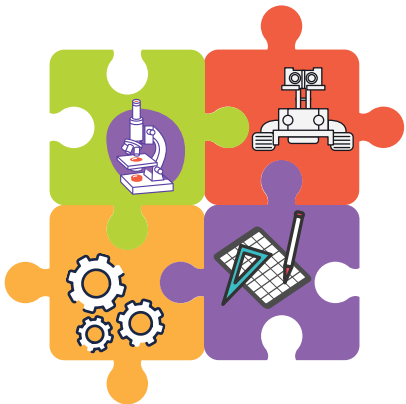




NM WOMEN IN STEM SUMMIT

SUMMARY REPORT



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New Mexico Out-of-School Time
N E T W O R K

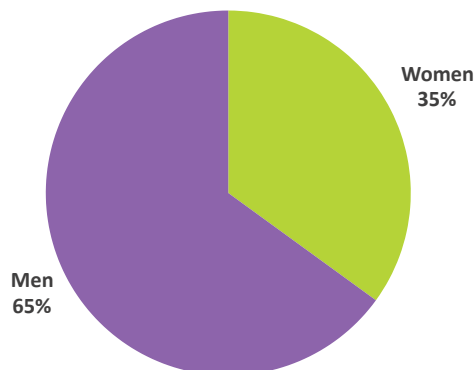
INTRODUCTION

The New Mexico Out-of-School Time Network (NMOST) and the NM STEM Gender Equity Coalition organized and hosted the first New Mexico Women in STEM Summit on April 27, 2024 at Hotel Albuquerque in Albuquerque, New Mexico. This event was inspired by The Global Women in STEM Leadership Summit¹ and the national “The State of Girls in STEM” convening hosted by the National Girls Collaborative Project.² The purpose of the event was to convene and connect STEM partners across fields, celebrate young women, and collaborate to collect “current state” information and actionable ideas to increase participation and persistence in STEM from women and other underrepresented groups. Participants from across New Mexico and its various STEM sectors heard from a panel of young women and a panel of STEM professionals and celebrated the 7th annual Advancing Young Women in STEM Scholarship Awards. Following each panel, attendees reflected, discussed, and strategized about what was shared and where we, as a state, want and need to go to achieve equity in representation, opportunities, and experiences in STEM.

National data show that women make up only 35% of the science and engineering workforce.³ The data also show that STEM industries often require employees have high education degrees or certifications in science and engineering fields, and while the total number of certificates and degrees awarded has been increasing, women and minorities (Hispanic or Latino, Black, and American Indian and Alaska Native) remain underrepresented in bachelor’s and higher-level degrees, especially in fields like engineering and computer science.³ The STEM workforce has been gradually diversifying since 2011, but we are still far from gender or ethnic and racial parity in representation or pay.⁴ Further, the majority of the STEM workforce (55%) does not have a higher education degree⁵ which shows the importance of providing youth career and technical education opportunities that ensure each student has the opportunity to find a STEM pathway that interests them and leads them to a lucrative STEM career. Out-of-school time (OST) programs are a great way to spark STEM curiosity and grow that into interest in STEM education and careers, but clear pathways are needed to support youth, OST providers, and the STEM industry to collaborate and support each other along the way.

