Technical Report: Trans and Nonbinary Computing Education Research Workshop

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Introduction

Existing gender diversity Broadening Participation in Computing (BPC) initiatives almost exclusively center a binary gender model focusing on girls and women as static categories (Menier, Zarch, & Sexton, 2021). However, recent data from (Jones, 2022) suggests that 2.1% of Gen Z adults identify as transgender (that is, have a gender identity that differs from the sex they were assigned at birth (James et al., 2016)). Additionally, in research presented at the 2022 RESPECT conference, we showed that there are at least 10,850 nonbinary[1] K-12 students in the US registered across nine different states (Menier, Sexton, Gutierrez, & Donoghue, 2022). As the number of people who identify as transgender and nonbinary (TNB) increase, current best practices regarding approaching gender in computing and engineering need to be revised (Haverkamp, 2018). To further support future gender diverse computing and engineering students, we will need to develop a research agenda that further elucidates this nascent area of study. We particularly expect that intentional work will be needed to uncover the as yet poorly understood ecosystem surrounding TNB computing students, their advocates, and their allies. In particular, we see a clear need to understand intersections with race and disability, as the 2015 U.S. Transgender Survey showed that TNB people of color and people with disabilities had worse outcomes than their already marginalized peers (James et al., 2016). In order to be a force for change for this goal, we held a virtual workshop to develop a research agenda that includes TNB students in BPC/BPE for inclusive and intersectional policy, practices, and research.

Figure 1. Our layered approach to intersectionality and TNB computing and education learners.

Purpose

The Trans and NonBinary Computing Education Research Workshop (TNB-CER) unites a cross-disciplinary group to collaboratively design and deliver a virtual workshop culminating in the development of an intersectional policy, practices, and research agenda that includes transgender and nonbinary (TNB) students in BPC, BPE, and related initiatives. Existing gender diversity BPC initiatives almost exclusively center a binary gender model focusing on girls and women as static categories (Menier, Zarch, & Sexton, 2021). However, recent data (Jones, 2022) suggests that 2.1% of Gen Z adults identify as transgender (that is, have a gender identity that differs from the sex they were assigned at birth (James et al., 2016)). Additionally, in research presented at the 2022 IEEE RESPECT conference, we

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[1] Having a gender identity outside a male/female binary

showed that there are at least 10,850 nonbinary K-12 students, whose gender identity is outside a male/female binary, registered across nine different states (Menier, Sexton, Gutierrez, & Donaghue, 2022). As the number of people who identify as TNB increase, current best practices regarding approaching gender in computing may need to be revised.

Okay, but really, why did we do this? In this workshop we center and specifically talk about Trans* and Nonbinary folks in computing. The people are only in computing classrooms or workplaces for part of their day. They are Trans* and Nonbinary all of the time. Some have noted that computing can be a refuge for Trans folks (Ko, 2021), though even this becomes complicated when thinking about transition history, passing, and the potential for employment discrimination, harassment and bullying within academia and industry (Ko). Computing does not exist in a silo and we cannot afford to ignore the broader context in which our work happens. NSF does not have a dedicated set of money set aside to fund projects by, for, and about TNB folks. According to NSF, Transgender and Nonbinary people are not "groups traditionally underrepresented or underserved in computing", meaning we have to couch what we do in gender diversity, hoping to squeak under the radar of programs intended to benefit women. Lawmakers in several states are trying to write Transgender people out of legal existence and the public imaginary, curtailing forms of expression, and suppressing democracy (ACLU, 2023; Reed, 2023). Despite the privilege that being associated with computing might give us, namely access to funding, a certain external prestige, and a direct connection with the United States' workforce aims compared with other academic disciplines, these privileges will not keep us safe from transphobia, discrimination, and hostile legislation. Everything we've discussed is important on its own, but it becomes crucial when situated within the context of a society that is actively seeking to curtail the rights of Transgender and Nonbinary folks to access healthcare, to create and maintain family, to access literature about ourselves, to exist.

Why Us?

We recognize that we are not *the* experts in this area, and that the participants we were able to gather represent only a portion of knowledgeable, interested, and invested people. Nonetheless we felt that this was an important conversation to begin with the community and we did not see a great deal of movement happening on the part of others in this field. In particular, the PI team felt this tension all the more strongly as we hold an interesting position as evaluators and researchers -- we are simultaneously enmeshed in the computing and engineering education world, but have never been computer scientists or engineers or computing or engineering educators. However (at least on the part of the workshop co-chairs) we have had the experience of being gendered in education spaces that didn't feel quite right, have experienced the marginalization that can happen within STEM disciplines, and recognized that that feeling wasn't present in the literature that we were engaging with.

Workshop Goals

With this in mind, we sought to bring together experts across a range of computing, engineering, and related technical and data-based disciplines as well as experts from other fields in the social sciences including education and the learning sciences to build an agenda for inclusive policy, practices, and research for TNB computing students. Our specific goals were to:

- Define near and long term agenda items for intersectional research about the inclusion of TNB learners in computing for the Computing Education Research (CER) community

- Advance our collective understanding of and ability to implement principles of intersectionality in future work
- Highlight existing work, researchers, and thought leaders on the inclusion of TNB learners in BPC/RPP initiatives
- Create a community where this work is valued for those doing, receiving, and being represented by this work
- Provide participants with the opportunity to conceptualize how to expand and refine the inclusion of TNB learners as part of their current and future BPC/RPP initiatives

An Intersectional Design Intention

As our end goal is to enact a systems change, we are keenly aware that power dynamics and other issues of intersectionality must be addressed. As members of this community, we have had the opportunity to learn from leaders in the field about racial marginalization in computing and engineering spaces, the influence of disability on participation in computing and engineering, and the long history of gender focused initiatives that have centered women in the past and are beginning to include TNB people. When we formulated the structure of the workshop, we therefore built the topic of intersectionality into our plans, and attempted to live out those principles in our design.

What We Mean by Intersectionality

Intersectionality is foremost a theoretical framework forwarded by black women scholars, highlighting how people who are marginalized by multiple identity facets experience an aggregate of oppressive conditions and negative outcomes (Collins & Bulge, 2016). Intersectionality is a theoretical lens for analyzing the world. Far beyond simply describing a layering of identity markers as a statistical analysis function, intersectionality is "a way of understanding and analyzing the complexity in the world, in people, and in human experiences" (Collins & Bilge, 2016). Human beings are shaped by the interaction of different social locations mediated by connected systems and structures of power. Studying these interactions and mediations is complicated by being within those same systems (Collins, 2015). We worked to operationalize intersectionality both within the workshop content and in our design and delivery of the workshop.

