



## **Empowering Change: Women and Girls in STEM Podcast Transcript**

### **Episode 4: Emboldening Potential: Thriving in the STEM College Experience**

This episode focuses on the specific challenges faced by women in STEM during their college years. We discuss issues such as imposter syndrome, gender biases, and limited mentorship opportunities. Our guest, an academic expert, shares insights and guidance on how women can navigate these challenges and maximize their college experience in STEM. We also discuss the importance of support networks, the impact of role models and mentors, and creating inclusive campus environments that empower women pursuing STEM degrees.

Host: Nancy Scales-Coddington, NGCP Director of Strategic Partnerships

Guest: Dr. Siobahn Day Grady Ph.D., Assistant Professor and Program Director of Information Science

[OPEN] music playing

#### **Siobahn Day Grady 0:08**

What you write about you is more important than anything else because at the end of the day what you believe about yourself, that's what matters most.

#### **Nancy Scales-Coddington 0:27**

Welcome to 'Empowering Change: Women and Girls in STEM' Podcast Series hosted by the National Girls Collaborative Project. I'm your host Nancy Scales Coddington, Director of Strategic Partnerships at NGCP. In this episode, we explore how imposter syndrome, gender biases and limited mentorship opportunities can shape women's college experiences. We will learn how support networks and the impact role models can have are crucial to empowering women pursuing STEM. Our guest is Dr. Dr. Siobahn Day Grady, Assistant Professor and Program Director of Information Science at North Carolina Central University. And she is the first woman to graduate with a PhD in computer science from North Carolina Agricultural and Technical State University. Welcome Shavon.

#### **Siobahn Day Grady 1:13**

Hi, thank you so much for having me today.

**Nancy Scales-Coddington 1:16**

Can you share a little bit about your background? And really what inspired you to go into computer science?

**Siobahn Day Grady 1:22**

That is a great question. Let me think for a moment on where I want to start. I think I want to take you back to young Shavon, who was growing up as an only child, no siblings, and highly interested in video games and computers. It probably started there. Because I didn't have any siblings, I actually come from a big family, my parents have many siblings, and I had a lot of first cousins, a lot of them were boys. And I would play them on the video games. And I would beat them all. And that really triggered them and upset them because a girl was beating them on the video games. And it was so much fun. And later on as I got older, and as computers became more available, we have one in my home. And I took my love for video games in the console, actually to the computer. So I went to play video games on computer. And not too long. After I did that something called the Internet came around. And I know I'm really dating myself.

**Nancy Scales-Coddington 2:35**

I'm right there with you.

**Siobahn Day Grady 2:36**

But this was the early days of dial up where you would actually have your computer would dial in number to get connected to the internet. And if someone calls your home, it would completely disrupt that internet connection. And so those of you who know know and those of you don't, that's okay, because now you have something called Wi-Fi, you have it even better. But long story short, my love of computers and technology began at that early age of playing video games with my cousins, who are males. And I didn't even know at that time that girls didn't like video games. So what I'm trying to make the connection here is is that I've always kind of been in this space where I've been in something that's considered maybe male dominated. But I never felt that I didn't belong. Also include that my mother worked for IBM, until she retired from that company. And my father actually majored in math. So he's a mathematician until he retired, he was a senior programmer at Duke University. And so I had two living role models in my home that actually worked in the tech space, that probably I can attribute my love for technology to them. Because I had these living role models that I could look up to that were on the computer. I didn't have to shy away from learning and growing. And again, once the Internet came around, I went from playing video games to actually developing websites and learning how to do that on my own. And being an only child, you quickly learn how to play by yourself. And what I mean by that is I spent a lot of time reading and just tinkering around until I figure things out. And my love started there. Now I'm going to fast forward a little bit to actually being involved in a lot of STEM programming. Also, while I was in school, there's a program here in North Carolina called M S II in the math and science education network. And so I would actually take what they called at that time Saturday Academy, where we would go take science and

math courses at a local college. Some of it will be UNC Chapel Hill, we will have the Saturday classes that were in science or math, and my love just grew from there. I've always loved math because I could primarily check my answers to make sure I was right. And who doesn't like being right English I always do that, especially as a youngster. So my love just grew from there. And when it came time to go to college, I had other thoughts on what I might want to major in. But ultimately, I decided to major in computer science, which I'm so grateful that I did, because computer science and math go hand in hand, the curriculum at my alma mater, which is Winston Salem State University, you get a minor in math just by majoring in computer science. So I actually got all of what I wanted by majoring in computer science. And, as you've already heard, I had my parents, I had my love for gaming, the love for the internet, and the love for building websites, all of those things in addition to that, so Saturday academy classes, all of those things attributed to my love for computers and wanting to major in computer science. So that's a little background of how I arrived to this destination. But there are other points after my undergraduate, you know, matriculation that we can talk about later, but that's how I arrived at majoring in Computer Science.

