

250% Increase in Female Students in Automotive Technology

Host: Donna Milgram, Executive Director, Institute for Women in Trades, Technology & Science

Presenter: Lewis Nall, Automotive Instructor of Technologies, Calhoun Community College

Interview Transcript:

Donna: Hello, and welcome to the 11th session and final day of the *2018 STEM Success for Women Telesummit*. My name is Donna Milgram, Executive Director of the Institute for Women in Trades, Technology and Science. I want to thank all of you for joining me, our 15 amazing speakers, and over 1200 other educators for this one of a kind change-making online conference funded by the National Science Foundation.

Our guest today is Lewis Nall, currently an Automotive Instructor of Technologies at Calhoun Community College in Alabama and formally the Coordinator of the Automotive and Diesel Program at Owensboro Community and Technical College in Kentucky. **Owensboro was able to increase the number of female students in their introductory automotive technology course from 2 to 7 female students, male enrollment also increased from 38 to 53 male students.** Welcome Lewis, and thank you so much for joining me for the *STEM Success for Women Telesummit*.



Lewis Nall

Lewis Nall (Lewis): Great to be here with you Donna.

Donna: Now, I understand, Lewis, you've been working on vehicles since you were age 11, you graduated from Nashville Auto Diesel College right after high school and you've been a Master Technician since 1989. We became acquainted when you brought a team from Owensboro Community and Technical College to one of our WomenTech Educators Online Training in spring 2015, and I've been excited to follow your success and hear about your strategies since that time. The auto technology field of course is still very male-dominated. Only 2% of automotive technicians nationally are women, and I'm sure that everyone listening is very interested to know how your program recruited more female students. **I want to start out by asking you what was the biggest change in the way that you did recruitment?**

Lewis: Probably for us the biggest thing was we changed the language, how we handled classes, how I spoke at events that we were at. We also put females in all of our recruiting pamphlets and I found role models that could actually talk to the ladies, talk to our students. That worked very well. Those were the big things we did.

Donna: You know, it's amazing to me in 2018 how many programs I see actually don't have any female role models at all. Now, I'd like to go into some detail about the actual recruitment strategies and I know you have multiple and actually the research shows that multiple touches are actually what's most effective from a marketing and outreach perspective. **Can you describe some of your recruitment strategies and tactics in some detail?**

Lewis: Sure. Some of the things that we did are Experience Days where we would have students come and visit the facility. I did a lot of the talking. I had three other instructors that we would also allow to

talk. We were all trained in how to properly recruit and how to be inclusive in our conversations with them. We also visited high schools. We had a cobra that we had built that we took and did recruitment at high schools. We had videos that we sent to the high school and they actually played and we made sure to have female role models in those. Some of the other things we did, is I went and presented at classes. I actually went to my college and presented in some of the classrooms where I found students with undeclared majors.

Donna: Okay. So let me just back up a minute and let's go to the event that was held at the college and that was an automotive experience day for high schools. I know that you were able to get two female students from that event. **And one of the things that I've seen at events like that is that you have the automotive program, but the high school students are in a position where they can choose what they want to go and they don't come over to automotive. It's like not where they're headed to, so how did you actually get the female students to come over to your classroom on that high school experience day at your college.**

Lewis: For us, all of the students got to look at all of the programs. That's a really easy way to make sure you get to touch everybody. The other thing is we would bring one of our female students that was in class, we would make sure that she was with us. When the buses were unloading and all the kids were there, she would be out there with us and that helped to attract them to our program.

Donna: Okay, so was it actually required that they go to every program?

Lewis: In some of the high schools that were small enough, maybe just 300, 400 students, yes. They were able to actually come through and we would set it up to where it was just a constant flow of students coming through, everybody had 10 minutes or 15 minutes, depending on how many students.

Donna: So they were required to go each different program area at your college?

Lewis: Yes.

