✓	✓
marketing to key audiences	✓	✓
employer involvement in curriculum development	✓	✓
information for and involvement of parents	✓	✓
learning contracts for worksite experiences		✓
diverse work-based learning options (shadowing, internship, co-op) that complement STW		✓
staff development for teachers, counselors (HS/Comm Coll)	✓	✓
staff development for administrators (HS/Comm Coll)	✓	✓
training for workplace mentors		✓
tuition assistance from employers		✓
employer identification/validation of program focus	✓	✓
placement assistance for graduates	✓	✓
establishment of fair selection process for student participation	✓	✓
provisions for student support services to ensure success	✓	✓
provisions for appropriate insurance (students)		✓
work-based programs for youth that are linked to employer strategies for upgrading current workers		✓
Curriculum-Related Components		
curriculum enhancement for grades 5-8 to blend with HS program	✓	
involvement of senior colleges in planning	✓	✓
articulation with postsecondary (Comm Coll)	✓	✓
articulation between 2-yr and 4-yr colleges	✓	✓
integration of academic/vocational education (HS)	✓	✓
integration of academic/technical education (Comm Coll)	✓	✓
work-based learning that relates to curriculum (HS)		✓
work-based learning that relates to curriculum (Comm Coll)		✓
high school credit for work-based learning		✓
Community College credit for work-based learning		✓
work-based learning that includes exposure to "broad elements of the industry"		✓
preparation for high skill/high wage careers	✓	✓

Blending Tech Prep and School-to-Work
continued

COMPONENT	T/P	S-T-W
academic courses with high standards (comparable to college prep)	✓	✓
provisions for meeting needs of special populations	✓	✓
open access to **all** students, including those with special needs	✓	✓
"active learning" instructional methods (HS/Comm Coll)	✓	✓
integration of SCANS competencies (HS/Comm Coll)	✓	✓
authentic assessment (HS/Comm Coll)	✓	✓
identification of workplace mentors to guide student learning experiences		✓
formation of curriculum sequences (majors)	✓	✓
supervision of students in the workplace by appropriate school personnel (HS/ Comm Coll)		✓
Counseling-Related Components		
focused counseling and educational planning (9-12)	✓	✓
focused advising and educational planning (Comm Coll)	✓	✓
career awareness and exploration (K-8)	✓	✓
career information that targets mid-level technologies (grades 5-14)	✓	
Program Outcomes/Evaluation		
recognized education credentials	✓	✓
recognized/portable credential for work-based learning		✓
outcomes that include either meaningful employment or transfer into 4-yr college	✓	✓
on-going program evaluation	✓	✓

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Integration of Academic and Vocational Education: Models, Types of Practices, and Levels of Implementation

Models

1. Incorporating more academic content into vocational courses through individual or collaborative teacher efforts.

2. Making academic courses more relevant and participatory through the use of vocationally-oriented applications (e.g., applied academics).

3. Modifying both academic and vocational courses so that they are more coordinated and aligned in terms of content and teaching methodologies.

4. Instituting senior projects that require students to utilize a variety of academic and vocational skills and concepts.

5. Implementing career academies which target a specific occupational cluster (e.g., public service) and require high levels of teacher collaboration and curricula alignment, block scheduling, and strong ties with the business community.

6. Designing occupational/polytechnic high schools or magnet schools which feature one or more vocationally-oriented "majors" supported by strong academic curricula which are highly integrated and often taught contextually in relation to the occupational major.

7. Developing occupational cluster within the school which specify the academic and vocational courses required to prepare students for work or further study. In this approach, traditional academic and vocational departments may be reorganized around the general cluster areas.

Types and Levels of Implementation

Type: Cooperative Efforts

Vocational and academic teachers...

Level 1: Learn about each other and ask for/receive help from each other.

Level 2: Plan together, exchange information about each other's teaching practices and about students both have in common.

Level 3: Assist each other by dovetailing instruction, coordinating schedules, and reinforcing concepts collaboratively.

Type: Curriculum Strategies

Vocational and academic teachers...

Level 1: Develop coordinated curriculum by planning joint assignments, projects, and instructional sequences.

Level 2: Change approaches to the delivery and content of instruction.

Level 3: Develop class projects which involve coordinated content, collaborative teaching, and input/participation from the business community.

Type: Instructional Strategies

Vocational and academic teachers...

Level 1: Infuse appropriate academic/vocational content into routine class activities; encourage students to identify, share, or develop examples of both academics in vocational content and vocational content into academics.

Level 2: Teach cooperatively by giving joint assignments, grading projects collaboratively, simultaneously covering common content, using the same or similar teaching strategies and/or team teaching.

Level 3: Incorporate input, resources, or direct participation from community and/or business representatives as enhancements to Level 2 activities.

(Source: Schmidt, J.R., Finch, C.R. and Faulkner, S.L. Teachers' Roles in the Integration of Vocational and Academic Education. Berkeley, CA: National Center for Research in Vocational Education, 1992.)

