Full Length Research Paper

The Role of Education in Entrepreneurship: Two Canadian Stories

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The role that education and training plays in entrepreneurial success is one that is subject to lively debates in the literature. In the first half of this paper, we explore the essence of this debate, with a particular focus on women entrepreneurs in Canada. In the second half of the paper, we tell the stories of these two Canadian entrepreneurs who have started technology-based businesses and were participants in a unique Canadian non-profit educational enterprise, Shad Valley Centre for Creative Technology. The stories of these two successful entrepreneurs - Thelma Zee, who started a freelance web design business while she was still in high school, and Jennifer Corriero, who started a now world-renowned non-profit organization for youth - aim to shed light on the role they see for education in entrepreneurship. Our cases suggest that personal characteristics *are* important – persistence, self-confidence, initiative, creative thinking, and as Thelma said, a certain kind of intelligence that isn't really about being "book-smart," although it often includes that too. Our research also asked the question, "Is learning important?"

Traditional formal education plays a relatively small role in these two cases and the others that we have gathered through our study. Based on our research, we would argue this reflects the relatively low importance of formal education as specific preparation for entrepreneurship for women. In our stories, the informal learning that young people receive from family and friends was important. Furthermore, participation in the Shad Valley program - its intensity, level of challenge, and focus on experiential and applied learning – played a key role in inspiring these women to take on the entrepreneurial initiatives.

Key words: entrepreneurship, education, training, Canada, women

"My parents raised me to pursue my dreams…."
Jennifer Corriero, TakingITGlobal

"You must love challenges - you get a lot of roadblocks, but you just don't quit!"
Thelma Zee, Oppo Design Studios

Introduction

Thelma Zee started a freelance web design business while she was still in high school. Jennifer Corriero has started a now world-renowned non-profit organization for youth. Both are members of a new generation of young Canadian women whose entrepreneurial activities are based in the scientific and technological knowledge of the *new* economy. In 1998, an Industry Canada study reported: "In the knowledge-based economy, it becomes paramount that all entrepreneurs take advantage of business planning, training and new technologies" (Industry Canada, 1998, N-1). These two young women have done just that, and more.

Both women have participated in a unique Canadian non-profit educational enterprise, Shad Valley Centre for Creative Technology. The brain-child of Dr. Derek Lane-Smith, Shad Valley offers an intensive four-week training program every summer to selected students entering Grade 12 from across Canada and overseas, at 12 host universities. Most Shad participants are entering Grade 12 but some may attend earlier in high school if they have accelerated in math. The role that education and training plays in entrepreneurial success is one that is subject to lively debates in the literature. In the first half of this paper, we explore the essence of this debate, with a particular focus on women entrepreneurs in Canada. In the second half of the paper, we tell the stories of these two Canadian entrepreneurs who have started technology-based

businesses. The stories of these two successful entrepreneurs aim to shed light on the role they see for education in entrepreneurship. Much of the research on women and entrepreneurship has focused on personal qualities, historically. More recently, there has been a strong call to re-examine this approach and to also examine structural and environmental factors that contribute to success (Carter et al., 2001).

The Role of Education and Training in Entrepreneurship

Entrepreneurship education has its origins in the 19th century agricultural sector, where courses were taught to children of farmers in the winter months (Katz, 2006). Almost two centuries later, there are still questions about the efficacy of education and training in creating successful entrepreneurs. We use the term 'education' here to refer to formal primary, secondary and post-secondary programs that lead to some form of certification. 'Training' includes short-term programs like Shad Valley and informal learning that may take place at the workplace, through meetings and discussions with colleagues, through hearing stories from other entrepreneurs and through receiving advice and inspiration from mentors and role models.

