

Policy Conundrums: Women and IT, Learning and Work



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Women's Alternate and Informal Learning
Pathways to Jobs in the IT Sector

<http://www.edst.educ.ubc.ca/IT/>

WALL Case Study

Women's Alternative
and Informal Learning
Pathways to Jobs in the
Information Technology
Sector



Case Study Objectives



- ⌘ **To document women's informal/non-formal pathways and learning activities related to accessing careers in IT.**
- ⌘ **To identify the barriers or obstacles to women's participation in formal IT preparation programs and women's access generally to careers in the IT sector.**
- ⌘ **To explore the relationship between formal and informal learning and wages earned by women in the IT sector**

Community-University Partnership

- Jen Liptrot, Executive Director, A Commitment to Community Based Training and Education for Women (<http://www.actew.org>)



- Shauna Butterwick, Associate Professor, University of British Columbia



Research Team



- Kaela Jubas (UBC), Doctoral Student in Department of Educational Studies, UBC
- Hong Zhu (ACTEW), PhD, Ontario Institute for Studies in Education, University of Toronto

Research Questions



- Where in the IT field are women (without formal IT credentials) working?
- How have they learned their IT skills and knowledge?
- How are their informally acquired skills recognized and rewarded?
- What bearing does gender have on their learning and skills recognition?

Stats on Women in IT



- Ratio of men to women IT graduates from post-secondary and vocational training colleges (2002) = 76:28
- On average, women in high-tech jobs earn 85% of the salaries of men
- Percentage of Women in IT Sector
 - 1990 – 38%
 - 2002 – 33%

Recruitment & Data Collection



- Network & snowball sampling
- 75 work and learning histories with women conducted in Vancouver, Victoria and Toronto
- Interviews conducted between 2003 and 2005
- Resumes collected from participants

Demographic Profile of Participants



- Ages 24 to 60 years old
- Most were of Western European descent
- Minority of women had children (& most children were older)
- Most had undergraduate degree in arts and social sciences
- Most had some short-term formal IT training

Participants' Stories



Social learning in the workplace



- “Reading, my colleagues, our office is extremely open. We have no cubicles, no barriers. We have daily, weekly meetings where we talk about stuff and we’re all sort of on the same page.... And I’m not afraid to ask people questions either.” (Elaine, web designer)
- “In some jobs, you know, some person would get a software program so I’d load it up, and then I’d play with it and figure out how to use it. So that happened. Sometimes, it was a combination of that and then I’d ask somebody, you know, some questions about how you did something and then they’d show me.” (Melanie, technical writer)

Social learning in the workplace (continued)



- “I guess, a lot of it was just a matter of being – well I guess, so a lot of the people skills were like a matter of being self-aware so, you know, I would consciously try to look, you know, try to observe other people and see what kinds of things they were doing and try to make a note of them and, you know, I tried to mentally sort of form goals as to what I, you know, wanted to achieve or what I perceived as being – people I perceived as being successful in trying to figure, you know, what it was that they did in order to become successful and try to – I tried to do things that way and, of course, yeah, I also, you know, talk about these things with other people sometimes.” (Wing-hua, software engineer)

Social learning in the workplace (continued)



- “And everyone’s always talking about...this office isn’t very big so it’s sort of, hard to miss conversations about whatever is being discussed. And you really just sit there and listen...or quite often they’re happy to have you sort of butt in and say, la, la, la, and they’ll explain it a bit more...” (Linda, office manager in a high-tech firm)
- “My friends, my network, we all have this unwritten rule, if you discover something new, you have to share it.” (Claire, systems analyst/architect/programmer)

Social learning in the workplace (continued)



- “The company’s just gone through quite a heavy restructuring. When I say restructuring I mean...downsizing. So there used to be time to do that kind of thing and we did quite often but...not any longer.... And also, when I was managing the development department...I used to get one of the developers to present a topic and every person had to take a turn and once a month we’d have a lunch-and-learn session,...distributing the knowledge amongst ourselves.... If we could at least share some of this information.... That’s one of the things I’ve missed being in a sole, solitary job in this company, is not having somebody to bounce my ideas off, and sometimes development would take longer then because you have to...try it out, somebody doesn’t have an instant made solution, oh, do it this way, you know... everything is trial and error.... Or scratching through the manual or...you know...more time consuming.” (Kathleen, project manager)