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♣Active Learning♣

"Active Learning" is a term that incorporates numerous innovative classroom strategies and methodologies. The methodologies described here are those most widely discussed in the literature as effective and well-researched.

♠ Applied Methodologies

This teaching strategy is usually associated with the Tech Prep/School-to-Work education reform initiative. Academic courses like Physics for the Technologies, Applied Mathematics and Applied Communications all are designed to teach academic concepts and skills in an applied context. Characteristics of applied methodologies include the following:

- illustrating connections between an academic concept and a "real life" or career/work-related example of how that concept is used;
- requiring students to become actively involved in the learning process individually or as part of a group;
- using computer technology interactively;
- fostering problem-solving, critical thinking;
- making connections across disciplines (particularly between academic and occupational studies;
- using simulations, work-based learning or other innovative approaches and integrating them with traditional classroom experiences;
- requiring teachers to act as guides or facilitators as opposed to managers.

♠ Cooperative Learning

Researchers like Johnson and Johnson, Kagan and others describe this methodology as more effective than the traditional competitive classroom approach in preparing students to work effectively in teams, facilitating critical thinking, lessening stress in the classroom, reinforcing good interpersonal skills and involving students actively in their own learning processes. Characteristics of cooperative learning, as defined by the Johnsons, are the following:

- "Eye to eye, knee to knee"--students are grouped in the classroom in such a way that they can work comfortably and identify themselves as a team;
- Positive interdependence--educators design activities so that students are forced to depend on each other to accomplish their objectives;
- Individual accountability--students are individually held accountable through various methods for accomplishing the team's objectives, so that every member of the team must be equally involved in activities;
- Group processing--teams are directed by facilitators that they are working on reinforcing specific interpersonal skills in addition to accomplishing content objectives. Groups then "process" at the end of an exercise how well they reinforced those skills.

♠ Teaching for Understanding

Sixty high school and middle school teachers in the Boston area have been collaborating with researchers at the Harvard Graduate School of Education over a four-year period as part of the five-year Teaching for Understanding Project funded by the Spencer Foundation. Participating collaborators have been investigating the nature of understanding and developing strategies to teach for understanding rather than the more superficial "knowing" that students typically achieve. According to Perkins and Blythe, project participants have come to define "understanding" as "a matter of being able to do a variety of thought-demanding things with a topic--like explaining, finding evidence and examples, generalizing, applying, analogizing, and representing the topic in a new way."

Project collaborators have developed the following four-part framework for teachers to use:

- Generative topics--topics that students can explore that are central to the discipline being taught, accessible to students, and connectable to diverse topics inside and outside the discipline;
- Understanding goals--objectives for understanding that teachers establish in the form of phrases like "Students will understand that...";
- Understanding performances--learners spend most of their time engaged in activities that ask them to generalize, find examples, carry out applications,etc. in order to exhibit understanding of a topic;
- Ongoing assessment--students receive criteria for assessment, feedback, and opportunities for reflection from the beginning of and throughout a sequence of instruction.

♠ Cognitive Apprenticeship

Collins, Brown and Newman have proposed a model for designing effective learning environments that arises from cognitive science research and analysis of traditional apprenticeship approaches to learning. The model modifies the traditional apprenticeship approach, guided incremental performance-based learning of observable skills--to be used in teaching less observable and more symbolically based skills. The term **cognitive** is not used as synonymous with **academic** but is used to define any classroom-based subjects, including those classified as vocational or occupational. The model defines four building blocks for effective learning situations:

- Content--an ideal learning environment includes domain-specific conceptual, factual, procedural, and strategic knowledge;
- Methods--teaching methods give students the opportunity to observe, engage in, invent or discover expert strategies in context;

- Sequencing--learning is staged so that the learner builds multiple skills in expert performance and discovers conditions in which they can be generalized;

- Sociology--learning environment should reproduce the technological, social, chronological, and motivational characteristics of the real-world situations in which the content and skills being learned will be used.

♠ Integrative Learning

Peter Kline, in **The Everyday Genius**, defines Integrative Learning as "a compendium of learning activities involving the whole personality. They are based on the common assumption that learning is unlimited, and they focus on complete affirmation of the learner's capabilities." Kline stresses that Integrative Learning makes use of learning styles theory in that teachers strive to provide learning activities that will appeal to students with different learning styles. Teachers using Integrative Learning also make use of Gardner's theory of seven intelligences when designing the learning environment and Lozanov's theories for using music to accelerate the learning process. Kline describes a framework for these classroom strategies in a three-step process he calls The Learning Cycle:

- Decoding--core concepts are made clear to the learner during this stage, so as to be synthesized into the entire thought process. May take the form of short lectures, research by students, or more participatory activities;

- Concert--material is dramatized with music in order to make it more easily accessible to long-term memory;

- Activation--students have opportunities to activate their understanding of material through games, skits, or other creative formats that replace the traditional drill and practice.