Peter Drucker, often referred to as the one of the top ten 'gurus' of management describes entrepreneurship as a 'discipline' and argues that like any discipline, it can be learned (Drucker, 1985; Schneider, 2001). Contrary to this, Mel Baiada, one of America's most successful technology entrepreneurs, reported that the most important element to entrepreneurship is one's desire or passion: something that cannot be taught. He thinks that the objective of curriculum devoted to the teaching of entrepreneurship is to increase the probability of success by teaching students about the structure of a business (Baiada interviewed in Decker, 2004). Numerous studies have demonstrated the link between education and higher rates of successful entrepreneurs, both in terms of the number of entrepreneurial endeavors and the longevity of these initiatives (e.g. Coduras et al., 2008; Weaver et al., 2006; Menzies & Paradi, 2002).

Educational and training programs that encourage entrepreneurship can help entrepreneurs learn valuable business and communication skills. Program initiatives that support and promote entrepreneurship by teaching key skill sets should be integrated into all levels of the educational system (Aronnson, 2004; Coduras et al., 2008; Katz, 2006). Some practitioners feel that the best way to 'educate' entrepreneurs is through apprenticeship programs where successful entrepreneurs lead by example (Aronnson, 2004; Katz, 2006). Duening (2008, n. p.) encapsulates the literature on education and entrepreneurship well by saying: "The moral of the story is that anyone can be an entrepreneur, but not everyone can be. If there is a fit between opportunities in the prevailing environment, and the skills and resources available to the individual, then success may [ensue]."

The Status of Women Entrepreneurs in Canada

The 2003 Canadian Prime Minister's Task Force on Women Entrepreneurs estimated that women entrepreneurs contribute in excess of CAD $18 billion annually to the Canadian economy. In 2008, more than 900,000 Canadian women were identified by Statistics Canada as being self-employed (Statistics Canada, 2009b). Entrepreneurial women represent about 11% of women in the Canadian labor market (Figure 1).
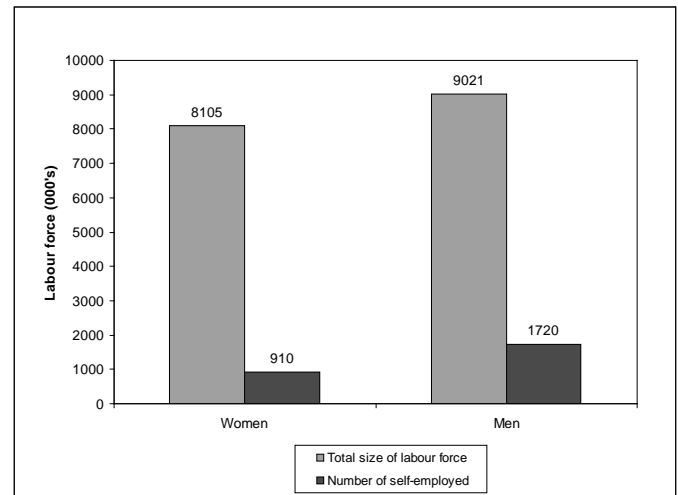

Figure 1. Size of labor force and numbers of self-employed in Canada by gender (2008). Source: Statistics Canada, 2009.

During the past 25 years, the number of self-employed women in Canada has increased rapidly – by over 200% from 1983 to 2009. By comparison, the number of self-employed men increased by 160% in the same time period (Statistics Canada, 2006; Statistics Canada, 2009b). Figure 2 shows the contrast between the number of women and men who are self-employed in Canada and also demonstrates the steady growth in self-employed women. At the turn of the 21st century, entrepreneurial women in Canada made up a larger share of the total number of self-employed workers than in any of the other twenty-nine OECD member countries (Adrien et al., 1999; Organization for Economic Cooperation and Development, 2009; Government of Canada, 2003). In an increasingly knowledge-based economy, women play an important role in the *knowledge-intensive services* that are experiencing much growth in both Canada and beyond (Industry Canada, 1998).

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twenty-nine OECD member countries (Adrien et al., 1999; Organization for Economic Cooperation and Development, 2009; Government of Canada, 2003). In an increasingly knowledge-based economy, women play an important role in the *knowledge-intensive services* that are experiencing much growth in both Canada and beyond (Industry Canada, 1998).