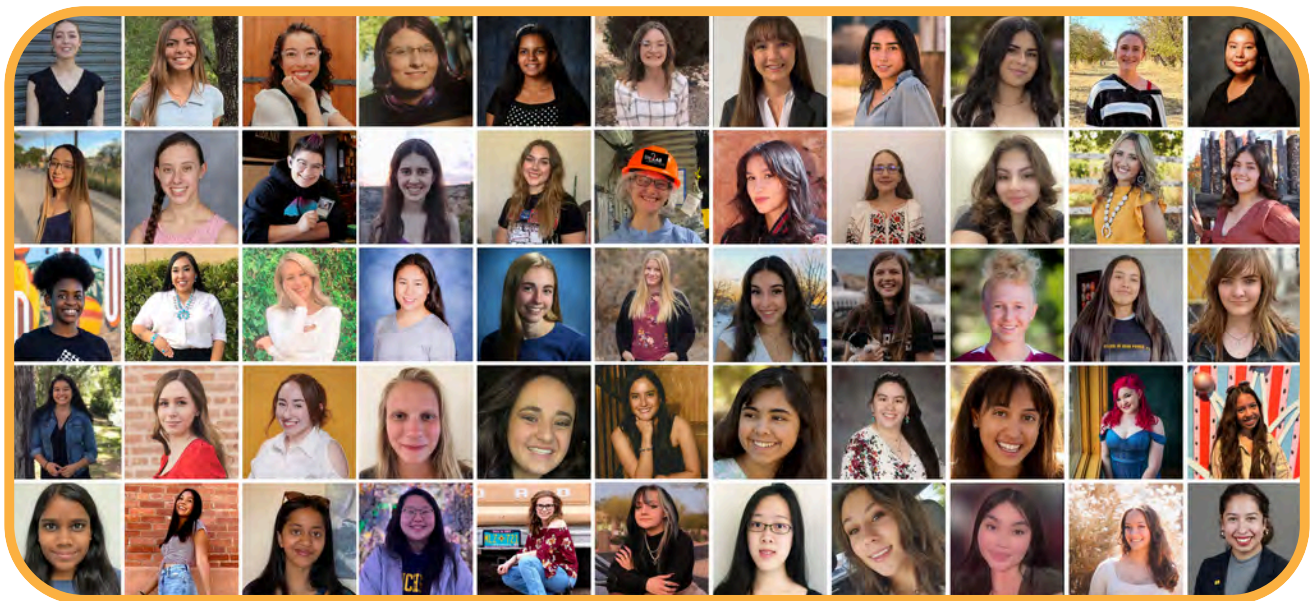
As stated by the Albuquerque Journal, “New Mexico is a STEM state,”⁶ and with large Federal investments coming in from the CHIPS and Science Act,^{7,8} STEM career opportunities continue to grow in New Mexico, but the state is lagging in adequately preparing our students, as local talent, to fill those roles. STEM is

Science and Engineering Workforce Gender Breakdown



important to New Mexico’s economy and is represented in most of the nine target industries for growth,⁹ in addition to the strong STEM history in the state dating back to the Manhattan Project that created the national laboratories. In 2021, about 6.9 percent of all jobs in New Mexico were in STEM occupations¹⁰ which is higher than the national average. According to Labor Market equity data, 40.9% of those in “professional, scientific, and technical services” identify as female.¹¹ Additionally, New Mexico has made investments in STEM and CTE education initiatives, including through recent state budget appropriations for out-of-school time programs.

NMOST promotes STEM in OST through professional development opportunities and resources including those provided through our participation in the Million Girls Moonshot¹² along with local and regional opportunities. NMOST also created the Advancing Young Women in STEM Scholarship program to highlight the need to uplift and support local women in STEM. Since 2018, NMOST has awarded 69 scholarships for a total of \$53,500 thanks to the generous support of donors including Verisk Atmospheric and Environmental Research, STEM Next Opportunity Fund, the New Mexico Oil and Gas Association, the Schumann Foundation, and individual donors.



In 2020, NMOST reached out to partners to collaboratively create the NM STEM Gender Equity Coalition (GEC). The coalition is composed of OST STEM organizations who support and/or cater to girls and young women. Goals for the GEC include working to increase support for young women in STEM, to share and elevate best practices, and to assist other OST programs in implementing STEM and engaging girls and young women in STEM. In alignment with these goals, the GEC developed the *Promising Practice Guidelines for Engaging Girls in STEM through Out-of-School Time*¹³ along with a self-assessment checklist.¹⁴ The GEC was also instrumental in planning the New Mexico Women in STEM Summit including recruiting and inviting panelists and attendees. This report will serve as the action plan for the GEC’s future initiatives.