♠ Contextual Learning

Dan Hull, in **Opening Minds, Opening Doors**, defines contextual learning: "learning occurs only when students (learners) process new information or knowledge in such a way that it makes sense to them in their frame of reference (their own inner world of memory, experience and response).

This approach to learning and teaching assumes that the mind naturally seeks meaning *in context*--that is, in the environment where the person is located--and that it does so through searching for relationships that make sense and appear useful." Instruction based on the contextual learning approach are structured to encourage many forms of learning, including

- Relating--learning in context of life experiences;
- Transferring--building on what the learner already knows;
- Applying--learning in the context of how the information can be used;
- Experiencing--learning through exploration, discovery and invention;
- Cooperating--learning through sharing and communicating with other learners.

♠ Project-based Instruction

While this theory of teaching/learning strategies is not identified with any individual researcher, it is now discussed chiefly in the context of the School-to-Work Transition initiative. The concept is closely linked, however, with the "exhibition" concept presented through the Coalition of Essential Schools project. Briefly, this learning strategy emphasizes that students can best demonstrate mastery of concepts and skills by exhibiting a product/project done either individually or as part of a team. This type of classroom strategy will be an important transition activity for students preparing for an internship or apprenticeship program. The components of successful project-based instruction are presented in the Jobs for the Future **School-to-Work Toolkit**:

- Successful projects emanate from a question that is meaningful to students;
- Students have opportunities to reflect on their own learning;
- Students engage in real investigation, using a variety of methods and sources;
- A tangible product that has lasting value is produced;

- Students present their work, when complete, to a real audience;
- Teachers function as coaches and facilitators;
- Teachers create a "culture of accomplishment" within the classroom;
- Teachers cross disciplines and academic/occupational boundaries to create opportunities.

♠ Resources

Partnership for Academic and Career Education. **Developing "Real-World Applications for Academic Concepts...A Teacher's Guide**. PACE: Pendleton, SC, 1992.

Johnson, David W. et al. **Cooperation in the Classroom**. Edina, Minnesota: Interaction Book Company, 1991 (rev.)

Kline, Peter. **The Everyday Genius: Restoring Children's Natural Joy of Learning--And Yours Too.** Arlington, Virginia: Great Ocean Publishers, 1988.

Partnership for Academic and Career Education (PACE)/National Dropout Prevention Center. **Integrative Learning: An Active Approach for Tech Prep Programs--Facilitator's Guide.** Pendleton, SC: PACE, 1994.

Perkins, David and Tina Blythe. "Putting Understanding Up Front," **Educational Leadership**, February 1994, pp. 4-7.

Unger, Chris. "What Teaching for Understanding Looks Like," **Educational Leadership,** February 1994, pp. 8-10.

Berryman, Sue E. and Thomas R. Bailey. **The Double Helix of Education and the Economy.** New York: Institute on Education and the Economy, 1992.

Hull, Dan. **Opening Minds, Opening Doors.** Waco, Texas: CORD Communications, 1993.

Jobs for the Future. **School-to-Work Toolkit: Building a Local Program.** Cambridge, Massachusetts: Jobs for the Future, 1994.

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NCRVE

National Center for Research in Vocational Education

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TASPP BRIEF

Technical Assistance for Special Populations Program

Volume 4 Number 1

THE 1990 PERKINS: RAISING THE ACADEMIC AND OCCUPATIONAL ACHIEVEMENT OF WOMEN AND GIRLS

by Maureen Coyle-Williams and Carolyn Maddy-Bernstein

Educational barriers to female academic and occupational achievement have endured despite legislation prohibiting sex discrimination and research and development activities designed to combat sex bias, stereotyping, and discrimination in education. Moreover, years of trying with too little progress have contributed to cynicism and ambivalence toward these efforts (Muraskin, 1989). Still, researchers and policymakers maintain that gender, in addition to other learner characteristics, must be an important consideration in efforts to raise educational and occupational achievement (AAUW, 1992; Council of Chief State School Officers, 1990; Earle, Roach, & Fraser, 1987). This BRIEF focuses on vocational education's role in breaking down the barriers to academic and occupational achievement for women and girls.

What's Changing?

Most Women Work Outside the Home

Very little has escaped the impact of the social and economic changes of the past 30 years. For women however, the changes have been particularly dramatic. While most women used to work full-time as homemakers, today, the majority work outside of the home (U.S. Department of Labor, Bureau of Labor Statistics [U.S. DOL BLS], 1991).

- In **1962**, 43% of 25 to 54 year old women were working or looking for work outside their homes.
- In **1990**, about 74% of women 25 to 54 years old were in the labor force.

The Bureau of Labor Statistics (1991) reports that women comprise 45% of today's workforce. A startling 60% of the increase in overall employment over the past 30 years is due to women. Women with children account for much of this increase (Johnston & Packer, 1989). From now until the year 2000, women are expected to comprise three fifths of the new entrants to the workforce (Reis & Stone, 1992).

