

AN ABSTRACT OF THE DISSERTATION OF

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Community service organizations, community college apprenticeships and organized labor have been working together to address the barriers to successful completion of apprenticeships. The barriers have been especially daunting for women and people of color. The Trades Mentor Network (TMN) grew out of a need to address this issue and to provide a means to assist at-risk apprentices to persist in the completion of their building trades apprenticeships. The purpose of this case study was to describe the TMN and to investigate the apprentice-mentor relationship to see if, in the perception of the apprentices, it was a useful retention strategy.

A literature survey identified the worth of mentoring in other arenas, discussed the fate of women in nontraditional work and the relationship between community colleges and apprenticeships, and reviewed appropriate research methodology for studying this phenomenon.

Participant observation, focus groups and interviews in two phases of data collection were used. Archival data contributed to the descriptions, conclusions and recommendations.

The TMN and the TMN training were described. The research was limited to the study of woman apprentices. Their stories revealed their experiences as apprentices, their mentor relationship and what it was about the relationship that helped them. In the course of the study, 39 women were invited to be mentored. The 28 women who participated credited being mentored as a significant factor in their continuation or successful completion of their apprenticeship. The retention rates for woman apprentices improved. In 1991, before the TMN existed, the dropout rate for woman apprentices in Washington community and technical colleges was 50%, in 1996, the dropout rate was 12%.

The TMN had an effect on the building trades culture. Woman apprentices were stronger, more confident and more expectant of a more inclusive and welcoming environment. Part of the significance of this study was to provide the data to justify the Trades Mentor Network and to convince organized labor to routinely fund it as a retention strategy for all apprentices at risk. Apprentice training is expensive and a low cost, essentially volunteer, program that reduces the risk of losing apprentices is valuable.

**The Trades Mentor Network: Mentoring as a Retention
Intervention for Woman Apprentices
in the Building Trades**

by

Jeanne L. Arvidson

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Jeanne L. Arvidson, Author

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The Trades Mentor Network: Mentoring as a Retention Intervention for Woman Apprentices in the Building Trades.

CHAPTER 1 - INTRODUCTION

This chapter presents the introduction to the study, the statement of the problem, the research questions, the overall research design, the definitions critical to a common understanding of the issues and setting, the rationale for doing the research and the significance of the study.

Successful Apprenticeships

Community service organizations, community college apprenticeships and organized labor have been working together to address barriers to successful completion of apprenticeships. The barriers are especially daunting for women and people of color, who historically have not been included in apprenticeships. The Trades Mentor Network (TMN) is the result of a survey concluding that the development of a mentoring program would assist in the retention and completion rates of women and people of color in apprenticeships (Arman, 1992). The network was initially funded in 1991 by a grant from Washington's Department of Community Development. The pilot program trained fifteen mentors from three Puget Sound apprenticeships and provided organization and support to the TMN. As South Seattle Community College's Director of Apprenticeships, the investigator served on the organizing committee along with representatives from education, apprenticeships, government, labor, employers and trades workers.

Statement of the Problem

People in the field who are concerned about the retention rates of women and people of color in apprenticeship programs are interested in those things that will lower the drop out rate of these two populations. In the researcher's institution it has been observed that in apprentice programs, when a group of white male apprentices move together through the required core of skill training classes, a sense of community develops, and as a result of the peer support that inevitably occurs, a much greater than usual percentage of participants remain in school and eventually achieve journey level status. With women and people of color, this sense of community is often elusive. At this point, in Washington, according to data from the Department of Labor and Industries, women and people of color drop out at twice the rate of white males (Arman, 1992). The Trades Mentor Network, as a support service, was designed to help maintain apprentices who are women or people of color through their apprenticeship.

The existing and well established Trades Worker Counseling Service, upon which the Trades Mentor Network was patterned, is a support service offered to apprentice and journey level workers. Trained volunteers, (personal communication, 1992, Workers Center personnel) report that this service, akin to student counseling services for students in the more traditional preparation program, is well-conceived and while not formally documented, is considered very successful. Both apprentices and journey level workers use the counseling program and evaluate it positively. Apprentices, especially the targeted

populations, often need more services than counseling. Like many other adult students returning to school, they may need extra help with their ancillary classes, with their on-the-job skill training, and in overcoming external forces such as issues surrounding transportation, child care and acceptance. Even though they are working with a journey level worker on the job and with a vocational instructor in the class room, one cannot assume that they are adapting effectively and succeeding.

Based on the initiating survey, developing a mentor program was considered to be a strong, pro-active step toward meeting the goal of making the trades more diverse by helping women and people of color succeed in their apprenticeships (Arman, 1992). Since its inception, the Trades Mentor Network has been successful in recruiting journey level workers to be trained as mentors. All training classes offered have been full. These workers are interested enough in helping new apprentices succeed that they voluntarily attend class for ten weeks and willingly agree to serve as a mentor. The apprentice coordinators are responsible for identifying apprentices in the targeted populations who are at risk of non-completion.

The organizing committee decided that The Trades Mentor Network as a support mechanism will be considered successful if these three goals are achieved:

- Increase the number of women and workers of color in the building trades.

- Reduce the dropout rate of women and apprentices of color in local Joint Apprentice Training Council (JATC) programs.
- Address economic and social barriers which prevent successful completion of apprenticeships.

These are the goals of the project and it is appropriate to see if they are being achieved. To meet these goals, the following has been done. An organizer (coordinator) was hired. Publicity targeted to the labor community was initiated. The Joint Apprenticeship Training Council (JATC) pledged support. A means to recruit mentors and apprentices for the program was designed and a network developed to disseminate invitations to participate. The curriculum for the mentors was designed and refined; materials were published and a speaker's network identified. Several training sessions were held and 62 mentors were trained and matched with apprentices.

Since the Trades Mentor Network has been in existence since 1992, and because the common apprentice indenture is three to five years, this study was a midpoint check on the program to see if the goals were being accomplished. In order to control the variables and study a common group, only the mentored woman apprentices were the subjects of the investigation.

Purpose of the Study

The purpose of this study was to describe the Trades Mentor Network and to determine if, in the perception of the woman apprentices, the assigning of a trained mentor influenced them to stay in a building

trades apprentice program. The study was designed as a midpoint investigation to weigh the benefits of the Trades Mentor Network for the mentored women.

Research Questions

The primary research question was: Did the retention rates for woman apprentices improve after the inception of the Trades Mentor Network and did the women credit being mentored as important to their continuance in apprenticeships? The inquiry was to identify the number of women who dropped out of an apprenticeship program before and the number who dropped out after the beginning of the TMN. The research describes the TMN and determines whether or not the woman apprentices perceived that mentoring was a significant factor in helping them feel successful. The research method used to investigate this issue was a case study. Investigations of various research methodology and review of educational research analyses and case studies caused the researcher to conclude that this was a responsible approach for this research (Bogdan & Biklen, 1982; Campbell & Stanley, 1966; Fetterman, 1989; Jick, 1985; Lincoln & Guba, 1985; Locke, Spirduso & Silverman, 1993; Merriam, 1988; Wolcott, 1979; Yin, 1984; Yin, 1995).

Definition of Terms

Apprentice: An apprentice is a full-time employee and a part-time student whose beginning salary is a percentage of the skilled worker rate, and

who is assigned progressively complex tasks with corresponding salary adjustments until occupational proficiency is achieved.

Apprenticeship: An apprenticeship is a cooperative training endeavor among employers, employees (or employee organizations), schools, and the apprenticeship council.

Mentor: A mentor is one who advises another. In Arman's 1992 survey which initiated the Trades Mentor Network, a mentor was described as "a buddy, someone to teach new people about the job, encourage them, and help them with problems."

The Trades Mentor Network: The Trades Mentor Network is a coalition of community-based organizations, organized labor, educational institutions, employers and government that work cooperatively to promote and retain women and people of color in apprentice programs.

JATC: The Washington State Joint Apprenticeship and Training Council, a nine-member council that reviews and registers apprentice programs.

Significance of the Study

The rationale underlying this research project began with a conviction that the Trades Mentor Network was useful as a retention tool. The researcher expected, through the study, to discover a more universal underlying rationale: that the participants felt that the Trades Mentor Network was a factor in helping them be successful. Fetterman, (1989) recognized the importance of

understanding the epistemological basis for a selected model. He stated that "people act on their individual perceptions, and those actions have real consequences--thus the subjective reality each individual sees is no less real than an objectively defined and measured reality." Thus it was the mentored woman apprentices' view of the influence of the Trades Mentor Network that was studied. After doing the research necessary to study this model, some assumptions and conclusions about the relationships between the mentor and the apprentice, and about the worth of this activity in meeting the individual's and the Trades Mentor Network's goals emerged.

Relevance to Education: Contribution to Knowledge, Policy, and Practice

It was also of interest to the researcher, to the apprentice program coordinators, and to the Trades Mentor Network (TMN) Organizer to know how well prepared the journey level workers who volunteered, trained and became mentors were to assist the apprentices. Was the curriculum of the Trades Mentor Network training program appropriate? Or did it need more refining?

If the Trades Mentor Network was proven to be of significant benefit to women, funding for this special type of student success service could be more readily secured. At one point during the time period following the completion of the initial grant from the Washington State Community Development Department, the TMN was unfunded. During this time, It was staffed by employees from the Worker Center who had other responsibilities and who had

to rely on volunteers . The Worker Center responded to a U.S. Department of Labor Women's Bureau Request for Proposals for resources to fund the TMN but the TMN was not chosen for funding. Thus part of the significance of this study was that corroborating data describing a successful program could assist in securing stable funding for the Trades Mentor Network. A problem has been, and continues to be, consistent financial support for the training program and the mentor matches.

Also, it was conceivable that this form of social organization could drive social and cultural change. Certainly, this was one hope for the broad scope of this project. Among people who work with people in the building trades, it is believed that the underrepresented women are handicapped for acceptance in the building trades by the overt and covert disapproval of the majority about their "belonging in their culture." According to Martin (1988) and Arman (1992), only during World War II were women well represented in apprenticeships because of the need to engage every able-bodied person in war related work. The historical perspective that comes from looking at the small numbers of women in apprentice programs over time helped to validate the lack of representation in current times and helped to show why programs that are designed to increase retention are useful.

CHAPTER 2 - REVIEW OF LITERATURE

This chapter is divided into four sections: mentoring and its relevancy in helping students succeed; women in nontraditional work settings; the relationship between the community college and apprenticeship programs; and the research methodology. The literature on mentoring was drawn from both education and corporate literature. Some information was available from the skilled trades. The literature about women in nontraditional work describes some of the special barriers that women face in these arenas. The section on research methodology includes justification for the case study as an appropriate research design for this study.

Mentoring Literature

The original Mentor was a soldier in the service of Ulysses. When the Greek hero Ulysses and his soldiers left to fight the Trojan War, he left his household and his son Telemachus in the care of Mentor, his trusted and wise friend. While Ulysses was away, Mentor counseled the inexperienced and untested son so that he would make good decisions in his father's absence. When Telemachus, searching for his father on the isle of Calypso, was wooed by the sea-nymph and offered immortality, it was Ulysses' patron goddess Minerva, in the shape of Mentor, who accompanied him and who made him repel her allurements. (Bulfinch, 1903). A mentor, identified with Homer's legendary literary character has come to mean a wise and loyal advisor, a teacher and a

coach. Currently, mentoring and mentoring programs have emerged as an effective strategy for helping people meet the challenges of meeting personal and professional goals. Mentoring as a relationship between one who is learning something and one who supports the process of learning comes in various models.

In educational institutions, models generally focus on students who are identified as most vulnerable. For example, North and South Seattle Community Colleges in Seattle, Washington, have student mentoring programs as does Fayetteville State University in North Carolina. All were conceived to assist the student in a successful transition to college and to provide the support necessary to increase their persistence in completing a program of study. All the mentor and student matches are voluntary. North and South Seattle targeted particularly the at-risk student, and Fayetteville invited all incoming freshman students to participate. All provide training or written guidelines for the mentor. Faculty and staff were mentors at both the community colleges and the university. These schools surveyed the mentored students and all continued their programs in light of the results. The evaluation was done formally in the case of Fayetteville with a survey adapted from the Advisor Evaluation Survey, Appalachian State University, Boone, North Carolina; or informally in the case of the two community colleges, by collecting voluntary reports from students (Fayetteville Pilot Mentoring Program, 1991; Making Connections: Mentor Handbook, 1994; Unlimited Success: A mentoring program, 1994). All of these

programs were started after the institutions reviewed literature that supported the adoption of a mentor program as part of a learning assistance program. Similar programs such as the Coach/Mentor program at Cape Cod Community College, Massachusetts; Project Quest at Cedar Valley College, Texas; Project Leap at Chicago City-Wide College, Illinois; and the Strategic Student Retention Plan at Texas State Technical College - Amarillo, Texas, are all reported as examples of successful mentoring programs for at-risk populations in a study citing exemplary practices in community colleges. (Roueche, Parnell & Kuttler, ed., 1994).

Wiley (1989), in a special recruitment and retention report in *Black Issues in Higher Education*, reported that results have been excellent in mentoring programs for minority students. Perman's (1995) assessment of The Puente Project at Chabot College in California found that results were positive. The Puente project was designed to improve retention of Mexican-American/Chicano students. The project matched students of Spanish speaking parents with bicultural professionals from the community in their field of interest to provide motivation and professional guidance. The project was designed to address low retention rates of students who were competitively selected and who were committed to staying in the program for a year. Major segments of the program included communication, writing skills, motivation provided by mentors and student advocacy. Perman felt that the benefits offered by

programs effectively transforming the experiences of students of traditional "at-risk" communities were both rewarding and necessary.

The Project on the Status of Women (Academic mentoring for women students and faculty: A new look at an old way to get ahead, 1983), which examined academic mentoring for both women students and women faculty, suggested that "multiple mentorships" may resolve many of the perceptions about mentoring problems that are associated with gender. This project advocated the establishment of a two-stage mentoring process in which newcomers were initially paired with a senior person of the same sex and race and then helped by that person to find additional mentors with different strengths throughout the organization. The report concluded that women's experience in the mentoring process was often vastly different from men's and that this two-stage process increased the likelihood of positive experiences for the women. Choa and O'Leary (1990) acknowledged that mentorships are complex relationships from which simple conclusions may not be drawn. Nonetheless, they suggested in the results of their study of third-party perceptions of same and cross-gender mentoring, that problems with cross-gender mentoring may be exaggerated.

California's mentoring program for teachers which followed the passage of the state's educational reform bill (HB 1725), resulted in the implementation of mentoring for novice teachers by experienced teachers. (Bird 1986, cited in Reiman and Thies-Sprinthall, 1993). According to Reiman and Thies-Sprinthall,

the mentoring program was defined by a state policy which was developed with little acknowledgment of individual needs or relevant theory and research.

Reiman and Thies-Sprinthall (1993) built on an emerging theoretical perspective of the conditions needed to promote novice and mentor teacher development and described a researched mentor training program for teachers that has "guided reflection" as its keystone. By guided reflection they meant that protégés and mentors benefit from a theory of assistance that both described the protégé and provided a basis for assistance strategies rather than one where mentors rely on intuition. The mentors encouraged the novice teachers to examine their experiences in written journals. The mentors responded to the protégé's written reflections using a specific format.

Mentoring programs also exist in the workforce. In the early childhood field, mentoring programs have been created in response to problems of recruitment and retention and have emerged as one of the promising strategies to retain experienced teachers (Mentoring News, 1995).

Among groups that advocate for women in nontraditional employment, mentoring is often suggested as a strategy. The respondents to the Northwest Women's Law Center's survey on nontraditional work, who were professional representatives of organizations serving women, reported that there is a need to provide women with support services if they are to succeed in nontraditional employment. Many groups suggested that mentoring programs and support groups be available for women in the trades (Fukuda, 1991). The City of

Toronto's guide to providing support for women in the trades, technology and operations employment advocated mentoring among several support strategies to maximize retention in these jobs (Bohnen & Klie, 1990).

In 1991, the Worker Center of Seattle, Washington and the King County Labor Agency, AFL-CIO received a Washington State Department of Community Development grant to, in part, study the support and mentoring experiences of former apprentices. Based on anecdotal evidence, the Worker Center sensed that mentoring was a good solution to the high drop out rate of women and people of color in the building trades apprentice programs (Arman, 1992). Beth Arman, a Worker Center intern and graduate student at Harvard University's John F. Kennedy School of Government, conducted a survey and wrote a report on the experiences of former apprentices who had graduated or dropped out of apprenticeships in the building trades.