This meant working to find speakers holding many different identities and positionalities. It meant accommodating our own neurodiversity needs by creating a highly interactive agenda with plenty of breaks. We acknowledged that for some participants, the idea of being recorded participating in an event like this comes with risks, and so for the pre-panel workshops we set aside time for anyone who did not want to be recorded to turn off their camera and change their Zoom name. Our entire workshop was grounded in acknowledging social context, naming social inequalities that affect us, welcoming complexity, defining our purpose toward social justice, confronting where power is kept and where power may be gotten in computing and engineering education research, and being mindful of the interrelation not only between systems of oppression but also those systems of potential liberation that exist among us all.

We are not the only scholars in this field working with the framework of intersectionality. This framework and theoretical lens has been used by scholars such as Yolanda Rankin, Jakita Owensby Thomas, Sheena Erete, Wendy DuBow, Shana White and others at the Kapor Center, to bring attention to the overlapping and compounded struggles faced by black girls and women in CS (Rankin, 2019). It

remains the case that while participation in CS has increased for white women and black men, black, indigenous and latinx women are not well represented in CS. Of note is that scholars inside and outside of computer science have offered an urgently needed critique of how the framework of intersectionality has been deployed in research in ways that are not in alignment with its original intention (Bowleg, 2008; Rankin, 2019). The main critique offered is that intersectionality has been used in research to call attention to people having multiple marginalized identities. In CS ed research, this can look like simply recruiting and/or pointing out that participants have multiple marginalized identities. In contrast, Shin (Shin, 2017) offers that "for scholarship to be considered truly intersectional, it must include a critique of the structural inequalities, which construct and reify the complex relationships between privileged and marginalized social identities." Several participants pointed out that the latter utilization of intersectional lens/analysis is what they were wanting in TNB-CER.

Workshop Format

As we intended to bring a wide variety of individuals of different backgrounds together, we envisioned a multi-part workshop: first, a series of panels to make sure that all participants had a common grounding to draw upon, and second, a highly interactive multi-day experience to brainstorm together. The workshop was held in three parts spaced with approximately one month between events. First, two panels were held about a month apart, with the first focusing on current TNB research in Engineering, Computing Education, and Applied Computing and the second focusing on different intersectional perspectives, including race and ethnicity, disability, and language. Approximately one month after the second panel, the workshop was held for three hours a day on three consecutive days. The first day focused on having the participants get to know one another and defining our sense of despair and hope. The second day focused on how to build an intersectional study (instead of just studying intersectional populations). The final day focused on identifying the remaining tensions and focused on the next steps we (both the organizers and participants) would take following the conclusion of the workshop.

Workshop Participants

We were able to draw participants from a range of demographic and disciplinary backgrounds, including computing, education, engineering, social science, data science, copy editing, labor organizing, and curriculum development. We were particularly happy to have a relatively high percentage of graduate students participate, and we look forward to seeing the excellent scholarship and advocacy that they will produce in the future. While we did not explicitly decide to exclude senior scholars from our event, we realized afterward that a benefit of not having high-profile scholars was that the junior scholars and students may have felt more comfortable sharing their perspectives. Although a wealth of disciplines were represented, the majority of our participants came from public research universities located in the United States, which likely limited many of our conversations. In retrospect, we would have recruited more heavily from K–12 practitioner spaces and policy advocacy organizations.

Table 1. Workshop participation across sessions

Session	All sessions	Panel 1	Panel 2	Workshop Day 1	Workshop Day 2	Workshop Day 3
Unique participants	30	18	20	16	14	12

Participants were invited to register for the workshop series via individual outreach as well as through listservs (such as SIGCSE and the Queer Scientists Event Calendar), and social media. It is very likely that we missed crucial potential audiences. Upon registration participants were asked to confirm their understanding that this was not an introductory-level workshop of best practices; rather the workshop was designed for researchers currently invested in TNB studies to develop a research agenda to better understand the relationship between TNB students and computing. The following flow-chart guided registrants in confirming if participation was appropriate.
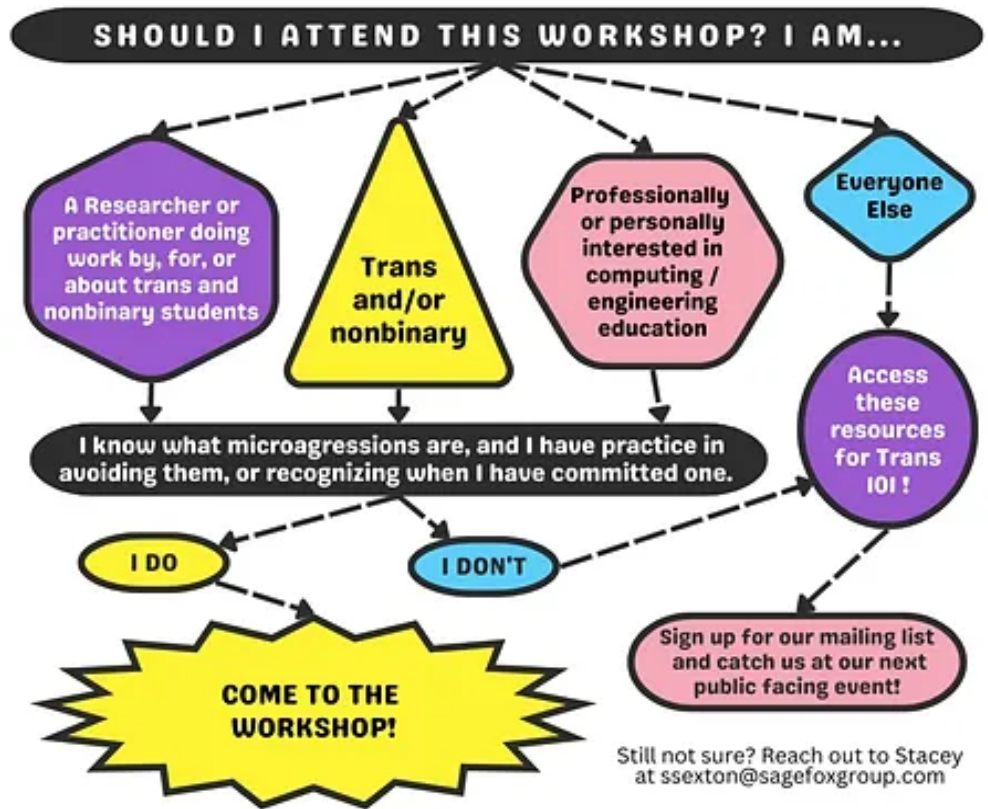

Figure 2. Decision flow chart for potential workshop participants.

