

**Labour Education and
Training Research
Network**



York University

**Centre for
Research on
Work and
Society**

Suite 276, York Lanes Bldg
York University
4700 Keele Street
North York, Ontario
M3J 1P3
Canada

Tel: (416) 736-5612
Fax: (416) 736-5916

**Women and
Apprenticeship:
The Role of
Personal Agency in
Transition Success**

by

*Robert Sweet
Lakehead University*

Women and Apprenticeships: The Role of Personal Agency in Transition Success

Introduction

The Canadian labour market has undergone two decades of restructuring and these changes have had a profound impact on the school-work transitions of youth. Pathways to meaningful, satisfying, and well-paid employment are today more complex and prolonged. Delays in entering the youth labour market present a significant barrier to career building and, consequently, to undertaking other developmental tasks of adulthood such as establishing a family and involving oneself in the life of the community (Lowe, 1999).

Apprenticeships in Canada represent one form of alternation training that reflects this extended transition process. Apprenticeships can take up to 5 years to complete and, in addition, the average age at which Canadian youth register in an apprenticeship is 27 (Economic Council of Canada, 1992). Some delay might be expected as it is necessary to be employed before registering in most apprenticeships. The fact remains, however, that a considerable period of unguided exploration of the youth labour market occurs before an apprenticeship is begun. This is in contrast to other countries where apprenticeships play a central role in highly managed school-work transitions (Schuetze & Rubenson, 1997).

The changing nature of school-work transitions parallels the larger social and economic shifts of an emerging 'risk society' (Beck, 1992). Risk in this sense refers to alterations in the established social structures and institutional relationships that once provided stability and surety in the progression through schooling, career and family, and retirement. In this post-modern period, individuals are largely responsible for shaping their own destinies. As Beck (1992) suggests: "The tendency is towards the emergence of individualized forms and conditions of existence, which compel people – for the sake of their own material survival – to make themselves the center of their own planning and conduct" (p. 88).

The implications of this emphasis on individualism for school-work transitions is explored by Furlong and Cartmel (1997) and Rudd (1997) who acknowledge the importance of personal agency in managing risk but who also see gender, class, ethnicity and other indicators of social address as exerting a significant influence. Gender in particular is a structural factor of pressing policy concern as governments (and some businesses and unions) attempt to redress the imbalances of an obviously gendered workplace (Armstrong, 1996).

Apprenticeships represent one school-work pathway that women who aspire to vocational work have been encouraged to follow. In the past, most apprenticed trades in the areas of construction, manufacturing, fabricating, and repair were accessible only to men (Wisner, 1988). Women typically registered in trades that represented traditional

women's work such as hairdressing and cooking. More recently, women have been supported in their endeavors to register and succeed in non-traditional trades by bridging programs that prepare them for unfamiliar work and by government financial aid packages designed to support them during training. These programs assume that women who choose non-traditional trades and complete their training will be rewarded in the labour market with more stable employment, higher incomes, and greater job satisfaction (Schneider, 1993).

Although the apprenticed trades remain strongly segregated by structural factors such as gender, it is important to explore the extent to which agentic behaviours of women taken during their apprenticeship training influence subsequent labour market outcomes. In this chapter, links are examined between labour market outcomes and women's choice of a non-traditional trade as well as their decision to complete training.

Exploring Personal Agency

The success of women's transition to work as journeypersons undoubtedly depends on a wide range of factors. The rationale for focussing this research on trades choice and apprenticeship completion derives not only from a desire to explore the impact of individual agency on labour market outcomes but also from related needs in the literature on occupational segregation in apprenticeships.

Occupational Segregation

A concern with occupational segregation in the trades reflects broader policy concerns with the unevenness of equity in the workplace and in the educational and training establishments that prepare women for employment. Hughes (1995, 1998), for example, has documented a significant shift by women into male-dominated professions. There is, however, no similarly strong trend to be found among the vocational occupations. Apprenticeships especially remain highly segregated by gender. Skof's (1994) analysis of women's participation in the largest trades categories (those with more than 3,000 registrants) revealed that fewer than 4% of apprentices in the non-traditional trades were women while the proportions in cooking and baking trades, and in hairdressing and related areas of esthetics were 25% and 75%, respectively.