Arman's report was based on interviews with 82 King County residents who had recently been participants in an apprenticeship program run by the carpenters, the painters or the electrical workers. The original pool was 328 former apprentices from 1991-1992; she was able to interview 25% of the original population. Of the people interviewed, 49 were graduates of their programs (60%) and 33 were drop outs (40%). Eleven survey respondents were women (13%). This was similar to the actual percentage in the three apprenticeship programs studied. Among the people surveyed, 45% of the women interviewed completed their program while 61% of the men did. The

survey asked all respondents why they had decided to join an apprenticeship program, the reasons why they had dropped out of the program, and how much and what kind of support they had received from various people. The experiences of the apprentices, in terms of support and informal mentoring, were that graduates felt they received more support from their family and friends, journey level workers, and instructors than dropouts did. After they were provided with a definition of a mentor, respondents were asked if they had a mentor when they were apprentices. (A mentor was defined as "a buddy-- someone to teach new people about the job, encourage them, and help them with problems"). Of the respondents who successfully completed the program, 57% reported having a least one mentor and more than three-fourths of them considered their mentor very helpful. Half of those who did not have mentors said that a mentor would have helped them. This was especially true for women (100%) and people of color (63%). Arman's survey lead to the conclusion that having a mentor can greatly benefit an apprentice at risk of dropping out. According to Arman, dropouts are disproportionately likely to come from underrepresented groups such as women, since even a good mentor may not be able to make up for the lack of connection they feel with others around them. This preliminary study lead to the development of the Trades Mentor Network.

Arman's survey (1992) found programs designed for community groups, universities, or corporations, but not for the building trades. She found *informal* mentoring-type programs for women in the trades in Chicago, Cleveland and

Minnesota. None included training for mentors. The Chicago Women in Trades (CWIT), has spent ten years advocating for women and seeking solutions to change the conditions that prevent them from being integrated into well paying building trade jobs. Their service includes recruitment and work to improve the working conditions of women and to propose solutions to lowering the barriers to women in the trades. A 1992, CWIT report of recommendations to be used by tradeswomen's organizations, public agencies, employers and unions, contained a recommendation that apprenticeship training should include developing support systems for apprentices through mentoring programs and through teaching ways in which to deal with sexism, racism and homophobia (LeBreton & Loevy, 1992). Wider Opportunities for Women, a Washington, D.C., women's advocacy organization, in a 1993 report, also recommend developing mentor programs for women in nontraditional work.

In both educational and workforce programs, mentoring involved matching individuals who want to learn and grow through a relationship with one who is looked upon for advice and guidance. Gray and Gray (1990), basing their recommendations on 22 years of experience in helping to develop and evaluate more than 60 mentoring programs, cautioned that *informal* mentoring is not appropriate for a mentoring program. They stressed using *planned* mentoring programs with clearly identified direction and established outcomes. In Gray and Gray's experience, successful programs depend on a voluntary agreement between the mentor and the protégé to work together to achieve the

program's purpose. A search of the literature suggests that other than Seattle's Trades Mentor Network, there appears to be no other fully developed, formal building trades mentoring training programs.

A community college has a responsibility to accept students for whom there is a realistic chance of success and to assist and support students who are at risk of dropping out. Once students are accepted, most community colleges consider guidance, counseling, study skills courses and assessment as a critical package of services needed to be available for students. Programs like South Seattle's *Unlimited Success: a Mentoring Program*, for non apprentice students are part of the student services available to students in many community colleges (Gray & Gray, 1990; Roueche, et al., 1994). Funding for student retention programs in community colleges, often provided initially by grants, become institutionalized if such programs were successful in retaining students. Similar to existing retention programs for other community college students, the TMN is a potential retention model for the apprentice student. The TMN was studied as an example of how institutional retention strategies could be adapted for apprentice students.

Women and Nontraditional Work

According to the 1990 census, women of all races make up more than 50% of the population and more than two-thirds of these women are in the labor market. The 1990 census data also suggests that increasingly workers of the

future will not be white, male and/or native born (Arman, 1992). The term "nontraditional work" as applied to women (in Public Law 102-235 passed by the 102 Congress, as cited in Stoner, 1993) refers to occupations or fields of work where women comprise less than 25 % of employment.

The Northwest Women's Law Center's Report on Nontraditional Employment (Fukuda, 1991), surveyed and interviewed women workers, advocates and professionals about issues facing women in nontraditional work. The data indicated that in the workplace, especially in jobs that traditionally have been male-dominated such as in the trades, women felt uncomfortable. Nearly every female worker surveyed indicated some problems in the workplace due to their gender. Interviews with representatives of organizations serving women in nontraditional work provided collaborative data. The report on the results indicated that discrimination against women has increasingly become more subtle and therefore more difficult to address.

According to the Law Center's report, women in nontraditional work reported that the most common work problem was unequal treatment in job assignments and skills training. Of 56 women surveyed, 28 reported problems with job assignments and 22 reported problems with skill training (page 2, Executive Summary). The survey allowed the respondents to identify more than one problem and those who reported multiple problems usually reported two or more. The respondents indicated they were often forced to take the least

desirable and least challenging job assignments, thus not getting the training they needed to advance in their trade.

Most women in the Law Center survey reported having been subjected to some form of sexual harassment. Of the 56 women interviewed, 43 said they were subjected to obscene jokes and remarks, 30 reported "girlie pictures" and 21 reported unwanted touching. Eight women reported problems because of their minority race, and ten women reported discrimination based on their sexual orientation. This was consistent with Arman's findings (1992) and with LeBreton & Loevy's (1992).

Arman (1992), interviewing women for the Worker Center survey that initiated the Trades Mentor Network, reported women faced an attitude of "the government can force us to let you in, but they can't force us to be nice to you." One woman said that co-workers openly told her she got her job as "a quota," even though her work had been highly praised by instructors. Others reported having to endure pranks or obscene language seemingly designed for male coworkers to see their reaction. LeBreton & Loevy (1992) found that it was usually a combination of factors which caused the difficult working conditions: sexual harassment and discrimination in hiring, in layoffs, in training and in treatment by unions. The participants told of hostile work environments and isolation.

In the book Men and Women of the Corporation, Rosabeth Moss Kanter (1977) described the effect of being in the minority as a process of tokenization;

becoming a symbol, rather than a person. Tokens, according to Kanter, have the advantage of high visibility but that visibility is often tainted with an exaggeration of differences. The majority became more aware of what they had in common as well as how they were different from the token, and tried to maintain a sense of distance. Even though the tokens may not be that different from the dominant group, they were viewed through stereotypes, so that individual characteristics that do not fit the stereotype were ignored. The token may find it easier to conform to the stereotypes. The token may also be viewed as an exception to the rule. Either can make tokens feel alienated from peers at work as well as from other members of their identity group. As a consequence of this stress, it was common for the minority to have lower job satisfaction and higher turnover rates than members of the majority.

Although Kanter (1977) studied office settings, Arman (1992) found that tradeswomen and people of color reported similar experiences on a construction site. Women in nontraditional work experienced all the problems of discrimination and isolation characteristic of tokens. They, like Kanter's women of the corporation, reported feeling less confident of their ability, less willing to take risks and less able to negotiate for their needs. They experienced performance pressures, marginality and role encapsulation (Arman, 1992; Bohnen & Klie, 1990; Fukuda, 1991; LeBreton & Loevy, 1992).

In the United States, according to a 1990 Bureau of Apprenticeship and Training report by Gehen (May, 1990), women made up only seven percent of

the 263,000 federally registered apprenticeship trainees and only two percent of the skilled, well-paid construction trades such as plumber, electrician, carpenter, etc., despite legislation and regulations designed to increase their numbers.

This was very different from fields requiring college for entry. Apprenticeship programs in the building trades have recognized their failure to add women and have begun a number of programs to encourage women to consider nontraditional work. (LeBreton & Loevy, 1992).

Currently, in Washington, women make up only 10% of nearly 9000 apprentices and they drop out of apprenticeships at nearly twice the rate of white men according to the Washington State Department of Labor and Industries' Employment Standards, Apprenticeship, and Crime Victims Compensation Division (Arman, 1992). The lack of women in the trades has resulted in the Washington State Apprenticeship and Training Council issuing sanctions against building training programs for not being in compliance with governmental guidelines. These sanctions can close apprenticeship programs and as a result, jeopardize opportunities for aspiring tradespeople and potential employers (Construction Labor Report, 1995, Penhale, April 12 & November 6, 1990).

In 1990, the Washington State Department of Labor & Industries recommended that the majority of building trade and service unions be cited for failing to meet affirmative action goals in their apprenticeship programs. Labor and Industries said that a majority of the over 100 unions that participated in the

state-subsidized apprenticeship program were not complying with affirmative action requirements for recruiting minorities and women. Sanctions could include losing the exemption that allows contractors to pay less than prevailing wage and unions could lose state subsidies they receive for sending apprentices to community colleges (Penhale, April 12 & November 6, 1990).

The Community College and Apprentice Programs

In Washington state, as in many states, the community colleges have provided related instruction for apprentices indentured by the Washington State Apprenticeship and Training Council and the Federal Bureau of Apprenticeship and Training since the community college system was created in 1967. Before that time, vocational technical institutes, junior colleges, and common school districts provided the ancillary training for apprentice programs. As part of the community college mission, apprenticeships are supported by a partially waived tuition and by state financing at a level similar to other vocational/technical preparation programs (Harry, 1990).

The Workforce Training and Education Coordinating Board (Plan for tomorrow today: A guide to careers-occupations in Washington state, WTECB, 1994) described apprenticeship as a voluntary system of training in occupations that require a diverse range of skills and knowledge as well as maturity, independence and judgment. Apprenticeship involves planned day-by-day training on the job and work experiences under proper supervision, combined

with technical studies in subjects related to the occupation. Most apprenticeships are from one to five years, depending on the occupation. To master a particular trade an apprentice must learn and perfect each skill identified by the union and bring those skills up to the speed and accuracy required for the job. Each apprenticeship program is administered by a training committee made up of employee and employer representatives and is registered with the State Joint Apprenticeship and Training Council (JATC). The committee determines specific entrance requirements, screens applicants, and monitors the training of the apprentice.

The apprenticeship process is a formal arrangement involving employers, unions, vocational/technical and community colleges and the individuals who want to learn a skilled craft. While each apprentice works with and learns from skilled crafts people, an apprentice also takes related training to gain additional knowledge of the craft. The related training classes are held in public or private vocational/technical schools and community colleges. Classes offer the apprentice the opportunity to pursue progressively more complex learning as does the on-the-job training. The apprenticeship program is set up to ensure that the apprentice learns all aspects of the trade and will be a highly skilled journey level worker who can work without supervision when the apprenticeship training is complete (Harry, 1990; Plan for tomorrow today, WTECB, 1994).

Apprentices earn wages during their apprenticeship at a rate less than the prevailing wage for the industry and their pay will advance on a regular schedule

as they gain skill in their craft. The employer or sponsor pays for the related classroom training. Qualifications for apprenticeship may vary from one apprenticeship to another but may include a minimum age requirement; mechanical and mathematical aptitude tests; high school diploma or GED; health requirements; and, previous work experience (Harry, 1990; Plan for tomorrow today, WTECB, 1994).

Jeffery Cantor (1992) studied the characteristics of 23 national community college and organized labor apprentice programs. He cited apprentice programs as a catalyst to bring together unions, employers, and community colleges to cooperatively educate and train workers. This mirrored the findings of the Florida Council on Vocation Education (Joint Ventures, 1987) who, in 1987, examined substate linkages between business, labor and vocational education. Cantor's research objectives were clear; he wanted to identify those apprenticeship programs that have successful linkages, to identify factors that made them successful, and to make recommendations for replication of dual enrollment apprentice programs in community colleges in many locations. His results were organized around the question: why did employers, labor organizations and community colleges collaborate?

The findings that emerged supported Cantor's (1992) expectations. He found existing partnerships between community colleges, apprentice programs and labor organizations mutually beneficial (p.101-108). For instance, unions and employers benefited from the colleges' educational capacity and the

colleges benefited from the large numbers of dual enrolled apprentices who otherwise might not have attended college. The participation of the college in curriculum development, site support and in identifying enrolled apprentices at risk of dropping out was a significant contribution to the apprentice programs as was credit awarded to apprentices towards an associate of science degree. A major benefit to colleges was the program standards developed by the national unions in cooperation with employers. A significant finding was that collaboration between apprenticeships and community colleges enhanced the potential to mediate conflicts over issues of controlling the types of training and the number of trainees. Cantor (1992) also listed the ability to access external funds for program support as an additional benefit of the involvement of community colleges-apprentice partnership. Hensley (1993) reported similar benefits to union and community college educational partnerships.

From Cantor's research emerged a model worthy of promotion because of the mutual benefit between community colleges and organized labor. Successful programs are easily replicated from his descriptions and recommendations along with reasonable implications for practice. The outlined steps would encourage community colleges to add apprenticeships to their program mix in worker training (p.111-113). Apprenticeship as a form of workforce training, in cooperation with community colleges, can bring together the resources needed to provide workers that employers need (Cantor, 1994; Hensley, 1993).

Perelman (1992) said that scientists who study learning increasingly recognize apprenticeship as a powerful way of organizing learning in context. He felt there should not be a division between academics and apprentices and that it was a myth that education is different from training. The apprentice acquires skills in a meaningful order in "bunches" or "bundles" that fit together and performance and competence evaluations are embedded in the work/learning environment.

Instructor recruitment and training for apprentice training is driven by the unions with hiring approval and the evaluation of the instructor the responsibility of the college. The college does not have complete autonomy to make faculty selection decisions. This successfully selects faculty appropriate to teach trade skills. The apprentice training trust fund managers are presently pressing for a new relationship with the college by requesting contractual arrangements which may reduce the involvement of the community college in the educational process. This could cause conflict and confusion about the relationship between the college and the training trusts and challenge the mutual benefits (Harry, 1990).

Trades training is often associated with academic failure or low academic achievement and low social status (Walsh, 1994, p. 37). However, Walsh reported that skilled workers who complete apprenticeships reported their work as "secure, interesting, challenging and well-paid" and from both theirs and the employer's perspective trades-based careers offered great potential (p. 36-37).

Martin Feldman (1985) in Deegan and Tillery's book, Renewing the American Community College (1985) discussed the importance of community colleges establishing linkages with other educational providers. At the center of educational institutional reform is the recognition of all community educational resources and their role in learning. Opportunities for linkages will play an increasing role in education and Feldman acknowledged the labor union as a growing educational sector. The apprenticeship is one of the union's general types of "worker education." Along with skills in their trade, another intent of the curriculum is to help workers become mature and responsible citizens.

Apprenticeship is a learning method that stresses peer support and teamwork, skills that are essential in the work site and sought by employers. Apprenticeships already have the integration of education, training and employment for which educational reform calls (Walsh, 1994). Peter Applebome (1995) reported that employers say one-fifth of American workers are not fully proficient in their jobs. Employers interviewed for this study, expressed a lack of confidence in the ability of schools and colleges to prepare young people for the workplace. Applebome reported on a study by the Census Bureau which was produced for the U.S. Department of Education by the National Center on the Educational Quality of the Work Force at the University of Pennsylvania. The study illustrated an alarming division between schools and the workplace even as national education and labor policy called for closer cooperation to improve the skills of the nation's workforce and to smooth the transition from school to

work. The national survey, which gathered responses of plant or site managers at 3,000 locations with more than 20 workers including offices, factories and construction sites, showed that schools and employers seemed to be operating on totally different tracts. Employers did not consider young people for employment who did not have years of experience in the work force. When asked to rank on a scale of 1 to 5 the factors they used in making hiring decisions, employers ranked at the top applicants' attitudes, communication skills and work experience. Schools on the other hand serve a broader educational purpose than just job training. Nonetheless, the survey findings are troubling because one would expect employers and schools to have common goals and strategies. The educators and the employers, the supply side and the demand side, do not collaborate. Employers have given up on the schools and are no longer seeking to influence them. Education, labor, employer and employee partnerships such as those found in community college apprentice programs offer the opportunity to forge common goals (Applebome, 1995).

Methodology

The research method used in this study to investigate the phenomenon of woman apprentices' success in the trades was qualitative. Naturalistic qualitative research has a long history of use in sociology and anthropology and has gained a more recent following and viability in education. There are several terms used by scholars to identify qualitative research; *interpretive*, *naturalistic*,

fieldwork, case study and ethnography are among the most common. These methods are described and evaluated by Bogdan & Biklen (1982), Locke, et al. (1993), Merriam (1988), Strauss & Corbin (1990), Wolcott (1979 & 1990), and Yin (1984 & 1995).