Donna: And that is key. So I'm going to spend a minute on this here, because I have worked with colleges where repeatedly I've seen this. The students would sign up in advance, what they want to see. And invariably, female students having this on their radar screen, they just signed up for things that are traditionally female. So there's a huge lost opportunity. So the fact that all of the students were required to go through different rotation makes a huge difference. I just want to call that out for our audience, because I'm sure that some of them have also let students select and when you do it in that way, then none of the female students would end up in automotive. And that is how you got two of the female students, so I really wanted to focus on that. Let's talk in some more detail about the high schools.

When you presented at the high schools, what kind of classes were you presenting to?

Lewis: A lot of times at the high school I did two different avenues. Sometimes you go in and you get to present to an entire class, sometimes I got to speak to all of the juniors or all of the seniors. So that works really well, cause they get to know you. The other thing is that they have Career Days, so I'll be at a booth with students walking around going to all of the different booths and I'm very outgoing, so I tend to try to grab the students and get them to come over there. I always make sure I have something interactive. I make sure that whatever I have that is interactive is non-threatening, so everybody wants to come over and play. Also, counselors sometimes would have students sign up. That one is probably

not as an effective way to reach female students, but I think in almost every presentation I've done at a high school, there's at least one or two females in it.

Donna: Okay. What I have in my notes, and of course we presented before at an ATE, Advance Technology Education conference at the National Science Foundation (NSF), I think it was that Automotive Experience Day where you got the female students, is that right?

Lewis: Yes ma'am.

Donna: Okay. So that's what ended up being most effective for you, and I want to bring that up because I think it's really important that you only had a couple of female students to start, but one of them was willing, as you say, to participate in that Experience Day and be a visible female role model. Of course you're male, but having that female student, you only need one to get started.

Lewis: Yes.

Donna: And if you don't have one in your program, you can also look to see if maybe there's someone in the community who's worked in that capacity that might be willing to help or a former student, so again you only need one to get started. **Now I know that you also recruited from within the college. Could you talk about the English class presentation, the GED presentation?**

Lewis: Yes, the English class. What we did is we looked and tried to find the classes where there would be the most undeclared students. One of those is predominantly English, because everybody has to have it. So I would go into the English class and just talk about opportunities, of course all of the technical fields, but really promoting automotive too. So that works really well and they're students that are already in college, so they're right there.

Donna: They're already enrolled at your college, already affiliated, already loyal. **What about the General Educational Development program (GED)?**

Lewis: The GED program was really neat. We made flyers that had female role models, but also had female students actually working in the lab. One of the students was in that crisis point in life and had some real tough times, and she saw one of those and all of my information was on there. She contacted me and later came to school and graduated.

Donna: That's awesome. This is, by the way, from a survey that you did of your female students through a local news story in the paper that ran for free. Can you just tell us a little about that?

Lewis: Yeah that was really neat. We built a '65 AC Cobra through the program and they came in and did a news story on it. We were talking about the opportunities for all students and I believe in the article we talked about how it wasn't just for men anymore. It's inclusive for all genders. She loved it, came, met up with us and enrolled.

Donna: Great. Now you talked about what worked, can you talk about also what didn't work for your program? I know that you tried some other recruitment strategies and some of them did not work.

Lewis: We spent a ton of time on email campaigns. We really worked hard on trying to make it grab attention, send out blanket emails to all of the college. That never got any response. I think it's because we get so many emails today, if it's not something directly related to us we tend to bypass it or overlook it. I also did a lot of large, general audience speaking, especially at the college. I didn't get the connection, if you will. Target audiences always worked much better for me or small enough audiences that I can make the connection with the people that are there.

Donna: So this was like a large, general assembly and you got 5 minutes or 10 minutes. That was not effective for you.

Lewis: That was not effective. One other thing that is new, that I discovered later, is sending female students into the workplace to get the experience before they're prepared. That backfired on me a little bit. So making sure that my female students were prepared for what that experience is going to be like when they're going to the workforce.