Changes in the American economy have played a major role in drawing more women into the workforce. The number of low-paying jobs has been rising. At the same time, middle-level earnings have been falling (Mishel & Simon, 1988). As a result, many Americans have experienced an erosion of their standard of living. A second income has become a necessity for the growing number of families trying to maintain a middle class lifestyle (Johnston & Packer, 1989). Young single and two parent families have been especially hard hit (Johnson, Sum, & Weill, 1988; Levitan, Mangum, & Pines, 1989). Consequently, one American child in five lives in a family with an income below the federal poverty level. Nearly half of these families have incomes that are less than half the federal poverty level (National Commission on Children, 1991).

> *The increase in the proportion of mother-only families accounted for about half of the overall increase in child poverty from 1979 through 1987. Higher poverty rates among married-couple families, primarily because of the declining value of the father's wages, were largely responsible for the other half of the increase.* (National Center for Children in Poverty, 1990, p. 27)

Families at risk of poverty include some with at least one full-time, full-year wage earner (Mishel & Simon, 1988).

In 1967, 1973, and 1979 a full-time, year-round job at minimum wage was more or less sufficient to support a family of three above the poverty level. Today, its value is 26.4% below the poverty line for a family of three, and even below the income necessary to keep a family of two out of poverty. (p. 43)

Women's Earnings Have Offset the Declining Value of Wages

As Americans have struggled with the falling value of wages over the past several years, more and more women have joined the workforce. Additional hours or weeks of work by women have prevented many families from slipping into—or further into—poverty (Johnson, Miranda, Sherman, & Weill, 1991; Levitan et al., 1989; Mishel & Simon, 1988). However, even though more Americans are in the workforce than ever before, income inequality has grown. A recent congressional study reported that between 1979 and 1989, incomes for two-parent families in the top 40% have increased while the bottom 60% experienced a decline (U.S. Senate, Joint Economic Committee, 1992). This study also found that increases in income inequality would have been even greater had they not been off-set by the earnings generated by wives.

Income Inequality Has Increased

For the past several years, expansions in the American workforce have supported the country's productivity growth. This observation, coupled with concern over the widening gap between the rich and poor and projections of a shrinking labor force, has sparked both concern and warnings. Analysts question how much longer these trends can be endured (The Commission on the Skills of the American Workforce, 1990).

America is headed toward an economic cliff. We will no longer be able to put a higher proportion of our people to work to generate economic growth. If basic changes are not made, real wages will continue to fall, especially for the majority who do not graduate from four-year colleges. The gap between economic 'haves' and 'have nots' will widen still further and social tensions will deepen. (p. 8)

Fundamental changes in our approach to work and education have been recommended as necessary responses to America's economic and social problems. The need to develop our human capital is widely acknowledged (The Commission on the Skills of the American Workforce, 1990; Johnston & Packer, 1987; The Secretary's Commission on Achieving Necessary Skills, 1992; U.S. Department of Education, 1991). However, while many education reform activities focus on populations with special needs, most efforts fail to acknowledge and respond to the impact of gender on educational and occupational outcomes. The extent to which such reforms can succeed is under question (AAUW, 1992).

What's Not Changing?

Low Wages

While females comprise a growing segment of our current and future workforce whose earnings are often vital to family well-being, their wages have remained low. Women comprise a disproportionate share of low wage earners. In 1986, two-thirds of the minimum wage workforce was female (Mishel & Simon, 1988). An estimated 43% of the women in the labor force earn wages below the poverty level as compared to 27% of the men (Wider Opportunities for Women, 1990). According to the National Commission on Working Women (1988):

In 1986, four and one-half million women were in the work force yet living in poverty. More than half of those women had children. (p. 4)

Fifty-one percent of all poor American families are headed by women; forty percent of these female heads of household are working. (p. 4)

Sole responsibility for supporting children compounds the impact of low earning-power and keeps millions of American women and their children in poverty. Teen parents, single parents, and displaced homemakers are among the most vulnerable to poverty (Displaced Homemakers Network, 1987).

- There are over 11 million women in the United States who have lost their main source of income because of divorce, separation, widowhood, disability, long-term unemployment of a spouse, or loss of eligibility for public assistance. Of these, approximately 40% were living below the U.S. Department of Labor poverty level and 21% were above the poverty level, but below the Bureau of Labor Statistics lower living standard (an income at which DOL estimates one can meet day-to-day expenses).

- Approximately 3 million American women are raising minor children without a spouse. More than three quarters of them are below the level at which DOL estimates one can meet day-to-day expenses.

Occupational Segregation

Occupational segregation accounts for the greatest differences between the incomes of women and men (Adelman, 1991; AAUW, 1992; Beck, 1989; National Commission on Working Women, 1988; U.S. DOL, BLS, 1991). Female-dominated occupations generally pay less than those held mostly by men. Moreover, both the likelihood and the impact of occupational segregation tends to be stronger for women from minorities and those who have disabilities (Lewis, 1985; National Commission on Working Women, 1988; Reis & Stone, 1992; Women and Disability Awareness Project, 1984).