Since this was a study of mentored woman apprentices in their work setting, a qualitative approach was appropriate. The study looked at a distinct cultural setting and investigated the worth of an educational intervention for a particular population of students. Wolcott (1979) suggested that the qualitative research model, with its anthropological orientation, offers perspective to educational settings. Terms such as culture, innovation, acculturation, change agent, primary group, are especially suited to describing processes related to directed change. It is, he felt, a dramatic instance of interdisciplinary "borrowing;" taking concepts from economics, anthropology, social psychology and offering perspectives for studying the educational process. Qualitative research provides for a continuing dialogue and can contribute to problem identification or to problem resolution from which all can benefit. Lincoln (1989), Lincoln and Guba (1985) and Yin (1984 & 1995) all suggested that qualitative research is appropriate in education and, at the time of Lincoln's 1989 publication, it was noted that a paradigm shift was occurring in academic research from a positivistic scientific model to a qualitative more humanistic, model. According to Weiss, cited in Jick (1985), qualitative research is apt to be

superior to quantitative data in "density of information, vividness, and clarity of meaning."

According to Yin (1995) and supported by Bogdan & Biklen (1982), Locke, et al. (1993), Merriam (1988), Strauss & Corbin (1992), Wolcott (1979), and Yin (1984), the case study is one of several ways of doing educational research and is the preferred strategy when "how" or "why" questions are being posed, when the research investigates a contemporary phenomenon within a real life context and when the investigator does not control the events.

The researcher read three ethnographic research reports in preparation for initiating this study; the seminal Wolcott (1994 ed.), The man in the principal's office; Perelman's (1992) School's out; and Freedman's (1990) Small victories: The real world of a teacher, her students and their high school. These, and the case study and/or ethnographic dissertations studied, (Cutler, 1991; Olson, 1993; Segura, 1989) made the case for this approach as a means of determining whether or not the TMN improved the retention of women in building trades apprenticeships. According to Fetterman (1989), the emic perspective, or the insider's perspective of reality, is the basic cornerstone of most case study research. In this light, woman apprentices' interviews could provide the most significant information about how and why the TMN worked, if indeed it did. The external, or etic perspective described the collected data. Most researchers see both as important in the analysis of data.

Bogdan & Biklen (1982) discussed types of interviews. They included structured, semi-structured, informal and retrospective interviews. In practice types of interviews overlap but there are pros and cons to each type. The structured types are similar to questionnaires. The semi-structured interview allows the researcher to probe for additional detail about the subject's experiences, but has enough structure so that each informant is asked to respond to the same inquiries and keeps the interview focused. The informal, or more specifically, the "waterfall" interview which allows an inquiry to flow from open ended questions, is also suitable for case study data collection. Retrospective interviews ask participants to recall events.

Good research practice requires the researcher to use multiple methods and data sources to verify research findings. A qualitative study design expects that the researcher will review historical and current documents and will conduct participant checks to corroborate observational and interview data that supports the research findings. This is a strategy that aids in the elimination of bias and improves research practice. Multiple methods increase the potential to produce an integrated whole from the findings generated by the primary case study method (Mathison, 1988; Yin, 1984 & 1995).

The research design was one in which a single group was studied only once. Campbell and Stanley (1966), have criticized single case studies feeling that securing scientific evidence involves making at least one comparison. However, the Campbell and Stanley publication pre-dates the emergence of

qualitative research in educational settings. In 1995, Campbell wrote the forward to Yin's text about qualitative research and conceded that case study methodology can contribute to knowledge. According to Borg, Gall & Gall (1992), there are numbers of respected single case studies, and the apparent danger is in drawing causal inferences from them.

The conditions of observation, both physical and psychological, are far from optimal. What survives or is retained is determined to a large extent by pure chance (Campbell & Stanley, 1966). During the interview process, conditions of anonymity, increased awareness of what response is politically appropriate, and fear or caution, all have a bearing on the answers to the questions put forth by a researcher. Sampling bias can occur because the researcher chooses who to interview and what to observe. The case study depends on cooperation of respondents because the information derived comes from a captive audience. Information is also dependent on the rapport that the researcher develops with the observed. Case study methodology has also been criticized for a lack of rigor and precision. But the methodology can be effective and rival variables can be guarded against if tactics outlined by Yin (1984 & 1995) are observed and data is collected from multiple sources. (Borg, et al. 1992; Campbell & Stanley, 1966; Segura, 1989; Walsh, 1994). Finally, Yin (1995) warned that a single case study may be vulnerable because it may not turn out to be the case study it was intended to be and stray from the original intentions!

Margaret Wheatley (1992) noted that while she was attending a social science conference, she was struck by how "scientific" the social scientists strove to be. She suggested that social scientists are trying hard to be linked to formulaic descriptions of human behavior while scientists are moving into a universe that suggests entirely new ways to describe reality. She quoted Nobel Prize winner Sir Peter Medawar; "scientists build 'xplanatory structures, telling stories which are scrupulously tested to see if they are stories about real life."

According to Yin (1995), every type of research has an implicit research design. The design is the logical sequence that connects the data to the research questions and to the research conclusions. The major intervening steps are the collection, analysis and interpretation of relevant data. Yin (1995) argued that in order to capture and analyze relevant data, some propositions must be stated in order to give direction to the collection of the data. Yin said that theory development prior to the collection of any data is an essential step in case study design so as to provide guidance in determining what data to collect and the strategies for analyzing them.

The theory underlying this research began with an assumption that the TMN was useful in helping retain women in building trades apprenticeships and that the participants would perceive that it was so. The researcher expected that through a case study of this small group of mentored woman apprentices, using interviews and other data collection necessary to study the TMN model, information about the relationships between the mentor and the apprentice

would emerge and conclusions could be drawn from that information about the worth of the mentoring activity in meeting the goals that the Trades Mentor Network intended.

CHAPTER 3 - METHODOLOGY

The purpose of this study was to describe the Trades Mentor Network (TMN), to consider its worth as a retention strategy, and to determine if the mentored woman apprentices credited their being mentored as an important help to them in continuing their apprenticeship in the building trades. The research methodology was a qualitative case study with the conclusions triangulated with data from documents and archival records. In addition, the study was validated by participant review and review by selected people of both genders who are involved in apprenticeships.

Population Studied

The population studied was at-risk mentored woman apprentices in the building trades who were selected from two Washington State community colleges. They were selected as being at risk by their apprentice coordinators. In total, during the course of this research project, 39 woman apprentices were identified by JATC apprentice coordinators as being at risk of dropping out and were invited to be matched for mentoring with a TMN trained journey level worker who practiced the same craft as they did. Although these 39 woman apprentices and the trained mentors matched with them represented a small number of the 8,368 Washington State apprentices (Wilde, 1995) they were the population that had the retention intervention.

Of the original 39 apprentices who were identified as being at risk of not completing their apprenticeships and were invited to participate in the Trade Mentor Network, 11 did not participate in the TMN for the following reasons:

- One died tragically in a car accident.
- Four apprentices initially agreed to participate but were not able to be contacted by their mentor.
- An additional four apprentices dropped out of the Trades Mentor Network after being matched and having some mentoring. No reason was given for discontinuing the relationship.
- One apprentice received some mentoring but then moved out of state.
- A sprinkler fitter apprentice was matched and had some mentoring but her mentor was injured and the relationship was discontinued.

This left 28 apprentices who had a sustained relationship with a mentor. The TMN was founded in 1991, organized in 1992, and began training in 1992. The longest mentor-apprentice match studied was for the four years TMN has been in existence. Three of the 28 women have since completed their apprenticeships with the help of a mentor. Two of the three now journey level workers are painters who completed their three year apprenticeship, the other is a carpenter who completed her five year apprenticeship. The most recent mentor-apprentice match was made just before the interviews of the mentored women began; this relationship, which continues, had lasted for one quarter.

Data Sources and Collection Procedures

The goal of the first part of the study was to describe the Trades Mentor Network. The description of the TMN was taken from the minutes, reports to the funding source, and records of the TMN advisory committee meetings. The researcher is a member of the advisory committee and attended the meetings. The description of the TMN training was taken from the class syllabus, materials, and from researcher observation. The researcher attended several of the classes of three different training sessions, had conversations with members of the classes, and frequently discussed the training with the TMN organizer.

The goal of the second part of the study was to examine the apprentice environment and to assess the perceptions of the mentored women about the usefulness of the Trades Mentor Network as a retention strategy. Modified participant observation, focus groups, interviews, and field notes taken during the focus groups and other meetings were the dominate strategies used for data collection for this part. Other data, observations at the apprentice training site, records from the TMN and community college enrollment records contributed to the research as well.

The data for part two of the study were collected in two ways. The part two, phase one data were collected as part of a special grant project, the AGENDA project (described later in this report). The data for the AGENDA project were collected during the Fall and Spring quarters of the academic year, 1995-1996. This data collection was used to assess and describe the

construction trades environment which was the setting for the research population who were interviewed for part two, phase two of this research project.

For the AGENDA project, as many of the mentored women as could be located and who were willing to participate were asked to attend focus groups to discuss their experiences as building trades apprentices. For the AGENDA project they were part of a larger group of 171 people who were involved with apprenticeships and who were interviewed to collect data on the current state of the apprentice environment. Data from the first phase were used to establish a picture of the work environment as a context in which to study the mentor-apprentice relationships. (It was also used as the baseline research from which to create a multimedia training guide. The training materials will be used as an orientation tool for recruiting apprentices and will also be shown to all first year apprentices). The semistructured interview was used for the AGENDA project focus groups. Questions in phase one, the AGENDA project, were questions such as: What is it like to be an apprentice? What are the positive and negative experiences in the classes and at the job? How did you come to be a building trades apprentice? (Appendix A). Some focus group meetings from phase one were tape recorded and all were recorded on a lap top computer by a volunteer from the AGENDA consortium. One of the strengths of the AGENDA project data was that it was compiled from a cross section of the whole work force and training groups in the building trades, not just from women or women's advocate groups.

The goal of the second part of this research was to assess the usefulness of the TMN as a retention strategy. The phase one AGENDA data collection gave a current picture of the apprentice environment. A second phase of data collection was undertaken. The strategies in this phase were focus groups and individual interviews to discuss the apprentices' relationships with their mentors and the worth of the Trades Mentor Network as a retention strategy. These focus groups and interviews were audio taped and transcribed by the researcher.

An informal, conversational "waterfall" type interview was used in these focus groups and the individual interviews. This more flexible style of interview was useful in obtaining information about apprentice's evaluation of the mentoring experience but still allowed some cross case study comparison about how one apprentice's experience compared to another's experience. The apprentices were asked to discuss their work experiences and their relationship with their mentor in an effort to get at the question of whether or not mentoring helped them. The questions were open ended so that the ideas came from the women rather than from ideas planted by the researcher with less subtle questions. Questions in phase two focused on what, if anything, changed after the women were matched with a mentor. Questions included: What was the length of time you were matched with a mentor? What is the relationship between you and your mentor? Since you were identified by the apprentice coordinator as being at risk of dropping out of your apprenticeship and asked if

you would like a mentor, was it, in your perception, significant in making a difference in whether or not you stayed? Or was it nice but not necessary? The flow chart in Figure 1 shows the two phase research process and the intended outcome from each phase of the process.

In phase two, data were collected from the TMN on the 28 women who had a sustained

mentor-apprentice relationship. Twenty three of the mentored women participated in focus groups or interviews. Thirteen women participated in small focus groups of four or five people and four women participated in individual interviews. Two women were interviewed by telephone and two women responded to a written appeal for information since their work schedule and job location made it next to impossible to interview them in person. Information about two others was culled from various TMN reports.

The transcriptions of the focus groups and interviews were a significant source of data about how the women viewed the effectiveness of the Trades Mentor Network and its usefulness in retaining them in apprenticeships. In order

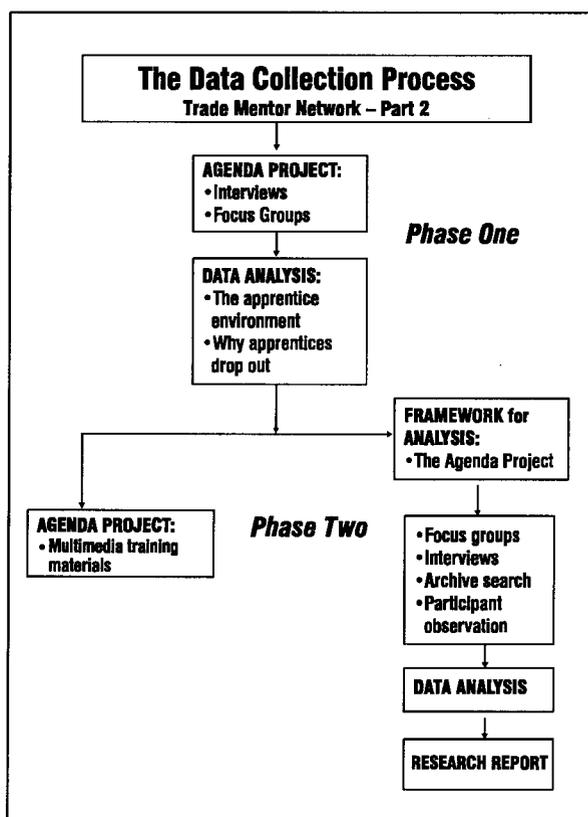


Figure 1. The Data Collection Process

to provide the rich detail that is critical to qualitative research, quotations from both phase one and phase two interviews are included in this report. They describe the building trades work and the job site environment. They were also used in order to describe the mentor-apprentice relationships. Some demographic data included in this report, including ethnicity, age range, and family status, were available from the Trade Mentor Network data base and some were volunteered by the apprentices. After reading the audiotape transcriptions and other materials, forming general conclusions about the emergent themes, and identifying representative samples of the women's stories for presentation, the information was organized around the themes that emerged from the phase one research of the AGENDA project. The women's words described their experiences, their relationship with their mentor and their perception of the usefulness of mentoring.

Informal data were gathered by the researcher in the form of observations of apprentices and apprentice programs from July 1989 to July 1995, while serving full time as the Director of Apprentice Programs for South Seattle Community College. It was this informal data collection and involvement in both the Trades Mentor Network and the AGENDA project that piqued the researcher's interest and provided the idea for the research.

A Framework for Analysis: The AGENDA Project

In April 1995, a group of concerned apprenticeship coordinators, apprenticeship training managers, and advocates for woman apprentices in Washington State, including this researcher, formed a consortium to address the dropout rate of women in the building trades (Appendix B). This consortium, which consisted of 12 women, had just attended the affirmative action subcommittee of the Washington State Joint Apprenticeship Training Council (JATC) and had heard, once again, the dismal figures concerning women's participation in the building trades. Many of the consortium members, in fact seven of the twelve, had been journey level building trades women. While recruitment efforts had increased the number of women who had experimented with apprenticeships, the retention rates were low and high numbers of women still dropped out.

The TMN was one strategy for increasing the retention rate of women but the one-to-one mentor-apprentice relationship prevented the TMN from serving more than a small number of people. The consortium decided that training materials that would stress inclusiveness, teamwork, and safety could have an effect on changing the culture of the trades to make it more hospitable to women, indeed to all apprentices. The consortium applied for and received a Carl D. Perkins Gender Equity in Vocational and Technical Education grant to sponsor a project to study the apprenticeship environment and to design multimedia training materials for all first-year apprentices. The intent was to

develop a retention strategy that could reach greater numbers of apprentices. South Seattle Community College was the fiscal manager of the grant and this researcher was the project administrator. The project was named the AGENDA project (**A**genda for **G**ender **E**quity, **N**ontraditional and **D**iverse **A**pprenticeships) and it provided the first access by the researcher to the stories of the mentored women, many of whom participated in the interviews and focus groups of the AGENDA project. This gave the researcher the opportunity to start the data collection that would be analyzed to judge the effectiveness of the TMN as a retention strategy for women in the building trades. The researcher was the recorder for AGENDA project interviews and focus groups that included mentored woman apprentices.

The data were gathered by interviewing 171 people, eight in one-to-one interviews and 163 in focus groups of four to fifteen people. Participants included white male apprentices as well as women and minority male apprentices in a wide range of trades and all categories of journey level workers of many trades. Instructors, training coordinators, members of the JATC and Labor and Industries staff were also involved in the focus groups and interviews.

All interviews and focus groups were arranged by consortium members and were facilitated by the same white female, Shannon Eberhart. Ms. Eberhart was hired by the consortium, using grant funds. Since all members of the consortium were tradeswomen advocates and involved in some capacity in apprentice programs administration, it was felt that the interviews should be

facilitated by a neutral person. Ms. Eberhart was experienced in facilitation, narrative data collection, diversity training and in multimedia curriculum development. She had done a similar project with a Seattle public utility that trained 2,800 employees using a curriculum she had designed. She would also be responsible for the training materials that would be the outcome of the AGENDA project. The data were recorded on a lap top computer by a consortium member and in many instances were audiotaped. The consortium members served as advisors and peer reviewers of the data and collaborated in analysis of the data. All consortium members had pledged resources from their respective agencies to leverage the grant money.