Despite the rapid growth in numbers of women entrepreneurs, Canadian women are still less likely to be self-employed than their male counterparts in the labor force. Even though women in Canada now constitute about half of the Canadian labor force, at 47% and are contributing about half of all new businesses in Canada, they represent about one-third of all entrepreneurs, as seen in Figure 2 (Industry Canada, 1998; Statistics Canada, 2009a; Statistics Canada, 2009b). Among Aboriginal women, this proportion is somewhat higher, at 38% (Government of Canada, 2003).
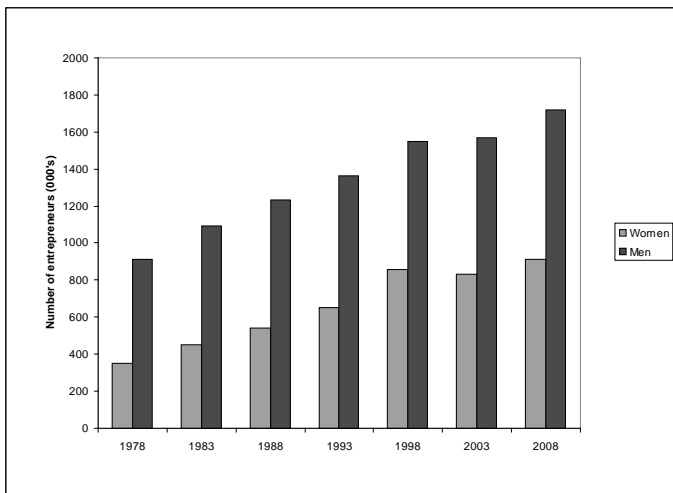

Figure 2. Number of women and men who are entrepreneurs in Canada Source: Statistics Canada, 2006; Statistics Canada, 2009b.

In Canada, and in North America more generally, gender analysis of entrepreneurship has identified a range of barriers differentially faced by self-employed women. These barriers include difficulties in accessing financing, restrictions in access to business-oriented social networks, the challenges of balancing work and family life, and lack of access to suitable training and education (Carr, 2000; Lior & Wismer, 2003; Mirchandandi, 1999; Terjesen, 2005).

Even with these barriers and challenges however, a recent Canadian survey of over 120 women entrepreneurs found that 60% still prefer self-employment to working for others (Government of Canada, 2003). Another study also found that, although some women enter self-employment because they have lost jobs or job status in the paid labor market, 60% of women choose self-employment, 'pulled' by the promise of independence, flexibility, a self-defined positive and challenging work environment, and the opportunity to escape

the barriers of the paid job world (Fenwick, 2003; Government of Canada, 2003; Hughes, 2003a). One study found that, in comparison to men, women choose self-employment much more frequently to address work-family balance issues, with 12.6% of women compared to 2% of men citing working at home as a motivator for self-employment and 9.2% of women compared to 4% of men citing flexibility of schedules as important (Hughes, 1999).

Case Study of the Shad Valley Program

Shad Valley is a four-week summer enrichment program for high school students. Started in 1981, Shad Valley now has over 10,000 alumni. The program strives to promote creativity, excellence, community, diversity and responsibility through an emphasis on science, technology and entrepreneurship. Young women will comprise about half of the group. The students live in university residences, attend lectures from invited professors and guest speakers, and participate in intensive applied workshops that focus on problem solving in the areas of business, science and mathematics. All students in the program work on an entrepreneurship project, in which they create a new product, develop a prototype, prepare a business plan and present it to an expert panel (Lupart & Barva, 1998; Shad International, 2009).