Eighty-one (81) participants attended the New Mexico Women in STEM Summit including youth, parents, educators, and STEM professionals. Substantial participant groups included Advancing Young Women in STEM Scholarship awardees and their parent(s), NMOST's OST Leadership Institute cohort of 20 OST professionals, and members of the Gender Equity Coalition. STEM industry and business professionals who attended were mostly from the Albuquerque area and included staff from Sandia National Laboratories, small STEM-business owners, and the Air Force Research Laboratory. Expanding this participant group is a goal for the next Summit planned for April 2025. The Summit was an invite-only event; each invitee was personally recommended by an NMOST or GEC partner as someone interested and invested in increasing participation from and improving support for young women in STEM. This resulted in a diverse group of participants with varied perspectives and experiences to share and resulted in multi-sector connections and robust and innovative ideas.



OVERVIEW OF SUMMIT

The morning began with welcoming remarks from May Sagbakken, Executive Director of NMOST; Dr. Gwen Warniment, Director of the NM Legislative Education Study Committee; and Austin Hall, Director of Policy at the STEM Education Coalition to set the stage for the event and its potential impact on policy and practice. This was followed by a panel of five young women (two high school students, two undergraduates, one graduate student) pursuing STEM education and participating in OST STEM activities. The goal of the Youth Panel was to spotlight the experiences of local young women in STEM, including the barriers and challenges they encounter, and to let youth voices and experiences guide the event. After the panel, the 2024 cohort of NMOST's Out-of-School Time Leadership Institute facilitated table discussions about barriers encountered by women in STEM and ideas for how to overcome them. This was followed by the 7th annual Advancing Young Women in STEM Scholarships Awards in which twelve young women (high school juniors/seniors and college undergrads) were each awarded a \$1,000 scholarship from NMOST. After lunch, a panel of professional women in STEM shared their personal journeys and recommendations for getting and keeping women interested in STEM and STEM careers. Following the panel, participants divided into groups based on their topic of interest:



Cultivating Champions & Male Allies: Bridging gaps and raising awareness to build stronger coalitions pushing for equity



Support Systems & Mentors: Exploring how to enhance relationships, connections, and partnerships to reach parity



Persistence in STEM & Systems Change: Imagining new policies and high-level changes that increase persistence and improve systems to align with needs



STEM Pathway Connections: Creating and solidifying connections among primary, secondary, and higher education; OST programs; and industry to clarify pathways to STEM careers

These discussions aimed to get diverse groups talking and strategizing together about these topics. Questions for each group focused on collecting ideas for HOW to make change and progress in each topic area with a goal of creating an action plan for NMOST and the GEC. Each group shared the main ideas from their discussions with the room. May Sagbakken closed the event with final thoughts and next steps and thanked attendees for their collaborative engagement and commitment to supporting New Mexico's STEM pathways, especially for girls, young women, and other underrepresented groups.

KEY THEMES & IDEAS



The most resonant takeaway from the event was that young women need more **support and encouragement** to pursue and persist in STEM education and careers. They need peers, near-peers, role models, and mentors that understand their experiences and support their STEM education and/or career goals. Standout comments from the event evaluation include that this Summit was the first time a handful of the young women met others like them and that the opportunity to network across ages, sectors, and STEM interests was valuable. In the following sections, a summary of each panel discussion is followed by an overview of the key ideas that surfaced from the accompanying strategy session.