Occupational segregation is a major theme throughout the literature on women and apprenticed work and is expressed primarily through analyses of the preparation and entry of women into traditional and non-traditional trades. For the most part, discussions of the antecedents to trades choice are contained in government reports that generate 'best practice' recommendations and as such they underscore many of the difficulties facing women interested in vocational careers. Butterwick & Ndunda (1996) and Scane et al (1994), for example, make recommendations directed toward developing the personal resources of women entering trades training. Recommendations for assertiveness training and guidelines for instructional programming that empower women are also found in earlier reports (Carroll & Cherry, 1985). Recommendations concerning

the preparation of girls in high school and women in the workforce for careers in non-traditional trades tend to emphasize the importance of the amount or level of education acquired prior to apprenticeship (Wisner, 1988). The value of bridging and exploratory programs, and the particular skills and understandings they provide, are frequently emphasized as a necessary addition to the educational preparation of women who are about to enter an apprenticeship (Schom-Moffat & Braundy, 1989). A number of the reports call for changed attitudes on the part of employers. Gordon (1994) saw government support for bridging programs and the active participation of employers and unions as essential means of promoting women's entry to the workforce and to apprenticeships: "By encouraging and sponsoring bridging programs, and ensuring access to those women who want, governments can take a big step toward increasing women's participation in apprenticeship. Hiring hall unions and employers can provide hands-on work experience, can assist with placement, and can recruit through the programs" (p.75). Sweet and Gallagher (1997) similarly concluded such programs are effective in creating occupational interest and in imparting essential prerequisites but are too few in number and seriously underfunded. In their analysis of the 1994 National Apprenticed Trades Survey (NATS) data, they found that only 6% of women registered in a non-traditional trade had participated in an exploratory program.

While numerous discussions of the antecedents of apprenticeship choice may be found in the literature, relatively few empirical studies have considered women's experiences subsequent to their apprenticeship training (Sweet & Gallagher, 1997). Occupational choice leads to different labour market outcomes – income levels employment stability, or job satisfaction. Where these represent a positive return to the initial investment in training, they are not only valued outcomes but also strong incentives to individuals in their choice of a particular occupation. A rational choice among occupations that differed in the wages offered would incline most individuals to choose the higher paying of the two. However, individuals frequently choose to enter an occupation because they prefer a certain kind of work or the working conditions associated with the occupation (Raudenbush & Kasim, 1998). In the case of women apprentices, some will choose hairdressing because they prefer it to carpentry or electrical repair work. Others will become carpenters or electricians because they are persuaded these trades offer higher levels of income. The basis for choosing a traditional or non-traditional career path then is dependent not only on a rational calculation of the returns to an investment in training but also on developed interests and preferences. In some (happy) cases, both potential return and preference will coincide (Locker & Theissen, 1999).

Credentials

The actual worth of an apprenticeship is presumably represented in the credentials that are awarded following completion of training. A journeyperson's 'papers' are sought because they acknowledge competence and frequently are required as a license to work in and advance in a trade. Investment by women in apprenticeship credentials is consistent with research on women's participation in post-secondary education as a vehicle for social and economic mobility. Women since the 1970's in Canada have invested in education and training with the hope that enhancing their educational capital would lead to

employment opportunities. Although significantly qualified by structural factors (ethnicity, region, socio-economic status) women's educational aspirations have steadily risen across all post-secondary levels – including the various technical and vocational training programs offered at colleges (Looker, 1993; Andres, Anisef, Krahn, Looker & Theissen, 1999). Despite the reality of a persistent gender wage gap and problems of unemployment and underemployment in the youth labour market (Lowe, 1999), women have persisted in their desire to obtain educational credentials that will facilitate entry to the work force.