Requests were sent to women Shad graduates who think of themselves as entrepreneurs to get in touch with us, so that we could hear their stories and so that they could share with us their views about what contributes to success in the world of self-employment. Within the time frame for our study, 10 people responded and agreed to be interviewed. Their business activities were diverse, ranging from new start-ups to businesses in their second decade, from social entrepreneurship to corporate entrepreneurship and profit-making enterprises in sectors from media to food to the creative arts. Their Shad Valley experiences were also diverse, taking place between 1984, the year after Shad Valley started, and 1998; and at universities in Quebec, British Columbia, New Brunswick, Ontario, Alberta and Nova Scotia. What these women have in common, in addition to their Shad experience and a strong technological component to their enterprises, is their zeal for their chosen work, their persistence and their will to achieve. It should be noted that our sample was small and was not culturally or geographically representative of the range of women entrepreneurs in Canada. We had no northern or Native interviewees and only one Francophone from inside Quebec, none from outside. As a result, we cannot make any comments about the general applicability of our findings.

Our interviewees talked with us about their goals and motivations in starting a business. Most discussed being drawn into self-employment by their desire for challenge, for flexibility, and by the positive self-image that business ownership offers to them. All of the participants in our study talked about the importance of the role models provided to them by their Shad Valley experience in leading them to

believe that they could be successful entrepreneurs. Most interviewees also talked with us about other role models and mentors as important sources of learning for them. These people not only encouraged our participants to believe in themselves and the possibility for success, but also provided important advice about how to build businesses, offering everything from client referrals to financial acumen to product development expertise.

One major interest in carrying out our study was to find out if our participants thought that entrepreneurship could be learned and if so, how. There was a range of opinion among our participants. One person said that entrepreneurship was about having a dream and a vision and being persistent, and that she did not believe these things could be taught. All the others, however, disagreed, saying that learning is important, that technological skills and knowledge, marketing and opportunity identification, financial management, product and service planning, working with people and problem-solving are all critical, and can be learned. They did say, however, that these things are rarely taught in formal educational programs and that their sources of learning were largely from training programs like Shad Valley, mentors and role models, the stories they heard from other businesspeople and the peer relationships they developed through networking.

The cases included here provide detailed examples, and provided us with an opportunity to examine in depth what two women entrepreneurs had to say about themselves and their personal attributes, their businesses and the question of whether and how entrepreneurship can be learned. Although both have created information technology-based enterprises, one is involved in a non-profit organization as a social entrepreneur, while the other has a more conventional business profile. Despite the differences in business goals, both of these women report experiencing similar challenges as they move through the start-up phase of their businesses. In order to place these stories and the more general findings discussed above in context, however, we have included a summary of recent literature on women entrepreneurs in Canada below.

Jennifer Corriero and TakingITGlobal

Entrepreneurship is important because it contributes to ongoing adaptation and ability to respond to critical needs, to fill major opportunities… More broadly, we (Canadians) need a culture of entrepreneurship… critical thinking, questioning, believing we have the capacity to respond, to handle change, to have the confidence that we can innovate and thrive in turbulent environments.
– Jennifer Corriero

As a self-described social entrepreneur, Jennifer Corriero is co-founder (with Michael Furdyk) and Executive Director of *TakingITGlobal,* an international organization led by youth and empowered by technology, based in Toronto, Canada

(*TakingITGlobal,* 2009). Started in 1999 and launched in 2000, *TakingITGlobal* was founded on the idea of using information technologies to provide young people with an online venue for sharing ideas, pursuing interests and taking action with the support of a global community of people with similar interests and aspirations. *TakingITGlobal* has experienced tremendous growth and support over the last nine years and has reached over 14 million people in every country and continent in the world and provides social networking opportunities, tools and resources in 12 languages. The organization's website TakingITGlobal.org offers an online community aimed at actively engaging youth in a global online social network and also provides content and tool for educators (*TakingITGlobal,* 2009). In 2003, in partnership with Canada's Department of Foreign Affairs and International Trade, *TakingITGlobal* also launched an international internship program for youth. *TakingITGlobal* has partnerships with five United Nations agencies as well as other international organizations such Oxfam, the International Institute for Sustainable Development and the Environmental Youth Alliance. Jennifer has been selected by the World Economic Forum as a Young Global Leader (2005) and Global Leader for Tomorrow (2002).