ELEVATING YOUTH EXPERIENCES

NMOST and the GEC recruited five dynamic young women from across New Mexico ranging from high school to graduate school to participate on a 30-minute panel to share their experiences in STEM so far and what supports they need to persist in STEM. The panel was facilitated by Caitlin Everhart, STEM Outreach Specialist at the Air Force Research Laboratory's NM STEM Academy. Graduate student Elizabeth Brock, undergraduates Tyanna De Vargas and Anwi Fomukong, and high schoolers Maya Gomez and Gianna Nilvo shared their STEM experiences so far including how OST programs provided important opportunities and what barriers and challenges they've encountered. All of the panelists stressed the importance of good mentors and said they have experienced sexism in their chosen STEM fields in classes, internships, and robotics clubs. They also discussed how they bring and connect their cultures to their STEM studies and goals even when, in some cases, their cultures do not traditionally support women pursuing STEM. The panelists have all learned that they have to be strong self-advocates to ensure they get the support and receive the same opportunities as young men, and they emphasized the importance of finding and building community and a strong support system. The youth panelists also participated in the rest of the event, sharing their ideas and experiences further during the strategy sessions and table discussions.

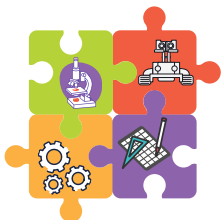


SOLUTIONS TO BARRIERS FACING YOUNG WOMEN IN STEM

Following the youth panel, Summit attendees participated in facilitated discussions at their tables to reflect and build on what the young women shared. The discussions focused on barriers that young women and other underrepresented groups encounter in STEM and what can be done to reduce or eliminate these barriers and to help youth overcome them. Participants were moved by the vulnerability and honesty of the youth panelists in sharing their experiences and noted, with a mix of surprise and annoyance, that young women still face adversity and “still have to put up with prejudice.” Other common reflections from the panel included that imposter syndrome can be a barrier and finding or crafting your own identity and path in STEM can help. All of the tables also noted that the panelists all mentioned and rely on a support system of friends, family, mentors, and educators that encourage them and help them to be persistent and resilient. Attendees were impressed with the panelists and at the same time frustrated that young women and minorities still face many of the same barriers and challenges that have existed for decades.

When asked what barriers they have encountered and what other barriers they know exist for women and underrepresented groups pursuing STEM, participants mentioned a **lack of resources and supports, being underestimated or held to different standards, and not getting credit or recognition for their effort**. Professionals who are women in STEM careers discussed **feeling a need to prove themselves** and shared experiences like **having a man on their team to take to meetings for credibility and validation due to stereotypes and biases about women being less capable in STEM**. One participant said being a woman in STEM can require that you “work twice as hard to get half as far [and you] may not get recognition”.

Educators and youth in the room discussed the **lack of awareness of and access to STEM opportunities and resources**, especially in rural areas. Nearly all of the table groups mentioned that there are **not enough good mentors who truly understand the difficulties of being a women and/or minority in STEM** and that being a good mentor is a learned and cultivated skill that isn’t incentivized or supported enough by the education and workforce development systems. Other common barriers that are well-known and were mentioned but not heavily discussed, include **access to transportation, funding for programs and resources, and a general lack of opportunities in smaller, rural communities**.



To progress the discussions from commiseration to progress and action, the final question asked participants to share their ideas for overcoming the barriers and challenges mentioned. The main ideas included:



Increased access to professional development and training for educators about STEM and getting and keeping girls in STEM.



Starting younger to engage children in STEM activities and to cultivate interest in early childhood and keep it going.



More funding for STEM programs and access to them.



Creating support groups of intergenerational women in STEM to cultivate a sense of belonging and build community.

The young people in the room repeatedly highlighted the need to see people who look like them doing what they want to do and succeeding and how powerful that can be in boosting their own confidence and resilience. This was especially true for the Indigenous attendees who greatly appreciated meeting and networking with other Indigenous women in STEM at the Summit. Educators stressed that teachers need more support in the forms of “recognition, empowerment, [and] inspiration” to keep seeking out the extra resources and supporting the OST programs and clubs that many students rely on for their STEM enrichment. Participants also suggested more convenings and discussions like the NM Women in STEM Summit to keep pushing for positive change in the systems we live and work in, to stay connected, and to continue to celebrate the successes of women (of all ages) in STEM.