The market value of a credential in the apprenticed trades should be obvious and predictable given the level of government and union regulation in most trades. However, Akyeampong's (1991) comparison of labour market outcomes for apprentices who completed their training and for those who discontinued suggests that credentials confer no particular advantage, either in terms of income or employment status.

Studies of 'dropout' from college programs and similar studies of employee turnover have emphasized the complexities of the decision to discontinue. Attempts to account for this phenomenon emphasize interactions between individual factors such as persistence or ability and institutional factors such as workload or financial inadequacies (Tinto, 1975; Bean, 1983). Certainly decisions to discontinue an apprenticeship are not always under the volitional control of the individual. However, most are likely to involve a reasonably rational calculation of their effects on the transition process; and for certain trades these may be greater than suggested by Akyeampong (1991)

Labour Market Outcomes

When asked why they registered in an apprenticeship, respondents to the 1994 National Apprenticed Trades Survey replied that they wished to improve their employment opportunities and income level as well as satisfying their interest in the trade (Sweet & Gallagher, 1997). This is consistent with other studies of occupational and educational participation. Most have found that individuals are drawn to a career for instrumental reasons as well as personal interest (Houtkoop & van der Kamp, 1992).

Instrumental Goals

Income and employment represent the most obvious of the perceived returns to apprenticeship choice and completion. They also are the most widely used indicators in studies of school-work transitions and in more specific analyses of the relationship between field of study and labour market returns (Krahn, 1996; Allen, 1999). Certainly, they are easily quantified and allow labour market outcomes to be readily compared across groups. Both income and employment stability are associated with other labour market outcomes of value. These include the further development of skill through continuing education and a greater attachment to the trade (Schuetze & Rubenson, 1997). These indicators are, however, better suited to analyses of longer term outcomes than the school-work transition period under study.

Personal Interest

In the context of apprenticeship transitions, job satisfaction may be seen as meeting initial expectations for higher wages and greater employment stability. However, the meanings individuals give to their work is broader than either of these indicators (Rehm, 1999). Attaining journeyman status typically follows a lengthy apprenticeship and satisfaction with the trade grows out of that experience. As well, work in the trades has many facets and opportunities for satisfaction. These include: responsibility and autonomy in one's activities and duties, job security, health and safety conditions, and relations with employers and co-workers. There are entrepreneurial possibilities for female journeymen. Starting one's own business, however, is not a priority among women apprentices whether registered in traditional or non-traditional trades (Sweet, 1998). The limited engagement of women apprentices in entrepreneurial ventures perhaps reflects the difficulties women in all occupations face when attempting to start their own businesses (Mirchandani, 1999; Hughes, 1999).

Job satisfaction in part reflects the image one has of male and female work (Looker & Thiessen, 1999). Interpreting work in the apprenticed trades in terms of the traditional and non-traditional distinction often diminishes the value of the former (Rubery & Fagan, 1995). Gaskell (1990) describes the need to consider both traditional and non-traditional work: "The feminist vision ... demands respect for the work women do, it calls for 'equal pay for work of equal value'. It challenges the process of valuation that puts women's work at the bottom. The process of revaluing women's work must be combined with the process of opening up opportunities in non-traditional employment" (p. 13). This brief overview of apprentices' transitions suggests the essential features and direction of the analysis. The basic question raised in the study asks whether or not labour market outcomes are influenced by apprentices' choice of traditional or non-traditional trade and their decision to complete or discontinue their apprenticeship training. These expressions of personal agency define (four) unique transitional pathways to the labour market: traditional continuers or discontinuers and non-traditional continuers or discontinuers. The examination of agency-outcome relationships in apprentices' transitions is organized around these pathways.

Examining Pathways and Outcomes

Data were obtained from the 1994 National Apprenticed Trades Survey (NATS). This was a national survey of some 32,000 (weighted) former apprentices who were interviewed 2 years after they had completed (or discontinued) their apprenticeships (Stoll, 1997). The labour market outcome variables examined in this analysis of the NATS referred to the respondents' position in the second year of their transition from the apprenticeship program. From among the 1900 (weighted) female respondents to the survey, 1863 respondents who were in the active labour market (employed or unemployed but seeking work) were selected. Although respondents were sampled from the various provinces and trades, it was necessary to aggregate the data as so few women are involved in apprenticeship training. Respondents were differentiated by their

transition pathways and their labour market outcomes were compared across the resulting combinations of apprenticeship choice and completion.