> *In 1990, close to half (46%) of all women workers were employed in relatively low-paying service and administrative support occupations such as secretaries, waitresses, and health aides, and black females were more likely than white females to work in these occupations.* (Reis & Stone, 1992, p. 307)

Sex-Stereotyped Vocational Enrollment Patterns

Not surprisingly, vocational enrollment patterns mirror occupational segregation. In spite of efforts over the last 20 years, women of all racial and ethnic groups remain underrepresented in vocational training programs that lead to higher paying jobs (Wirt, Muraskin, & Goodwin, 1989). The influence of gender on enrollment patterns is strongest for females with other risk factors. The following findings from the National Assessment of Vocational Education (Wirt et al., 1989) indicate that sex-stereotyped enrollment patterns are especially persistent for females with disabilities, those who are economically or academically disadvantaged, and teen parents.

- *Males who are disabled or who are academically disadvantaged* have enrollment patterns that resemble their nondisabled and academically advantaged counterparts.
- *Sex stereotyped enrollment patterns* are more common among people with disabilities and those with low socio-economic status.
- *Females with disabilities* earn considerably fewer credits in occupationally specific courses than any other group of students, lack access to business and office occupations, and are disproportionately enrolled in training for service occupations as well as nonoccupational vocational education.
- *Nearly half of all vocational credits earned by disabled and academically disadvantaged females* are in service occupation courses or consumer and home economics.
- *Programs for displaced homemakers* tend to be short term and in traditionally female fields.
- *Education programs for teen parents* tend to lack vocational components.

Gender-Related Barriers in Education

Practices that help to channel females into low-wage occupations permeate education. It is still true that girls do not receive equitable amounts of teacher attention, are less likely than boys to see themselves in the materials they study, and are frequently not expected or encouraged to pursue higher level math and science (AAUW, 1992). Other practices that can block achievement for women and girls include (Beck, 1989):

- failure to provide complete and accurate career information,
- inadequate counseling on nontraditional options,
- inequitable treatment by teachers and administrators of nontraditional enrollees,
- lack of sex equity in-service staff training,
- no strict policy against sexual harassment,
- no targeted recruitment of nontraditional students,
- gender-biased course materials, and
- failure to publicize sex equity activities.

These and other school-related inequities compound the odds that girls with other known risk factors (e.g., low socioeconomic status, minority status, and low parental education levels) will drop out of school (Earle et al., 1987).

> *The factors that particularly impact girls are early socialization experiences that teach girls to be less assertive, cognitive differences in the ways that many girls and boys learn,*

teacher interaction patterns that favor boys' response patterns and learning styles, and curricular selections that often leave girls without the prerequisites for higher-paying jobs and careers. When these factors combine with the background characteristics mentioned above, girls who are only marginally involved in school may opt out completely. (p. vii)

Gender-Related Barriers Outside Education

Additional barriers confront women pursuing higher-wage occupations. Occupational segregation; wage discrimination; lack of affordable, quality child care; and limited education and training opportunities impede the progress of low-income women seeking better jobs (National Commission on Working Women, 1988). Barriers to male-dominated occupations are especially formidable. Warner (1989) identified the following barriers to women trainees in the machining trade:

- sex bias in assessment, testing, and counseling;
- lack of information about the range of career options available;
- math or technical anxiety;
- lack of affordable, quality child care;
- lack of access to local "networks" (ie. contacts with people working in the field);
- sexual harassment and discrimination;
- opposition or little support from family and friends;
- lack of transportation to get to work;
- financial hardship while in training; and
- language and cultural bias.

How Can Vocational Education Make a Difference?

Break Down Barriers to School Success

Efforts to improve academic and economic achievement for girls and women must address multiple barriers head-on. It is critical that educational policy and practice address gender-related inequities and the special needs of those women and girls at greatest risk (e.g., females who are educationally disadvantaged, economically disadvantaged, members of minorities, displaced homemakers, single parents, teen parents, and/or those who have a disability). The AAUW (1992) has called for a variety of reforms designed to create "gender-equitable education environments." Others have identified and called for specific strategies to support achievement in women and girls at-risk (Earle et al., 1987; Ekstrom & Marvel, 1985; Gordon & Addison, 1985; Hershey, 1988; Lewis, 1985; Partee, 1988; Quiroz & Tosca, 1992; Rosenfeld, 1985; Traustadottir, 1990; U.S. Department of Labor, Women's Bureau, 1987).

Women and girls—especially those with special needs—need more than just good training. They need assistance and support to overcome the multiple barriers to higher-wage occupations. Strategies that encourage and support the success of special-needs females must be comprehensive. In addition to targeted recruitment activities, many women need assessment services; remediation of basic reading, math, and communication skills; job-skill training; job-search training and job placement; child care assistance; counseling; and various other support services (Burghardt & Gordon, 1990).

