

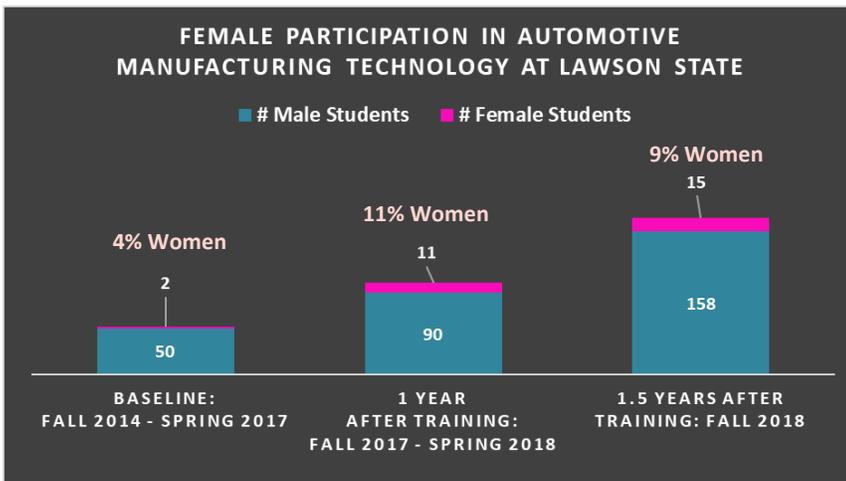
2 to 11 Women in Automotive Manufacturing in 2 Semesters

Retention Increased of Both Female and Male Students

SUMMARY

After participating in a WomenTech Educators Online Training, Lawson State Community College—a Historically Black College and University (HBCU)—increased female enrollment in **Automotive Manufacturing** from an average of **2 female students at baseline to 11 after 1 year**. Retention increased of both female and male students: **female completion improved from 80% to 93%** and **male completion rose from 81% to 84%**. Students in this program are able to work in a variety of manufacturing career pathways—only one course is automotive specific.

Prior to the WomenTech Training, the female Assistant Dean for Career Technical Education had tried unsuccessfully since 1995 to recruit more female students—coming from the manufacturing industry herself she was very committed to bringing more women in. It was only when she and her team participated in the WomenTech Training and Coaching System, that the program’s numbers shifted.



KEY ACTIVITIES:

- Personal Encouragement Conversations which included examples of successful female graduates
- 1-on-1 tours of the lab by instructors
- Outreach Marketing Collateral featuring “typical” female students
- Retain students by enabling them to have early successes



LAWSON STATE COMMUNITY COLLEGE
 Bessemer, Alabama (Urban Area)
 Historically Black College and University
 Automotive Manufacturing Technology

RECRUITMENT RESULTS

- Female enrollment increased from 4% to 11% in 1 year
- 90% were African-American

RETENTION RESULTS

- Female completion increased from an average of 80% to 93%
- Male completion increased from an average of 81% to 84%

Salary

- \$16 - \$18/hour to start
- \$25 after 5 years



“Before the WomenTech Educators Training, I felt like I was just spinning my wheels trying to get more women into our Automotive Manufacturing Technology program.

After the training, Lawson State went from only **2 female students in Automotive Manufacturing Technology to 11 in just over a year**.

If you’re tired of spinning your wheels attempting to get more women in your program, then the WomenTech Educators Training is the way to do it.”

~ Nancy Wilson, Assistant Dean, Career Technical Education, Lawson State Community College, Bessemer, AL

CHALLENGES

Nationally, **the number of women in manufacturing is very small—only 6% of the AS degrees awarded for Precision Production** went to women in 2013/14 according to the US Department of Education and **women make up only 5% of those working in manufacturing fields** according to the US Department of Labor.

Nancy Wilson had tried everything she could think of as a woman in the field of manufacturing to recruit more female students and she hadn't been successful—**there was rarely more than a couple of women in the Manufacturing program at any given time** despite her efforts:

Some of the **strategies she had tried that didn't work included:**

- ☑ Targeting women's organizations in the community, such as domestic violence shelters,
- ☑ Presenting at high school classes with high female enrollment such as home economics
- ☑ Distributing outreach materials with female role models (she later learned they were the "wrong" type of female role models in the WomenTech Training)