Responsibility for and cost of learning



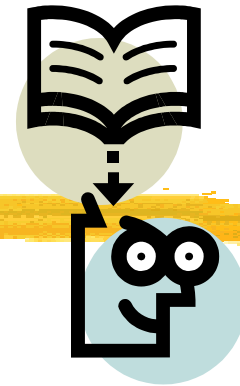
- “I think a big part of it is the individual, and then a percentage is the company and the support. I guess what I kind of would like to see is maybe the company help come up with kind of, help define the pool of courses for the employee to choose from so that it’s not so overwhelming.” (Pauline, business analyst)
- “I think the individual is responsible. If you end up in a job where there is related courses, most of their employers pay for the training, you know.... [B]ut I think ultimately we’re responsible for our own education.” (Lorraine, business/database development specialist)

Responsibility for and cost of learning (continued)



- “And I think...that that is also the company’s responsibility.... I took on that responsibility for the people who work for me,...to kind of give them a bit of a heads up, you know, like, you know what, this is really...happening, this is what everyone’s talking about, this is the sort of thing that companies are jumping into these days so...if you want to take a little bit of time...this is where I think you should focus. And,...you know, those people have...benefited from it. Some of them have then gone on to jobs that...that really did use that and it was good for them. But I think every company has that responsibility.” (project manager)

Experiential and credentialed learning



- "...when I'm learning something that probably does have a practical application, I really need that element of it to be a part of what I'm going to do and just sort of contextualize it or to even, to make it a personal knowledge." (Alissa, manager in a public library)
- "I would say I learned the most on my practicum.... I know it's...like the sense I got from the program I was in is that...this is the real world, you know...and actually it's not the real world. Like when you're learning it's a different thing than the real world...." (Marion, network support coordinator)

Experiential and credentialed learning (continued)



- “I learned skills when I needed to use them.” (Helen, technical writer)
- “My second major strength is I learn very, very quickly, and I’m a self-learner. I don’t require courses. I can learn and figure out what I need to do, through the internet or a book, whatever. Um, or my small circle of experts, which I utilize.” (Brenda, information and technology manager)

Experiential and credentialed learning (continued)



- “[L]earning what happens in the real world is very different than learning what happens in school and that’s not to say...that I didn’t get any value out of education...but...as I say, talking to other people, when this MSCE thing became very popular..., I was interviewing for jobs...and I can’t tell you how many people who were hiring said to me, look at this stack of resumes here, I have 50, 60 resumes. They’re all people who are so-called paper MSCEs, in other words, they have an MSCE, but they have no experience.... This one guy that I interviewed.... I remember he said to me...I won’t even look at these. He goes, memorizing information in a book and going to pass the test means nothing when you’re actually in there and you have to make a decision based on what you already know. Because the experience speaks volumes...reading a book and understanding it can help you but it’s not like the experience.” (Carla, systems administrator)

Beyond technical skills...



- “It's definitely true that technical skills are required and should be taught. I think what is never discussed is other skills that you need in your job, being organized, being able to communicate.” (G, system engineer)

Work/Life Balance



- “I just think in the work world overall people that are going to be accommodated are people who can say..., I can work as many hours as you want. I am willing to travel anytime you want.... I have no other issues, right. You know, it’s not just women. It’s also people with disabilities.... I have a friend who has multiple sclerosis and she has...worked as a hairdresser. She has taken a web design graphic design program and she was thinking about going into that just because of her multiple sclerosis because of her health issues. And she is incredibly hesitant to do it because where she works now...mostly women work there and they have known her for so long, they knew her before her illness, and so they have made accommodations for her.... And now she feels, whether or not this is true I don’t know, but from her perspective for her to go to a new organization to apply for a job as a web designer she feels like she would have to tell them up front that she has this illness, that it may affect her work, that she may not be able to work 40, 50, 60 hours a week, that they may have to make considerations for her.... So, yeah, I think if you require any type of accommodation I think it can be difficult.”
(Sally, project coordinator/e-business)