Starting in 2002, and with the assistance of a team of volunteer translators, *TakingITGlobal's* entire technical infrastructure was re-developed to support multiple languages and different character sets. The virtual translation team includes over 130 volunteers and the site is available in twelve languages. Jennifer spoke about the importance of providing a multi-lingual network:

> One of the major criticisms of technology and globalization is how it has contributed to the loss of local cultures and languages. [In the beginning] our website was only available in the English language, which contributed to the problem and held us back from truly achieving our goals of inclusivity.

Getting started. In 1998, when Jennifer was still in high school, she attended the Shad Valley summer program at the University of Calgary. She says that the Shad experience was memorable because of the stories she heard there, of "people who are really committed to great things," such as one guest speaker who had climbed Mount Everest. She also got experience with working in an intense and challenging environment:

> At Shad, you're confronted with a lot of things in a short period of time…. it takes you to a different level, being challenged by your peers, and finding balance too…. I created a product, developed a plan for it, managed the t-shirts for the group – got the design and handled the sales…. I was challenged intellectually…. Shad helped me to overcome my own barriers.

Coming from Ontario's rolling farmlands and big cities, Jennifer enjoyed the contrasting beauty of the landscape around Calgary, which sits at the western edge of the Canadian Great Plain, with the foothills and high snow-capped mountains of the Rockies close by. Jennifer noted that Shad helped ignite her entrepreneurial spirit in several ways that went beyond what she learned in the program itself: "My parents told me that if I wanted to go, I had to pay my own costs, so I sold prints of my art to raise money." The idea for *TakingITGlobal* also grew in part from a desire to go beyond the Shad Valley experience*:*

> Shad is very restricted: (it's) only for the best and the brightest. We need programs to be more broadly available, we need more of a culture of initiative within the school systems. A lot of people might not get the marks, but they have potential. Leadership programs exist, but people don't always get recognized. We need to increase exposure and mentorship. It really does make a difference when you hear people's stories, when you are exposed to excellence, and different career paths. Mostly in schools, there is not as much networking, not being given business skills, as is needed…we need to mainstream opportunities.

Shad Valley was not the only experience that prepared Jennifer for the challenges of creating *TakingITGlobal*. The support and encouragement of a grade 7 teacher, who encouraged her to become director of a school play was an important influence: "That was definitely an important experience because someone saw potential in me…I was also involved in sports, which gave me confidence, helped me to learn teamwork, developed me physically…. I learned that I could compete with the guys, do things, that I didn't have to be afraid of any of that…"

Jennifer was inspired by her high school experience in Toronto, Ontario. She worked on the school newspaper there and was also responsible for a website that promoted awareness of important Canadian women who have been ignored by standard history texts. In hindsight, she recognizes that some of these experiences were important not just for the substantive skill development involved, but also because they "developed initiative in me".

Jennifer's parents were also influential, always supportive, encouraging her to pursue her dreams and give her best effort. When a junior kindergarten teacher, in a conversation with Jennifer's mother, expressed concern that Jennifer might be too 'bossy', Jennifer's mother pointed out that Jennifer was never disrespectful of others and suggested to the teacher that what she was actually seeing in Jennifer was early signs of leadership. Jennifer says that her mother taught her that "good leadership is knowing when and how to respond*"*.

Like a number of others who volunteered for our study, Jennifer went on from her Shad experience to the Ontario Science Centre Summer School to investigate science as a career path. She set aside her interest in science however, after a summer program on website development and project development and a six month consultancy job with Microsoft got her excited about the potential of information technologies. In fact, while Jennifer and her colleague Michael were contemplating how they could create a space that would foster inspiration, information and involvement amongst youth, Microsoft heard about their project and invited them to work for the software company in Seattle to help the company understand and re-think how they should approach the 'Net Generation' (*TakingITGlobal*, 2009). Jennifer has also worked as a consultant on projects for Xerox, Bootlegger, J. Walter Thompson, Canadian Imperial Bank of Commerce, Nike, Swatch, McDonalds and HP.