Employment

Employment outcomes for each pathway are shown in Table 1. Employment levels are partitioned to indicate: full year employment (50 to 52 weeks), less than full year employment (27 to 49 weeks) and half a year or less of employment (1 to 26 weeks). Comparing the number of weeks worked across pathways indicates that employment stability and continuity vary most obviously between completers and discontinuers. In contrast, the pattern of employment is very similar between traditional and non-traditional paths.

One indicator of the relationship between apprenticeship training and employment is the degree of attachment to the trade in the second year. Attachment is indicated in the lower panel of Table 1 by the number of weeks per year that respondents' were employed in the trade for which they trained. As may be seen in the number of respondents (N), there is a dramatic decline in attachment over this period, even among completers. However, those who do remain in the trade are able to secure higher levels of employment: among completers, more have full-year positions whether in a traditional or non-traditional field. It also is apparent that discontinuers in the non-traditional trades fare less well than discontinuers in the traditional trades. It seems that the greater regulation and skill requirements of the former limit participation to those with formal qualifications.

Table 1: Employment				
Employment Status	Pathways			
	Traditional Completer	Traditional Discontinuer	Non-Traditional Completer	Non-Traditional Discontinuer
<i>Weeks Worked Per Year</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
1 to 26	21	41	19	39
27 to 49	14	16	17	20
50 to 52	65	43	64	41
<i>Total (N)</i>	936	466	225	236
<i>Weeks Worked per Year in Trade</i>				
1 to 26	10	24	10	18
27 to 49	15	22	20	25
50 to 52	76	54	70	58
<i>Total (N)</i>	695	137	175	36

Income

Annual incomes for each pathway are reported in Table 2. It is apparent that choice of a non-traditional trade confers an economic advantage as both non-traditional pathways had higher levels of income than the traditional paths. Some two-thirds of respondents in the traditional trades are in the lowest income bracket while none of the traditional tradespersons are in the highest bracket. Further, apprenticeship completion appears to combine with choice to produce even higher levels of income. The distribution of income for those who had completed a non-traditional apprenticeship is decidedly higher than that of all other pathways. Over half the respondents in this group had incomes above \$30,000.

Annual Income	Pathways			
	Traditional Completer	Traditional Discontinuer	Non-Traditional Completer	Non-Traditional Discontinuer
	%	%	%	%
0 to 20,000	60	67	19	52
20,001 to 30,000	34	26	29	40
30,001 to 40,000	5	5	27	4
40,001 to 50,000	-	2	17	3
50,001 to 60,000	-	-	9	-
<i>Total (N)</i>	797	354	198	189

Job Satisfaction

Job satisfaction indicators present a more complex pattern. As seen in Table 3 (next page), respondents are not especially satisfied with their incomes. The non-traditional-completer group reports a somewhat higher level of satisfaction but they too seem to suggest their expectations were not met. And completers in the traditional group report equal or even higher levels of satisfaction in all other categories. Non-traditional completers perceive the workplace to be less secure and containing higher occupational risks than traditional completers. Interestingly, however, both traditional and non-traditional completers report equally positive social relations with their co-workers. Of all the pathways, non-traditional discontinuers report the lowest levels of satisfaction. Among those women who don't complete their training, the non-traditional group seems least able to find satisfactory employment.