Session Details

The following tables provide a snapshot of the three days of the workshops and the specific sessions created. We note the general topic, session type, engagement mechanism, and whether the session featured an external speaker. We made extensive use of Google's Jamboard feature to allow participants to interactively share their thoughts using virtual sticky notes and other annotations in a cloud-based, collaborative environment. This had the added benefit of producing an artifact that documented the thoughts and conversations that we shared during our working sessions. For those who have not used this tool in the past, it is almost like a shared, co-created PowerPoint presentation. These jamboards became an important source of the post-workshop theming that we undertook to understand the themes and unresolved tensions we uncovered during the course of the workshop.

Panel One

We held the first pre-workshop panel on November 3, 2022. It was the first activity in the workshop series and we intended to set the initial tone for what we hoped the community would become and provide us with a common springboard from which to launch our January co-working experience. In particular, it attempted to unpack the current state of gender inclusivity and expansion within computing education research, policy, and practice. We had noticed that there were many people working on TNB issues in computing and engineering fields who did not have the opportunity to cross paths and coalesce conversation around TNB issues and research.

We sought out panelists with expertise in engineering, labor organizing, computer science, linguistics, education, information science, and, of course, gender that we could bring together in conversation with our computing research community. **Dr. Andrea Haverkamp** (she/her) is a queer/trans labor organizer and engineering academic. She holds a Ph.D. in Environmental Engineering with a doctoral minor field in Queer Studies from Oregon State University. Her research explores the experiences of transgender and gender nonconforming students in engineering and computer science, such as their sources of community support and collective resiliency, as well as the connections between anti-trans discourse and radicalization pathways within STEM and nerd online communities. **Vagrant Gautam** is a computer scientist and linguist with personal and professional experience in Gender™. Xe is currently a PhD student at Saarland University where xe works broadly on problems with computers and language - speech, chatbots, generation and more, in German and English, and sometimes with neopronouns. **Max Skorodinsky** is a PhD Candidate in Critical and Sociocultural Studies of Education, at the University of Oregon. His research is focused on social justice in Computer Science (CS) education and democratizing the field of CS. **Morgan Klaus Scheuerman** is a PhD Candidate of Information Science at University of Colorado Boulder and a 2021 MSR Research Fellow. His research focuses on the intersection of technical infrastructure and marginalized identities.

The first half of this 90-minute panel presented panelists with a pre-planned set of questions and the second half focused on questions from the audience. The panel began with each panelist giving a short introduction to their personal background and computing research interests. Stacey and Amanda acted as moderators and also administered the Zoom room. We made efforts to balance interactivity with individual safety. For example, we called for screens to be on to facilitate community building; however we made it clear that the call was going to be recorded and participants were welcome to change their screen names and turn off their cameras if they preferred to anonymize themselves. We also acknowledged that for many people the meeting was held outside of standard work hours and that if participants needed to attend to children, pets or life they should do so. Finally, we emphasized that the workshop series is clearly a trans-centered space, transphobia, homophobia, racism and other forms of dominance and oppression will not be tolerated in the space. Once introduced, we began to use the pre-set questionnaire (Appendix A). Audience members were invited to ask questions and provide input via the chat and a shared notes document.

Table 2. Themes from the first panel: Current state of TNB-CER

Themes	Details
Doing TNB computing education research	Varied paths to computing research, tied to personal experiences and available opportunity
	Serving as a diverse voice on a writing team is often emotional and actual labor that people are uncompensated for and possibly unrecognized for
Resistance to TNB research in Academia	Federal level - Trump Era restriction on the use of the word "transgender"
	Colleagues/peers - allies in words but not in actions; microaggressions, misgendering and stereotypes can be especially difficult for TNB researchers who are not out to their colleagues
	Researchers - computing research often uncovers hidden (or not so hidden) biases that can harm minoritized groups. Raising the alarm can be met with extreme resistance particularly when the technical solution being explored is used to group people into boxes, or promote efficiencies at scale

Themes	Details
Challenges of doing TNB-CER research	The work being done is all technically challenging and rigorous but is often seen as less so because of the inclusion of gender. Work is dismissed as not as scientific or as important.
	Research may be siloed because it includes a gender focus even though the technical applications may have widespread potential.
	Computing education research is taking place in two domains: the field of education, with a focus on K12 and postsecondary CS pedagogy and curriculum, and the field of computer science, with a focus on computing content and skills.
	TNB researchers are tasked with supporting any and all gender or diversity related initiatives and research projects, regardless of whether their research work is related to gender or not.
	"I got trans burnout where it's like, I'm so tired of doing trans things all the time."
Existing TNB-CER research	The need to include expansive gender in CER, sense of belonging, resilience, intersectional experiences, leaving CS

While the panelists had unique paths into their technical field and their relationship to transness, we were able to identify some key themes that we believe provide a grounding in trans-focused work being done today. First, the panelists noted the resistance to TNB research from their colleagues and funding bodies. It is not always understood, and there was a sense that being seen as a person who works on trans issues leads to pigeon-holing and a lack of recognition for their technical ability. Additionally, it can be hard to find co-authors who are willing to do trans focused work, and the panelists noted that work on trans issues often required performing emotional labor as well as academic labor. The panelists also saw the opportunities for collaborations across disciplines, especially with those doing strong trans-focused work in non-STEM fields, such as gender and sexuality studies. Despite their struggles to advance TNB work, the panelists were able to identify instances where they were able to act as inspirations for students to more critically view gender and find trans joy by connecting with other TNB folks at conferences and events.

We sent out a short evaluation survey after the conclusion of the panel and received eight responses. Almost all respondents agreed or agreed strongly with the statements "This panel was a good use of my time," "The facilitators were well prepared and managed the session well," and "I am excited about the future workshop events." No respondents disagreed or disagreed strongly with those statements. When asked what had gone well, respondents stated they enjoyed the open discussion, and enjoyed hearing the variety of perspectives that were shared by the panelists, which was gratifying since that was a major goal of the panel. When asked what could have gone better, respondents noted that there was some uncertainty about who would answer what question which matched with one of the moderator's sentiments, and a plan was created to address this in the future. When asked what folks would be taking away from the panel, many of the responses echoed the value of bringing diverse perspectives together, and shared our goal of reducing the amount of siloing and reproduction of effort that currently exists in TNB related work in computing.

Panel Two

The second panel was held on December 8, 2022 and followed the same format of the first panel. This panel was the second activity in the TNB-CER workshop series and attempted to dig deeper into the framework of intersectionality as it is currently used and misused in computing education research, policy, and practice. These panelists brought expertise in computer science, learning science, disability studies, data science, copyediting, and gender. **Stephanie Jones** (they/she) is a 5th year Computer Science and Learning Science PhD Student at Northwestern University's School of Education and Social Policy. Their current research interests include intergenerational learning opportunities, building technologies that are personally relevant, and the relationship between anti-Blackness and computing. Dr. **Brianna Blaser**, based at the DO-IT Center at the University of Washington works to increase the participation of people with disabilities in science and engineering careers. She is the associate director for AccessComputing and AccessADVANCE. **Dr. Nikki Stevens** is a researcher, a technical architect, and an open source community member. Dr. Stevens' research focuses on how software engineering practices reinforce systems of power. In other words, from the code and database up, how data is biased or algorithms can cause harm to people. Read more here. **Alex Kapitan** is a queer and trans trainer, speaker, consultant, editor, and activist who left the world of nonfiction book publishing to start Radical Copyeditor, an anti-oppressive language project.