In 1999, Jennifer enrolled in the undergraduate business program at York University in Toronto, at the same time as she was developing the idea that evolved into *TakingITGlobal.* By 2000, Jennifer had reduced her university program to part-time so that she could focus on launching her new venture. Since that time, she has not only finished her undergraduate degree, but has also started a Master's program in Environmental Studies. Why did she decide to turn her efforts toward *TakingITGlobal*?

> I wanted to promote learning, sharing, leadership, social entrepreneurship…Social entrepreneurship combines things important to me. I felt that TakingITGlobal needed to be created by young people and I felt compelled to create it…..I like having a vision, carrying it out. This [TakingITGlobal] requires massive dedication, it takes a lot, it's not a 9 to 5 job, but I wanted to commit myself to something that makes a positive contribution to the world. Lots of companies do that, they make a positive contribution also, but what I saw was a lot of gaps in the youth development space and I wanted to do something to strengthen civil society there.

Jennifer and her co-founder Michael also wanted to "bridge the digital divide", using information technologies to reach young people who might not otherwise be active in an on-line environment.

Challenges. Jennifer cautions that the idea of entrepreneurship can be over-idealized:

> It's a lot of work. A source of income is needed and you (the entrepreneur) are accountable to wherever that income comes from – clients, your Board (of Directors). You have to produce, you don't just get to do what you want.

One major hurdle for *TakingITGlobal* is that it is a young people's organization in a start-up position and, as one result, there is considerable turnover in staff:

> …[T]he organization is run by young people who are at a life stage where longer term commitments are less likely and our pay scale is also less competitive. Also, many positions at TakingITGlobal are internships, which means that people join with the expectation of leaving or moving on within a period of 6-12 months. We get a great deal of insight and fresh perspectives from the process of continuing to work with new people, but…. as we work toward increasing more secure sources of funding, we hope that a larger percentage of our core staff will be able to make longer term commitments to the organization.

Looking to the future. Jennifer reflected on the past and looked to the future: "I've definitely learned a lot over the past 5 years…. how to hire the right people, collaborate with strategic partners, manage critical projects, and multi-task…"

One of Jennifer's original goals was to see *TakingITGlobal* grow, to 100,000 members in 2006 and into the millions by 2010 (as of June 2009 they had over 250,000 members (along with 4 millions visitors to the site per year). Jennifer notes: "knowing that my efforts are mission-centered and that I am having an impact is critical." On a personal level, she remains deeply committed to the original vision and *"would love to be able to continue to work with such dynamic and inspiring groups of individuals and organizations,"* spending more time in the countries where *TakingITGlobal* has active members, learning new languages and "strengthening my leadership abilities as the organization grows."

Thelma Zee and Oppo Studio Inc.

> I never thought about starting my own business until Shad Valley, but just going through the program, just hearing about what it's like to be an entrepreneur, made me intrigued with the idea of being my own boss. I thought maybe I would have my own business when I was 30 or 40, but Shad made me realize I could just go ahead.
> — Thelma Zee, *Oppo Studio Inc.*

Thelma Zee is a graphic designer and artist and founder and owner of *Oppo Studio Inc.* The company provides branding consultation and web project development services. Founded in 2000, while Thelma was still a student, the company has worked with a wide range of clients, including IBM, the Royal Bank, Sandylion Sticker Company, Flintstones Vitamins and Minute Maid. Thelma's business strategy has been to build the company slowly and steadily: "Now, I have a good steady flow of clients, many returning clients and referrals…. I haven't ever really advertised… (My company's) growth has been mostly through word of mouth".

Getting started. Thelma's interests have always been in the arts. In high school, she specialized in the arts and then she went on to the York University/Sheridan College undergraduate program in Design. After completing her Bachelor's degree in Design, she also completed a 2-year post-graduate diploma in Multimedia at Sheridan College. *Oppo Studio Inc.* was started while Thelma was in her third year of her undergraduate studies.