**Nancy Scales-Coddington 6:07**

Well, sounds like you had a lot of support through this too, which is key. And we are going to get into that. I do have to ask was your first computer one of the IBM PC juniors?

**Siobahn Day Grady 6:18**

You know what I don't remember we, it was something IBM related, I can't remember. But what I do remember, because my dad's a programmer, we had a lot of different computers. And I had like, or I should say, My father had a network of computers that all talk to each other. So there were different computers in my home that we had doing different things. So that if that makes sense. So I really was excited to see all of that happening. And that further, again, attributed to my love. But what I really wanted, the computer I really wanted was a Mac growing up, and I didn't have that. But I wanted one because they were so colorful. And in the schools, they had all the colorful Mac computers. So that's what I do remember is what I didn't have. I don't remember the one that was actually our house. I just remember the one that I wanted, which was a Mac.

**Nancy Scales-Coddington 7:08**

Well, my dad also worked at IBM when the PC Jr. first came out and that was our first exposure too. That was right when the internet was starting. So exactly what you're talking about with the dial up. So I'm a kindred spirit there. Gender biases can be significant barriers for women in STEM fields. How can these biases manifest during college? And what steps can students take to challenge and combat these stereotypes?

**Siobahn Day Grady 7:37**

This is great, because kind I was alluding to with your last question. There are certain majors, particularly STEM that if you were to Google, what does someone in that particular STEM field look like? A person of color probably may not pop up and definitely not a woman. So how those things manifests in college is I'll use one example that I've used it a lot, because it's actually real, is getting paired up to work on a coding project, with your peers, who probably more than likely will be males in your class, and then letting you know that they're going to do all the coding, and you're going to be the secretary for the project. That's one of the ways that it manifests because, again, there's a stereotype that girls can't code. Or we're better suited to be in a secretarial role, which is nothing wrong with with being in a secretary role. But a man can do it just as well as a woman. And so these things manifest and you have to learn how to advocate for yourself, and let people know what your capabilities are. And that no, I would like to be the lead coder for this project, you can actually take notes at all all of our meetings, and just let them know that, note taking, is for everybody, every role that is a part of the team is interchangeable, and that's specifically designed for one person based on their gender. And that's one of the ways that it manifests and during college, and what students can do to combat those stereotypes are a multitude of things. One thing is again, advocating for yourself. And I know that that is easier said than done, some of us are not as confident I just happen to be a youngster who's always been very confident in myself. But I recognize as being a college professor that many students aren't confident to speak up mainly because they are afraid or scared or thinking that someone else might know more than them. But let me be the first to tell you that sometimes everything that looks like is not actually what it is. Sometimes that person is saying that leak going to be the lead coder is maybe not even actually all that confident in their ability. Maybe they are actually just wanting others to like them and get validation. So sometimes things are in aren't what they appear to be. So learn how to get that confidence and advocate for yourself. Also, if there's someone else on the team that you feel comfortable with, it's okay for them to advocate for you. It's okay for them to say no, I think Siobahn would be excellent in the lead programmer role. Or you can actually provide other options for, you know, maybe like a little coat off, sometimes you just have fun with it. Now, let's do a little coat off and see who can code this the quickest or the fastest, or who does it the best to actually see who might be better suited for that role. So confidence, learning how to advocate for yourself. Those are ways that you can do it. And then one thing that I love to do is I let my work speak for itself. Sometimes the proof is in the pudding as a season, people will say, and the truth is they're true, the work will always be that determining factor. And so I say that, because sometimes you can't stop people from thinking, whatever they're going to think about you. But the work that you do is a standalone, and that can't be denied. There are things that I do that, because I'm a woman. And because I'm a black woman, whatever stereotype someone may have had about me, when they see the work that I've done, there's no denying that irregardless of what they have to say about those physical attributes that I that I have. So those are some some simple things that I think college students can do. And remember, you're learning and growing. So if you don't get it right the first time, take that first project as a learning lesson. And then you just improve the next time you get paired on another project with someone else. And just also know that some of these issues, unfortunately, are lifelong. And so the more that you learn how to adapt, how to grow, and be resilient, the better that you'll be on every project that you get handed.

I really liked that message of growing and putting yourself out there in those opportunities, because this is the time for that, right to try things that you may or may not like. And that's really helpful, I think, for your trajectory as you work through your college career.