Ensure the Success of Nontraditional Enrollees

Additional strategies are necessary for nontraditional enrollees. To date, the few girls who do complete nontraditional programs are unlikely to secure training-related employment (Muraskin, 1989). Vocational programs must address this bias against hiring women in nontraditional occupations. *Strategies which support the long-term success of nontraditional enrollees must be incorporated into vocational programs.* Support for nontraditional enrollees can take many forms, including (McGraw, 1991):

- nontraditional role models,
- job placement services,
- information on dealing with discrimination and harassment,
- staff training on gender bias,
- screening for health concerns that conflict with occupation, and
- encouragement to continue training and upgrade skills.

Support Perkins Provisions

Resources for promoting sex equity in vocational education have been available through vocational education legislation since 1976. The 1990 Carl D. Perkins Vocational and Applied

What Are Nontraditional Jobs for Women?

(U.S. Department of Labor, Women's Bureau, 1991)

NONTRADITIONAL JOBS are those in which women comprise 25 percent or less of the workers in a particular occupation, whether in the categories of managerial and professional specialty; technical, craft, and repair; operative, fabricators, and laborers; or farming, forestry, and fishing. (p. 1)

NONTRADITIONAL JOBS are more likely to offer higher wages, greater benefits, a wider variety of work schedules, and better job security and may be more personally rewarding than traditionally female jobs. (p. 2)

Technology Education Act remains the major source of funding for programs and activities to eliminate sex bias, stereotyping, and discrimination in vocational education and to support vocational services to teen parents, single parents, and displaced homemakers. Revisions of the previous legislation are designed to maximize the impact of the relatively few resources channeled into these efforts. Because gender-related barriers to achievement are so pervasive, these provisions are important. However, many provisions have been weakened by the U.S. Department of Education final regulations (American Vocational Association, 1992).

By concentrating funds on large programs serving special populations, the 1990 Perkins Act will make more vocational programs available to low-income females (Sections 231 & 232). Moreover, mandates to integrate academic and vocational education, annually evaluate program effectiveness, and formulate and implement program improvement plans should improve the quality of *some* vocational programs (Sections 117 & 201). Unfortunately, the final regulations have diminished the law's potential to effect improved outcomes for all students by restricting the scope of program evaluation and improvement efforts. They require only those particular projects, services, and activities using Perkins funds to conduct annual evaluations. *Program-wide* evaluation and improvement activities would have been much more likely to change the educational practices stunting achievement for females and special populations.

In order to support the success of nontraditional enrollees, the Perkins Act prioritizes services to individuals enrolled in programs designed to eliminate sex bias. Local programs must make assurances that these students will receive assistance to enter a program; assessment of special needs; and guidance, counseling, and career development activities to facilitate the transition from school to post-school employment and career opportunities [AVA, 1992, 403.190 (b)]. However, the regulations have lessened local accountability for these assurances. "Assured services" are only required *to the extent possible* with Perkins funds. Moreover, these assurances do not apply to the Title III Tech Prep programs. Lack of adequate support to nontraditional enrollees will likely result in continued sex-stereotyped enrollment patterns.

Meaningful program improvement for females may be restricted to the boundaries of those programs receiving funds set aside to promote sex equity and to effectively serve teen parents, single parents, and displaced homemakers. The Perkins Act requires that 10.5% of each state's basic grant be used to fund these activities [Section 102 (a) (2)].

1990 PERKINS: STATE PROGRAMS FOR SINGLE PARENTS, DISPLACED HOMEMAKERS, AND SINGLE PREGNANT WOMEN [Section 221 (a)]

States must use seven percent of their basic state grant to—

Provide, subsidize, reimburse, or pay for preparatory services, including basic academic and occupational skills, necessary educational materials, and career guidance and counseling services, in preparation for vocational education and training that will furnish single parents, displaced homemakers, and single pregnant women with marketable skills;

Make grants to eligible recipients for expanding preparatory services and vocational education services when expansion directly increases the eligible recipients' capacity for providing single parents, displaced homemakers, and single pregnant women with marketable skills;

Make grants to community-based organizations for the provision of preparatory and vocational education services to single parents, displaced homemakers, and single pregnant women...;

Make preparatory services and vocational education and training more accessible to single parents, displaced homemakers, and single pregnant women by assisting such individuals with dependent care, transportation services, or special services and supplies, books and materials, or by organizing and scheduling the programs so that such programs are more accessible; or

Provide information to single parents, displaced homemakers, and single pregnant women to inform such individuals of vocational education programs, related support services, and career counseling.

1990 PERKINS: STATE PROGRAMS TO PROMOTE SEX EQUITY (Section 222)

Three percent of each state's basic grant must be used to promote sex equity through:

programs, services, comprehensive career guidance and counseling, and activities to eliminate sex bias and stereotyping in secondary and postsecondary vocational education;

preparatory services and vocational education programs, services, and activities for girls and women, aged 14-25*, designed to enable the participants to support themselves and their families; and

support services for individuals participating in the activities described above including dependent-care services and transportation.