She knew she needed to try something different and contacted the Institute for Women in Trades, Technology & Science (IWITTS) about their online WomenTech Educators Training. "I spoke with Nancy and it was clear she was passionate about bringing more women into the field, and like many women pioneers the weight of recruitment had fallen on her shoulders alone," said Donna Milgram, Executive Director of IWITTS. "Since the WomenTech Training is only available to school teams, we discussed the key stakeholders at Lawson, and I could tell by the end of the call that **Nancy would now have some help from her colleagues on moving the needle on women in manufacturing education.**"

ACTIONS THAT MADE THE DIFFERENCE FOR LAWSON STATE

- ☑ **WomenTech Educators Online Training: Semester Version**
- ☑ **Bringing a TEAM together**
- ☑ **Developing a Recruitment and Retention Plan**

Working collaboratively, the Lawson State WomenTech Team developed a detailed step-by-step Recruitment and Retention Plan, which their trainer Donna Milgram provided feedback on to help them strengthen it.

According to Nancy, "I think the team was the biggest difference. We were able to get all kinds of perspectives. I think it worked much better because we had buy-in from the instructors and the staff—if you're working on it and you're part of it, you own it. Our team owned the Recruitment and Retention Plans. We were able to hear what strategies had been tried in the past that didn't work, so we could leave those out of our plan."

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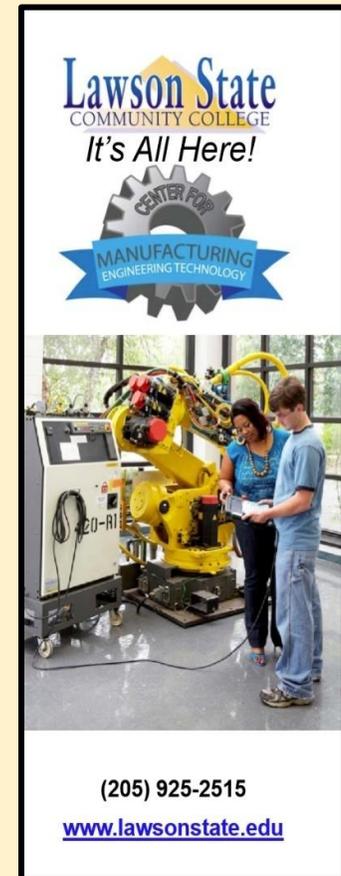


Figure 1. *New* Brochure Cover Featuring Female Role Model

INSTITUTIONAL SUPPORT: WOMEN IN TECHNOLOGY LEADERSHIP TEAM

Participating in teams ensures that all the college's key stakeholders are represented and invested. Here are the job titles of the 8 Leadership Team members:

- **Key Leader** = Nancy Wilson, Assistant Dean, Career Technical Education
- Manufacturing Technology Instructor
- Mechatronics Instructor
- Industrial Electronics Instructor
- Enrollment Specialist
- Persistence Counselor
- Counselor/ADA Coordinator
- Mathematics Instructor

The situation Nancy faced is familiar to many educators according to Donna, “Instructors often try different strategies on their own, but they’re usually not aware of all the evidence-based practices and strategies we recommend.” As Donna shares, “One of the biggest barriers is that many schools and individual instructors think they already have the knowledge to broaden female participation. It’s distressing to see hard-working faculty and staff with good intentions put so much time and effort into strategies that don’t work. So many educators think they’re doing the right thing to increase female enrollment, but they never get past creating career awareness. Our goal is to help them to see the difference.”

Donna works directly with each institution’s key stakeholders to educate them on best practices. The training process begins with the development of the Women in Technology Leadership Team, their enrollment in the WomenTech Educators Online Training, virtual team-building during an orientation, and population of the WomenTech Data Dashboard with baseline data for goal setting and measuring progress. During the training, the team develops actual Recruitment and Retention Plans from templates and receives plan feedback and coaching support for implementation to encourage and support the process.

RECRUITMENT STRATEGIES

Lawson State’s Recruitment Plan—developed in the WomenTech Training—reflected the collective wisdom of its team members. Their **target audiences** for recruitment included:

- ☑ Lawson Adult Education Program = 2 female students were recruited from this target audience
- ☑ Pre-Nursing Students not accepted into Nursing Program = 1 woman recruited
- ☑ Robotics job training program run by a nonprofit = 1 woman recruited

3 other female students came from **additional sources**:

- ☑ High school student signed up for dual enrollment after attending a co-ed dual enrollment event
- ☑ Employer referred female employee to the college so she could advance her career
- ☑ Mother of a male high school student who accompanied her son on a school tour decided to sign up with him. He was referred by his high school counselor

The new female students in the manufacturing program didn’t come from one source—they came from multiple target audiences. **The team now had better tools to help them with recruitment.**

Nancy’s own background was very similar to many women entering male dominated fields—they arrive at this career choice after a series of traditionally female jobs that aren’t really a good fit for them. They rarely come straight out of high school into a non-traditional career pathway.