Donna: Work-based activities have been very effective for leveling the playing field, but as something that you do after you've been in the training itself. Is that what I'm hearing you're saying, your lesson learned was?

Lewis: Yes, lesson learned. When I went through the training with you that was something that we picked up on. Actually from day one we started, as soon as I came in, I met with female students.

Donna: One thing I'm curious about, Owensboro, I've actually done a WomenTech Training onsite there. In the past you participated in our online training, but I've been onsite. **It's a very rural community and automotive is a very rural profession, so speaking of work based, was there any resistance to these women in the workplace. Would they have a hard time getting jobs?**

Lewis: Yes. We had to do some training within the industry as well. It's kind of like everything else, you have to get one in there. What my employers found out is when they hired a female, brought a female in there, a lot of times they kind of lift up everybody else. One of our diesel students graduated, went to work in a large diesel shop which is a tough environment to walk into sometimes. They're very traditional, so there were some things that she had to deal with, but he noticed that she was really working hard, doing a great job and actually total output in the shop began to come up just because she was kind of shaming the guys a little bit, if you will. Had to do some of that. I actually had one shop that will remain nameless that I actually had to go to the owner because they basically were saying, "Well, we don't hire girls here because they cause problems. You know, don't need to get into all of that." So I actually went to the owner, talked to him, and dealt with that situation and resolved it.

Donna: These are hard conversations to have. What did you say?

Lewis: I had a father whose daughter was in the program. She was doing a great job. He went into this facility and was talking to the owner and it was getting ready to be summer. We were working on some co-ops and he just asked if he would be willing to hire his daughter and got some very negative comments. He came back to me and said, "Is my daughter going to school and then not going to be able to get a job?" So I talked to him and then I went to the owner and explained to him the experience, what happened, told him he lost a customer because the father, of course, was very unhappy. I came at it from, "This is going to hurt in the long run. That attitude from one of your managers is really going to

hurt you.” So I went out not to criticize him, I was very calm, but to talk to him and say, “Hey I’m just here to help you.” If you can come in there and talk to the owner or the manager and just say, “Hey let me explain to you, here is what happened in the past. We had some of our girls go out and this is how the environment in the shop has improved, actually putting out more work.” So that was the conversation.

Donna: Did he actually ultimately hire someone?

Lewis: He did not. And she wouldn’t go there, she was a little frustrated afterwards. She went into a dealership and just knocked it out of the park, did a great job. She was a very outgoing, just one of our star students.

Donna: Wonderful. This is the reality. It may be the law that you can’t discriminate, but it doesn’t mean that there isn’t going to have to be conversations, so I appreciate you sharing with us how you handled that. The other thing that I’ve heard is that, once you had a female student go in and she did a good job, then she of course was the pioneer for that particular shop, she opened doors for other women to come in with that employer. And one of the things that I like about work-based learning activities such as internships is that it’s a way for employers to also have the opportunity to have a student without having to make a commitment to employ that. But often, of course, we know that’s a result.

That can level the playing field for a female student in a very traditional community, and even not in a traditional community, where it’s still a problem for women really anywhere in a very male dominated career pathway to get hired. There’s an opportunity for them to get their foot in the door and then for the employer to see, “Yes they have the skills,” and to ultimately offer them a position, so I appreciate your sharing that with us. **Now I’m curious, what kind of money can students make when they come out with an AS in Auto Technology or a certificate and get their certifications?**

Lewis: It’s going to really vary on the skill set of the students. Top students doing really well, depending on whether they go to a dealership or dependent on how busy the shop is, can make anywhere 39 up into the 40s and 50s starting out. Here where I am now in Alabama, the Huntsville area, which is a fairly large city, a good technician can pull \$100,000 a year out of that. Now he’s going to earn it. He’s going to be busy, going to really work. We actually, here in Huntsville, have a female working in one of the Huntsville Ford dealership. I got to talk to her last week.