A good deal of discussion was dedicated to defining the term intersectionality and the ways that the term has been weakened through casual use and how it retains power through works that follow or expand the original principles (Bowleg, 2008; Rankin, 2019). The panelists also discussed the inseparability of gender and race and gender and disability. To address these issues, panelists suggested crafting positionality statements to better articulate one's relationship to their work, to be mindful of how and when demographic categories are used, and use the power of computing to provide support or research capability to communities who would benefit from it.

Table 3. Themes from the second panel: Intersectionality in TNB-CER

Themes	Details
Defining what we mean by intersectionality	Panelists noted that though the term was first used by black feminists, it has been co-opted and whitewashed by the Academy.
	"Weak intersectionality" - research that acknowledges that identities intersect but doesn't interrogate the larger systems of inequalities that contribute to different outcomes
	"Strong intersectionality" - research that foregrounds relationship and outcomes among intersecting social categories and critiques the interlocking forms of power and privilege that contribute to this.
	"Transformative intersectionality" - research that looks at the relationships between multiple social identities and structural inequity and explicitly calls for social justice, actions and interventions aimed at dismantling systems of oppression
Positionality statements	When done well, are included in research papers to signal how the researcher's lived experiences inform the research being reported.

Themes	Details
Intersectional research in TNB-CER	Need to focus on the Intersection of race and gender in CER
	Within computing, gender and race are well known to interact through facial recognition software with negative consequences for people of color
	Need to focus on the Intersection of disability and gender in CER
	Among people that work with those that are queer and/or disabled there is often discomfort around language, for example not knowing how to even ask if someone is queer or disabled when conducting research
Using demographic categories	The group wrestled with the concepts of categorization, particularly of demographic data.
	Demographic data can provide important insights into the
	complications that certain populations faced
	Crafting appropriate categories is incredibly difficult when trying to create meaningful definitions that advances research and also recognizes the response of the participant
	It is critically important to ask what you really want to know, and not use categories, such as gender, as a shorthand
Ways to be advocates for intersectionality in research	Universal design isn't just for people with disabilities
	Raise concern when not all people are being included in an event or activity, even if the event/activity is not explicitly targeted towards that group
	Offering practical ways to expand a methodology for other researchers
	Deliberately including research that challenges the gender binary even in intersectional studies

We sent out a short evaluation survey after this panel as well and received six responses. This time, all respondents agreed or agreed strongly with the statements "This panel was a good use of my time," "The facilitators were well prepared and managed the session well," and "I am excited about the future workshop events." When asked what had gone well, respondents seemed to appreciate the amount of resources that were shared during the course of the conversation, and thought the panel was well facilitated. No specific themes emerged about what could have gone better at this panel, what could be done better at the workshop, and what was taken away from the panel.

Workshop Day One

The focus of the first day of the workshop was to form the individuals that we had brought together from a variety of backgrounds into a cohesive group. As such, we began with a plenary orientation that set the expectations for our time together. We then quickly moved into three breakout rooms to give participants the opportunity to get to know one another. Participants self-selected into one of three breakout rooms based on whether they wanted to discuss policy, practice, or research. We began with an icebreaker where they were asked to discuss a piece of TNB media with which they had recently engaged. Then, we asked each group to consider what barriers we currently face and what opportunities

are present in their selected focal area (research, policy, and practice). We then brought the participants back to plenary where we shared our discussions from our small groups and worked to make connections between these three arms of our work. After a short break, we spent time discussing the importance and challenges of performing TNB focused work — and, for many participants, existing as TNB individuals — in an environment that is often politically hostile. This involved recentering on why we perform this work, with a major motivation being to provide a safe and nurturing environment for TNB learners in computing. We closed out the day with a discussion of our aspirations for the rest of the workshop.

Table 4. Workshop Day One Schedule

	Understanding the Context for Trans, NB, and Gender Expansive Youth in the US		**Session Type**	**Engagement Mechanism**
DAY ONE	2:00 – 2:15	Opening orientation	Opening remarks	Chat
	2:15 – 3:00	Get to know each other! Participant-choice breakout groups: Policy, Research, Practice	Breakout Rooms	Jamboard
	3:00 – 3:30	Facilitated conversation: Building on the Breakouts, Stacey Sexton	Large-group Shareout	Chat/ Jamboard
	3:30 – 3:45	*Break*		
	3:45 – 4:45	Doing equity work in a politically charged environment: Dynamics between the personal and systemic	Facilitated Discussion	Chat
	4:45 – 5:00	Closing Reflections: Applying the policy landscape to research and practice	Closing Remarks	Chat

Workshop Day Two

The focus of the second day of the workshop was to learn and practice how to assess the intersectionality of a research design. We began by sharing a project proposal that we had recently submitted to a funding agency that focused on TNB learners. We asked participants to assess whether it was or was not an intersectional study. We felt that it was important to model self-criticism and reflection instead of asking participants to share work that they had not created with intersectionality in mind. After this exercise, Dr. Christina Harrington, of Carnegie Mellon University, joined us to lead a facilitated conversation focused on the process of taking a well-intentioned study and putting effort into turning it into an intersectional study. After this, we returned to the earlier project proposal and asked participants to reflect and discuss it again with this additional context and information. In retrospect, we would have asked participants to reflect on their own work at this juncture.

Table 5. Workshop Day Two Schedule

	Building an Intersectional Research Agenda Around Trans, NB, and Gender Expansive Learners		**Session Type**	**Engagement Mechanism**
	2:00 – 2:20	Check in and agenda review; reflections (in the chat) and grounding	Opening Remarks	Chat

	Building an Intersectional Research Agenda Around Trans, NB, and Gender Expansive Learners	Session Type	Engagement Mechanism
DAY TWO	2:20 – 2:50	Applying it: real time research critique using a work example from Stacey and Amanda (pt. 1). Is this intersectional?	Show & Tell	Jamboard
	2:50 – 3:00	*Break*		
	3:00 – 4:00	Facilitated conversation: from studies of intersectionality to intersectional studies, **guest speaker:** Christina Harrington	Facilitated Conversation	Chat
	4:00 – 4:45	Applying it: real time research critique using a work example from Stacey and Amanda (pt. 2). Now, thinking more deeply, how could we take this further?	Breakout Rooms	Jamboard
	4:45 – 5:00	Closing Reflections	Closing Remarks	Chat

Workshop Day Three

After the second day, we met as a team and discussed the tensions that we felt remained unresolved throughout the first two days of the workshop. Those tensions are described in more detail later in this document. We also decided to alter our original plan for the third day by shortening the amount of working time. We held one breakout session where participants returned to the focal areas of policy, practice, and research to think about what we could do in the future, after reflecting on these topics for several hours over the course of a few days. Unlike on the first day, we intended for all groups to discuss all the focal areas. Afterward, we shared out our responses as a group. Finally, we closed in a plenary session that briefly summed up our collective achievements during the course of the workshop and then held space for individuals who wished to stay beyond the end of the session to ask us questions.