The interviewed people described the work conditions for apprentices in the building trades. Through content analysis, key findings about the building trades environment were generated from the collected data. The key findings, affirmed by apprentices, the other participants, and consortium review, described the reasons why apprentices drop out of the building trades and why women drop out at a higher rate than white men. These key findings from the AGENDA project, phase one of the data collection, provided the framework around which the researcher organized the stories of the mentored women and their relationship with their mentor.

Data Analysis Methodology

The case study had two parts. Part one was the description of the TMN and part two was the perceptions of the mentored woman apprentices. Part two had two phases of data collection. Throughout both phase one and phase two of the part two data collection, data analysis occurred at the same time as data collection. Field notes from the focus groups, interview transcripts, and the collection of data from documents were analyzed as they were completed. The AGENDA consortium met every two weeks in the initial stages of AGENDA data collection; Ms. Eberhart and this researcher met weekly and talked on the phone almost daily. Ms. Eberhart's report to the AGENDA consortium described the key findings of the phase one data which described the apprentice environment and addressed the reasons why people drop out of an apprenticeship.

The phase two data, the stories about the women's relationship with their mentors, collected by this researcher were examined, categorized, re-combined, and organized around these key finding. Woman apprentices had contributed to the phase one research of the AGENDA project and had affirmed its credibility. The apprentices' own words were used to describe how their mentor had supported them during their apprenticeship. Apprentices' individual comments were associated with one or more of the key findings and the placements were verified by the concordant judgment of the members of the AGENDA consortium and the TMN advisory committee and a select group of apprentices. Thus there was agreement about the placement of the data. Due to this

organizational framework, the data began to make sense and began to address the question of the worth of the Trades Mentor Network and the women's perception of its usefulness for them. In presenting the results, quotations were chosen to demonstrate the prevailing issue in each of the key findings.

The women's stories provided a description of the apprentice-mentor relationship and told how it helped them persist in their apprenticeship. Stories that the mentored women described as being pivotal in the mentor-apprentice relationship and that appeared to be robust enough to be used were grouped by relevant segments and placed into one of the three themes. These stories substantiated the significance of events at work and at school that could have contributed to the women dropping out. The stories told how the mentored women used their mentors in critical circumstances described in the key findings, to help forestall dropping out.

Triangulation

Triangulation used in the description of the TMN allowed for multiple data checks to overcome any deficiencies of the research process (Mathison, 1988). It provided quality control because comparing archival data from before and after the inception of the TMN could support other data on the effectiveness of the TMN as a retention strategy.

Using Yin's (1984) essential data list as a guide to materials and practices that were used in the project, materials that were compared included data such

as the number of apprentices and the percentage of woman apprentice dropouts. Triangulation sources also consisted of JATC affirmative action committee reports, JATC statistics about building trades apprenticeship enrollments and affirmative action records, information gathered during the AGENDA project, and community college building trades apprentice enrollment and drop out records from 1991 to 1996. TMN reports, advisory committee minutes and training materials were also important sources of data. The data were available from the Washington State community and technical colleges and from the Department of Labor and Industries. They were reviewed to see if there were significant changes in the number of dropouts among woman apprentices since the 1992 inception of the TMN. The Arman (1992) survey and a preliminary search of other literature showed that there had not been a formal mentoring program in the building trades before the TMN's inception. However, there was much literature about mentoring in other contexts that helped to validate the program's effectiveness as a retention strategy. In addition, the availability of many of the people who have been involved in the TMN provided the opportunity to have other people assess the data that were collected.

Role of the Researcher

As South Seattle Community College's Director of apprentice programs, the researcher served on the TMN organizing committee. The researcher also served on (and continues to serve on) the advisory committee that designed

both the program and the training curriculum. Since the researcher had been working in apprentice programs for the past five years, she had an advantage in describing the culture of apprentices and journey level workers in the building trades and lent this experience to a description of the TMN. This could give some bias to a study of the mentor program. According to Locke, et al. (1993) there is a possibility that personal biography will influence the research process.

But the authors also stated that the researcher's personal biography can become a positive part of the research process if it is recognized as an inextricable background and if the researcher provides self-monitoring while conducting the research.

As the Director of the apprentice programs and as someone involved in the TMN, the researcher was involved but suitably distant from the study participants, both mentors and apprentices. According to Wolcott (1979) and Fetterman (1989) an effective participant observer must be involved yet maintain professional distance while interacting with the population to be studied. The researcher's tentative hypotheses was that the TMN would have a positive influence on the woman apprentices who participated. The researcher also hypothesized that the TMN would have the effect of subtly changing the climate of the trades to become more accepting of women. To protect the study from possible researcher bias, the phase one AGENDA focus groups were facilitated by another person and the researcher was a recorder and observer. Phase two focus groups and interviews were conducted by the researcher. Once the data

were collected, the researcher expected to be able to draw a picture of the TMN and make logical conclusions that would lead to useful insights about the building trades and the value of the mentoring process.

CHAPTER 4 - THE TRADES MENTOR NETWORK

Reality changes shape and meaning because of our activity . . . We are required to be there, as active participants. It can't happen without us and nobody can do it for us. Margaret Wheatley

Equity in the Building Trades

In terms of equity in the building trades, women still are not well represented in the journey level worker ranks. In spite of increased recruitment efforts, equity laws, and the sanction of apprenticeships, the number and the percentages of woman apprentices in the building trades have remained virtually unchanged.

Woman Apprentices in the Building Trades

There is a history in the United States, of excluding women workers from the skilled crafts. Women worked in the skilled crafts when industry needed labor, but were viewed as a threat to male workers when the economy contracted. After World War I and World War II, women were expected to relinquish jobs they had acquired when men entered the armed forces. The passage of Title VII of the 1964 Civil Rights Act (as cited in Martin, 1988), which outlawed race and sex discrimination by employers and unions, put the law on the women's side. In 1981, Executive Order 11246 amended the 1964 Civil Rights Act (as cited in Martin, 1988), and established, among other industries, specific goals and timetables for the percentage of women in the building

trades. It required employers to develop affirmative action programs and made the employer responsible for a harassment-free workplace and for combating the isolation of female employees. Apprenticeship regulations set numerical goals for woman apprentices, based on the participation of women in local labor markets, and specified recruitment techniques. In 1981, these numerical goals were set by the US Department of Labor at 6.9%; in the United States, they have not been met or increased (Martin, 1988).

Women in Washington State have fared better than women in other states in their quest to enter the building trades. In the past five years, the percentage of women in building trades apprenticeships in Washington has been between 11 and 12%, which exceeds the federal goals. Fall quarter Washington State community college enrollment data show that in 1991, there were 243 woman apprentices (12.26% of the total) in all of the building trades apprenticeships; in 1992, the number was 234 (11.18%); in 1993, there were 232 women (12.22%); in 1994, there were 225 women (12.47%); and in 1995, there

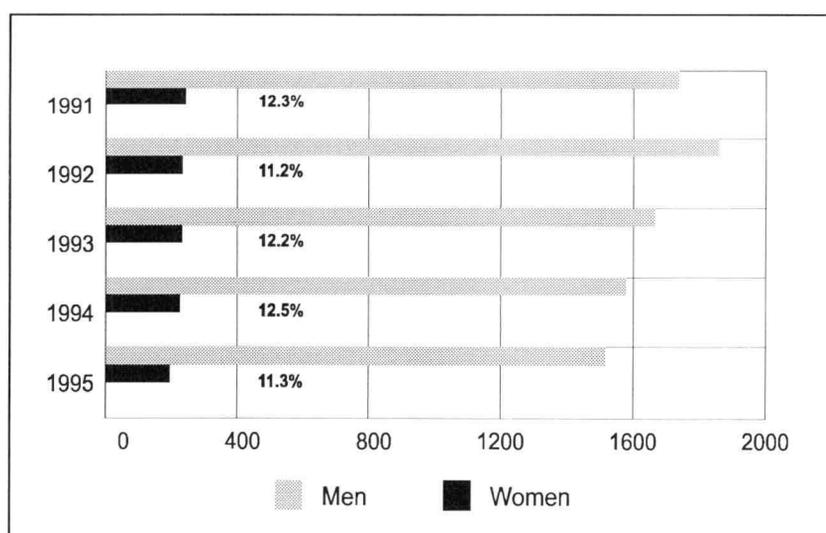


Figure 2. Community College Apprenticeship Completers
All construction trades, fall quarter 1991–1995

were 195 women or 11.33%.
(Washington State Community
and Technical College
Enrollment by Occupationally
Specific Programs, 1991-1995).

Figure 2 shows the number of
men and women in
apprenticeships and the
percentage of woman
apprentices.

However, only a small
number of women, who
represent a small percentage of
all apprentices, actually
complete their apprenticeships.
The number of women, as a
percent of the total
apprenticeship completers, in
three trades (painting, electrical
and carpentry) was gathered

from the Washington State Department of Labor and Industry's 1991-1995
apprentice data (see Figures 3-5). The data for these trades were chosen

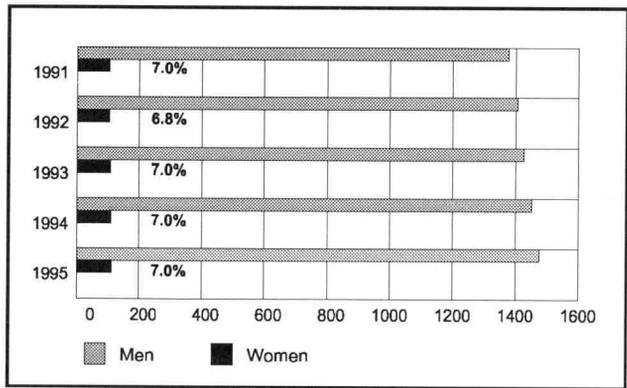


Figure 3. Community College Apprenticeship Completers
Painters, fall quarter 1991-1995

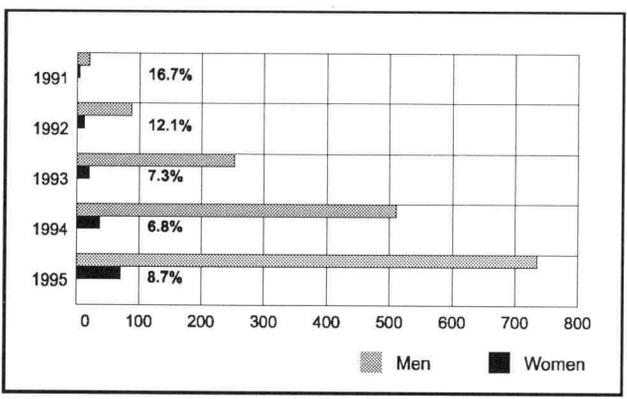


Figure 4. Community College Apprenticeship Completers
Electricians, fall quarter 1991-1995

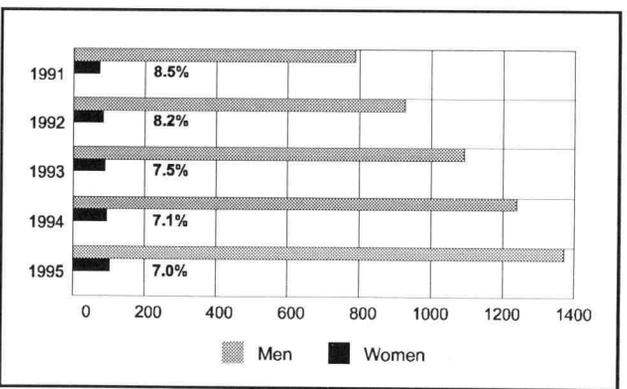


Figure 5. Community College Apprenticeship Completers
Carpenters, fall quarter 1991-1995

because they had apprentice coordinators who voiced a strong commitment to increasing the number of women in their unions. In addition, many of TMN's first class of trained mentors were volunteers from the electrical and carpentry unions. Since mentors are matched with an apprentice in their same craft, there is a direct correlation between this commitment and the fact that 20 of the 28 mentored women were apprentices in one of these two crafts. Figure 3 shows that from 1991 to 1995, the percentage of women among the painters who completed their apprenticeships ranged from 6.8% to 7.0% of the total. Women electrical apprentices (Figure 4) had similar percentages except for two unusual years. In these exceptional years, 1991 and 1992, much smaller numbers than usual of electricians, men and women, completed their apprenticeship. The women, although their numbers were still very small, represented 12.1 and 16.7%. Women in the carpenters (Figure 5) had similar percentages with a low of 7 to a high of 8.5%. Men therefore, represented 91.5 to 93% of the total number of apprentices who became journey level carpenters in these years. From 1991 to 1995, 533 women and 7138 men became journey level painters, 143 women and 1606 men became journey level electricians, and 442 women and 5419 men became journey level carpenters (1/01/1991 - 12/31/1995, Washington State Department of Labor and Industries Apprenticeship Data).

Successfully completing an apprenticeship is the best avenue to getting the skills needed to succeed in the building trades. The figures illustrate the disproportionate number of men to women who successfully complete their

apprenticeships. As a result, far more men than women receive the benefits of union wages and union working conditions. Retaining women in apprenticeships is a critical step in increasing the number of women in the building trades.

Retaining Women in Apprenticeships

The traditional culture of the building trades and the apprenticeship model has fostered an informal mentor-protégé relationship between an older and a younger male worker. This informal relationship, which has been the traditional avenue of indoctrinating younger workers into the trades culture, has existed among tradesmen, especially those with a multi-generational history of belonging in a trade, excludes women. However, as the United States' workforce has grown increasingly diverse, even the building trades are no longer as homogeneous as they once were. Women are trying to gain access to the work and into the culture. Once women have enrolled in an apprenticeship, their experiences in class and on the job and the support services they can access play key roles in convincing them to stay or drop out.

People working at the same job site often confront similar problems. Working together on the job is one way for people to solve problems as well as to help forge bonds of community. However, women working in the building trades are too small in number to do this alone. "They are so isolated," said members of women's organizations that advocate for trades women. There are

simply not enough women to advocate, mentor, and help each other on the job or at school. One apprentice painter reported that in her shop, “there are only six women in a crew of 250” and they do not work on the same team. Most often, the trades woman is but one of all the workers on a construction site. “I’ll go to a job and be the only woman there. I go into shock if I see another woman,” said one apprentice carpenter. Even if there is more than one woman on a particular job site, they are so underrepresented that they may never see one another.

Being the only woman in 300 workers on a job, was more lonely than I had ever felt before in my life. One day I heard that there was another woman on the site. I can’t explain the feeling I got. All I wanted to do was see her. Maybe say, ‘Hi.’ I was astounded at my reaction. It was then I realized how much of an outsider I was (journey level woman construction worker, speaking to a focus group).

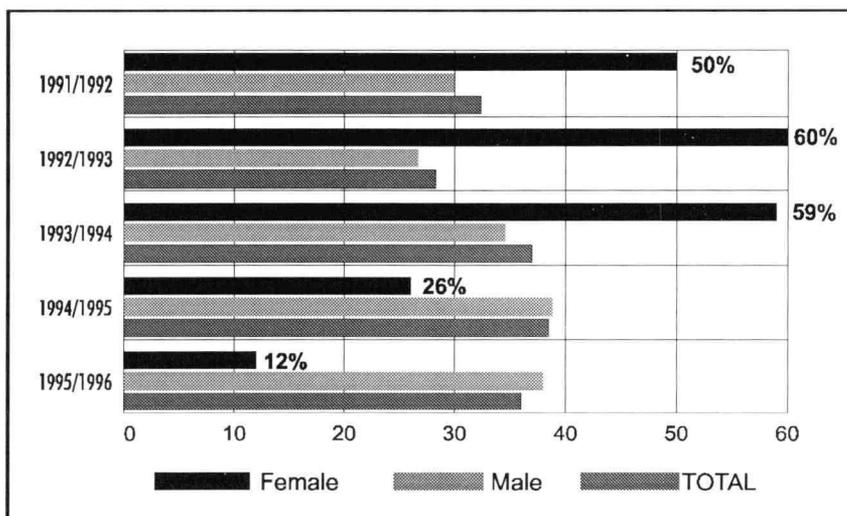
In addition, managing to reach journey level status alone does not necessarily mean one woman has the energy to help another. Journey level trades women, like woman apprentices, often meet much resistance on the job. A journey level trades woman may be so busy running interference on her own job that she has no energy to help an apprentice.

I asked a woman journey level worker where are the women? She said, ‘gone.’ When I asked why, she said they got tired of dealing with the underlying stuff like not wanting you here. ‘You watch. The supervisors will put the guys (male apprentices) with journey level workers and you will be with the laborers. You won’t learn shit. You will still be cleaning up some white man’s mess as a journey level worker ‘cause they can’t see you any other way’ (carpenter apprentice).