Table 3: Job Satisfaction				
Indicator	Pathways			
	Traditional Completer	Traditional Discontinuer	Non-Traditional Completer	Non-Traditional Discontinuer
	%	%	%	%
Income	65	68	75	62
Responsibilities	90	86	92	79
Security	80	71	74	55
Health & Safety	89	92	86	84
Relations	93	95	94	88
<i>Total (N)</i>	892	387	208	204

Summary and Conclusions

The analysis of apprentices' choice of a trade and their decision to persist or discontinue defined unique pathways to the labour market. These pathways were associated with differences in the returns to apprentices' investment in training. Employment stability and continuity were greater for those who completed their programs regardless of their choice of a traditional or non-traditional trade. Income was maximized for those who completed a non-traditional trade; although registering in a non-traditional trade but failing to complete training still produced better financial returns than either of the traditional pathways. General job satisfaction levels were lowest for the non-traditional discontinuers. Among non-traditional completers, income satisfaction was relatively low but apart from this specific financial consideration, there were no marked differences on the remaining satisfaction items between these respondents and those who had chosen a traditional trade, irrespective of their completion status.

Contrary to Akyeampong's (1991) assertion, those who complete their training do benefit in terms of employment and income, especially those registered in a non-traditional trade. Choice of trade does, however, qualify this positive completion-outcomes relationship. As indicated, traditional apprentices who had completed their training fared less well in economic terms than did non-traditional discontinuers. It may be that, for traditional apprenticeship completers, lack of advantage in labour market outcomes stems from the general disparity in male and female wages. It may also reflect inconsistencies in the status of official credentials. These conditions are unlikely to represent or give rise to the 'opportunity structures' that allow effective career building (Bates & Riseborough, 1993). This situation has prompted some to encourage the entrepreneurial possibilities found in largely unregulated areas of the economy such as hairdressing. However, while the experiences of women entrepreneurs in this sector have not been adequately researched, relevant studies of other sectors are not encouraging to the view that part-time, flexible work status is conducive to successful entrepreneurship (Hughes, 1999).

Establishing a link between the decisions apprentices make with regard to trade choice and apprenticeship completion suggests that personal agency plays a significant role in successful school-work transitions. Within the structural (gendered) framework employed in this analysis, individual decisions were associated with particular labour market returns to training. This is consistent with views of an increasingly individualized society in which personal initiatives influence the transition process but are nevertheless constrained by social structure (Heinz, 1999). In response to the changing relationship between education and work, comprehensive educational reforms currently are underway in virtually all advanced economies (OECD, 1999). These have increased the number and variety of pathways for women. While apprenticeships represent only one approach to alternation, the findings of this study offer a useful starting point for a more complete specification of structure-agency issues in relation to other alternation training formats.

It is important to interpret the decisions women apprentices make in relation to their personal situations. Rudd (1997) reviews the various perspectives that are employed to interpret linkages between the educational and work worlds. The more recent (post-

modern) interpretations of structure and agency clearly emphasize the latter but stress also the difficulties of keeping these factors conceptually distinct (Hays, 1999). Certainly, apprenticeships are experienced quite differently by women registered in male-dominated as opposed to female-dominated trades (Braid, 1988). And they undoubtedly differ by region, sector, and along numerous other complex dimensions.

Integrating structural factors in the analysis of agency furthers our understanding of individual attempts to cope with change in particular settings. The concept of agency nevertheless can be seen as tied to broader principles of human capital development. In the context of trades training, women's aspirations and expectations are sensitive to information that compares the expected costs of and returns to an apprenticeship. While career choices are unlikely to be wholly rational processes (Raudenbush and Kasim, 1999), individual decisions are likely to be influenced by a knowledge of the linkages between apprenticeship pathways and labour market outcomes. It would be difficult to persuade women to enter the trades without first demonstrating substantial returns to an investment in apprenticed training.

Proponents of greater participation by women in the non-traditional trades are, on balance, justified in their enthusiasm. Certainly, the present analysis suggests that support for women in the non-traditional trades should be available to enable them to complete the apprenticeship and acquire the necessary certification. However, it may be necessary to temper somewhat this enthusiasm for non-traditional work. Despite achieving substantially higher incomes, women in non-traditional trades are less satisfied with their economic returns than might be expected. This may result from the persistent gender wage gap in the Canadian labour market or it may result from setting initial income expectations too high. It also should be acknowledged that women in traditional trades present a generally positive view of their work, especially in the important areas of job responsibility and interpersonal relations. Given this degree of complexity, there is a need to further research the returns to training for women in both the traditional and non-traditional trades.