Table 6. Workshop Day Three Schedule

	Research on Practice and Practicing Research	Session Type	Engagement Mechanism
DAY THREE	2:00 – 2:30	Check in and agenda review; reflections (in the chat) and grounding	Opening Remarks	Chat
	2:30 – 3:30	Where do we go from here? Three breakout rooms with rotating participation: one each for policy, practice, and research: half-hour each. Ask participants to build from one topic area to the next. Same group, different topics	Facilitated Discussion	Jamboard
	3:30 – 4:00	Share Out	Share Out	Chat
	4:00 – 4:15	Closing: Where do we go from here?	Closing Remarks	Chat

After the completion of the workshop, we sent participants a final survey invitation. We received eight responses from workshop participants, all who attended on all three days of the workshop. Four of these respondents were graduate students, and the others were a mix of academic staff and non-academic researchers. They self-described as belonging to various computing, social science, and education research fields. As with the previous surveys, respondents were almost all positive (with a few neutral responses) to questions about the preparation and success of the sessions and facilitators. Where respondents felt able to evaluate the goals of the workshop, nearly all felt the goals of the workshop were at least somewhat met, with the exception of a single respondent who felt that we had not advanced the collective understanding of intersectionality. All respondents felt the workshop was excellent or above average in overall quality. The flexibility of the sessions and the quality of the discussions were seen as highlights. More information about intersectionality and what prior work had been done on TNB students in computing were seen as areas for improvement. In the future, respondents were interested in ways to keep in touch and continue to develop the network and potential events.

Workshop Outcomes

We found the workshop to be an invigorating and enlightening experience. We were truly in awe of the varied and nuanced perspectives brought by our guest speakers, panelists, and participants. A key success was bringing together individuals from fields who, though closely related, do not get to regularly interact due to the academic pressure to specialize. We are glad to have been able to foster those connections and look forward to following the work of these scholars and practitioners in the future. We were also able to crowdsource an incredible reading list[2] that we will make available on our conference webpage. These new perspectives gave us and our participants a greater sense of context in order to better understand how to approach the issue of TNB student inclusion as we work in this space. One thing that we heard, especially from cis allies who we had invited to participate because of their related BPC/BPE work, was an initial sense of apprehension about how their expertise would relate to the issue of TNB students in computing and engineering. By the end of the workshop, we heard that these allies were able to better appreciate the commonalities faced by TNB students and other BPC/BPE populations. We as well were able to learn more about applied computing fields and the nature of the pressures on educators, scholars, and practitioners in these fields.

In what follows, we will attempt to highlight some of the key takeaways from this workshop experience. First, we will lay out the future research, policy, and practice intentions that we feel should be put into place in the future. Then, we will describe the tensions that we feel are essential as barriers to progress in this field that we were (unsurprisingly) unable to resolve in 12 clock hours together. Next, we will offer some conclusions we reached about how to better approach our BPC/BPE work to keep it intersectional instead of merely focusing on intersectional populations. We also provide some insights for BPC/BPE and inclusion work in general. Finally, we offer some notes on what went well and not so well in terms of logistics for readers who may be considering holding a workshop of their own in the future.

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[2] Reading list available at https://bit.ly/tnbcer-resources

Synthesis

In the interest of transparency, we would like to take a moment to describe how we collected these various themes and tensions that we describe below. We used our personal reflections as facilitators in combination with the artifacts co-produced with participants such as shared notes documents and Jamboards. This was conducted in three main phases. First, before the final day of the workshop, Stacey and Amanda met to discuss what we saw as the unresolved tensions that we had yet to adequately address during our working sessions. This would set the foundation for the working sessions of the third day in which we encouraged the participants to elaborate more on why these might be unresolved. Out of this conversation emerged a framing to our collective conversation about what the next steps toward an inclusive TNB research, policy, and practice agenda might be. Next, after the workshop, we engaged in a detailed collaborative debrief in which we took the artifacts generated by the participants (and ourselves), and discussed them in detail, creating our own annotations on the Jamboards and distilling additional themes from the content. Finally, in the production of this workshop summary report, we turned an additional lens onto the material as we were able to better situate it in the larger BPC/BPE context once we were removed from the endorphin rush of participation in a generative and enriching community. In this way, we cannot fully claim the ideas presented in this section as solely the product of our analysis. However, we also cannot say that this work is the product of a consensus process with the participants, because we did not go through such a formal process. We think it is best to describe these findings as a reasonable presentation of the themes collectively co-produced in the course of the workshop, mediated through the value-judgements and biases of the facilitators as to what is noteworthy, novel, and worthy of sharing with the BPC/BPE communities.

Future Directions

One of our main goals of the workshop was to produce a body of suggestions for future research, practice, and policy that would expand the work already being done for and by TNB folks in computing and engineering. While we have sorted our collective thoughts into these categories, we want to be clear that the boundaries between these types of efforts are fluid. Practice and research inform each other and are influenced by the policy environment within which they occur. None has greater intrinsic importance than another, though we may have our personal preferences for working in a particular domain.

Research

One thing that we discussed at length, which now seems obvious after the workshop sessions, is that when we talk about moving TNB research forward, we need to consider not only the subject of our research, but also the practice of research. For example, we discussed how we can best make use of citational practice to elevate the work of others, especially in allied fields. This may also require making use of the acknowledgements field when bringing outside work into technical fields that might not otherwise have space for that type of practice in the run of the paper. This might be particularly true for something like a positionality statement, which may now be easily added to a social science paper, but which may not be accepted by reviewers in applied computing or engineering spaces. Some of this work may require advocacy for positionality statements to be included in other fields, in the same spirit that a conflict of interest statement might be appended to disclose potential financial entanglements.

Within the confines of a conference such as this one, enacting a new practice might look like creating multiple tracks for diversity work - one that focuses on introductory materials designed to educate potential allies and other interested parties and another for advanced work that speaks to those people already thoroughly immersed in the subject matter. Beyond this, we must also consider how different methods and methodologies might become more common in our work. A key theme was making sure that the people who will be impacted by the research are present in planning and administration of research. As such, using a method like participatory action research might be of greater benefit, and more fair, to TNB communities.