WOMEN'S JOURNEYS INTO STEM

In the afternoon, Dr. Kim Scheerer, Central Inner Regional Coordinator at NM MESA, moderated a 30-minute panel discussion with professional women in STEM. The panel was composed of female scientists and engineers from the University of New Mexico (environmental engineering) and Sandia National Laboratories (civil engineering, materials science, and biochemistry and chemical engineering). Panelists were asked about their STEM journeys and barriers they've encountered along with their ideas to increase persistence in STEM and advice for young women wanting to pursue STEM careers. While each panelist's journey was unique, they shared similar recommendations about advocating for themselves and their needs through their higher education journeys and staying true to themselves. Good mentors were essential to each panelist's success in STEM as was taking the initiative to ask for help when needed and having the courage to speak up in classes and in work settings. One panelist is an Indigenous woman in STEM who shared the statistics that show just how rare she is, and how her cultural identity is an asset and an opportunity that has

driven her throughout her career. Self-care and mental fortitude were stressed as essential for success as was cultivating and relying on a core group of supporters and people who uplift and encourage. Panelists also shared their hopes that through being mentors and through participating in events like this Summit, that it becomes easier for the next generation to succeed in STEM and encouraged all the young women in the room to stay true to themselves and to keep pursuing their STEM passions.



STRATEGY SESSIONS

After the STEM Professionals Panel, attendees joined a strategy discussion based on the topic they were most interested in: Cultivating Champions and Male Allies, Support Systems and Mentors, Persistence and Systems Change, and STEM Pathway Connections. Each group was given a few questions to help guide their conversations but were encouraged to dive into the areas of most interest to the group and to think about action items to drive progress in their topic area.

All groups recognized that there is advocacy to be done to ensure state legislators understand the importance of solid STEM pathways and inclusive spaces that youth are excited to engage in and that can lead to fruitful careers both for the students individually and for the New Mexico economy. There appears to be a need to build capacity for advocacy and to gather and share the information advocates need to be successful.



Cultivating Champions and Male Allies

This group discussed what it means to be a champion and/or ally and what it looks like, then brainstormed around how to create more champions for young women in STEM. Participants agreed that men need to be willing to communicate openly and not be afraid to show emotion and to stand up for women and other underrepresented groups. They also suggested that more should be done to recognize both the issues that women in STEM face and the contributions they make to their fields. The group said the best way to be an ally is to ask questions to understand the perspectives and experiences of others, especially those you are striving to support. To cultivate more allies and champions, the group said there needs to be funding for training and more opportunities to build meaningful relationships among diverse groups and that there need to be more inclusive spaces where everyone feels seen and heard and can speak up about their experiences and needs in STEM.



Support Systems and Mentors

This group discussed what a good mentor looks like, how to build a support system, and how to increase support for women in STEM more broadly. To increase support, the group recommended more events like the NM Women in STEM Summit to provide opportunities for intergenerational networking and connection and to raise awareness among families so they can become better champions and stronger supporters for their young women pursuing STEM. They suggested creating and sharing resources with families to help them understand what it is like to be a woman in STEM and how to be supportive.

To be a good mentor requires showing up, being positive, learning about your mentee's life and culture, and being consistent and authentic. The group discussed mentorship as a skill that requires ongoing learning to stay connected to mentees from different backgrounds and generations and also discussed the shared responsibility between mentor and mentee to collaborate. They also acknowledged that finding the right fit in a mentor/mentee relationship is important; not every situation will work, and it is okay to find a new mentor when needed or to have more than one mentor for different things. Similarly to the champions group, this group recommended training for mentors including cultural competency training to help them connect with young minorities in genuine ways and to create more good mentors overall, so every young person has multiple mentors.