Acknowledgements

The author wishes to acknowledge funding support for this project provided by the Labour Education and Training Research Network of the Centre for Research on Work and Society, York University, and the Social Sciences and Humanities Research Council of Canada.

References

- Akyeampong, E. (1991). "Apprentices: Graduate and dropout labour market performances." *Perspectives*, 3: 7-15. Ottawa: Statistics Canada.
- Allen, R. (1999). *Education and Technological Revolutions: The Role of Social Sciences and Humanities in the Knowledge based Economy*. Ottawa: Social Sciences and Humanities Research Council.
- Andres, L., Anisef, P., Krahn, H., Looker, D. & Thiessen, V. (1999). "The persistence of social structure: Cohort, class and gender effects on the occupational aspirations and expectations of Canadian youth." *Journal of Youth Studies*, x, xx-xx.
- Armstrong, P. (1996). "The feminization of the labour force: Harmonizing down in a global economy." In I. Bakker (Ed.), *Rethinking Restructuring: Gender and Change in Canada* (p. 29-54). Toronto: University of Toronto Press.
- Bates, I. & Riseborough, G. (Eds.). (1993). *Youth and Inequality*. Buckingham: Open University Press.
- Bean, J. (1983). "The application of a model of turnover in work organizations to the student attrition process." *Review of Higher Education*, 6, 129-148.
- Beck, U. (1992). *Risk Society: Towards a New Modernity*. London: Sage.
- Braid, K. (1988). "Neither friendly nor familiar: Language styles, stress and macho." In *Surviving and Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of the Naramata Conference. (p. xxx - xxx). Winlaw, B.C.: Kootenay WITT.
- Butterwick, S. & Ndunda, M. (1996). *What Works and What Doesn't Work in Training: Lessons Learned From a Review of Selected Studies of Labour Market Training Programs*. Report submitted to the B.C. Labour Force Development Board, Victoria, B.C.

- Carroll, B. & Cherry, F. (1985). *Some Advice for Overcoming Barriers to Women's Achievement in Non-Traditional Occupations*. Ottawa: Women's Employment Directorate, EIC.
- Economic Council of Canada (1992). *A Lot to Learn: Education and Training in Canada*. Ottawa: author.
- Furlong, A. & Cartmel, F. (1997). *Young People and Social Change: Individualization and Risk in Late Modernity*. Buckingham: Open University Press.
- Gaskell, J. (1990). "The politics of methodological decisions: How social policy and feminism affect the study of careers." In R. Young and W. Borgen (Eds.) *Methodological Approaches to the Study of Career* (p.xx-xx). New York: Praeger.
- Gordon, S. (1995). *Operation Access: A Pre-Apprenticeship Bridging Program For Women - Part 1, Framing Women's Options*. Toronto: Advocates for Community Based Training and Education for Women (ACTEW).
- Hays, S. (1999). "Structure and agency and the sticky problem of culture." *Sociological Theory*, 12, 57-72.
- Heinz, W. (1999). "Transitions to employment in a cross-national perspective." In W. Heinz (Ed.). *From Education to Work: Cross-National Perspectives*. Cambridge: Cambridge University Press.
- Houtkoop, W. & van der Kamp, M. (1992). *Factors influencing participation in continuing education*. *International Journal of Educational Research*, 17, 537-547.
- Hughes, K. (1995). "Women in non-traditional occupations." *Perspectives* 7, 14-19.
- Hughes, K. (1999). *Gender and Self Employment in Canada: Assessing Trends and Policy Implications*. http://www.cprn.ca/back_press/bgse_e.htm.
- Krahn, H. (1996). *School-Work Transitions: Changing Patterns as Research Needs*. Ottawa: Human Resources Development Canada.
- Looker, D. (1993). "Interconnected transitions and their costs: Gender and urban-rural differences in the transitions to work." In P. Anisef & P. Axelrod (Eds.), p.137-157. *Transitions: Schooling and Employment in Canada*. Toronto: Thompson Educational Press.
- Looker, D. (1997). "In search of credentials: Factors affecting young adults' participation in postsecondary education." *The Canadian Journal of Higher Education*, 27, 1-36.