Also, as a group, journey level trades women are called upon to speak and act on behalf of their gender and their craft to share their success and to recruit other women. Trades women organize forums, speak at apprentice preparation programs (especially those that serve women), talk to high school groups, and attend job fairs. Serving as a role model for other women is valuable but it can be a significant time commitment which requires planning and scheduling as well as training.

The data that initiated the founding of the Trades Mentor Network showed that women dropped out at twice the rate of men (Arman, 1992). Most of the attrition

occurred during the first quarter of the apprenticeship. However, the dropout rate in this critical first quarter declined



**Figure 6. Community College Apprenticeship Drop-out Rates
All construction trades, fall quarter 1991–winter quarter 1996**

dramatically from 1991 to 1996. Figure 6 shows the fall quarter to winter quarter community college enrollment data to compare the dropout rates from 1991, (the year before the TMN's inception) to 1996. In 1991/92, of 87 women, 43 dropped out, a rate of 50%; in 1992/93, of 77 women, 46 dropped out, a rate of

60%; in 1993/94, of 56 women, 33 dropped out, a rate of 59%; in 1994/95, of 85 women, 22 dropped out, or 26% and in 1995/96 it was a dramatically lower rate of 12%, of 49 women only 6 dropped out of their apprenticeship. (Washington State Community and Technical College Enrollment by occupationally Specific Programs, 1991-1996). What accounted for this change?

The Trades Mentor Network

Local unions have been able to show “good faith efforts” in planning recruiting strategies to attract women but, as shown by the low number of women in the trades, they have had difficulty in actually recruiting them for apprenticeships and even more difficulty in retaining them once they have been recruited. The Trades Mentor Network was organized in 1991 by the AFL-CIO’s Worker Center, an agency of the King County Labor Council. The Worker Center had surveyed apprentices who had graduated or dropped out of a building trades apprenticeships in recent years and had determined that a mentoring program would help to increase the retention rate of women and people of color in building trades apprenticeships.

The King County Labor Council and the Worker Center called together an advisory board made up of Joint Apprentice Training Council (JATC) coordinators, working tradespeople, community organizations, community college representatives, and members of various apprenticeship bodies (Appendix C). This group, facilitated by Myron Minor of the Labor Council and

Charles Best of the Worker Center, met for months to design the TMN, its outreach and recruitment methods, and the curriculum that it would use to train mentors. Currently, the TMN, with the aid of union officials, business agents, and JATC coordinators, identifies, trains, and supports journey level workers in the building trades (both current and retired) to work one-on-one with an apprentice. The TMN trains people to act as advocates for women and people of color and to provide access to resources and a sympathetic ear as the nontraditional apprentices proceed through their apprenticeship on the way to achieving independence and journey level status.

Shai Kane, a journey level carpenter, said she knew what it was like as a woman to feel "stigmatized and isolated" on construction projects. With this experience and these feelings, she became involved in the newly organized TMN. After receiving training, Ms. Kane began mentoring an apprentice. The initial training session was funded by a grant from the Washington State Community Development Department. The TMN temporarily lost its funding. During this period, Ms. Kane volunteered as the TMN organizer. When new funding was secured for the TMN, resources were identified to hire an organizer (coordinator); Shai Kane applied and was hired. The organizer recruits mentors, organizes training sessions, and provides the continuous support services that mentors need in order to mentor their apprentices. Ms. Kane (1995) talked about the intent of the TMN:

Even when apprentices are strong enough to withstand the challenges of their working life, events in their personal life can knock their feet out from underneath them and keep them from completing their apprenticeship. Sometimes all it takes to keep an otherwise well-qualified apprentice in their program is someone familiar with their trade standing behind them, with a helping hand to keep them up when life tries to knock them down. The Trades Mentor Network was founded to provide that helping hand (Shai Kane, 1995, TMN Organizer).

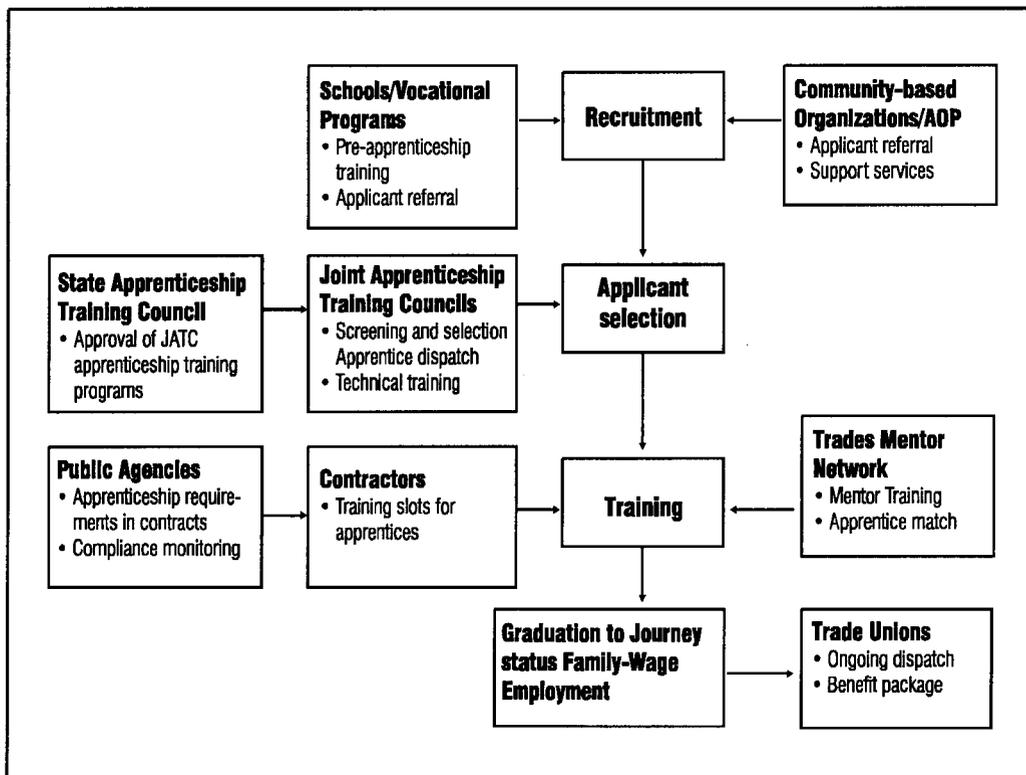


Figure 7. The Apprenticeship Process

Figure 7 shows the relationship of the Trades Mentor Network to apprenticeships.

The Trades Mentor Network Training

The TMN provided current and retired journey level worker volunteers with thirty hours of free, but mandatory, training and then matched them directly

with an apprentice in the same trade. The training sessions were held at South Seattle Community College's Duwamish Industrial Education Center, the site of SSSC's building trades apprentice training. Mentors must complete at least eight of the training modules (24 hours) to be considered eligible to be mentors. The training program covered topics that were designed to increase the mentor's interpersonal skills and familiarize them with available community resources. Since the mentors have ample experience in their craft, the training concentrated on social service issues. Class sessions covered issues that are common to the trades, such as alcohol and substance abuse and domestic violence. The sessions also covered transportation and child care, which most tradespeople have had little experience in trying to deal with (Trades Mentor Network, 1991-1995 & 1991-1995A).

Divided into ten, three-hour per week training sessions, the TMN covered the following issues:

Week One: Alcohol/Substance Abuse.

Week Two: Workman's Compensation, Unemployment Law, Americans with Disabilities Act.

Week Three: Sexual/Racial Harassment.

Week Four: DSHS, Day Care, Community Clinics.

Week Five: Domestic Violence.

Week Six: Cultural Diversity, Ergonomics.

Week Seven: Sexual Assault, Family/Youth Services.

Week Eight: Labor Agency, Labor Relations, Financial Counseling.

Week Nine: Coaching and Mentoring.

Week Ten: Sexual Minorities, Class wrap-up.

The curriculum has been subjected to both the expert judgment and field-trial phases of summative evaluation and has evolved over the four years since the founding of the TMN. After four years of refining through advisory committee review and mentor checks, the TMN has been determined to meet the TMN's defined instructional needs. The first training session was considered to be a pilot and the effectiveness of both the presenters and their material was assessed after being delivered to the first group of mentors. The TMN relied on experts from the community to train the mentors. The TMN organizer had a list of effective trainers from these various community and public agencies who delivered an effective and interesting curriculum in an interactive forum for the mentors. In order to help the apprentices, mentors especially needed training to deal with the increasing ethnic and gender diversity in the trades. Sexual and racial harassment in the building trades is illegal but it exists nevertheless. All of the women interviewed for this study experienced harassment either on the job or at school. The traditional journey level worker is a white male and is in a position, as a majority member of the trades' culture, to effect a cultural change by accepting responsibility for helping woman apprentices deal with harassment, whether they are mentoring woman apprentices or training women on the job.

The community and agency representatives, during the training, introduced the mentors to low cost sources of substance-abuse treatment, financial, psychological, sexual, and family counseling. They also introduced the mentor to the laws surrounding labor practices, harassment and to union services that are available. Each community representative brought handouts and brochures on the topics and programs on which they spoke. Each mentor was provided with a 3-ring binder to hold handouts. Each then left the training with a reference manual to use while working with their assigned apprentice (TMN, 1991-1995 & 1991-1995A).

The Mentor-Apprentice Match

The TMN organizer matched a trained mentor with an apprentice, based on her knowledge and assessment of the mentor and her conversations with the apprentices and their apprentice coordinators. Apprentices who were identified as at risk of dropping out were *invited* to participate but did not have to accept the invitation (TMN, 1991-1995 & 1991-1995A).

(I) had been in (my) apprenticeship for a month or two, the IBEW apprentice training coordinator told me about the Trades Mentor Network. (She) sent me a letter in the mail and said it would be a very good idea to come to this meeting and find out about this stuff. They put me together with a mentor (electrical apprentice).

The mentor and apprentice were matched as soon as possible after the mentor was trained; the mentor was asked to make the first move in establishing the relationship. There was no formal policy governing the type and level of contact.

This was left to the mentor and apprentice and, as the TMN organizer said, “they are encouraged to use any contact that is comfortable for their relationship.” According to data from the interviews and focus groups, the most frequent contacts were telephone calls but the apprentices reported getting together as well. The apprentice-mentor relationship was intended to last the duration of the apprenticeship (TMN, 1991-1995 & 1991-1995A). “The goal is to ensure that the qualified women admitted to apprenticeships do not drop out for any reason but the decision that particular trade is not for them (Shai Kane).”

The relationship which developed between the mentor and the apprentice was the strength of the TMN.

I use my mentor pretty good. She calls me to see how I am doing, I call her sometimes. I call and ask her questions. I ask does she hear of any work. I don't have too many problems now, I am almost out (carpenter apprentice).

A successful relationship depended upon the trust that developed between the mentor and the apprentice and the support which was provided by that relationship. Kane described support as that which was “provided by listening, by providing opportunities to brainstorm to solve problems, and by sharing oneself as a person.” Some women were initially cautious about having a mentor:

Well, it took a long time to get the whole thing taking off, I walk into a room and I am presented with Mr. white boy American, you know he looks like a good Christian. I said what am I gonna do with this guy. I said whoa! I honestly didn't know what to do with him - I could bitch about stuff (carpenter apprentice).

Like the woman quoted above, other women were not sure what sort of a relationship they would have with a mentor or how that relationship would be useful to them.

It (the TMN) was such a new thing at the time and I don't think anyone knew what was suppose to happen and how it was suppose to be. What does a mentor do for the apprentice? (electrical apprentice).

(At first), I really didn't know what to ask him. Little by little I been talking with him lots more. I have ideas, he is a sounding board. He is my way to blow off a lot of steam so I don't go shooting my mouth off and get myself in trouble (carpenter apprentice).

Another woman suspected other than altruistic motives for matching her with a mentor. An ironworker apprentice's cynical first reaction was that being assigned a mentor may be a way of controlling or containing her:

(When) they asked me if I wanted a mentor. (I thought) I am not sure I want someone telling me that I need to shut up, stay low and not think for myself. Everyone keeps telling me 'go along and get along' or I'm going to be a short-timer. That ain't no good . . . They called me a troublemaker at the union meetings and the reps came out to talk to me about my attitude. Man, what attitude? I am not going to shuffle along and say 'Yas Suh'.

Another woman, expressing her initial apprehension, told of the subsequent turnaround in her feelings about being mentored.

One of the important things about having a mentor, is (that) I was apprehensive. I thought it might be sort of parental, not like a real person. He gives me good advice like a friend would. People have no clue what kind of a resource dropping a quarter in the phone every now and then, what kind of a resource a mentor is (carpenter apprentice).

The Mentored Woman Apprentices

One purpose of this study was to describe the Trades Mentor Network, the other was to examine the experiences of the mentored woman apprentices and the meaning they made of this experience as it related to retention in an apprenticeship until they "turn out" as journey level workers.

During the time period delineated by this project, 39 women were identified to be matched with a trained mentor. All of these 39 were identified as at risk of not completing their apprenticeships and were invited to participate in the Trades Mentor Network. Eleven of the 39 did not start or did not sustain a relationship with a mentor; they left the program.

- One died tragically in a car accident.
- Four apprentices initially agreed to participate but their mentor was unable to contact them.
- Four additional apprentices dropped out of the Trades Mentor Network after being matched and having some mentoring. No reason was given for discontinuing the relationship or for dropping out of the program.
- One apprentice receive some mentoring but then moved out of state.
- A sprinkler fitter apprentice was matched and had some mentoring but her mentor was injured and the relationship was discontinued.

Three of the four women who had *no* mentoring dropped out of their apprenticeships as did two of the six that had *some* mentoring. (According to the TMN organizer or the apprentice coordinator - including one woman who moved out of state where she is, reportedly, still in the trades). Of these 11

apprentices, only one stayed in the trades despite having *no* mentoring and only two women dropped out of the trades despite having *some* mentoring. The remaining 28 woman apprentices who were matched with a mentor are still in the building trades and are still being mentored, or they have “turned out” as journey level workers.

The mentored women varied in age, ethnicity, years in their apprenticeship, building trade, and family status. The youngest participant was a 26 year old first year carpenter and the oldest participant was a first year electrician, aged 45. Twenty were single women or single heads of households and thirteen of those had from one to six children, ranging in age from infancy to adult. There were sixteen Caucasian women, five African American women, two Hispanic women, two Native American women, and two Pacific Islander women. One woman did not disclose her ethnicity.

There were also variations in the trades and gender of the mentors. Seven building trades were represented: twelve electricians, six carpenters, three painters, four ironworkers, one sprinkler-fitter, one plumber, and one sheetmetal worker. Nineteen of the 28 mentors were women: nine electricians, three carpenters, two plumbers (one matched with a sprinkler-fitter), two ironworkers, one painter and one sheetmetal worker. Apprentices were matched with someone from the same or similar trade. The electricians, carpenters, and ironworkers were well represented because journey level workers from these trades embraced the TMN and turned out in good number to

train to be mentors. Also, the nineteen women who became mentors were especially good role models for the apprentices they mentored.

The stories of the woman apprentices' experiences and their relationships with their mentors are the subject of the next chapter.

CHAPTER FIVE - THE MENTORED WOMEN'S STORIES

In recent years, social scientists have come to appreciate what political, religious, and military figures have long known; that stories (narratives, myths, or fables) constitute a uniquely powerful currency in human relationship... And I suggest, further; that it is stories... of identity--narratives that help individuals think about and feel who they are, where they come from, and where they are headed... John W. Gardner

Women Trades Workers

Outside my office window, across the street, a major construction project is being built. This site is typical of a building tradesworker's environment. A few months ago it was a deep hole in the ground, covering a square block, surrounded by a chain link fence, yellow construction tape with "Caution" written on it, and had a Sanican on each side of the block. As this introduction was written, the building was above street level and significant architectural details appeared on a daily basis. From my second story window overlooking the site, it was hard to tell if there were any women workers on the job, especially when all the workers were dressed for Seattle's usual inclement spring weather. They wore lots of bulky clothing, including hooded sweatshirts under their hard hats, and had tool belts slung over their coats and bright yellow rain slickers. Both women and men pull their hair into ponytails, so long hair under a hard hat was not a clue to their gender. From the second story window, there were no discernible differences in their work methods or demonstrated skills.