**Siobahn Day Grady 12:12**

Absolutely. All of this necessary. And again, I can't say enough, none of us has it all together, we are all still learning and growing, and finding new ways to be better. So you know, be kind to yourself.

**Nancy Scales-Coddington 12:27**

That is so true. We are learning stuff every every single day. Well, this leads really nicely into my next question, when you're talking about how people don't have that confidence, you know, that really brings up that imposter syndrome, right? So how prevalent is imposter syndrome among women studying STEM in college and how can they overcome that?

**Siobahn Day Grady 12:47**

It is very prevalent. And it goes beyond the college years in professional women's lives too and I get impostor syndrome. And really, this just a belief that you don't deserve something or you're not positioned for whatever has been asked of you. And what has worked for me is my support system. And what that can look like for you or for anyone or for myself is family, friends, mentors, we all need someone to pour into us we need a squad, if you will, we need that team of people, where when we're feeling a little bit unsure of ourselves, or I'll give you an example. I have been asked to speak sometimes that being used that I'd never even dreamed. And sometimes it's like, wow. So sometimes I might reach out to my support system and say, Hey, do you do you think I could do this? Or what do you think? And my squad is they're like, Absolutely. Are you kidding me? And they will remind me of something that I've done before. That perfectly positioned me for why I was asked to do that. And the reason why I say that is sometimes we're so busy working on things that we forgot what we've actually done. And so make sure you have that team of people. It can be your parents, grandparents, your siblings, it can be your mentors, your teachers, friends, make sure you have that team of people that you can reach back to that can really reassure you that yes, not only are you well positioned for what has been asked of you, honestly, if they hadn't asked you, I might think something was wrong. And so that's really what you need sometimes, and also was helpful too, is if you're a person that journals, keep up, keep a running log of your accomplishments. Sometimes what you write about you is more important than anything else, because at the end of the day, what you believe about yourself, that's what matters most. So make sure you can reach back into those systems. Mentors are great. I can't say that enough. I have what I like to call a board of directors different mentors for different things. And really what they are as guides, and all of us needs a guide, there will never be a point where we won't need someone to kind of show us the way because things are changing every day. So make sure that you have those right people and those positions who will keep you grounded, but also that you trust to actually reaffirm and reassure you that you can do it. And again, if no one else, or you don't have anyone to do that,

that journal that I talked about, have that and reassure yourself, look in the mirror, and this might sound cheesy, but it's so true. Make sure you look in the mirror, and talk to yourself. And what I mean by that is sometimes I know people who, and I haven't done this, but I do know people who before they do a speech, they look at themselves in the mirror when they pronounce words, or make sure they're smiling, you can do that same thing for yourself. To have that reassurance, you know, I am who I say I am, I am, you know, queen or I can do this, do it. There's nobody there to judge you.

**Nancy Scales-Coddington** 16:07

That's super great advice. I really like what you're saying about keeping that running log of accomplishments. Because we are so busy doing that we do forget the things that we've done that have brought us on our path. And I think that that's really helpful in especially in a situation like this to remind yourself that yes, you were asked to do these speaking engagements because of the work that you have done.

**Siobahn Day Grady** 16:30

Absolutely, that we are our best advocates, we really are. So we have to believe it to

**Nancy Scales-Coddington** 16:37

You started talking about role models and we know from research that role models and mentorship play a crucial role in academic success. So what are some of the unique challenges women face in finding mentors in STEM fields? Because that's not easy. You know, we've already touched upon that, and how can they lean into these mentorship opportunities?

**Siobahn Day Grady** 16:58

I hope that this has taken well. But we have to start asking for what we want. And I say that because sometimes as as women, and not just women, people in general are afraid of rejection, we have to learn how to ask for things that we want. And see a no, not as a never, but as a not right now. And I say that because mentorship is something that you want someone to say yes to, and really have the time to do it for you. So every no is not something that should be seen as Oh, I was rejected, it can be that person saying no, because I really don't have the time to give you that you will deserve. And so I think one barrier that I have seen, particularly in young women, is just being afraid to ask. I also know that sometimes people are looking for mentors, they're putting themselves in a box, all of your mentors don't have to be women. Just because you're a woman, a man can be your mentor, or it can be someone that doesn't look like you. I'm a black woman. Mentors don't all have to be black. Okay, you need to have a well rounded and diverse group of people who again, can help you get to where you would like to be, you can't be afraid to ask, they don't all have to be in the same field per se. These just have to be people who can guide you to where you want to be. So for instance, if you are a young person, and you want to be on an advisory board or a board member of an organization, you can ask someone