- Looker, D. and Thiessen, V. (1999). "Images of work: Women's work, men's work, housework." *Canadian Journal of Sociology*, 24, 225, 251.
- Lowe, G. (1999). "Youth, transitions, and the new world of work." In V. Marshall, W. Heinz, H. Kruger, & A. Verma (Eds.) (p. xx-xx). *Restructuring Work and the Life Course*. Toronto: University of Toronto Press.
- Mirchandani, K. (1999). "Feminist insight on gendered work: New directions in research on women and entrepreneurship." *Gender, Work, and Organization*, 6, 224-235.
- OECD (1999). "Preparing youth for the 21st century: The transition from education to the labour market." *Proceedings of the Washington, D.C. Conference*. Paris: Organization for Economic and Cooperative Development.
- Raudenbush, S. & Kasim, R. (1998). "Cognitive skill and economic inequality: Findings from the National Adult Literacy Survey." *Harvard Education Review*, 68, 33-79.
- Rehm, M. (1999). Vocation as meaningmaking narrative: Implications for vocational education. *Journal of Vocational Education Research*, 24, 145-159.
- Ruby, J. & Fagan, C. (1999). "Gender segregation in societal context." *Work, Employment & Society*, 9, 213-240.
- Rudd, P. (1997). "From socialization to postmodernity: A review of theoretical perspectives on the school-to-work transition." *Journal of Education and Work*, 10, 257-279.
- Scane, J., Staton, P. & Schneider, M., Eds. (1994). *Strategies that Work: Women in Science, Trades, and Technology*. Toronto: Green Dragon Press.
- Schneider, M. "Women in non-traditional occupations: Educational strategies that work." In D. Corson & S. Lawton (Eds.) (p. 40-48). *Education and Work, Vol II*. Proceedings of the International Conference Linking Research and Practice. Toronto: OISE.
- Schom-Moffat, P. & Braundy, M. (1989). "What really happened to the WITT grads?." In *Surviving and Thriving: Women in Trades and Technology and Employment Equity*. Proceedings of the Naramata Conference. (p. 101-110). Winlaw, B.C.: Kootenay WITT.
- Schuetze, H. & Rubenson, K. (1996). *Learning in the Classroom and at the Workplace: Elements of a Framework for the Analysis of Apprenticeship Training and other Forms of 'Alternation' Education and Training in Canada*. Vancouver: UBC Centre for Policy Studies in Education.

- Skof, K. (1994). "Women in Registered Apprenticeship Training Programs." *Education Quarterly Review*, 1, 26-35.
- Stoll, P. (1997). *The National Apprenticed Trades Survey*. Ottawa: Human Resource Development Canada.
- Sweet, R. (1998). *Women and apprenticeships: Choosing a traditional or non-traditional trade*. Paper presented at *Restructuring Work and the Life Course: An International Symposium*. University of Toronto, Toronto, Ontario.
- Sweet, R. & Gallagher, P. (1997). *Women and Apprenticeships: An Analysis of the 1994 National Apprenticed Trades Survey*. Final Report. Ottawa: HRDC.
- Tinto, V. (1975). Dropout from higher education. *Review of Educational Research*, 45, 89-125.
- Wismer, S. (1988). *Women's Education and Training in Canada: A Policy Analysis*. Guelph: Canadian Congress for Learning Opportunities for Women.

The Labour Education and Training Research Network

Training Matters is funded by the *Social Sciences and Humanities Research Council of Canada* for a period of five years. During that time, we expect to produce innovative research that critically examines the provision of training for the Canadian workforce. In addition to publishing books of collected articles on selected themes, we are publishing a working paper series to disseminate as widely as possible the research being conducted by members of our Network.