Each day the number of workers varied; I have counted as few as 12 and as many as 37 on different days. They are working hard, alone and in pairs, according to some architect's vision, directed by the contractor and a blueprint. They walked purposefully all over this tangle of rebar, wood, and concrete, and everyone appeared to know what they were doing. People carried long lengths of rebar over their shoulders, balanced so that both ends bounced gently as they walk. Great stacks of materials were delivered to the site. Scaffolding went up and then was torn down, concrete was poured and plywood was torn away and carried to another area and constructed into another form. One day, a team polished a platform of concrete, first by machine and then by hand, on their knees, arms swinging in a circular motion. They have strung wire, dug huge holes in the street and sidewalk, and have generally disrupted the whole neighborhood with a cacophony of noise from the massive machines they used.

The only discernible woman on the site was the traffic control "flagger," who diverted cars and people away from dangerous areas. In the middle of the construction site, standing over five stories tall, was a large yellow crane. It belonged to Garner Construction, owned by Jackie Garner, a woman owned construction company that was a subcontractor on this site and three others. She was a less visible woman in the trades than the flagger. In a northeast corner of the site a team of five carpenters worked together. As a result of sustained and close observation, four of them could be identified as men and one identified as a woman. She was as tall and broad shouldered as the men.

Her long, curly red hair escaped from her hard hat which, unlike her team members, was covered with decals. The decals were as plentiful as an old soldier's field medals; maybe they are *her* badges for valor. I watched her work every day.

When construction is completed, this building will be a large supermarket, drug store, and retail space, with apartments or condominiums above. All of us here at Seattle Community Colleges' district office have been "sidewalk superintendents," watching this project unfold, but none so intently as me. We usually spent a few minutes before and after work assessing the progress and speculating on what will happen next. I took binoculars to work so I could see better what was transpiring on the job. Even though I have worked with apprenticeships and trades workers for the past five years after spending the last year interviewing women in the trades, I had a new appreciation of their work and the climate in which they worked. I was certain that my sensitivity to the women on this project was not shared by my male colleagues who watched from other windows or if indeed they even knew that some of the workers were women. They had not heard the women's stories. The narrative that I had strung together of the women's stories and their relationship with their mentors gave them a voice that was both strong and poignant. They were few, the work was hard, and the environment harsh.

This description is illustrative of the environment of a building trades apprentice. The TMN was conceived to help women persist in their apprenticeship on this type of job site.

Why Women Drop Out of Apprenticeships

According to data collected in phase one of this research project, the AGENDA Project (Eberhart & the AGENDA Consortium, 1995), women listed three key reasons for dropping out of an apprenticeship. Their reasons were not discrete, but were instead additive or cumulative, with the building trades culture being the deciding factor:

1. The level of physical and mental endurance and previous technical expertise needed to perform the job duties in all conditions was higher than expected by building tradespeople as well as apprentices.
2. The level of life accommodation and sacrifice, logistical management, and personal support needed to adapt to the industry was unexpected and costly for the apprentices and everyone around them.
3. The trades culture is exclusive and adverse. To gain entry, all apprentices must go through a boot camp-like testing period. In addition, the working environment was hostile. The hostile environment was significant in women's decisions to drop out.

“The culture tends to treat women and men of color as outsiders . . . ”

“The culture demands assimilation as the price of admission.” Definitions of equality in the building trades differ between white men and all women. Women experienced classic symptoms of “tokenism” and “marginalization”; “feeling like an outsider - not being wanted; self doubt and doubting their experiences;

isolation, confused about what course of action to take; and feeling victimized and powerless” (As cited in the AGENDA report, 1995). Women said harassment was common, while men considered it to be rare and not a problem (Eberhart & the AGENDA Consortium, 1995).

Four common circumstances tended to lead to success by women: the higher the number of women in the apprenticeship, the higher the likelihood for success; internal grit was important in surviving in the culture; support from family and friends was important; ***and mentors made a difference. The nontraditional apprentices who were mentored reported that they couldn't have made it without their mentor*** (Eberhart & the AGENDA Consortium, 1995).

Illuminating the Mentor -- Apprentice Relationship

The mentor, first of all, provides a supportive friend for the apprentice. For a fourth-year carpenter apprentice, the phone calls from her mentor were a good support system. “She calls me just to see if I'm getting along okay. It's nice to have somebody there.” The apprentice appreciated having someone to talk to who was supportive and encouraging. This mentor-apprentice pair reported in a TMN report that they kept in touch regularly, whether or not they worked together. The mentor encouraged the apprentice to have confidence in herself. “Your performance is being measured, and you're competing with others. (You've) got to show that you are better.” The apprentice was glad that

her mentor was a woman. “It made it a lot easier talking to (her), and I can relate with her and relay my feelings and problems better.”

Their training allows mentors to be more than just friends to their apprentices. Data collected in this study found that the advocacy and support provided by a mentor was a significant factor in successfully retaining women as apprentices. The mentors helped the woman apprentices handle and get past situations and feelings that otherwise might have triggered them to drop out.

The woman apprentices were acutely aware of their situation, that there are significant barriers to overcome in the trades and in the trades culture in order for them to successfully complete their training. All the women who participated in this study reported that having a mentor really made a difference in their ability to make it in their apprenticeship. The women's personal stories make their experiences on the job real.

Physical and Mental Endurance

Key finding number one: The level of physical and mental endurance and previous technical expertise needed to perform the job duties in all conditions was higher than expected by building tradespeople as well as apprentices.

Construction work can be as physically challenging as a strenuous sport, pushing one's physical as well as emotional strengths to their limits. The women said, “the work is stressful - physically stressful” but they also said that they could do the work. One ironworker apprentice reported on her first day in construction work:

I am in a man's job. I am 5'2" and 115 pounds. There are some things I can't do like the men do them. I feel bad when I can't do it all. These men all have back problems or something. I don't know why they still want to continue to hurt themselves. The first night, after a twelve-hour shift, I had a 45 minute drive home. I tried to get out of my car and something had frozen in my back. I was literally stuck. I was so sore. I started honking my horn. Finally, my roommate came out. Getting out my car and up those stairs was excruciating. I guess I can see the comedy in it now. I laid in a hot tub for hours, sleeping.

In talking about how she was feeling the next day, the difficult nature of the work was revealed as was some of the cultural values of the trades worker. Endurance, stamina, and strength all are necessary in construction work and all are valued, but her determination not to let the men know how much she was hurting was of note. This reflected yet another building trade value journey level workers expect to be displayed and demonstrated by woman apprentices.

My roommate got me up early the next day so I could limber up before going to work. I was in a lot of pain. When I arrived, everyone poked fun at me about my back. I wasn't going to give them the satisfaction of letting them know I hurt (ironworker apprentice).

Construction work is also considered very dangerous. The female tradesworkers said they were more conscious about work place safety and were generally more aware of their own physical limitations. They said they used brains and leverage instead of brawn to do the job. "I'm always trying to think the tasks through so I don't get hurt and I am doing my share," said one woman. Another woman stated that women could help men work "smarter" and get hurt less. "This macho way of doing work is crazy. There are some things I can do

better like getting into small places. But they think that is cute, not an asset.”

I have some good ideas and they should be listened to. I am a small woman and I already devised different ways of doing the backbreaking work. I think the guys could learn how not to hurt themselves from us women (carpenter apprentice).

An electrical apprentice said that the shop in which she worked was not safety conscious, “guys just do it!” They wanted her to tear down asbestos without a respirator.

I talked to my mentor, he talked to the apprentice coordinator and OSHA and the EPA were all over the place. The owner asked me, ‘what did you do?’ I’m not going to put myself in that condition, I had to go to Bremerton to be tested for asbestos poisoning.

The difficult physical nature of the work was exacerbated by the fact that the mentored women did not have the same childhood experiences as men. This put them at a disadvantage when it came to technical expertise. The women’s stories about learning a nontraditional craft tell of overcoming childhood socialization to aspire to traditional jobs, learning to use tools, and becoming competent in an alien and hostile world. Women also talked about gaining self-confidence with each new skill. Mentored apprentices, unlike most others, had three teachers: the journey level workers who supervised and trained them on the job, their classroom apprentice instructors, and their mentors. Mentors, said the apprentices, taught tricks of the trade, answering, as one apprentice said, “stupid questions,” without embarrassment. Two carpenters talked about how they imagined that the childhood of the men they worked with was different from their own.

You get a lot of these boys in here and they have been doing this stuff, swinging a hammer after high school. I don't know how many women have that kind of experience.

It is a lot different. These guys have been doing it since they could walk, learning it from their fathers and uncles. Women breaking into the trade, none of our mothers was doing anything like this. This is all new to us sometimes I think they forget, this isn't something that just comes to us!

A carpenter apprentice said, "No one came to my high school and said you can be a carpenter." Another chimed in, "We need to do that though, what if someone had come to my high school and said you can do this. I took shop! I took wood shop and all that stuff!" Another carpenter apprentice, after telling the interviewer that before she had become an apprentice she had worked for minimum wages pushing two buttons all day in a toy factory, noted:

Some of these women who grew up on farms or whose Dads were in the trade have a leg up on me. There is a lot of this stuff that they call 'common sense' that don't make no sense to me. I think if I had gone into a program like ANEW (an apprentice preparation program for women) things would be different.

Rusty math skills or a lack of math skills is a problem for many apprentices, but for two female carpenter apprentices who did not attend an apprentice preparation program it was a significant problem. One apprentice, through her mentor and the Apprentice Opportunities Program, had a tutor hired to help her. The other, at risk of being suspended or terminated from her apprenticeship because of her lack of math skills, worked with her mentor to find an instructor from the technical college that provided the ancillary training for carpenters.

It became clearer as the stories were told, that the women were indeed at risk of dropping out without the help of a mentor. Mentors, according to the woman apprentices, provided guidance in work-related problems and helped them in skill training. This was particularly important to the women because, as a carpenter apprentice related, not all journey level job site workers are helpful. "I walked on my first job and asked what tools I needed to buy first. My journeyman said, 'don't bother, you're not going to be here long enough to need tools.'" An apprentice coordinator acknowledged that getting the skills they needed on the job could be a problem. He said, "women are not as accepted as men, there have been so few that the men haven't gotten used to women being there." A journey level worker admitted:

The journeyman is insecure about his future. They are going to have to upgrade their skills to stay viable. Some journeymen don't want to share the tricks of the trade because they feel in competition with the apprentice. They believe it is economic suicide to help the apprentice, especially if the apprentice is a woman.

The mentors helped apprentices to be more assertive about getting the training they needed while on the job and at school. They talked about emphasizing teamwork and balancing men and women's abilities and that the women had something to bring to the table. A painter apprentice told about her mentor's coaching:

A lot of my questions I get (answered) from the vice president of the union, I get mentored by her, I can call her on any given day and get my questions answered. I can call (my mentor) anytime. My mentor tells me to talk to the bosses, about what I am learning

and not learning, like it's not going to be a year before I can pick up a brush. I have to be pretty careful about what I say, our company is pretty strict. I know that if I ever got out of this job, I wouldn't be in this career, because I couldn't keep up with the trade. Our work is so basic. Ah, my last supervisor has been exposing me to lots more skills. Let me do the job, don't just show me.

An electrical apprentice talked about getting technical training on the job.

"I had to fight for it sometimes." She called her mentor and told him that she had a journeyman not doing what she had been led to believe a journeyman was supposed to do. Which was, as she said, "train me and help me do this job." Her mentor came to the job site and talked to the journey level worker and the foreman. "I am not quite sure what was exchanged there," she said. She got another job; the journey level worker was assigned another female apprentice to supervise and he was treating the new apprentice better than he had treated her. Another electrical apprentice acknowledged that skill training was a problem for her. "If you get placed with the wrong person, you will 'hump' materials all day at the job site." She said one particular incident was resolved by talking with her mentor and then to the apprentice coordinator. The supervisor rescheduled her and told the journey level worker that the apprentice had done her share and was done "humping" for the job unless it was an emergency. A carpenter apprentice told a story of talking with her mentor about her school experiences. She was trying to work on developing technical skills:

Well, the schools stuff I was talking with my mentor about. Because I work alone on a project at school, I don't know how they (apprentice instructors) are dealing with individual students but

those guys have been allowed to not teach. They sit in their offices and drink coffee. We watch some slides from a million years ago and build something, you have to hunt them down if you want something. The person who runs the school is a serious good old boy. He called all the women bitches. Who do you talk to in the state to go in there and do something? I had a discussion with my mentor about school, instructors should be instructing if someone is having a hard time they should be helping them out. Out on the job, I have someone right beside me helping me out. Most of the time (at school) you are working on your own project by yourself.

Apprentices were respectful and grateful for the help they received from their mentors. Two women's comments were typical of those told about the skills of their mentors and their willingness to help them.

My experience with the older journey's is they are patient and want to teach you. He (my mentor), is just awesome, he takes you through it. He has been in the trades for 35 years (painter apprentice).

So I've been calling him about basic carpentry stuff and the union stuff I don't know about. If I hadn't had a mentor, a lot of the things I've come up against I would have been totally in the dark . . . I can't really tell if they are making it hard for me. Like this project, they explicitly told me to build it with hand tools, all these guys watched me building it and when I talked to them they said well you should be using power tools. 'What the hell are you doing it by hand for?' It was written on the piece of paper to use hand tools. I called my mentor (carpenter apprentice).

Life Accommodations and Sacrifice

Key finding number two: The level of life accommodation and sacrifice, logistical management, and personal support needed to adapt to the industry was unexpected and costly for apprentices and everyone around them.

One electrical apprentice shared her experience, how she was trying to manage her apprenticeship, her job, and to balance her life.

Why (do) women drop out more than men? Kids, I don't see them at all on Tuesdays and Thursdays. They are asleep when I leave and asleep when I get home. They are four and five. On Mondays and Wednesday, I have to do homework. I live with my mom and she watches them, otherwise, I couldn't do it. I would cost me \$1000.00 a month to have them in day care. I am missing them growing up. But they are the reason that I am doing this. I would be on welfare. I couldn't put them through college. I could make more on welfare now than the 65 % (of journey level pay) I'm getting (electrical apprentice).

For this apprentice, the pain of not seeing her children was a price to be paid, but she considered it worthwhile in the long run. She said she has to “keep looking ahead” and noted that she was “lucky” that she had her mother to take care of the kids especially when they got sick. She said, “Some of the women I know jeopardize their apprenticeship by taking time off or leaving early. I guess a man could be in the same situation but somehow it is different (electrical apprentice).” This woman’s mentor has helped her by encouraging and supporting her when juggling everything became difficult and it seemed like the job was not worth it. She reported however, that she loved her job and said that working with three women and having a mentor made it easier to handle the stress.

Other apprentices have had their mentor help them solve problems that had to do with the trades culture (and to the women, the “mystique” of the union), bureaucracies, or the general vagaries of life.

He (my mentor) has helped me with housing. He helped me with a problem I have with L & I. So I’m feeling like a lot of the crap I had to deal with, general life-stuff, bureaucratic stuff, I have a resource, a network of people that can get me information. I feel

less overwhelmed. At this point I don't hesitate to call him about anything. It has been snowballing (carpenter apprentice).

One electrical apprentice told of how her mentor helped her with housing and money, how he created a support network for her and even arranged for others to "adopt" and help her as an apprentice. When he became her mentor, "he took the job on! He knew where I was and what was going on in my apprenticeship, he just took me in."

I had been working piddling jobs, six bucks an hour and I didn't realize how expensive it would be to be an apprentice and I got behind. I had a relationship break up and all of a sudden, I am on my own. I don't have any money and I don't have any credit and I got to make it to work 40 hours per week, I got to make it to school, I have to pay my tuition, buy my books, tools, clothes, everything you need to have and this happened right as I got into the program. It was really bad (electrical apprentice).

After explaining about all the things that had gone awry early on in her apprenticeship, she talked about all the things her mentor had done to help her.

First thing he did was he passed the "kitty" around down at the union hall, collecting money. He got me in touch with some people who were personally willing to help me, financial donate kinda. I had people giving me books that I needed for my apprenticeship class that I couldn't pay for, I had people giving me tools. I was homeless for a time, I had people letting me stay in their basement apartment... until I could get back on my feet. He networked and got me hooked up with these people. It was a rough start, I came pretty close to saying I can't put up with this. That first six months was really tough. You start off with a pretty low wage in an electrical apprenticeship, 35% of journey level wage... it was pretty piddling wages when you consider all the expenses ... you use up a lot of gas, (you need) to keep yourself fed, and I was living by myself, I had to make the rent on my own, buying groceries. I took a part time job for a couple of months weekends to make up the difference. Once you get that first raise, to 45%, it makes a big difference. It takes about six months, so if you can hold out... (electrical apprentice).

Other apprentices got help from their mentor in less dramatic, but to them, no less important ways. They talked about vexing problems that could have kept them from meeting their work and school obligations. An ironworker said that not only did her mentor answer all her questions about working in the trades and about the union, he also “helped me out when my car broke down by giving me a ride to work and to get the car fixed.” She said that, because she had a mentor, her apprenticeship has gone “pretty smoothly” so far, while explaining that it was still two more years before she can take the test for journey level. Another ironworker said her mentor helped her “mainly with helpful information on things like getting money for food, paying her light bill, and sending her kids to camp.”