who serves on a board to be your mentor. They don't have to be specifically in the same discipline or field that you're in. But they can definitely be a guide for you on how to be a successful board member. And that's great. But you have to be able to ask for what you want. And a lot of times you need to be able to discern why that person might be a good mentor for you. People want to know how is it that I can help you. So you have to be more thoughtful and intentional. And explaining to people that you would like to be your mentor, how you see that they could help you and how you see how you see that you might be able to help them too. Because relationships don't have to be one directional. They can be bi directional. And so that's also something that you need to think about when you're making your ask as far as mentorship. And additionally I want to say sometimes mentors find you. You don't have to even ask, it might be one of your professors seeing great potential in you. And they want to take you under their wing and you have to decide again, if that's going to be a good fit for you. The great thing about all of this, what we're discussing is you hold the power to To these decisions and who you want to be a part of your board of directors. So keep in mind to be thoughtful and intentional. And you don't have to say yes to everything. And you don't have to take every no to heart.

**Nancy Scales-Coddington 20:14**

That's great advice. I really liked that asking for what you want and being very intentional and what you're looking for, because that's really going to take you in that next step further. Absolutely. You had started talking about an analogy earlier, which I really liked, called that board of directors, which is that accountability piece of there, it's not really a board of directors, right? Can you talk a little bit about what that actually means?

**Siobahn Day Grady 20:40**

Absolutely. So I have several different mentors. They're not all in my discipline, they do not all look like me, who I can draw upon, for guidance, for information, for a multitude of things that I find, to be extremely invaluable. And why that's so important is because, and this is a true story. Even though most people won't say this, having a doctorate degree does not mean you know, everything. What it means is that you know, one thing very, very well, especially for PhD, and other disciplines, it means you know, your research your work area extremely well, you're an expert in that. But what I am not an expert in is everything. And so I might go to one mentor, because I serve on different, many different boards, I might go to that mentor for information on something that might be experiencing on a board. Or I might go to another person mentor for policy information. Or I might go to another mentor for information about how to be about my professorship. There's many different things that I go to people for, or I do a lot of keynotes, I might want someone to listen to a speech that I have coming up. The point is, I recognize that everyone's busy. And sometimes you can't keep pulling on the same person all the time. And so that's why the board of directors is so and that's just what I'm calling it again, as you mentioned. But that's why it's so important to have this team of people who are actually helping me, at least I like to think they are helping me be the best doctor Cheban they greatly that I can be and making sure that I stay on track with what I have decided my professional goals are. And everyone can have this. And even let me just say this part of that board of directors you better believe is my parents. Okay, those are part of my mentors as well, because they, they know the

way I lean on them very heavily for their input, even though they may or may not be in this discipline, they still have wisdom and knowledge that is valuable. And so you don't want to leave anybody out, who might be able to help you on your journey. Because all of this is a journey. None of us starts out at the top. Most of us work our way. Slow and steady wins the race, most of us work our way to where we want to be. And even when you get to where you want to be. As I mentioned earlier, there's always room for improvement. board of directors is basically my support system.

**Nancy Scales-Coddington 23:33**

It absolutely does. And those support networks and those support systems are absolutely key for helping us to achieve those goals. Let's shift gears and talk about something that has been in the news quite a bit lately. And that's about creating inclusive campus environments, which is really crucial for empowering women in STEM. What are some practical steps that these education institutions can take to foster an inclusive culture and provide equal opportunities for women pursuing STEM degrees?

**Siobahn Day Grady 24:03**

This is a great question. I think there's a couple of different things that institutions can do. And the first thing making sure they have a diverse group of professors that are serving their student population. That's important having women like for instance, I'm a woman and computer science having women in computer science be professors at your universities sake women out seek again, diversity seek all ethnicities out. Problem is things have been so mono for years where we've had only the same type of thing. We need all different aspects of different voices, because everyone's experience in computing is not the same. So having a diverse group of professors I think is one way that institutions can better serve their student populations to create that inclusiveness. One reason why is because everyone needs to have someone that they can relate to that relatability component is so important, because a lot of times from my own experiences being an educator I taught at a different public institution about five years ago, and I was the only black woman there. I don't know why. But when I tell you during my office hours, everybody came. And sometimes it wasn't always about the school, the coursework, they just wanted someone that they could talk to because they believe in, it could have been my age as well, let me say that. But that relatability aspect was so important for those students, and I was happy that I can be that person that they could come to, for that. Also making sure that universities have those student organizations that cater towards women. So for instance, in my discipline, we have an organization called the association of Computing Machinery is for computer scientists, but they also have ACMW Association of Computing Machinery for Women. And that's important because the women in computer science or students need to be able to come together and talk about issues that maybe they just experienced, everybody has all these different experiences. So universities need to make sure they create these safe spaces, where students can actually advocate for themselves either through student organizations, or through professors that are from a diverse set that they can speak to. So not just professors, but administration, the administration should be reflective of what universities want as well, as far as that diversity component. Lastly, I want to include something else that