Persistence and Systems Change

This group brainstormed around how to increase persistence and resilience in STEM for young women and other marginalized groups and discussed what changes need to happen at the systems level to create more welcoming and inclusive STEM spaces. The group suggested leveraging OST programs to show interdisciplinary connections and to help make STEM a priority at a younger age. OST programs often have greater flexibility to explore topics that are of interest to students through hands-on activities, making STEM and OST programs natural partners. Ideas for increasing persistence and resilience included policy changes to offer more opportunities and support, getting and keeping more good teachers in the system, and spotlighting role models in STEM to show what's possible. Overall, the group noted that more funding is needed to get more resources, teachers, and STEM programs into schools so more students are exposed to and have opportunities to connect with STEM. The group suggested that educating parents more about the impact of STEM programs and the future career possibilities along with broadening the definition of STEM careers could help create change as there would be more people involved in the conversations and more people advocating for inclusive STEM environments and opportunities for students to thrive.



STEM Pathway Connections

The final group discussed how to create and solidify connections among out-of-school time programs, in-school learning, higher education, and industry to make pathways into STEM clear and welcoming for all youth, especially young women and minorities. They brainstormed how to build collaborative partnerships and how to create new and build on existing pathways in STEM. Similar to other groups, they recommended starting STEM earlier (in Pre-K and Kindergarten) and added that youth should be connected to employers earlier through career and technical education (CTE) and capstone courses in middle school and high school. The group also recommended more asset mapping of what programs and opportunities are available across New Mexico to help visualize and raise awareness about what exists and to show where there are gaps. Finally, the group recommended that partnerships be formalized between schools and community-based organizations to get more information and programs into schools and to solidify community connections.



SUMMARY

NMOST and the NM STEM Gender Equity Coalition are committed to continuing to support young women and other underrepresented groups in STEM through promoting and providing training on our *Promising Practice Guidelines*,¹³ sharing resources, continuing our “Women in STEM” day each week on the NMOST social media accounts, and through the Advancing Young Women in STEM Scholarship program. We also hope to make the New Mexico Women in STEM Summit an annual event for networking and celebration.

Even though the conversations at the Summit were framed with a New Mexico context, many of the recommendations and ideas are similar to those reflected in *The State of Girls in STEM* report² including the need for policy and legislative support, the importance of collaboration, and the necessity of providing adequate supports (people and resources) and examples (role models and mentors) to help young women persist and succeed in STEM. NMOST will continue to leverage, share, and promote resources from national partners including Million Girls Moonshot, National Girls Collaborative Project, Techbridge Girls, Teen Science Café, and others.



The New Mexico Women in STEM Summit brought together multiple groups including young women pursuing STEM, educators, parents, and STEM industry professionals who want to make STEM more accessible and inclusive. Through panel presentations and various group discussions, participants were able to network, share experiences, and brainstorm ways to increase support and persistence in STEM for young women and other underrepresented groups. **New Mexico needs to continue to invest in and build a supportive infrastructure for homegrown STEM talent.**

ACKNOWLEDGEMENTS

NMOST appreciates the generous financial support and collaboration from both local and national partners. The Afterschool Alliance and the Overdeck Family Foundation are essential supporters and thought partners in our policy work, including the NM Women in STEM Summit. The STEM Next Opportunity Fund has supported NMOST's Advancing Young Women in STEM initiatives, including the scholarship program and the NM STEM Gender Equity Coalition, as part of the Million Girls Moonshot project. The Nusenda Foundation and the New Mexico Public Education Department have supported the Out-of-School Time Leadership Institute which is working to build capacity and to professionalize the OST field in New Mexico.

NMOST thanks the panelists and moderators for sharing their time and their stories. We also thank all of the attendees who passionately and collaboratively engaged in the discussions. Finally, we send a final congratulations to the Advancing Young Women in STEM Scholarship awardees, thank them for sharing their journeys thus far, and wish them well on their continuing STEM journeys.

THIS EVENT IS AN INITIATIVE OF THE NM GENDER EQUITY COALITION:



THANK YOU, EVENT SPONSORS!



CITATIONS

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