Thelma's interest in the creative potential of information technologies also goes back to secondary school: "I was already doing web design in High School. I became good friends with my computer science teachers - they sent me my first clients". During the years when Thelma was trying to balance studies at school with running her business, she kept to her slow and steady growth strategy, contracting out for assistance at times when it was difficult to manage both her schoolwork and her client load.

Like all those in our study, Thelma was a participant in Shad Valley. She attended the program at University of Waterloo in 1997. Because her primary interest was in the arts, she felt "a little out of place" among a group of young people whose majority interests in her year were in engineering and systems design. She did say, however, that the opportunity to work with a highly qualified group of young people for four intense weeks definitely made an impression on her. She says she learned "how people can really excel", and went on to say, "…. the group experience was really important". Like other participants in our study, she found that hearing stories from those who have started their own businesses was inspiring: "I think hearing case stories is really important training for starting your own business".

Shad Valley was not the only important influence on her future during high school. In addition to the relationships she forged with the computer science teachers who gave her first referrals, Thelma also used high school as an opportunity to seek out leadership positions in group projects: "I built up my skills in project management, and also my design role…"

In discussing what has made her business successful Thelma gives lots of credit to some of her first clients: *"My first clients were understanding, let me make mistakes and stuck with me… (They) allowed me to make mistakes and came back".* From her start doing freelance work in high school, Thelma has built her business into an incorporated operation that employs her full-time and, in addition, employs two other web designers on a contract basis, and part-time financial administration assistance.

Challenges. Thelma talked about challenges stating, "For me, trial and error and figuring things out for myself is what entrepreneurship is about…*"* Thelma saw starting a business as a process of learning from both positive and negative experiences and carrying on, building the viability of the

business one steady step after another. For example, Thelma credited an early negative experience that she had with helping her to learn some important lessons about success in business:

> In high school, I had one client who I really learned from. He had asked for a website, and I worked hard on it, but then he didn't like what I did and wouldn't pay me for my time. I didn't know anything about contracts before that, but through that experience I learned to have a detailed contract. I'm glad it happened when I was very young. It wasn't too bad; one summer's income in High School was all I lost. I got a part-time job to make it up…

In her interviews with us, Thelma emphasized the importance of perseverance and social skills in overcoming challenges:

> You can't be a quitter, because things happen - even when I do everything right, clients can be hard to deal with. You have to learn to be a professional; you need business acumen; you need to know how to deal with clients who do not behave professionally. You need to learn how to read people and you need to be very good at interacting with others….

Looking to the future. Thelma intends to stay with the strategy that has worked well for her so far, of building slowly and steadily. She is pleased with how her business has developed. She says that doing well in business is "not so much about being book-smart, a lot of it has to do with social interaction and learning from your previous mistakes. It is how you deal with your clients that determines if they come back."

For Thelma, her future plans are to continue to grow the business so that it can take on more clients and bigger projects. She says that the rewards come in "finishing a project and knowing you've done well." She wouldn't want to be doing anything else, but she also cautions that running your own business can be all-consuming since she likes to be 'hands-on' in all aspects of her business. Her hands-on approach allows her to keep quality high, but it also means that it is important to plan vacations: "Being my own boss is great. I like working my own hours, but you have to be careful to take time off. If you're not careful, you can go for the full year and never take time off – that was me last year!"

Women, Education, and Entrepreneurship
Our cases suggest that personal characteristics *are* important – persistence, self-confidence, initiative, creative thinking, and as Thelma said, a certain kind of intelligence that isn't really about being "book-smart," although it often includes that too. Our research also asked the question, "Is learning important?"