I've done throughout my tenure as being a professor. But making sure professors and administrators and everyone at the university is taking courses to understand what inclusive means. I've taken several courses throughout the pandemic, that have helped me reshape and redesign my courses so that they can be in a way that is thoughtful for my students. And what I mean by that is, sometimes we need articles that are written by diverse people within computing for my classes, right? We need media, where it's not the same, you know, same people all the time. So we really need to have curriculum that actually advocates for that as well. And part of that is going to be requiring professors and others to actually make sure that they're designing their courses in a way that are inclusive, to not only the discipline, but actually the students that they serve, as well. So I hope that kind of answers that question. But there's just on every level, there's work that we that needs to be done, so that everybody feels included and not excluded from anything that's happening at their institution.

**Nancy Scales-Coddington** 27:39

Well, and that's such an important part to make sure your students do feel included, because you want them to be part of that experience, so that they are successful, and so that the universities and colleges are successful as well.

**Siobahn Day Grady** 27:52

Absolutely.

**Nancy Scales-Coddington** 27:54

What advice do you have for families and peers and how they can support women in STEM as they are going through their college years?

**Siobahn Day Grady** 28:02

I would say to just really try to be there, be those cheerleaders, you know, be the cheerleaders that your girls and women need, as they're going through this space that may feel exclusive, rather than inclusive. Try to hear them out what's going on, don't try to minimize anything that they're sharing with you because everybody's experience is extremely important. And they need to feel that what they have to say, is value. So I would tell their support system to be thoughtful and listening. Really try to understand if there are any issues that are arising from your loved one, be supportive, and also be that cheerleader. It is the simple things that mean so much to be honest with you, whether it's someone and I'm just using computer science, because that's my discipline. But if your loved one is doing a hackathon, if you don't even know what that is. You can still show up and support that and cheer them on. Even though it's something that may be foreign to you really just try to engage and support them in all the ways they may need you. Whether it be a listening ear showing up for an event that they have going on, or just being a vote of confidence that they need and telling them that they are amazing, and how you don't understand what they're doing. But it sounds really cool. And that is also supports when

**Nancy Scales-Coddington** 29:25

The STEM squad gets out there with their cheers.

**Siobahn Day Grady** 29:30

Exactly. And it matters let me just tell you, it matters.

**Nancy Scales-Coddington** 29:34

We need STEM squad shirts now. I want to help design Okay, sounds like sounds like a plan. Where can people go to find out more information about you?

**Siobahn Day Grady** 29:54

I have a website is my name but SiobahnDayGrady.com. You can definitely go there or you can go to my institutions website as well NCCU.edu. And also you can follow me on every social media platform that exists. That can be threads. It used to be called Twitter, it's now called x. TikTok, Instagram, Facebook, LinkedIn. I welcome you all to connect with me on all platforms. Again, you can go to my website as well, but I welcome the opportunity to engage with you. And that's how you can learn more about me as well.

**Nancy Scales-Coddington** 30:30

And we will have links to all of those in the show notes. Well, thank you so much. This has been incredibly insightful. And it really has been a pleasure discussing the importance for supporting women pursuing STEM degrees in college. So thank you, Dr. Siobahn Day Grady.

**Siobahn Day Grady** 30:46

Thank you so much for having me. And I hope that if nothing else, one thing resonated with anyone that's listening. Thank you so much for having me.

**Nancy Scales-Coddington** 30:54

As we delve into the challenges and opportunities faced by women in STEM during their college journey, we invite you our listeners to take action and be advocates for change. Share this episode with your peers, friends and educators to raise awareness about the issues discussed. Let's work together to create a supportive and inclusive environment for women in STEM, ensuring that they have the mentorship, resources, and encouragement would that stem squad that they need to excel and make significant contributions to the field. Your efforts can make a

difference in empowering the next generation of women pursuing STEM degrees. You can follow the National Girls Collaborative Project on Twitter, Facebook, LinkedIn, Instagram at NGC project and on YouTube at National Girls Collaborative. You can find and NGCPs podcast Empowering Change: Women and Girls in STEM wherever you listen to your favorite podcast. If you've enjoyed this podcast, consider supporting this work. The link is in the show notes. Join us next time to learn more about how we support effective strategies for taking action and showcase the hope for a more equitable future for women and girls in STEM. Thanks for joining us.

[CLOSE] music playing

###