Donna: So it could be a “She’s going to be really busy”. **I would imagine that must be a quite a lot of money in a very rural area where the cost of living is less expensive than some of the major urban areas. And this is with just an AS or a certificate?**

Lewis: Yes. A student with an AS degree has the whole package. They’re going to write a little better, their critical thinking is going to be a little better. Now it doesn’t mean that I don’t have students that graduate with certificates that just are phenomenal. They’re just gifted in that area. But we really encourage them, and most employers today are willing to pay a little more in the very beginning if they have the degree, so it really helps them get them a little higher pay rate.

Donna: **Now what type of certifications do they need to have?**

Lewis: In their final class they take their Automotive Service Excellence or ASE certificates. That's about all there is in automotive. Now if you go to work at a GM dealership or a Ford dealership or a Toyota dealership, they would have certificates that GM gets or that Ford gets, but that's after they're already working most of the time.

Donna: Okay. Now I know that when you were at Owensboro, and you shifted now to another college, you had some long term recruitment strategies that you had started. Can you just talk a little bit about those?

Lewis: What we started doing, and we're really surprised at how well it worked, was teacher training for STEM teachers. So we brought in our STEM teachers and for four days we worked with them. We were training them in Advance Transportation Fuels, but we also had some of our female students in there volunteering with us when we were doing the training. So that allowed us to open up conversations, especially with STEM teachers in the high school and in community colleges too. Some of them didn't realize that females can participate in the automotive field. I had a female welding instructor that I would bring into the class just in lunch time to talk to the teachers about her experiences. So that was very effective.

We also did a summer academy. We called it the COBRA academy where we brought in high schools and they spend a week with us. We did a lot of hands-on, just a lot of fun automotive, alternative fuels, that was amazingly diverse. We had a lot of females come to that and we actually were able to recruit females into the college. Some of them didn't come to my program, but just from the exposure they went into other programs.

Donna: Wow, that is great, and that was a high school summer academy. Some of them came from that academy and to your program and into the college in general. That is wonderful. **Now I know that you're in a different position, are you still planning on recruiting more females? Talk a little bit about what you're doing in your new position.**

Lewis: In my new position I've already recruited two role models. I have two females. One does a lot of service writing at a Nissan dealership and the other one is a technician at a very large Ford dealership. I've met with both of them, they've agreed to do an interview with me and we're going to develop the role model video to send out to the high schools about what we're doing here. So I've got that. We also are in the process of putting together our materials, and of course all of that will have females in it. I'm swiping a couple of pictures from my previous place, and we'll also go into these shops where these women are working and take some of their pictures while they're working, and we'll have that with our stuff as well.

Donna: Fifty percent role models! Yay!

Lewis: Yes. Every time.

Donna: I'm so excited! I'm looking forward to having you back at future Telesummits, and you can talk about your success at Calhoun. **Now before close I want to ask you, for those who are listening and would like to increase the number of female students in their auto technology programs what's one of piece advice you would give them in terms of getting started?**

Lewis: Don't get discouraged first. It takes a little bit of time. If you can't find a female role model within your discipline, then find somebody close talk to them. Be honest with them. Be open with them. It is a little tough, can be a little intimidating. I'll just be honest, to be a male, I don't totally understand what it's like to come into that. I have done a few things in my life that were completely different from where I am, so I understand that discomfort. I'll just be honest, this has worked great for me, just saying, "Hey, I believe this is going to be an awesome experience for you." Remembering that, in education, for me the big thing is about life changing. We are making a difference in people's lives.

Donna: And I remember that you told me about one woman in particular, this was really a life changing experience for her to be in the auto technology program.