Traditional formal education plays a relatively small role in these two cases and the others that we have gathered through our study. Other studies concur (Hughes, 2003b; Warren,

2004). Moore (2004), in an extensive review of the literature relating to women's entrepreneurship, made very little mention of education or training. Based on our research, we would argue that this absence is partly a reflection of gaps in the literature, but it also reflects the relatively low importance of formal education as specific preparation for entrepreneurship for women. Fenwick (2003) suggested that the strong preferences of women entrepreneurs for spontaneity and "go-for-it-now" approaches mean that highly formalized and institutionalized educational experiences are likely to be inappropriate and may actually act to stultify innovative energies. In our stories the informal learning that young people receive from family and friends was important. Jennifer's choice to tell us during her interview about a long-ago conversation between her mother and a junior kindergarten teacher about leadership is not unusual. Among our interviewees, all of whom have been through the Shad Valley program, its intensity, level of challenge, and focus on experiential and applied learning were mentioned repeatedly as attractive. In this area too, Jennifer's comment on teaching people to be "entrepreneurial in their thinking" is typical: "I gained more in those four weeks at Shad about that than in my five years of high school."

Although many of our interviewees were skeptical about the value of higher education as preparation for self-employment, their levels of literacy, numeracy and technical skills were uniformly high. This finding reflects the characteristics of our pool of interviewees. All were selected for the Shad program through a competitive process in which, after pre-selection at the high school level, only one of every three applications received by Shad is selected. Other studies have also found, however, that today's young women entrepreneurs in Canada are "generally more educated and career-oriented than their predecessors" (Industry Canada, 2003: M-14).

For Jennifer and Thelma, teachers were important mentors. In Jennifer's case, the teacher who encouraged her to take on directing a school play also encouraged her to see herself as a capable leader. In Thelma's story, her teacher was an important source of referrals, providing her with her first clients. In these cases, and in the rest of our interviews, mentors and role models were important teachers. They facilitated learning in areas that are important for entrepreneurs working in the dynamic and turbulent world of information technologies. Persistence, creative problem-solving, taking initiative, innovative marshalling and use of available resources, all identified as critical learning needs in our research, are seldom taught in formal educational programs, however. For Thelma and Jennifer and for many of our other interviewees, the training they received through the Shad experience largely occurred as a result of meeting new people. Other participants in the program urged our interviewees to accomplish more than they had previously imagined that they could. Guest speakers provided inspirational stories. Staff members focused the Shad program on "nurtur(ing) their (participants) initiative, skills,

values, and desire to solve important problems, while challenging them to meet the highest standards of ethical conduct, social responsibility and environmental sustainability" (Shad Valley, 2009, n. p.). Other studies too noted the importance of mentors, networks and stories in preparing women for entrepreneurial success (Moore, 2004).

The two cases here included relatively young businesses. Their enterprises may support Thelma and Jennifer for a few years, or for many. For Canadian women in today's labor markets, conventional ideas about career as a continuous sequence of advancements within a single organization have been replaced. When the young women in our study talked about success, they identified criteria that have to do with personal satisfaction, goal achievement, generation of adequate income, and garnering the respect of mentors, peers, clients, family and friends. In this respect, they are typical of their generation (Vermond, 2000). Weiler and Bernasek (2001, p. 100) also noted "self-fulfillment, rather than profits, is the most important measure of success for women entrepreneurs." Profit is, of course, necessary. Income generation is necessary. A positive balance sheet is a powerful compensation for all the many headaches and challenges associated with any new business start-up. Moore (2004) argued that in an increasingly diverse workplace, education, portable skills and knowledge, meaningful work experiences, on-the-job learning, networking and a variety of other skills define characteristics of successful women entrepreneurs. Individual enterprises are likely to come and go, but it is entrepreneurial spirit, the desire to learn something new every day and the array of skills and attitudes that go with these things that determine whether the journey to work over the course of a woman's lifetime will be, ultimately, a source of satisfaction and well-being.

Question: *What are your criteria for success?*

Answer: "You have to be able to inspire people, take initiative, and see opportunities that are important" (Jennifer Corriero, *TakingITGlobal*)

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