Practice

When we speak of practice, we refer to the day to day ways in which we interact with and enact gender in our organizations and lives. In the classroom context, we must remember that TNB instructors will need to navigate the disclosure of their identities. As a group, we discussed our desire to not simply create another mental heuristic for gender by creating another discrete category to make an action plan for and nothing more. We consider this approach to be inherently limited in its effectiveness, as it once again reduces gender to preconceived categories that do not reflect the diversity of experiences within broader categories and the shared experiences across those same categories.

We respect and value the amount of prior work that has focused on including diverse learners in the classroom (Chetty, & Barlow-Jones, 2018; Munson et al., 2011; Salter, 2017; Weston, Dubow, & Kaminsky, 2019). What we're trying to do here is to build upon these prior studies and use them and our personal experiences to deeply think about the surrounding systems and underlying values that create the need for inclusion-driven interventions. For example, we know belonging is important (Sankar, Gilmartin, & Sobel, 2015). Our workshop participants discussed this concept by asking "belonging to what?" Is it a win for BPC/BPE if students feel like they belong in an oppressive, sexist, racist, ableist culture? So if pure inclusion is not the answer - not to devalue the important inclusion work, which is absolutely necessary - then what is? We appreciate the way that inclusion/belonging research has called out parts of the system, but we disagree with the focus on acculturating students to bad systems. We recognize that due to the way research is funded and promoted, that many of these foundational works may also have similar goals and values, that have been constrained by a self-reinforcing system and therefore cannot be changed without thinking about the ecosystems in which these practices occur, and how we might be able to influence them through policy.

Policy

Policy can sound like a daunting prospect - and it may be if we only consider policy to be state or national level legislation. A key takeaway from our workshop discussions, however, is that policy is much broader than that. We all have institutional policies that we must follow and it is likely that much of the audience has a service obligation that results in them sitting on a committee or task force that is responsible for making recommendations or policies within a certain domain. What we would like to emphasize is that we can and should make use of the power we have in the spaces in which we have it to make "small p" policies that make those spaces more hospitable to TNB students. This might be as simple as a classroom policy on respecting pronouns or advocating for gender-neutral (and accessible) restrooms. These local policies can have an outsize impact when added together, and we should remember that we often have more control over our personal spaces than we think.

But we must keep state and national level policy in our sights as well. We notice the tendency for policy to be created reactively or defensively (when it's not being created with hostile intent). For example, waiting until a TNB student shows up before crafting a bathroom access policy, or creating an anti-harassment policy after a TNB student is targeted. When possible, we should be creating policy structures to protect TNB students before they have a negative experience -- even if there are no TNB students that we are aware of at the time. To these suggestions, we would like to add the caveat that TNB community involvement or sufficient expertise will be needed to implement these in a way that does not create unexpected harms for those students. Further, please recognize that there is no monolithic transgender experience and having one token representative is not enough.

Tensions Remaining

While we were able to articulate many of the ways that we could do better research, practice, and policy for and by TNB folks in computing, we were (unsurprisingly) unable to resolve critical tensions that may act as a barrier to progress. One such tension is the balancing of effort between earning **interpersonal victories** by changing hearts and minds about the worth of TNB students and struggles for **justice at the system** level. As we know from the works of others in justice-oriented spaces, an unjust system will still produce unjust outcomes even if there are no bigots involved. While our goal is systems change, we know that that is unlikely to occur without one-on-one conversations. This is further complicated by the tension that arises from having to **operate within our current social and cultural context while we are trying to change it**. While we were planning this workshop, we were very cognizant of the wave of transphobic laws that aim to limit the ability of TNB people to access affirming medical care, accessing information about themselves via book bans, or exist authentically within educational spaces. While this is not currently an issue in our home jurisdiction, we recognize the immense personal risk that many educators and TNB folks take on to try to improve their lots.

- Operating within a current social/cultural context while trying to change that context
- Needing/wanting to use research as a tool to advance justice while recognizing the many ways that current approaches to doing research are not set up to do this
- Keeping the human in mind, including ourselves
- Ensuring the people we are doing the work for have a say in its design and implementation, while not overburdening people or using identity
- Critical consciousness vs critical competence

Even when we have the safety necessary to carry out this work, we are still beholden to a research paradigm that was not created to advance justice, but instead to communicate expertise and gather prestige. We recognize that in many ways, we have a privileged position to be writing about TNB students from the computing and engineering fields, which are valorized as "good" areas of study that produce practical skills. By utilizing the thirst for an expanded workforce, we were able to secure funding to hold our workshop. We imagine that we would not have been able to get the same funding if we had proposed work to expand the number of TNB students in the visual arts or gender studies departments.

When we talk about research or policy, it can be **difficult to keep the actual humans that this work will impact in mind. This includes ourselves.** We must remain mindful that there are real people who will benefit - or suffer - from the quality and depth of the work we produce. We must also keep in mind that

for those of us who are in this community and doing this work, that we are subject to the additional weight of representing and fighting for this community in a way that can often feel like we are arguing with others that we ourselves have value. We recognize the importance that having TNB community members involved in this work is essential to ensure fairness and applicability, but recognize that this can create an unfair burden on TNB folks to be the go-to person for everyone else's projects and can also make them feel reduced to their identity. This may be especially an issue for folks in technical disciplines who become tokenized as "only" being a diversity researcher and not seen as a technically competent person in their field.

Finally, we would like to point out that ***critical consciousness does not automatically bestow critical competence.*** Mere awareness will not remove the issues of marginalization. Instead, we also need to build our toolkits to better engage with potential allies and resist potential detractors. Awareness does not teach us how to navigate complex bureaucracies, or understand who wields power in a given arena. We could write the most persuasive essay ever, and it would be for naught if it languished in obscurity. To push forward, we will need to learn how to make the changes we want to see. Additionally, we know that expertise does not magically confer confidence or courage (though wouldn't it be great if there was a correlation). Being able to speak and make oneself vulnerable for the greater good does not come naturally to everyone, even if they are oriented toward justice.

Keeping it Intersectional

A key goal of the workshop was to champion the prospect of producing intersectional studies instead of studies that focus on intersecting populations. STEM and Computing Education studies which draw on the framework of intersectionality studies do valuable work by highlighting the differential impacts or experiences that members of intersecting groups face, but they often do not consider the intersectional framework that includes power, relationality, and other social, historical, economic and political factors that create those differential conditions that studies focused on intersectionality include (Fletcher, Green, Quintero, & Arroyo, 2020; Kramarczuk, Plane, & Atchison, 2021; Trauth, Cain, Joshi, Kvasny, & Booth, 2012). Researchers who have exposure to this area already will likely recognize that one Crenshaw citation (1991) that is used to signal that intersectionality is being considered. We ourselves are guilty of including just this citation as a signal that we are trying to do something more than just examining our population data, but we fall short when we do not prioritize reading and theorizing beyond that shallow attribution.