The Culture was Exclusive, Adverse, and Hostile to Women

Key finding number three: The trades culture was exclusive and adverse. To gain entry into the trades, all apprentices must go through a boot camp-like testing period. In addition the working environment was hostile.

Sexual harassment was described as one of two types, “quid pro quo” and “hostile environment,” both of which are illegal according to state and federal law. In the U. S. Equal Employment Opportunity Commission, as reported by the Northwest Women’s Law Center (Fukuda, 1991). All the women interviewed had experienced some form of sexual harassment and the women were able to distinguish between harassment and “locker room” type behavior (Eberhart, et al., 1995). The women said that “quid pro quo” (demand for sexual

favors) harassment, was not prevalent. There were not requests for sexual favors in exchange for promotions or raises, nor were there incidents when it was inferred that they would be fired or pulled off a job if they did not submit to a sexual request. "They have their boundaries, they are really pretty careful, all the lawsuits, you know," said one carpenter apprentice. Instead they said sexual harassment usually came in the form of intimidation or hostile gestures and behavior (Eberhart, et al., 1995). The women reported hostile behavior on a continuum from belittling remarks to what the "journey jerks," as the women call them, consider "pranks" to physical assault.

A pervasive kind of harassment was that which was gender-based, aimed at women simply because they are women in a "man's" job and its function was to discourage women from staying in their jobs. One apprentice offered this exchange between her and a journey level worker:

... my journey level worker said... "What are you doing here anyway? All you are doing is taking some man's job. All you are is a short-timer, anyway. I don't know why we even bother with your type."

The women reported that much of the hostility was expressed in subtle rather than overt ways. "I get all the nasty jobs, people won't talk to me at breaks or I would be placed in dangerous situations (electrical apprentice)." A carpenter apprentice made a poignant statement about exclusion, "I think if I were a white male apprentice they would be saying, 'Hi' and we would be laughing. There is a silence, no stories, just telling you what to do." According to data collected in

the AGENDA project, the trades culture expects women to deal with adversity and not to expect the traditional men to change for women. The women reported that there are stereotypical “male” behaviors with which they have to put up. “You got to know what you are getting into, you are working with guys who say, ‘fuck,’ who fart and say, ‘whew, who did that?’ You got to want it (the job). If you don’t, you won’t make it (carpenter apprentice).” The women reported standing up to the men. One ironworker said a guy was “on her case” and she told him off. “Now he calls me ‘sis,’ I guess he was testing me and now I got his respect.” Another woman said, “I was a week from being homeless and I was hungry. It was easy working with those assholes. It was like I had a big blanket of insulation (carpenter apprentice).”

The women used their mentors as sounding boards. One lesbian ironworker apprentice was being harassed because of her sexual orientation, “I called my mentor, he said, ‘Just tell him off . . . you are pretty aggressive.’” An African-American painter apprentice said she talked to her mentor about being harassed about her fiancé who works for the same company:

I have to listen to a lot about him and me. It’s basically (because), I am the only African-American, I got a lot of B.S. from them when I first came on. I have had to put up with that! I talked this over with my mentor. Other people say, ‘you have only been here three years. I have been here 15, I don’t get what you get.’ I’ve had to put up with that. My mentor, she says, (when) I call her and talk with her and she says, ‘you know, you are just starting out’ and she says, ‘you have so much more to endure!’

Trades women reported lots of harassment activity around the job site toilets. The conditions they encountered were very difficult. Most construction sites use Sanicans. At some sites they were dirty and at most sites privacy was an issue. Added to the potentially unhealthy conditions, the women reported that “journey jerks” have a proclivity for what they consider to be “pranks” concerning toilets, the acts targeted at women.

It was my turn at the utility truck latrine duty. The portable toilet was stuffed with human feces, urine and beef bloodstained tampons and sanitary napkins. I should have known something was up because everyone was taking so long in the shitter that morning. Normally, I could empty the toilet contents quickly but because of the quantity of stuff and the expansion of the sanitary products, the contents were difficult to remove. When the dumping station attendant caught me throwing those sanitary napkins in the hole, he refused to let me dump it. I had to separate them from the rest of the waste. Well, to make a long story short, one thing led to another and I was written up for taking two hours to do a fifteen minute job. Upon returning to my car that same day, the word 'cunt' was written in beef blood on my windshield.

Even if the women had separate facilities, the harassment around toilet facilities found a different expression.

Us women have claimed one of the Sanicans as ours but of course it is the one the furthest away from the job down this long corridor. My nickname is 'Sweet Cheeks' and they are not referring to my face.

A carpenter apprentice who learned to cope with what she considered adolescent behavior, said she was resigned to it.

I don't sweat the small stuff. Sometimes these guys act worse than a 13-year-old. But, what the hay, let them draw their huge genitals on the Sanicans and tell dirty jokes. As long as they don't touch me, I just let it roll off. But if they touch me...

When she complained, the vandalism was scrubbed off the Sanican and the men were told not to do it again. "It is like they are little boys, it doesn't belong on the job!"

Women found that their mentor was an advocate who "keeps some of the guys in line." Some women reported that their mentor talked a hard line against negative and sexist comments about their apprentices from other workers. "On my first job, my mentor said, 'I have been working longer than most of those pip-squeaks, if they give you any trouble let me know.'" A carpenter apprentice, one of the youngest of the mentored women, told about her relationship with her mentor:

My mentor, he took me under his wing and protected me like he would his daughter. It was like a father-daughter relationship. But you know, those assholes never let up on the sexual innuendo. I know half of them still believe we were having sex. Even when they all found out I was a dyke. That was worse. They razzed him something awful about being so bad in bed that he turned me permanently off men. He was about to retire so he didn't care what they others said about him.

One electrician apprentice, bolstered by the support of her mentor and fortified with an ANEW class on harassment, gave her views on sexual harassment and the tactics she would take if confronted with it.

I won't take it, you say something I don't like, I am going to tell you once that I don't like it. If you say it again, I am going to tell your foreman and if you say it again, I am going to tell your general foreman. And, if you say it again, I am going to call the owner of the company you work for and say I don't like it. If you say it again, I am going to file a lawsuit and get witnesses. It is going to be a big ugly mess and you don't want that, so just shut up!

The images of women working in the building trades are compelling, especially when told in their own voices. They are not passive voices. The women are actively involved in creating a place for themselves in the culture of the trades. If they continue to unite, they may make greater headway in finding more opportunity to work in jobs they enjoy without enduring daily hostilities.

There is no better way to end this chapter than to quote a carpenter apprentice who recently “journeyed out.” When asked, “was it valuable, having a mentor, did it really help you stick it out?” She answered, “Oh yeah! It is really nice to have someone to talk to who has been there before. Otherwise, when you get frustrated, and you have no one to talk to you, you quit!”

CHAPTER 6 - CONCLUSIONS AND RECOMMENDATIONS

He has half the deed done, who has made a beginning. Horace

Women will not succeed in the building trades by making themselves copies of the men they encounter on the job. They will need to work in their own way, on their own terms. Trades women's problems have been ones not of performance, but lack of opportunity to work in a non hostile environment and to get the training they need to succeed. There are substantial barriers to overcome. Much has been accomplished with law and legislation to allow women entry into the trades: programs such as the Trades Mentor Network are helping them to persist. Even though women have a long way to go, their presence is having an impact on making the trades culture more inclusive and accepting.

Conclusions

The purpose of this study was to describe the TMN and to determine if, in the perception of the woman apprentices, having a mentor influenced them to stay in a building trades.

Reaching Personal Goals

The TMN provided services in such a way that a more productive learning and working environment was created for a broad spectrum of building trades woman apprentices. The women who are persisting in the trades are creating a

presence of strong women who have made a career choice and who are, with the help of their mentors, overcoming the obstacles of prejudice and discrimination in order to succeed. “There is a point, when you can do the work, then things change. I am assertive and I am not going away. They can’t not teach me (ironworker apprentice)!” An electrical apprentice, whose mentor was a powerful and respected union agent and who feels confident and well supported by her mentor, said, “If (they) get on the wrong nerve, I’ll let (them) know about it!” She is also extending this support to her sister trades women and champions in their behalf as well. “... If I see other women being harassed, I jump into that too, I say, leave her alone!”

These women are choosing apprentice training as a means of achieving their goal of a living wage job with benefits, in order to support themselves and/or their families in work they can do well and that they enjoy.

You get into the trade to go out there to do the work that you love and go out there ‘cuz its good money, and you get into the union and the union package, and the union has excellent benefits. You can build a future for yourself (electrical apprentice).

My plan and my dream were to make my own way and support my child ... I knew it was going to be difficult ... I could have made more on Welfare. I always work with distinction (journey level mason).

I’d worked as a landscaper... much as I hated it, I got used to working outside, to having money. I took the two day carpenter testing and orientation... If I was doing it for \$5, I might have

walked off the job. I was in the gas station and I had some mud on me. He (the attendant) said, 'what ya doing, grunts' work?' I said, this is the color of money (carpenter apprentice)!

I was only by a stroke of luck that I got laid off just before the Women in the Trades Fair. I went and took a big bag of information home, and threw it in the garbage. A couple of years later I said, hmm, what did I do with that stuff? My parents said, 'I thought you were gonna go to college and do something smart?' Now I have all the time in the world to read books and I don't have to write any papers (carpenter apprentice)!

Other women echoed the same sentiments: "I have been poor and I was not going to do that anymore! Whoa, (I said to myself), a five-year commitment! But, you can pour espresso for five years (ironworker apprentice)!" "I love my work, I love being an electrician, I wouldn't still be one if I didn't, because it is tough (electrical apprentice)!" Another electrical apprentice said, "I love my job, I just love it." An apprentice sprinkler fitter said, "It's really interesting work. It can be cold and dirty, but I love it. I want to make a career of it."

As the building trades work sites have changed and become more diverse, so must apprentice programs change. Support services programs such as the TMN are a response to the changes in employment in the building trades. Ideally, these change strategies should come about as the result of *predictable* shifts in the changes in the employment of women. But, in this case, the TMN was a *reaction* to a changing work place in which women were not accepted. It was, however, a conscious effort to more adequately meet the needs of woman apprentices. Placing apprentices into an environment in which they can

succeed and attain journey level status is important to apprentices, to maintaining apprenticeships, to community colleges, to union membership and to the construction industry.

The research found that the TMN is an effective strategy for helping women meet their personal goal of eventually achieving journey level worker status. Having a mentor who coached them from the sidelines helped give apprentices the confidence they needed to complete their apprenticeships. Bolstered by the support of a mentor, women were stronger, more assertive, and fewer dropped out than they did before the inception of the Trades Mentor Network (as discussed in Chapter 4).

Benefits to Building Trades Unions

Apprentice training is expensive, so any measure which reduces attrition provides a direct savings to the Joint Apprenticeship and Training Council (JATC) and the community or technical college. Two training coordinators from the sheetmetal worker's apprentice program, speaking at a public education forum, said that it costs \$15,000 per year per apprentice for training. The investment in recruitment, screening and selection, and in preapprentice training and apprentice training is significant (See Figure 7). Retaining woman apprentices translated into many thousands of dollars in savings. By using volunteers for apprentice-mentor matches, the TMN was a low cost mechanism

for bringing together in a planned, cohesive manner the people in a trade union that are needed to solve the retention and training needs of women in the building trades.

To create productive trades women, the women must get the technical skills necessary to practice their trade. The skills must be taught in a logical and sequential way, on the job and at school. Job rotation allows apprentices to build technical skills during their apprentice training. This is critical to their training but limits their access to a constant work-site mentor. The TMN, by pairing an apprentice with a mentor of the same craft, provides the apprentice with a constant support system, which increases the likelihood of their staying in their apprenticeship. Because the women were more likely to persist in their apprenticeship with support and advocacy, the unions can expect to receive long-term benefits in the form of increased capacity and a larger pool of available workers. By law, the unions have goals that they must meet to provide access to apprenticeships for special populations and to meet affirmative action requirements. Over the years, unions have attempted other means to meet these goals but have found them to be expensive, time consuming, and ineffective. From the difference in the persistence rate, one can conclude that these efforts have met with much less success than mentoring. The TMN can be considered both an assistance program for special populations and a good faith effort by unions in support of their affirmative action goals. Working with a mentor can help the apprentice understand the benefits that can come from

union membership and from purposeful on-the-job training. The mentoring can help build a stronger relationship between an apprentice and her union.

Supportive to Women

The TMN appears to be a carefully crafted program that helps women apprentices become more successful. The unions, by supporting the TMN, are reaching out to women who were underemployed or unemployed because they lack the support systems necessary to succeed in the nontraditional workplace.

A carpenter apprentice and a sprinkler fitter apprentice, one raising six children and the other an infant daughter, had little work experience and were on welfare when they became apprentices. The carpenter apprentice said, "I support my family now . . . I love what I do. I know I'm going to complete my apprenticeship.

I know we'll never need to be on welfare again." The sprinkler fitter apprentice echoed her words, "I see a future for myself now. In the trades, you get paid for what you know and the work you do. I'm looking forward to journeying out and having a career." With the exception of the TMN, sufficient support services are lacking for those who enter apprenticeships. Each woman's workplace success refuels apprenticeships as a whole, and successful women help recruit others.

In the past, the victims of the barriers in nontraditional work were expected to learn techniques that allowed them to "go along to get along." The training coordinators, work site supervisors and the journey level workers who have developed a personal relationship with a woman apprentice through mentoring

are more likely to be interested in breaking down the barriers. For example, they are more likely to demand zero tolerance of harassment, and to demand penalties for noncompliance with laws that exist to protect women from a hostile work environment. In other words, those who become involved in mentoring can become part of the solution, thus helping to increase the pool of skilled workers.

In their stories, mentored women identified four conditions that seemed to give them greater confidence and build the mentor relationship:

- The mentors were authentic and credible.
- An essential trust was established.
- The male mentors were exposed to the uniqueness of women in nontraditional work and became more aware of their issues.
- Mentors were able to provide information about community services and with this information, other barriers were removed that could have stopped the women's progress.

According to the apprentice women, not to be a victim of barriers in nontraditional work was the start of a culture change in the building trades environment. As their confidence grew, the mentored women became more assertive about their right to training and their right to a comfortable workplace.

Appropriate Intervention Effects Cultural Change

It was the hope of the broad scope of the Trades Mentor Network that mentoring as a form of intervention would also drive social and cultural change in the building trades. If the historically underrepresented women are

handicapped for acceptance in the building trades by the overt and covert disapproval of the majority about their "belonging in their culture", the perspective that comes from these women's stories helps to validate whether the retention strategy made any difference in changing the culture. The truest picture of women in the trades is found in their own stories.

According to the woman apprentices interviewed, mentoring was rewarding for both the apprentice and the mentor. Mentors gained new insights about the barriers and the hostility women face in nontraditional work. Many apprentices reported that their mentors came to value mentoring as a learning experience for themselves. The women reported that because of this, their mentors have had an impact on the system.

There is a lot of dog eat dog attitude but I went to this carpenter to carpenter talk and some guy gets up and talks about job leads . . . I've been talking to him on the phone, he isn't worried about me being a woman. If you had a mentor, you can think about a lot of different people as a mentor. I can talk to him. Having one mentor leads to thinking you can talk to other people. It opens up a whole new network for you. I see it with my mentor, I say, 'how do we deal with this issue?' We figure out how to deal with a problem. We can see how we need to get information back to the mentor program. My mentor says he has gotten so much out of the partnership (carpenter apprentice).

An electrical apprentice told of how her mentor "extends himself to other people now, (albeit) not on an official basis." "I really feel blessed or privileged to have had him for a mentor, because I don't know if anyone else could have helped me out as much." Same and cross gender mentoring was successful.

I have some women go - 'you have a male mentor!' Right now it's

working out. Like it is good to have men paired with women because of instead of having the women's opinion stay with the women, instead of having the men being totally separated, we have a way to try to find a common ground. I get a better idea of the atmosphere I am in. I am mentoring him and telling him what it is like to be a woman in the trades. (I am) influencing him and sending him back out to his job with a whole new perspective so he can be more of an advocate. It is particularly valuable because my mentor is a foreman. A 'super.' He could personally do a lot for women so I am really glad I have him (carpenter apprentice).