Nancy’s Story:



“I attempted to go into accounting and that didn't work. I attempted the medical field—I wanted to be a physical therapist, but I'm just not cut out for medical. Then I was a secretary for five years and if you know me, that really doesn't fit my personality but it was a job. I get bored really easily, so I'm always finding new things to do, I'm not going to sit and wait on somebody to tell me what to do.

One day our copier went down and we had a gentleman come to repair it. Having finished all my work, I was looking over his shoulder and got really interested in what he was doing and asked him where he went to school and that's how I ended up as a student in Industrial Electronics.

After graduation, I went to work for the Power Company and then eventually started teaching at Lawson State in 2000 in Manufacturing and Robotics, becoming the Division Chair, and for the last 5 years I've been the Associate Dean of CTE.”

~ Nancy Wilson, Assistant Dean, CTE,
Lawson State Community College,
Bessemer, AL

- ☑ A new brochure featuring a female student who had been a hairdresser vs the prior brochure that had a lone woman who “looked like she had just come out of a grease pit”
- ☑ A brochure in which 3 of the 4 students pictured are female
- ☑ A Personal Encouragement Conversation that told the role model stories of Nancy and female graduates of the program

Lawson State found the recruitment strategy that worked best for them was a 1-on-1 Personal Encouragement Conversation. Says Nancy, “When we got students to have personal conversations with us, we got more students.”

During the WomenTech Educators Training, the team developed a script for a Personal Encouragement Conversation with career information including expected salaries and a female alumni role model story that helped prospective female students see themselves experiencing the same success.

Success wasn’t limited to a female instructor holding the conversation either. According to Nancy, “I think it is **every instructor’s job** [male or female] **to recruit**. Nobody can sell your program like you can. When I speak with women, I share my story. When male instructors speak with female students, they share my story or the story of one of our past successful female students.”

The main contacts listed on the program brochure are both Nancy and Rich Raymond, a male Manufacturing instructor, and they both held many of these conversations.

The instructors held these Personal Encouragement Conversations with women that went through the prospective student tour, women they met at recruitment events and women who reached out after receiving a brochure or flyer.

RETENTION STRATEGIES

☑ Introducing New Certifications

According to Nancy, “One of the key things that we discovered by accident was that by **allowing the students to have early successes and earn some certifications in the beginning** courses, we are increasing the interest and investment of both female and male students so they are more motivated to complete the program.”

☑ Retention Strategies

The entire team worked together to implement multiple retention strategies in the classroom and in the program the year after their WomenTech Educators Online Training.

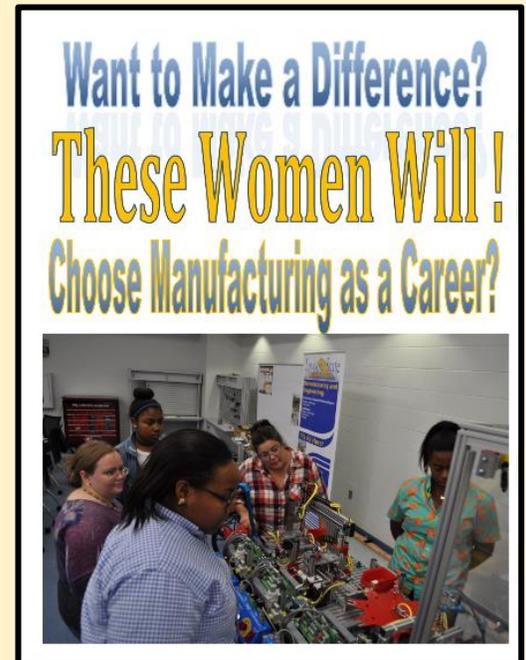
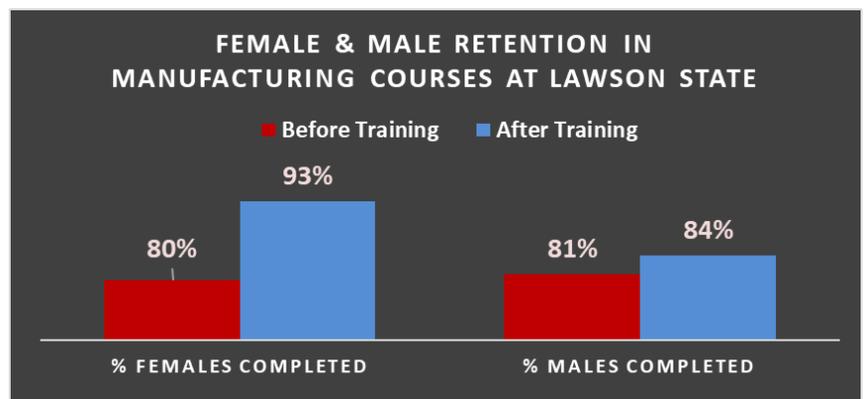