We call on ourselves and our fellow researchers to recognize that intersectionality is an entire field and one which we must approach with some humility. We encourage our fellow researchers to recognize (y)our own positionality and limitations, and know when you need to invite someone(s) else. Though we respect and want to honor the principles of intersectionality in this workshop and our research in general, we felt that it would be disingenuous for us to present ourselves as the experts in this field. Therefore, we structured our advisory board to include this expertise and brought in a guest speaker to facilitate a conversation with attendees on how to make better intersectional studies. We do want to caution that these should be partnerships and not just takings from intersectionality experts, else we risk recreating a system where some researchers must do all the intersectionality labor for the entire field, who shirk our responsibility to become competent professionals in this aspect of our work.

At the workshop, we discussed the following practical steps that intersectional novices could pursue to improve their studies. First, make the commitment to invest time into thinking about this part of the study up front. This will likely require thinking deeply about the underlying values that inspire and

constrain the study, and perhaps more broadly, considering axiology more deeply in the field overall (Hart, 1971). These might include foundational assumptions about the limitations of your ability to change the situation and the importance of "objectivity" when conducting research. Using methods like participatory action research might be a way to better engage with the individuals who your work is focused on and may introduce people to the research process who can help you challenge many of the assumptions that you uncovered in the prior step. We also suggest practicing linguistic shifts to remove the language of violence from our research. For example - no more targets! Research ought not be violent in the way we describe it, especially as it regards our participants. Some will roll their eyes at this, but we often use these words automatically, with little regard for what we actually mean or what our actual relationship to our studied population will be.

Workshop Lessons Learned

For people who are interested in holding their own workshop in the future, we would like to add some logistical notes, so that you can learn from our experience. For folks who might look to focus on TNB issues, we very purposefully chose to limit the workshop participants to individuals who already had a basic understanding of TNB identities. This allowed us to skip the "Trans 101" that is common when participants with all levels of experience will be participating. We found that this helped us attract experts to the workshop who would have otherwise skipped it. This lesson likely applies to other affinity groups, so consider your purpose and audience. In terms of the actual content, we discovered that less is more when it comes to workshop activities. We had to adjust the third day on the fly to prevent overwhelming participants and to make sure that we were making good use of participant time, and not just filling time because we originally scheduled it that way. In retrospect, we probably could have covered all our material satisfactorily in two days instead of three. Also, when planning the time when this virtual workshop would take place, we wanted to be mindful of potential west coast or Hawaiian participants, so we chose 2PM to 5PM Eastern time. What we hadn't considered was that some participants would be in Europe, and they would be participating late into the evening. We also found that several people had to leave early for various essentials such as picking up children from school. We are not sure what the ideal solution to this would be, but it is food for thought.

Drawing from our experience as workshop attendees, we made the decision to make breakouts longer than they usually would be in other sessions we have attended. We found that we personally never felt like we had enough time to get a really deep conversation happening. To this effect, we allotted at least half an hour, and sometimes over an hour to breakout sessions to ensure that this wouldn't be the case. We were slightly concerned that this could backfire, but instead, it worked well to stimulate conversation and allow participants to get to know each other. We thought this was especially important as we brought together individuals from different disciplines and we wanted there to be time to examine the topics from different perspectives.

Although we wanted very much to focus on intersectionality and disability issues, we feel like we could have been more intentional with the way that we integrated these concepts. We are the first to admit that we could have done more in both arenas. For example, we didn't budget for professional captioning or a sign language interpreter in case these were needed by our participants. We did use an auto captioning service, but we know that those are flawed. Another area where we could have planned to dedicate more resources was to communications. We severely underestimated the effort that it took to reach out to the different communities that we wanted to invite, especially since we were not insiders in those fields. Part way through the planning we brought on one of our colleagues as a communications specialist, but this would have been more effective if we had done it earlier in the process. Though we

reached our recruitment goal, participation was less than we expected. In the future we would try to gather double the RSVPers to try to ensure a larger attendance. Another limitation in this regard was our decision to be rather quiet about the workshop outside of communities that we knew well or knew were TNB positive. We wanted our workshop to be a comfortable place so that we could tackle uncomfortable issues and we wanted to do everything that we could to potentially hostile crashers out. In retrospect, we may have been too protective in terms of sharing, and not protective enough when it came to actual plans for dealing with a potential interruption, of which we had none.

Conclusion

As we continue to advance this work, we face the challenge of improving the environment for TNB computing and engineering students while also not needlessly recreating the work of prior BPC/BPE initiatives. We also must continually remind ourselves that TNB issues are not entirely unique and we stand to gain from allying ourselves with other groups who need many of the same things, such as meaningful community representation without overtaxing the time and cognitive load of community members.

We continue to fight for institutional recognition of transgender and nonbinary students. This includes practical action for representation such as ensuring that existing databases and data collection systems are modified to include gender options beyond male/female/other. Additionally this fight includes championing changes to campuses which create more inclusive facilities and cultures of belonging such as having gender neutral restrooms available in every building. We encourage faculty to use inclusive classroom practices such as volunteering their own pronouns during introductions, respecting when students request a different name than that which may be listed on the course registration list, and using examples with a variety of differently gendered folks, if examples are necessary.

However, we do not encourage a one size fits all approach. The goal is not to simply add another heuristic for transgender and nonbinary people -- the ultimate goal is to release us all from the confines of gender. It should not matter if someone is a woman, a man, both or neither, or something else entirely in order to be afforded basic human dignity and respect. To be clear, we are not advocating for a "gender blind" approach to sexism and transphobia. Much like how a "race blind" approach to racism obscures the material and social impacts of racism by seeking to impose a false meritocracy, an orientation to "not seeing gender" would have very little to say about the ongoing harassment and targeting of transgender youth. Instead we advocate an approach to gender that allows for differences among transgender and nonbinary people and doesn't ascribe a "one best way" to meet their needs.

We call on you to join us in this fight, linking our struggles against all forms of domination and oppression.

Acknowledgements

References

American Civil Liberties Union [ACLU]. (2023, July 28). Mapping attacks on LGBTQ rights in U.S. state legislatures. American Civil Liberties Union. https://www.aclu.org/legislative-attacks-on-lgbtq-rights

Bowleg, L. (2008). When Black+ lesbian+ woman≠ Black lesbian woman: The methodological challenges of qualitative and quantitative intersectionality research. *Sex Roles*, *59*, 312-325.