*the sex equity coordinator may waive the age limitations.

As in the past, the current legislation requires each state to designate a full-time sex equity coordinator. At least $60,000 of state administrative funds must be set aside to support the salary and expenses of this position. State-level sex equity coordinators are of pivotal importance to gender-fair education reform efforts (Schmuck, et al., 1985). However, their effectiveness in the past has been circumvented in states which limited their authority over both sex equity funds and programs (National Coalition for Women and Girls in Vocational Education, 1988). Advocates hailed the 1990 Perkins for expanding and clarifying the coordinator's role. The law assigns them the following responsibilities [Section 111 (b) (1)].

- Administer vocational programs for sex equity, single parents, and displaced homemakers.
- Gather, analyze, and disseminate data on the effectiveness and adequacy of state vocational programs in meeting the education and employment needs of women.
- Make recommendations concerning local plans to ensure that the needs of women and men for training in nontraditional jobs are met.
- Review vocational programs for sex stereotyping and sex bias and make recommendations for local plans to overcome sex bias and stereotyping.
- Assess the state's progress in eliminating sex discrimination and stereotyping.
- Ensure that the needs of women are addressed in the state's administration of Perkins grants, contracts, and policies.
- Recommend outreach activities concerning vocational education and employment opportunities for women (including opportunities in new and emerging occupational fields).
- Provide technical assistance to expand vocational opportunities for women.
- Assist local personnel to increase access for all women to vocational programs and enrollment of men and women in nontraditional programs.
- Manage the distribution of funds set aside for programs for single parents, displaced homemakers, single pregnant women, and sex equity.
- Evaluate the effectiveness of programs supported by set-aside funds.

In spite of these clarifications, state-level restrictions on the sex equity coordinator's role in "managing" set-aside monies are still acceptable. While the final regulations do not change the law's provisions, they affirm that each state board of vocational education has final say over the distribution of set-aside funds [AVA, 1992, 403.13 (a)(11)].

Clearly, barriers to female achievement extend far beyond the boundaries of vocational programs. However, vocational education is in a position to lead the way to educational reforms that are effective for all students. In spite of the opportunity to conduct "business as usual," provided by the rules and regulations, most states remain committed to the goals of effective education reform. Many are requiring that local programs receiving Perkins funds evaluate their entire vocational program, not just funded projects. The program improvement process must be extended beyond the boundaries of "funded projects" as well.

During 1992-93, many local secondary and postsecondary vocational programs complete their first annual program evaluation as prescribed by the 1990 Perkins Act. These programs will then develop and implement plans to increase program access and effectiveness for all students. Gender should be considered throughout this process. Program outcomes should be evaluated for everyone (including special populations) by gender. Strategies for increasing the academic and occupational achievement of females from all populations must be identified and refined. We have the opportunity to contribute to the country's economic well-being by redefining and redirecting vocational education. In order to do so, we must "make it work" for everyone.

Given the increase in the number and percentage of women who are single parents and the growing importance of women's wages to total family income, the education of women is important not only for women as individuals, but also for women as mothers, as family members, and as effective and creative citizens of larger communities. (AAUW, 1992, p. 5)

References

Adelman, C. (1991, June). *Women at thirtysomething: Paradoxes of attainment*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

American Association of University Women Educational Foundation. (1992). *How schools shortchange girls: A study of major findings on girls and education*. Washington, DC: Author.

American Vocational Association. (1992). *The Carl D. Perkins Vocational and Applied Technology Education Act of 1990: The final regulations*. Alexandria, VA: Author.

Beck, J. (1989). *Step by step: Educational equity options project*. Washington, DC: Wider Opportunities for Women.

Burghardt, J., & Gordon, A. (1990). *More jobs and higher pay: How an integrated program compares with traditional programs*. New York: Rockefeller Foundation.

Council of Chief State School Officers, Resource Center on Educational Equity. (1990). A concern about gender and school reform. *CONCERNS*, Issue XXXI, pp. 1-7.

Displaced Homemakers Network. (1987). *A status report on displaced homemakers and single parents in the United States*. Washington, DC: Author.

Earle, J., Roach, V., & Fraser, K. (1987). *Female dropouts: A new perspective*. Alexandria, VA: National Association of State Boards of Education.

Ekstrom, R. B., & Marvel, M. G. (1985). Educational programs for adult women. In S. Klein (Ed.), *Handbook for achieving sex equity through education*. Baltimore: The Johns Hopkins Press.

Gordon, B. J., & Addison, L. (1985). Gifted girls and women in education. In S. Klein (Ed.), *Handbook for achieving sex equity through education*. Baltimore: The Johns Hopkins University Press.