Work/Life Balance (continued)



- “And I think because as a female in IT, you’re just working so hard to prove yourself that you’re thinking, okay, well I’ll take it all on, I’ll do it all, I’ll prove I’m Superwomen, but, you know, you’re just hurting yourself. Yeah, I think the respect for women in IT is difficult.” (Hannah, director of IT business unit)

Career Education



- “I guess the other thing is knowing enough about technology to know how to make wise decisions about the technology you want to focus on ... [It] comes back to mapping out of your carrier. It can be hit or miss ... So you can limit yourself or enable yourself by the choices you make. So part of the education is knowing how to manage your career and knowing how to foresee enough in the future in order to enable you to make choices [and] how to recognize the direction technology might go and to see where your opportunities might be and see which ones are attractive to you.” (H, Business manager)

Career Education (continued)




- “I think the IT industry, and certainly from my experience, is very based on math graduates. ... I’ve always thought that one of the changes that needed to occur was that we needed to encourage more girls to be interested in the math based programs early. So that they could get into those streams and become acquainted with those structures early in their academic world.” (S, director, National Service)

Mentorship




- “I guess one thing is the importance of role models, female role models. So what can we do to make females in this industry more visible as serious practitioners as someone that girls might want to emulate. I’m just trying to think. I think society has changed over 30 years, is there anything that we should be doing to reflect the changes of society in terms of how we use IT people.” (H, business manager)

Mentorship (continued)



- “I think mentoring by females is necessary at this point, there’s still not enough of us out there so if you can support another woman whose just starting or asking questions. I think that’s really important.” (I, senior bank account manager)

Mentorship (continued)



- “I don't think women really think about that too much I think women have to stop being intimidated by technology. I think the problem is that there's not enough role models of there for them.” (J, project manager of website development)

On-the-job mentorship



- “I was encouraged to get into IT because it was a prestigious profession, in which the playing field was equal, but once I got into IT I didn’t find that men similarly encouraged me ... What they did was they dropped me in the middle and they say “go” like they do with all the other men, but I didn’t find that there was any kind of nurturing or any kind of extra encouragement that I would have hopped for amongst IT professionals towards women.” (K, employment counsellor)

On-the-job recognition



- “[Women] don’t have the formal training, or they were hired into an admin position. But when an employer finds out that they have technical skills, that they use those skills, but still pay them the admin level of money.” (R, coordinator of an entrepreneurs project)

Recognition (continued)



- “I wish I knew how much technical people got paid, when I started out. Because I remember negotiating my first contract with the web design company. I was just thinking today, ‘God, I totally undersold myself!’ Like I was thinking I was making shitloads of money, but you know, in retrospect today, I thought, ‘Oh man! I could’ve charged twice as much!’ You know?” (R, coordinator of an entrepreneurs project)

Policy Conundrums



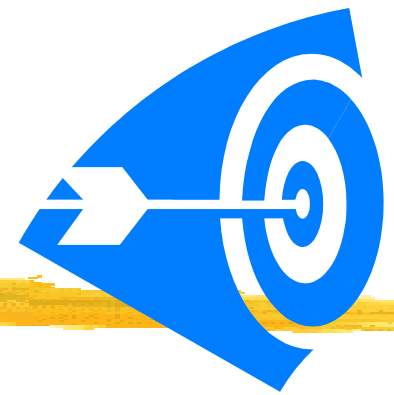
- Policy rhetoric stresses individual responsibility for career pathing, employment and learning, and emphasizes credentials, but...
 - undermines the important informal, social aspect of learning
 - policy directives and programs have neglected “career self-management”

Policy conundrums



- Restrictive Employment Insurance guidelines
- Provincial Employment Standards exclusions

Policy Actions



- Broader consultation: inclusion of women's IT networks
- Better funding: development of inclusive funding schemes and training options
- Maximize PLAR: extension beyond regulated professions; assessment of both soft and hard skills
- Employment equity: more support from employers for women's training; pay equity

Career Education



- Challenge gender bias about careers in technology
- Provide more female role models
- Expand vision of work in the IT field
- Recognition of 'soft' and 'hard' skills
- Importance of broad-based education (not just IT training)