Training Matters Working Papers

Access Diminished: A Report on Women's Training and Employment Services in Ontario, Jennifer Stephen; **L'alternance: pratique structurante ou alternative pédagogique? Éléments d'analyse d'une dynamique régionale**, Christian Payeur, Laurier Caron et Nancy Émond; **The British Columbia College, University College, Institutes and Agencies Accord on Government Contract Training**, John Calvert; **Consequences of Attrition in Apprenticeship: An Analysis of the 1994-95 National Apprenticed Trades Survey**, Robert Sweet and Zeng Lin; **Les Entreprises et la formation de la main-d'oeuvre au Québec: un état des lieux**, Colette Bernier; **La formation de la main-d'oeuvre et les syndicats au Québec dans les années 90**, Jean Charest; **La formation professionnelle continue dans les ordres professionnels au Québec**, Sylvain Bourdon et Claude Laflamme; **Formation professionnelle et action syndicale: enjeu plutôt que dilemme**, Christian Payeur; **The German Dual Apprenticeship System: An analysis of its evolution and present challenges**, Diane-Gabrielle Tremblay and Irène Le Bot; **Human Capital, the Competitiveness Agenda and Training Policy in Australia**, Stephen McBride; **The Impact of Privatization on Newfoundland College Students: The Case of the Career Academy**, Michelle McBride and Gregory Kealey; **A Labour Agenda on Training Funding**, John Anderson; **Un modèle de pratique en formation destinée aux jeunes à risque d'exclusion**, Sylvain Bourdon and Frédéric Deschenaux; **The Political Economy of Training in Canada**, Stephen McBride; **Research and Engagement with Trade Unions**, Carla Lipsig-Mummé; **Sectoral Strategies of Labor Market Reform: Emerging Evidence from the United States**, Laura Dresser and Joel Rogers; **Skills Training: Who Benefits?** Nancy Jackson and Steven Jordan; **Snakes and Ladders: Coherence in Training for Office Workers**, Alice de Wolff and Maureen Hynes; **The Strategic Conception of Skills and Training in Construction Unions**, John O'Grady; **Trade Unions and Vocational Education and Training Trends in Europe**, Winfried Heidemann; **Training and Canadian Labour: The Hard Questions**, Jean-Claude Parrot; **Training and Equity Issues on the British Columbia Island Highway Project**, Marjorie Griffin Cohen and Kate Braid; **The Training Strategies of the Australian Union Movement**, Peter Ewer; **Union Membership and Apprenticeship Completion** Robert Sweet and Zeng Lin; **Universities, Liberal Education and the Labour Market: Trends and Prospect** Paul Anisef, Paul Axelrod and Zeng Lin; **What Works in Forest-Worker Training Programs?** Tom Nesbit and Jane Dawson; **What's Happening with Training in New Brunswick?** Joan McFarland and Abdella Abdou; **Women's Access to Training in New Brunswick**, Joan McFarland; **Women and Apprenticeship: The Role of Personal Agency in Transition Success**, Robert Sweet; **Worker-Centred Training in an Economy-Centred World: The Challenge for Labour**, Thom Workman and David Bedford

Other Network resources and CRWS Working Papers

Combating Youth Employment I and II, Winfried Heidemann; **Funding for Training: An Annotated Bibliography**, Nyranne Martin and D'Arcy Martin; **Knowledge and Skills for the New Economy: The role of educational policy**, Winfried Heidemann; **Public and Private Sector Unions in the Delivery of Training: The 1998 CLC Protocol**, John Anderson; **Seizing the Moment to Finance Training: A Union Perspective on the Joint Union-Management Program**, Fred Wilson; **Voices from the Classroom: The Ontario Colleges and the Question of Quality**, Jerry White

The Training Matters Network is coordinated by the **Centre for Research on Work and Society**. For more information on Training Matters and the Centre for Research on Work and Society, and its activities and working paper series, contact the Centre at:

276 York Lanes, York University, 4700 Keele Street, North York, Ontario, M3J 1P3, CANADA.

Telephone: 416-736-5612; fax: 416-736-5916; email: crws@yorku.ca

Web: <http://www.yorku.ca/research/crws>