Hershey, A. (1988, November). *The minority female single parent demonstration: Program operations*. New York: The Rockefeller Foundation.

Johnson, C., Miranda, L., Sherman, A., & Weill, J. (1991). *Child poverty in America*. Washington, DC: Children's Defense Fund.

Johnson, C., Sum, A., & Weill, J. (1988). *Vanishing dreams: The growing economic plight of America's young families*. Washington, DC: Children's Defense Fund.

Johnston, W. B., & Packer, A. H. (1987, June). *Workforce 2000: Work and workers for the twenty-first century*. Indianapolis: Hudson Institute.

Klein, S. (Ed.). (1985). *Handbook for achieving sex equity through education*. Baltimore: The Johns Hopkins University Press.

Levitan, S. A., Mangum, G. L., & Pines, M. W. (1989, July). *A proper inheritance: Investing in the self-sufficiency of poor families*. Washington, DC: The George Washington University, Center for Social Policy Studies.

Lewis, S. (1985). Achieving sex equity for minority women. In S. Klein (Ed.), *Handbook for achieving sex equity through education*. Baltimore: The Johns Hopkins University Press.

McGraw, K. (1991). *Still trying to make it work: Women, trades training and jobs*. Springfield, MA: Machine Action Project.

Muraskin, L. D. (1989, May). *The implementation of the Carl D. Perkins Act*. Washington, DC: U.S. Department of Education.

Mishel, L., & Simon, J. (1988). *The state of working America*. Washington, DC: Economic Policy Institute.

National Center for Children in Poverty. (1990). *Five million children: A statistical profile of our poorest young citizens*. New York: Author.

National Coalition for Women and Girls in Education, Vocational Education Task Force. (1988, April). *Working toward equity: A report on implementation of the sex equity provisions of the Carl D. Perkins Vocational Education Act*. Washington, DC: Author.

National Commission on Children. (1991). *Beyond rhetoric: A new American agenda for children and families*. Washington, DC: Author.

National Commission on Working Women. (1988, May). *No way out: Working poor women in the United States*. Washington, DC: Wider Opportunities for Women.

Partee, G. (1988, August). *Strategies for increasing the achievement and attainment of at-risk Hispanic females through vocational education*. Washington, DC: Resource Center on Educational Equity, Council of Chief State School Officers.

Quiroz, J. T., & Tosca, R. (1992, March). *For my children: Mexican American women, work, and welfare*. Washington, DC: National Council of La Raza.

Reis, P., & Stone, A. J. (Eds.). (1992). *The American woman 1992-93: A status report*. New York: W.W. Norton & Co.

Rosenfeld, S. A. (1985). Rural women and girls. In S. Klein (Ed.), *Handbook for achieving sex equity through education*. Baltimore: The Johns Hopkins Press.

Schmuck, P., Adkison, J., Peterson, B., Bailey, S., Glick, G., Klein, S., McDonald, S., Schubert, J., & Tarason, S. (1985). Administrative strategies for institutionalizing sex equity in education and the role of the government. In S. Klein (Ed.). *Handbook for achieving sex equity through education*. Baltimore, MD: The Johns Hopkins Press.

The Commission on the Skills of the American Workforce. (1990, June). *America's choice: High skills or low wages!* Rochester, NY: National Center on Education and the Economy.

The Secretary's Commission on Achieving Necessary Skills, U.S. Department of Labor. (1992, April). *Learning a living: A blueprint for high performance*. Washington, DC: U.S. Department of Labor.

Traustadóttir, R. (1990, July). *Women with disabilities: Issues, resources, connections*. Syracuse, NY: The Center on Human Policy.

U.S. Congress, Public Law 101-392, *The Carl D. Perkins Vocational and Applied Technology Education Act of 1990*.

U.S. Department of Education. (1991). *America 2000: An education strategy*. Washington, DC: Author.

U.S. Department of Labor, Bureau of Labor Statistics. (1991, August). *Working women: A chartbook*. Washington, DC: U.S. Department of Labor.

U.S. Department of Labor, Women's Bureau. (1987). *Employment-focused programs for adolescent mothers*. Washington, DC: Author.

U.S. Department of Labor, Women's Bureau. (1991). *Directory of nontraditional training and employment programs serving women*. Washington, DC: Author.

U.S. Senate, Joint Economic Committee. (1992, January). *Families on a treadmill: Work and income in the 1980s*. Washington, DC: Author.

Warner, H. (1989, September). *Access, equity, and opportunity*. Springfield, MA: Machine Action Project.

Wider Opportunities for Women. (1990). *Program and policy agenda 1989-91*. Washington, DC: Author.

Wirt, J. G., Muraskin, L. D., Goodwin, D. A., & Meyer, R. H. (1989, July). *Summary of findings and recommendations*. Washington, DC: U.S. Department of Education.

Women and Disability Awareness Project. (1984). *Building community: A manual exploring issues of women and disability*. New York: Educational Equity Concepts Inc.

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