People need to become accustomed to and embrace change in view of today's state of constant flux and unpredictability in employment. Despite laws and sanctions, the building trades have managed to resist change, even as other nontraditional occupations have opened up for women. However, since people tend to support what they help create, the TMN, which was created and endorsed by the "house of labor," gives labor rank and file a credible avenue in which to participate in reform. Many of the mentors, male and female, proudly wear, their TMN T-shirts to union events. Several male mentors, as well as female mentors, participated in the Pacific Northwest Tradeswomen's Forum held in Seattle in May, 1996. By supporting women, the Trades Mentor Network fostered and promoted apprentice diversity.

As discovered in the AGENDA project investigation of the trades culture environment, both men and women apprentices are treated badly. Women are not the only ones subjected to hazing and harassment, but they get more of it. Changing the culture of the building trades to one that frowns upon and penalizes all forms of harassment will benefit all apprentices and is also likely to

increase productivity. The woman apprentices reported that the atmosphere on the job is getting better. Having a mentor, the women said, created a change for the better for them personally and they were going to help to change the culture.

I know some of the older generation tradesmen were really outright abused as apprentices but I say it's not their obligation if they were abused as apprentices, to abuse. It's wrong! You are not out there to get abused by some old coot who can't seem to get past 1960... it is 1996, wise up or retire (electrical apprentice).

"I know how they treated me and I will not treat people that way. It discourages people. It's a game and someone should put a stop to it, I am going to do my part (carpenter apprentice)." A male apprentice volunteered, "Most of my peers can't wait to journey out so that they can give it to the 'preemies' but they will not do it on my watch. This is one aspect of the culture that needs to change."

In a dynamic system, such as the modern workplace, even a slight change can produce results. The improvements may not be discernible on a daily basis, but their sum can begin to make a difference, in the attitude of the traditional worker and the assertiveness of mentored women. Journey level workers can share the knowledge, skill, and attitude that they learned from mentoring with other co-workers. Three mentored women who journeyed out became mentors or were in training to be mentors. Others plan on "becoming more involved to put back what I have already been getting. I can see myself journeying out and going to be a mentor (carpenter apprentice)." Journey level

workers continue to volunteer for TMN classes. Journey level workers who learned together in their mentoring classes developed common attitudes, understandings, and language.

The literature on the adoption of innovation, especially Everett Rogers' 1996 work, charts the diffusion of innovation in an organization. Rogers emphasized that it is essential that leadership identify and focus on those who support the change effort. He indicated that relatively clear stages can be observed in the way people accept change. He identified the point at which enough individuals adopt an innovation so that the innovation's further rate of adoption becomes self-sustaining. The innovators, 2.5% of the group, like to be involved in change and will be the first to accept change. The early adopters, who need to see the innovators take the first steps, make up 13.5%; early majority 34%; later majority 34%; and so on to the laggards at 16%. According to Rogers, critical mass occurs at about the early majority stage. Washington trades women are presently still only seven to eight percent of the building trades workforce. However, women now entering the trades consider themselves "second-wave" pioneers. They believe that they will have a voice in the future. For women to become one-third of the building trades workforce and trigger Roger's (1996) diffusion theory's critical mass, is not an easily attainable goal. But, as the number of women increase, their increased visibility could begin to tip the scale.

Trades Mentor Network Drop-Outs

Despite the success of the interviewed mentored women in securing a beneficial relationship with a mentor, it cannot be said that there is one answer on how to help women sustain themselves throughout their apprenticeships. The challenge lies in finding the appropriate programs in which to place resources and energy to promote women in the building trades. While it was clear that mentoring was a helpful approach for the women interviewed for this case study, there were other things that the women commonly mentioned in the interviews. They mentioned three circumstances other than mentoring that helped them be successful: the more women in the apprenticeship, the more likely women would be successful; internal “grit” was important in surviving the culture; and support from family and friends was important. They also alluded to the lure of good wages and the pleasure of building something as things that kept them working towards journey level status. Moreover, one cannot assume that because these 28 TMN mentored woman apprentices perceived that mentoring was a crucial benefit to them that all woman apprentices would perceive it to be.

Of the 39 women identified as at risk of not completing their building trades apprenticeship and invited to become part of the TMN, 10 women, over a quarter of the population (25.6%), dropped out of the program. Four women did not respond to the invitation and did not start a relationship with a mentor. Six additional apprentices dropped out of the TMN after being matched and having

some mentoring. According to Shai Kane, the TMN Organizer, these six had as little as one phone call and as much as several months of contact with a mentor.

One of the four women who had no mentoring, as well as four of the six who had some mentoring are still persisting in their apprenticeship. For these five women, mentoring was not as critical to their success. Even though the dropout rate for women was very high, one could speculate that if these five women could succeed without mentoring, others could as well, as indeed they have. However, for the larger number of women, mentoring was key to their success. And, the dropout rate of women in the building trades apprenticeships has decreased.

A Consideration -- The Apprentice Opportunities Project

The Trades Mentor Network has not been the only force in changing the fate of women in the building trades. In 1990, the Port of Seattle and the community-based organizations that make up the Committee for Economic Opportunity assembled to develop a strategy to achieve two goals. The first goal was to assure the availability of skilled workers for port-related business; the second goal was to create new opportunities for women and people of color in nontraditional work.

In 1993, as the result of the 1990 meeting, the Office of Port Jobs was founded. One of the office's first missions was to create the Apprentice Opportunities Project (AOP). The AOP is a joint effort by community

organizations, apprenticeships, and apprenticeship preparation programs together with public and private agencies involved in construction projects. (This researcher is on the committee as is the TMN organizer).

AOP's partners agreed to require that a percentage of labor hours on capital projects be performed by apprentices (this amount is currently 15%) and to share in the costs of the AOP. Of all the apprentices hired, 10% must be women and 15%, people of color. The partnership requires construction contractors to contribute twenty cents per labor hour to a human capital investment fund which helps fund the project. The AOP can also provide financial assistance to help an apprentice get work clothes or tools they need to be ready for the job. The AOP partners currently consist of the Port of Seattle, the City of Seattle, King County, the Pine Street Associates, the Seattle Housing Authority, and the Seattle School District.

Since its inception, the AOP has been instrumental in helping construction businesses to meet their affirmative action hiring goals for women and minorities and in helping to build a skilled workforce that reflects the diversity of the community. This partnership has resulted in many new apprentice opportunities. The prospect of continuous construction work has had a positive impact on the ability of women in the trades to stay employed and to be able to complete their apprenticeship. Many of the mentored women are the beneficiaries of the AOP and the partnership's activities. The Office of Port Jobs sponsors the Trades Mentor Network and the "clearinghouse" for apprentices at

The Center for Career Alternatives (CCA). It contributes to ANEW (Apprentice and Nontraditional Employment for Women) and to Seattle Vocational Institution's (SVI) multiple trades training, both of which are apprentice preparation training opportunities for women. (Manual for the Apprenticeship Opportunities Partnership, 1996).

Summary

According to Wolcot (1979), the researcher can never be sure that all the data have been collected. At some point, he said, it is necessary to stop studying the objective of the research. He also said that education remains a human enterprise. Therefore, all conclusions are provisional and an analysis of the data is limited.

This case study describes the Trades Mentor Network and the stories of 28 woman apprentices who have been mentored for a limited time. The theory underlying this research was that this program was useful in helping to retain women as apprentices in the building trades. This case study bears this out.

The study suggested that the goals of the TMN are viable:

- Increase the number of women and workers of color in the trades.
- Reduce the drop out rate of women and apprentices of color in local JATC programs.
- Address economic and social barriers which prevent successful completion of apprenticeships.

Although the number of women in the building trades remains small, all three

goals of the Trades Mentor Network are being addressed and progress is being made on achieving them. The second assumption of this research project was that the women who were mentored would perceive it as being useful in enabling them to complete their apprenticeship. The women affirmed that mentoring was critical to their success.

Recommendations for Further Study

This case study was a starting point for research into issues concerning the retention of women in building trades apprenticeships. Ultimately, to address the under representation of women in the building trades, unions and union membership, apprenticeships and community colleges must educate themselves about the best practices to recruit and retain women. At its best, affirmative action can compensate for women's lack of access. But since mere inclusion will not necessarily help women succeed on the job, it is critical to support programs that can. This case study collected data from a small population of women who made up *one half* of a mentoring partnership. There are legitimate directions for further study in the building trades. One direction is to study the mentor's perception of the TMN and the value of mentoring. Another direction is a longitudinal study to further investigate the issue of women's retention.

Women's Retention Issues

Recommendation one: This case study and the literature affirms that mentoring can be a viable means to inculcate newcomers into a field. This study was limited to assessing the experiences of 39 woman apprentices in the building trades who were identified as at-risk. Journey level workers trained by the Trades Mentor Network mentored 28 of them. However, if the desired outcome is to retain women in building trades apprenticeships, and mentoring did not serve all women well, other options concerning retention should be explored and studied.

Recommendation two: A few of these at-risk women succeeded despite having little or no mentoring. Other women who were not identified as at-risk and thus not part of this study, persisted in their apprenticeship without the Trades Mentor Network. What would be the results of a case study of women who completed apprenticeships without mentoring? What would their stories reveal about persistence? Are the women of this case study representative of the whole cohort of building trades woman apprentices? Would other women in similar nontraditional work share their enthusiasm for mentoring? There are many questions concerning retention that could be investigated.

Recommendation three: Since mentors and the TMN trainers are volunteers, the TMN is described as low cost retention intervention. There are of course, considerable costs in time and energy as well as direct monetary costs in providing this support service for women. It would be prudent to study

whether or not the TMN is a *cost effective* program. Are mentored woman apprentices better workers and do they stay in the trades longer than those who are not mentored? Is there positive return on investment in mentoring?

Another Perspective

Recommendation four: Like many studies of mentoring, this case study only assessed the apprentice's perception of mentoring as a retention strategy. While some apprentices reported that their mentor considered the relationship mutually beneficial, the study did not interview nor consider the perceptions of the mentors. Post World War II building tradespeople have had limited and relatively short-term experience with women in the workforce. Studying the mentor-apprentice relationships from the perspective of both participants could add to the body of knowledge about how to help women succeed.

Recommendation five: If women *and men's* mentor-apprentice pairs were studied, the findings could have practical implications for unions, community and technical colleges, and apprenticeships. If mentoring was shown to effectively serve a broad based workforce as a retention intervention, the aforementioned organizations could organize around this strategy and avoid investing in programs that have not been shown to be effective. This could help reduce the drop out rate of all apprentices.

Recommendation six: The results from further study of the mentor-apprentice pairs could be used to inform the curriculum of the TMN training, to further develop it and refine it and keep it current and relevant. In addition,

investigating the success of mentoring from the mentor's perspective could help recruit journey level workers to become mentors, especially if additional study determined that mentors endorsed mentoring and found it to be beneficial to them personally as well as beneficial to the apprentices and to their craft.

Administrative Recommendations

Unions have a major interest in promoting workforce development to ensure access to living wage employment for their membership. They also want a larger portion of the work force to be represented by organized labor and to meet affirmative action goals. Mentoring apprentices should be a major role for the labor community. It can be a critical step for labor to take in strategic planning efforts for developing a highly skilled workforce that is made up of both genders. As one of the carpenter apprentices said, "You shouldn't keep people out. The more people in the union, the stronger the union." Education and labor both have roles to play in assuring that women continue to have opportunity to infiltrate the building trades industry. Women are choosing careers in the trades and they are not settling for assimilation, but want accommodation. If it takes mentoring for the women to be able to succeed, then the labor and education community should provide it. If there is tolerance for a hostile environment toward women on the job, the labor unions should end it. If it exists in the attitudes and teaching performance of the apprentice instructor, it

is the responsibility of the community college and the unions to investigate and end such practices.

Building on Success

Recommendation one: To build on its success, the Trades Mentor Network should continue to provide trained mentors for women identified as being at risk of dropping out of their apprenticeships. The TMN should recruit journey level women, especially those who have been mentored, to be mentors for the next generation of women apprentices. Three of the women who participated in this study have already made that commitment. Others have said they will. “I am going to train to be a mentor. I think if someone takes the time to give you a helping hand you should do something to keep the cycle going (carpenter apprentice).” Another carpenter apprentice said, “When I graduate, you better believe I will be a mentor for somebody!” She added, “We are all women, straight or gay, and we are infiltrating their (the traditional construction worker) trades, together. We should be helping each other.”

Recommendation two: There is a growing trend in the skilled crafts to mandate continuing education for journey level workers. Legitimizing the Trades Mentor training as a journey level upgrade course may make it an appropriate way for supervisors or training instructors to meet the continuing education requirement. The TMN volunteers took classes in order to prepare themselves to be mentors. By getting this preparation, they not only benefited the

apprentices they mentored but they personally benefited from new learning. The increased heterogeneity in the building trades has caused some turmoil as the culture has changed. Despite change, or perhaps because of it, there still exists a great need for interdependence and teamwork among workers. The training increased the mentor's cultural sensitivity, their coaching and teaching skills, and possibly their employability as on-the-job supervisory personnel. The TMN as a continuing education class could help provide a continuous pool of trained people as mentors.

Recommendation three: The TMN should use the multimedia curriculum designed by the AGENDA project in TMN training. It would help the mentor to understand the experiences of woman apprentices on the job and at school before they initiated an apprentice-mentor relationship. Some very seemingly small actions can make big differences, showing the one-hour AGENDA curriculum could be a high impact, small action activity.

Recommendation four: Direct funding for the program could be accomplished through categorical funding from the Apprenticeship Trust Fund. The most promising experiments in problem solving should be made institutionalized. At this time, funding for TMN for the next year has been identified and secured. However, unions and the apprenticeships should fund the Trades Mentor Network so that it does not have to continuously seek grants or other resources. Unions and apprentices are the direct beneficiaries of the TMN.

Community Colleges and the Apprentice Partnership

Recommendation five: The participation of the college in curriculum development, site support and in identifying at-risk apprentices was a significant contribution to the Trades Mentor Network. The community and technical colleges can do more. They should regularly review apprentice curriculums and continuously evaluate instructors. Cantor (1992) found that existing partnerships between apprenticeships, unions, and community colleges are mutually beneficial. As a contribution to the success of all apprentices and especially women, the curriculum and the instructors should not be perpetuating myths that surround women's ability to work in the trades. The colleges should confront the issue of harassment and insist that it is not tolerated in the classroom or on the job. The instructor's evaluation could include an assessment of an instructor's skills in working with heterogeneous groups. Instructors, as part of their professional improvement plans, could seek professional experiences to increase their awareness of the issues confronting women. This could help them discover ways in which to be part of the solution to problems that still exist. The AGENDA curriculum could become part of the Occupational Teacher Training required for apprentice instructors.

Recommendation six: Community colleges could also increase the opportunities for women to enroll in apprentice preparation training programs in order to learn technical skills that they did not acquire through life experiences or in secondary school. Replicating or increasing the size of programs such as

ANEW (at a technical college), SVI's multiple trades training program (at a skill center), HUD's Youthbuild Carpentry Program and, the CCA's recruitment program for women and people of color into nontraditional work would provide more slots for training for women and a smoother transition into apprenticeships.

This case study described the Trades Mentor Network and the perception of 28 woman apprentices who affirmed that mentoring was useful as an retention intervention to help them to persist in building trades apprenticeships. The opportunity is available for community colleges and unions to address continued positive change for women in the building trades environment. The findings from this study point to directions that could be taken towards meeting a responsibility to woman apprentices in order to help them succeed. The recommendations for further study and especially the administrative recommendations have a place in the development of policy about the operation of community college and union apprenticeships.

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APPENDICES

**APPENDIX A
TRADES MENTOR NETWORK**

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**APPENDIX B
TRADES MENTOR NETWORK**

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APPENDIX C TRADES MENTOR NETWORK

Agenda Project Interview Questions

1. Explain how you chose to join your trade and describe the process of getting where you are today. Include events and facets that assisted and hindered you along the way.
2. Describe the kind of people who do well in your trade.
3. What is the best compliment someone can give in your trade?
4. In your observation and experience, what is it like for women to work in your trade?
5. What additional or different qualities do women need to possess to be successful?
6. What is the best compliment one can give a woman in your trade?
7. How are apprentices treated in your trade?
8. What makes a successful apprentice? Is this different for women?
9. What kind of behavior is unacceptable from anyone in your trade?
10. What kind of behavior is unacceptable from a woman in your trade?
11. What different strategies for survival do women use? Which work and which don't work?
12. What have you observed about work relationships between men and women in your trade?
13. In dealing with the opposite sex at work, what are the issues that concern you the most?
14. Describe a conflicted situation between people of the opposite sex that was handled well. What started it, what happened and why did it turn out well?
15. Describe a similar situation as above that turned out negatively. What started it, what happened and why did it turn negative?

16. What do you think contributes to the high women's drop out rate in the trades?"
17. What can women do to be more successful?
18. What can men do to positively effect the success of women?
19. What do you think the training should include?