Lewis: Yeah, one of our young ladies made a lot of mistakes in life and was really in a bad place and she came in. It's really neat and really different in what we deal with today is we get students in here that have never been taught how to dress. They don't have any of the soft skills. Nobody's ever taken the time. She became one of our student workers, and she actually worked with us and got paid to work with us when she wasn't in class. And she has done phenomenal. She graduated, got her life together, has since married. And whether you marry or not, it's just for her. She actually reconnected with the father of her children and they're doing great. I actually called before we got online because I wanted to make sure that everything was still good, and they're doing very well. So that's neat.

Donna: That is really wonderful.

Donna: So the first question is, ***"Were the Automotive Experience Days for high schools for female students only or for both female and male students?"*** This was that high school Automotive Experience Day that we described earlier. Was it for females only? Or for females and males?

Lewis: It was open for everyone. That has seemed to work better for us. If we tried to say, "This is just for this group or that group", high schools don't really want to work with you as well. So we opened it up to anybody that would come.

Donna: **So was that a pre-existing event that you had, that was co-ed?**

Lewis: Yes. Well, they weren't really doing much of that. That was one of our big pushes, and then the college saw how it was working for us and it became something that they did college-wide.

Donna: Okay, so actually it really was something that you focused on as part of your recruitment plan and then it got rolled out. So that was new, but you did it co-ed. So another question, ***"Where do your graduates go after completing the program? Do they enter aftermarket component companies or manufacturers of electronics? Do they enter additional training programs? What does their career pathway look like?"***

Lewis: All of the above. It's neat. Some of our students would move into a dealership and become a service writer, and this is male and female, both. Some would move in and just start working on cars immediately. We had a very strong co-op program, probably closer to 95% of all of my students were working in the field before they graduated. I really worked hard to make sure everybody was getting that real life experience. A lot of our students work in parts and things like that during their education because part places and shops like that are very easy. They have a lot of evening hours. So they worked

in all of those. Manufacturers, actually automotive manufacturers hire technicians that work in the manufacturing plants when the cars are finished up, which is kind of scary, but it is a good job.

Donna: Another question is, *“How could I find female role models if I don't have a lot of women in my courses?”*

Lewis: That is where going out in the industry was a big help to me. My first female role model was actually a mechanical engineer. She wasn't even the technician. She didn't work on cars, but she talked about her experiences going into the engineering field when there were so few women in it, and she was a mature lady. So she's been in the field for quite some time, so she talked about in her day, she was a trendsetter by going into the engineering field.

Donna: So you found something that was close at that time before you grew some of your own role models. That's a great suggestion because again I know other people listening from very rural areas where it's really hard, and that's the next best thing. It worked in the short term before you had some actually women who graduated from your programs or even students.

Lewis: Another good thing to do with that, is if you're a teacher and you go for training, take your iPad with you. You can use a laptop too, but I did this in the beginning. I went to training out in California and met a female instructor, so I interviewed her just with an iPad. So you can find them, you just have to sometimes get creative and sometimes maybe get out of your box a little bit. Go to training somewhere, call other instructors until you find some in other states. That works too.

Donna: That's great. That is very creative and out of the box. Another question is, *“How did you make you new female students feel welcome because they're still a very small number in the class?”*

Lewis: Yes, the first thing is, before we really did this push, we trained everybody in there. Instructors were taught about it. Of course I was going through training with your program and then facilitating that down to my other instructors. I met with my female students when we first were bringing them in there the very first day of class, before class, the... whatever you call that.

Donna: The Welcoming Conversation part of the WomenTech Educators Training.

Lewis: So, we would do that. Also I was the guy who met with all the automotive and diesel classes before they started, and we talked in that introduction on how you're going to treat each other and how we treat everybody. We also talk about proper language, how we address each other. And that may seem silly, but again we have a lot of young people that have never been trained, never been taught. That really helped a lot too. And then my private one-on-one conversations with them.

Donna: Great. Well those were some great questions and Lewis, this has been great to have a conversation with you. Thank you again Lewis and thank you for all of our listeners for your participation.

Lewis: Thank you all. It's been great.