


Recruiting More Female Students to STEM Courses: *Case Study*

John Henshaw, Mount Wachusett Community College

Summary: John Henshaw, Dean of Workforce Development at Mount Wachusett Community College,¹ attended a 12-week WomenTech Educators Online Training with his team from February to May in 2015. John's team focused on enrollment for a new program area in their college: the Analytical Lab Quality Systems was funded by a National Science Foundation ATE grant. With their efforts, the enrollment of females in this program increased from 25% in spring 2015 to 69% in spring 2016, a 44% increase.

At a glance	
Name:	John Henshaw
Institution:	Mount Wachusett Community College
Location:	Massachusetts
Programs Targeted:	Analytical Lab Quality Systems
Goal:	Increase enrollment of females in targeted STEM courses

The Challenge: John had attended Donna Milgram's WomenTech Educators Training presentation at an ATE PI Annual Conference. He received emails about upcoming trainings from IWITTS and saw an opportunity to take advantage of NSF resources to work on his challenge of enrolling a representative (diverse) sample of students to the new Analytical Lab Quality Systems program. John shared the WomenTech Educators Online Training emails with other faculty and staff members at his college (who would later form his team) and, once the academic dean approved their participation, started the training, and was on his way.



THE MOST VALUABLE ASPECT [OF THE TRAINING] WAS BUILDING OUR TEAM! GETTING A GROUP OF PEOPLE FOCUSED AND THINKING ABOUT RECRUITMENT AND RETENTION WAS GOOD! THE TRAINING WAS VERY EYE-OPENING; WE HAD A VEHICLE TO FOCUS OUR EFFORTS.

John Henshaw, 2015 Training

The Process: John's team used the recruitment and retention plan templates provided in the WomenTech Educators Training and felt they had set realistic, achievable, goals. Based on input from Donna Milgram, the course instructor, they decided to focus on a few efforts that they hoped would have high impact rather than many smaller efforts that might not be as effective. In John's words, they tried not to "bite off too much" and focused on going after people who had demonstrated some interest, but not yet bought into the new program.

John felt the most valuable aspect of the WomenTech Educators Training was building the team and getting a group of people thinking about recruiting and retaining a diverse group of students, including female students. He felt the training experience was eye-opening and appreciated it as a vehicle to focus the team's efforts. John's team was from different disciplines and campuses and mainly comprised of female faculty members plus a few women in leadership positions. He mentioned that advisors were key members of the team since they played such a key role in helping undeclared students make course

¹ The Mount Wachusett Community College system is composed of 15 community colleges serving 29 cities or towns in Massachusetts with a diverse student population of approximately 12,300 students.

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decisions. While it was challenging at times to get the team together, having an agreed-upon work-plan helped them stay on-track and accountable. John enjoyed the support calls held after the WomenTech Educators Training as he got to hear success stories from other schools across the country. The follow-up team support that was part of WomenTech Educators Training was also a way to touch base with his team and get feedback from the project lead and other participants on what they had accomplished and what more they could do.

John's team included a passionate female faculty member that served as a role model in their marketing materials and events. John felt using her in this role was the most positive part of their plan because she had a powerful story about her STEM career path. (She had a successful STEM career in industry, but wanted to get back into academics and came to their college.) Part of the WomenTech Educators Training had emphasized using marketing materials that utilized women in STEM careers so people could see them as STEM professionals, not just as instructors in the classroom. John's team focused on the career pathway aspect for women and identified several areas they could target such as adding "women tech" sessions to a career expo hosted on campus where they featured women speaking about roles in STEM and spoke with potential students one-on-one. They also did a marketing campaign to enroll females in introductory STEM courses (such as in chemistry and biotech) as pathway courses. They reached out to other staff on campus who were involved in recruiting new students and let them know they had resources such as a female role model who would talk with prospective students, visit classes, and attend events. John continues to see the support and involvement from others who "believe" (in the importance of diversity in STEM) and even had new team member join partway through their efforts.

Of the recruiting strategies they implemented, John felt that an individual discussion with a student, called a Personal Encouragement Conversation in the training, was probably most effective. The conversations often started at information sessions where a team member would guide students to focus on what he/she would like to do after completing the Analytical Lab Quality Systems program. Another strategy that proved effective for recruiting women was providing a non-credit training at places of employment in fields related to the program. These non-credit trainings increased participants' knowledge and skills and introduced them to somebody from the college. Focusing on the work related to the Analytical Lab Quality Systems program has helped increase the enrollment of workers – specifically women working in industry – who are looking to increase their knowledge and skills to attain different jobs.

The Results: John's team was successful in their recruitment efforts: more women enrolled in targeted STEM-related courses. Before the WomenTech Educators Training and implementation of their plan, only one female was enrolled (in spring 2015). Fall enrollment in 2015 had nine females. The strategies they used also helped with male recruitment. John credits this success on implementing the strategies they outlined in their plan, the relationships that were built between students and faculty, the exceptional female role model, and the engaged faculty on his team. Their efforts are spreading: one advisor adopted the same approach with another STEM program at the college has seen more females enroll in that program. John feels his teams' work is becoming "*part of the culture*" at his school.

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The team also had success with student retention and 100% of female and male students were retained in the targeted fall 2015 introductory course compared to 0% of female students in spring 2015.²

Enrollment by Gender in STEM-related Courses - Mount Wachusett Community College

	Term	# Total Students Enrolled	# Females Enrolled	# Males Enrolled	% Females Enrolled	Increase from Baseline in % Female Enrolled
Baseline	Spring 2015	4	1	3	25%	
Results*	Fall 2015	13	9	4	69%	44%

**After Training & Implementation*
Program - Analytical Lab and Quality Systems Certificate

John's team is still engaged in their efforts to increase female enrollment in their school's STEM programs. He is personally grateful to be a part of the learning process and he has used what he learned through his involvement in the WomenTech Educators Training in other aspects of his work.

² The spring 2015 course had one female student who was not retained = 0% retention.