



# All Girls ICT Class, Ontario, Canada

## School Impact Story: Cardinal Léger Secondary School

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In the 1960s, the iconic American television show, *Star Trek*, depicted an African-American female communications officer. The character famously inspired Dr. Mae Jemison to join the space program, and she became the first African-American woman to fly aboard the Space Shuttle. The lesson in role models was not lost on Dan Harmer, a long-time *Star Trek* fan and a teacher at Cardinal Léger Secondary School in Brampton, Ontario.

Dan has been teaching for 30 years. For more than half of that time, he was a special education teacher. About 15 years ago, he decided it was time to reach for

the stars himself, and he became a computer science educator. With no formal technology background, Dan began taking computer science courses through the Ontario Ministry of Education. In 2001, he



was introduced to the Cisco® Networking

Academy® program, and worked summers to take CCNA® (Cisco Certified Networking Associate) courses. He is planning to earn his CCNA and CCAI (Cisco Certified Academy Instructor) certification.

While he thoroughly enjoyed teaching computers and networking to high school students, Dan felt a nagging dissatisfaction

with the lopsided performance of the boys and girls in his classes. “The girls tended to stay in the back of the room and not contribute. It was clearly not a question of aptitude, ability, or even interest, because they performed just as well as the boys on tests.”

Even more disheartening was the fact that enrollment by girls in computer classes was declining each year—a frustrating trend that Dan heard echoed at the annual Networking Academy conferences. What, Dan wondered, accounted for the ‘quieter’ performance of girls in the classroom? And was there some way to engage more female students to turn the tide of falling enrollment?

An experienced teacher, as well as the father of a teenage girl, Dan had a strong theory about the dynamics of the classroom environment and social pressures, and how those might affect the performance of girls working alongside boys in technology classes. He went to Dolores Proietti, principal of Cardinal Léger, and proposed an untested concept in the Canadian school system: an all-girls computer science class. Principal Proietti agreed to the experiment. With fewer and fewer girls signing up for computer classes, what was there to lose?



Without any fanfare, the very next class was divided into boys and girls. After initial uncertainty among the girls, one of the comments Dan heard was, “Maybe this will help me focus on my studies.” Dan’s instincts were right: the all-girls class began to flourish.

“The response to the all-girls class exceeded my expectations. They speak up and show their

enthusiasm. They don’t fade into the background anymore. They know that they’ve started something special at our school and in their lives. They know that what they do in these courses will be important to their futures, as well as future girls at this school, and perhaps schools across Canada. They may not know it yet, but they’re already role models.”

Eight classes are available to grade 10 students through the Cisco Networking Academy program at the school.

The girls have asked for a continuation of the all-girls classes, which Principal Proietti and Dan hope to see as well, if there are enough girls for a dedicated grade 11 class.

Dan never loses sight of the importance of role models, either. The local Cisco office in Toronto was enthusiastic about helping. Three Cisco engineers: Trina Alexson, Hena Prasanna, and Tiffany Hsieh, came to Cardinal Léger to talk about their journeys and challenges from young adults to successful IT professionals. Dan comments:

“The girls were clearly impressed by how these women have fought for educational and career opportunities from a very young age.”

The girls also had the opportunity to tour Bell Canada’s Network Operations Center, and talk to networking specialists managing and supporting the nationwide network of a telecommunications giant.

Without a doubt, one of the great highlights of the term was a “face-to-face” meeting that Cisco arranged with another all-female class from the



African Center (ACWICT) for Women in ICT Cisco Networking Academy in Nairobi, Kenya.

Cisco TelePresence® connected the girls and their teachers in Toronto, London and Kenya. The girls buzzed with excitement when they saw each other via TelePresence. One of Dan’s students asked the ACWICT girls, “Do you want to be an engineer when you graduate?” The answer brought applause: “I want to be an IT manager!” See the video of their visit at [www.cisco.com/web/learning/netacad/us-can/impact.html#~Videos](http://www.cisco.com/web/learning/netacad/us-can/impact.html#~Videos)

Every province in Canada is facing a shortage of skilled technology workers, according to an ICTC report which estimates that up to 90,000 jobs may go unfilled over the next 3-5 years. Dan hopes that some of the girls he is teaching today, and the ones who will follow in their footsteps, will fill jobs like these. He hopes that he has created an environment in which these teenage girls can move beyond stereotypes and peer pressure to pursue careers in male-dominated fields with confidence.