Figure 2. Women in Manufacturing Flyer



These strategies included:

- ☑ Instilling confidence in students in their ability to succeed in Manufacturing from the first day of class
 - ☑ Teaching technical content in the context of real-world situations
 - ☑ Offering more group projects with a focus on the benefits and advantages to society
 - ☑ Connecting female students to each other and other women in Manufacturing
 - ☑ Checking in on female students with 1-on-1 welcoming conversations to see how everything is going and offer extra support if needed
- ☑ **Reaching Out to Struggling Students**

Reaching out to a struggling student turned things around. Nancy had a female student who had been doing well until her last semester. “I called her in the office and asked her what was going on. She was going through a divorce, her husband was trying to get custody of her child, and he had threatened to kidnap the child while she was at school. All of this was on her mind as opposed to her school work. I talked her into taking a week off to address her personal issues and I sent her, her assignments. She did that, graduated, and now works for a steel company probably making twice the money her husband did.”

STUDENT SUCCESS STORY

- ☑ **“2 young women**—a former hair stylist and a former nail technician—joined the Manufacturing program together, graduated together, and were hired together by the same company. The company interviewed the two of them for the same job and liked them both so much that they opened up a second position and hired them both.”

“The job that I do now I would do even if they didn’t pay me because it is exciting and the position that I am in gives you a chance to show your creativity. You can influence change and that’s a part of what our group is doing now through Reliability.”

Mary Bimbo
Manufacturing

CAREER QUICK LOOK

Years in Field:
12 years

City/State:
Sylvan Springs, AL

LinkedIn:
[Profile](#)

Video Clip:
[Watch on YouTube](#)

Ethnicity:
African American

School:
Lawson State Community College, University of Alabama, Birmingham

Degree:
AS Electrical Distribution/Industrial Electronics, BS Business Administration

Career Pathway:
Manufacturing, Steel Production

Personal Time:
Time with grandson and daughter

Other:
Adjunct Electronics Instructor Lawson State

How did you get interested in Manufacturing and what has your journey been like so far? What is your background?

I was working as a clerk at U. S. Steel and one of the maintenance technicians came up to do work in my office and I asked him, “What do you all do? You are always all over the plant and it seems like it is a cool job. You’re not just in one place doing the same thing.” He said we are electricians and we go where needed. So, I asked, “How do you get into that?” and he told me the company had an Electronics Training program and who to contact.

Then a few months later, I saw the Tech again and he asked, “Did you ever start that program?” and I told him I hadn’t. A few weeks after that, someone from the Electronics Training Program called me and said I heard you were interested. I told him, “No, I’m not really interested, I was just curious.” And he said, “We would love to have you, so why don’t you come over and take a look around?” I said I’d come if I had time. Then Human Resources called to say they’d love to have me in the Training Program and asked me to come and look around and give it a try.

So, that’s what I did. I went up, took a look around and I started the program.

Why did they have to work so hard to recruit you?

Well, as a clerk, I was in my comfort zone. I was in the top tier of clerks. I knew nothing about Electronics. It is hard to move from what you are comfortable with to something you don’t know anything about.

Figure 3. Role Model Profile of Mary Bimbo, Lawson State Graduate
(Click to Access Program Graduate Profile)

ABOUT IWITTS: CREATOR OF WOMENTECH EDUCATORS TRAINING SYSTEM

The Institute for Women in Trades, Technology & Science has been helping educators nationwide close the gender gap for women and girls in technology since 1994. IWITTS provides tools, resources, and professional development for educators to help them broaden female participation in STEM and CTE programs where they are underrepresented.

To discuss what type of professional development would be the best fit for your school, region, or state please [Contact Us](#). Visit our website at: www.iwitts.org



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