Chetty, J., & Barlow-Jones, G. (2018). Coding for girls: Dismissing the boys club myth. In L. Morris & C. Tsolakidis (Eds.), *The International Conference on Information Communication Technologies in Education (ICICTE 2018) Proceedings*, pp. 324–335. ICICTE. http://www.icicte.org/assets/8.3_chetty-and-barlow-jones.pdf

Collins, P. H. (2015). Intersectionality's definitional dilemmas. *Annual Review of Sociology, 41*(1), 1–20. https://doi.org/10.1146/annurev-soc-073014-112142

Collins, P. H., & Bilge, S. (2016) *Intersectionality*. Polity Press.

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review, 43*(6), 1241–1299. https://doi.org/10.2307/1229039

Fletcher, T., Green, A., Quintero, R., & Arroyo, E. (2020). Intersectionality at minority-serving institutions (MSIs): A longitudinal analysis of female student participation within engineering and computing. *2020 IEEE Frontiers in Education Conference (FIE)*, 1–8. https://doi.org/10.1109/FIE44824.2020.9274059

Hart, S. L. (1971). Axiology — theory of values. *Philosophy and Phenomenological Research, 32*(1), 29–41. https://doi.org/10.2307/2105883

Haverkamp, A. (2018, June 23–27). *The complexity of nonbinary gender inclusion in engineering culture* [Paper presentation]. 2018 ASEE Annual Conference & Exposition, Salt Lake City, UT, United States.

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality. https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-Dec17.pdf

Jones, J. M. (2022, February 17). *LGBT identification in U.S. ticks up to 7.1%*. Gallup News. https://news.gallup.com/poll/389792/lgbt-identification-ticks-up.aspx

Ko, A. J. (2021, May 21). Deconstructing CS Culture – Dr. Amy J. Ko – 2021 IEEE RESPECT Keynote [Video]. YouTube. https://www.youtube.com/watch?v=c8TQ29I8lK4

Kramarczuk, K., Plane, J., & Atchison, K. (2021). First-generation undergraduate women and intersectional obstacles to pursuing post-baccalaureate computing degrees. *2021 Conference on

Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT), 1–8. https://doi.org/10.1109/RESPECT51740.2021.9620632

Menier, A., Sexton, S., Gutierrez, B., & Donoghue, J. (2022). Nonbinary learners in state data: Implications for computing education research. *2022 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT)*, 1–2.

Menier, A., Zarch, R., & Sexton, S. (2021). Broadening gender in computing for transgender and nonbinary learners. *2021 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT)*, 1–5. https://doi.org/10.1109/RESPECT51740.2021.9620612

Munson, A., Moskal, B., Harriger, A., Lauriski-Karriker, T., & Heersink, D. (2011). Computing at the high school level: Changing what teachers and students know and believe. *Computers & Education, 57*(2), 1836–1849. https://doi.org/10.1016/j.compedu.2011.03.005

Rankin, Y. A., & Thomas, J. O. (2019). Straighten up and fly right: Rethinking intersectionality in HCI research. *Interactions*, *26*(6), 64-68.

Reed, E. (2023, March 4). Second Period Anti-trans Legislative Risk Map. *Erin in the Morning*. https://www.erininthemorning.com/p/second-period-anti-trans-legislative

Salter, A. (2017). Code before content? Brogrammer culture in games and electronic literature. *Hyperrhiz: New Media Cultures, 17*. https://doi.org/10.20415/hyp/017.e02

Sankar, P., Gilmartin, J., & Sobel, M. (2015). An examination of belongingness and confidence among female computer science students. *SIGCAS Computers & Society, 45*(2), 7–10. https://doi.org/10.1145/2809957.2809960

Shin, R. Q., Welch, J. C., Kaya, A. E., Yeung, J. G., Obana, C., Sharma, R., ... & Yee, S. (2017). The intersectionality framework and identity intersections in the Journal of Counseling Psychology and The Counseling Psychologist: A content analysis. *Journal of Counseling Psychology*, *64*(5), 458.

Trauth, E. M., Cain, C., Joshi, K. D., Kvasny, L., & Booth, K. (2012, February). Understanding underrepresentation in IT through intersectionality. *iConference '12: Proceedings of the 2012 iConference*, 56–62. https://doi.org/10.1145/2132176.2132184

Weston, T. J., Dubow, W. M., & Kaminsky, A. (2019). Predicting women's persistence in computer science- and technology-related majors from high school to college. *ACM Transactions on Computing Education, 20*(1), 1–16. https://doi.org/10.1145/3343195

Appendix 1: Pre-Panel 1 Panelist Prep Questions

Background:

- Can you give us a 30 second overview of your research or professional experience as relates to gender and computing/engineering?
- Who or what influenced you onto your CS/ENG path?
- How and why did your research begin to involve gender? Did you face resistance?
- Many CSEd research projects involve some type of classroom intervention or special targeted program - do you know if you were part of one of these? If so, how was it? Was it gendered?

Classrooms

- If you have teaching experience, have you been able to work gender expansive concepts and content into the course? What has worked, what hasn't?
- What has connected with trans and nonbinary students? What has connected with cis students?
- What is gender expansive CSEd missing from your professional experience? From your personal experience?
- Many municipalities, states, or countries have policies that are hostile to trans and nonbinary youth (and adults). How can we support CS/ENG learners in these spaces?

Research

- What are some current research endeavors working with trans and nonbinary folks that are getting you particularly excited?
- Over the next decade, where do you hope to see the field with regard to trans and nonbinary gender and its relationship to research?
- What could be so much better about computing if we de-emphasized or removed a binary of gender?

Appendix 2: Pre-Panel 2 Panelist Prep Questions

- Can you give us a 30 second overview of your research or professional experience as relates to gender and/or computing & engineering?

- Who or what influenced you onto your CS/ENG path?

- Would you describe your research as being "intersectional"? If yes, can you give an example of how that has influenced your research (questions, methods, design, implementation, etc.)?

- Drs. Yolanda Rankin and Jakita Thomas gave a powerful presentation critiquing their own past work and identifying how it falls short of engaging the notion of intersectionality in a really robust way that can acknowledge identity without being constrained by thinking of identity as the only facet of intersectionality. From your perspective, what would it mean to take up that charge and move the field forward in this way?

- **Stephanie**, can you talk a bit about the relationship of race and gender, particularly transgender and nonbinary genders?

- **Brianna**, can you talk a bit about the relationship of disability and gender, particularly transgender and nonbinary genders?

- One element of our continued struggle toward truly conceiving and implementing intersectional research is grappling with power. **Alex,** can you talk a bit more about the linguistic shifts that could help us accomplish this? Why is it that tripping over language seems to be a common stumbling block?

- **Nikki**, what are the most promising avenues for the intersectional use of data? What should we fear from data?

- What are some resources that interested researchers (and practitioners) can reference?