

Why Are YOU in the RUME?

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In this study we explored the intended outcomes that participants in the SIGMAA on RUME conference had for their conference participation. We conducted in-person, semi-structured interviews at the 2024 RUME Conference and engaging in thematic analysis to arrive at three broad categories of intended outcomes. People intended to achieve specific career-oriented goals such as ‘gaining a line on a CV’ and research-oriented goals such as getting feedback on their work. Finally, participants expressed multiple personal outcomes driven by their sense of the RUME participants as a community that they enjoy being part of. In addition, we found aspects of the conference and community that both support and inhibited the participants in their pursuit of their intended outcomes. The analog to the perception of a strong community is that participants find it difficult to become part of the intellectual and social conversations.

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Disciplinary conferences are believed to be critical sites in the academic trajectory (Henderson, 2015), yet their roles and purposes for participants are under-researched. Generally, conferences are understood as sites of networking and as an opportunity to present work and learn new ideas (e.g., Fakunle et al., 2019; Henderson, 2015; Hill et al., 2018). There has been some research focused on people at specific career stages such as undergraduates (Hill et al., 2018) or doctoral students (Fakunle et al., 2019), or on attending specific conference types (Weber & Fukawa-Connelly, 2023). There is, however, relatively little exploration of the value of disciplinary conference attendance to the participants, how and why those values might be different for different participants, and the aspects of the conference that facilitate or inhibit the participant’s ability to realize those values.

Researchers have studied the value of disciplinary conferences (Hill et al, 2018), the importance of conferences for the discipline (c.f., Carpay, 2001; Walford, 2011), and linguistic explorations of the content (e.g., Hood & Forey, 2005). Fakunle et al. (2019) surveyed and interviewed doctoral students in Schools and Colleges of Education at four institutions in the US, UK, and Australia to explore their motivations for attending academic conferences. They found that student’s primary motivations were to network with other academics—with a focus on career advancement—develop ideas for new research, develop new research collaborations, explore employment opportunities, and get guidance on research tasks. The students also claimed to view conferences as learning opportunities including learning about a new field, learning who works in a field, and honing their abilities to describe their work. Kneale et al. (2016) explored what undergraduates attending STEM conferences believed they might learn from giving presentations or posters. They found that students’ main learning goals related to presentation skills, such as confidence in public speaking, structuring the presentation, and writing. In addition, the students valued getting critical feedback to gain knowledge and advance their research progress.

In this study, we explore the reasons that people at various stages in their careers attend the RUME conference—what they value about attendance, how they believe they (might) benefit from attendance, and how those values have changed (if at all) throughout their careers. We also explore how and why they might realize or be inhibited from realizing their intended outcomes. The themes we examine expand on prior research by including senior researchers and focusing on a narrow research field to better explore the ideas of networking and conferences as sites for learning. Our research questions are: *What are the different reasons that RUME participants give for coming to the conference? What helps or inhibits their ability to achieve the desired goals?*

Theoretical Perspective

We draw on Lave and Wenger's (1991) construct of *legitimate peripheral participation*. Conferences are ephemeral sites of congregation, although peripatetic, with no fixed participants. Instead, different groups of people, some within the discipline and some 'interested outsiders,' briefly gather for academic and quasi-academic purposes. These purposes are influenced by social and academic issues; disciplinary and social norms; issues of power and prestige, and career stages; and types of ties to a particular community. We find the notion of *communities of practice* (Lave & Wenger, 1991) salient in conceptualizing the practice of attending conferences. From this perspective, communities include "old-timers," who embody the socio-cultural practices of the community, and newcomers, who begin participating in the practices of the community and, in so doing, begin to adopt its activities, identities, and artifacts.

A conference can be framed as a sociocultural space where various aspects support and require different types of social participation, without clearly articulated rules. Participants have varying levels of familiarity with each other, academic spaces, and the conference itself. They are also members of disparate departmental, institutional, and disciplinary communities and have different reasons for attending the conference. Thus, we draw on communities of practice and legitimate peripheral participation to conceptualize the continual process of becoming a more central participant in the RUME conference community. We explore attendees' ways of and goals for participating, as well as what aids or inhibits attendees' participation.

Positionality

All authors are former elected members of the board. Two authors have been plenary speakers. Three authors have mentored students and supported (and expected) their conference attendance. Thus, we are most likely understood to be central members of the community. Although we tried to convey to participants that we were conducting research, some told us ideas for improving the conference, indicating they believed us to have influence in the structure and organization of the conference.

Methods

We recruited in-person participants at the SIGMAA on RUME 2024 Conference through convenience sampling—typically by asking people walking through the lobby if they would talk with us. We recruited 22 participants who agreed to participate in audio-recorded interviews. Two interviews were with pairs of participants. We attempted to interview conference participants with a wide range of experience with the RUME conference, from first-time conference attendees to those who have attended for nearly two decades, and from relatively new graduate students to full professors.

We collected data using a semi-structured interview protocol. Participants were first asked to give a characterization of their career and research trajectory and to relate different reasons for

conference attendance at different times in their careers. Subsequent questions asked participants to describe their reasons for attending the conference, what initially motivated them to attend (for those who had attended multiple times), what benefits they derived from attending, and how those benefits might be derived. Finally, we asked them to contrast attendance at the SIGMAA on RUME conference with another conference to explore other possible reasons for conference attendance. Each interview was approximately 20 minutes in length.

We drew on thematic analysis (Braun & Clarke, 2006), using inductive analysis to identify latent themes and construct codes. We consulted the relevant literature, with its focus on networking and career development, to guide our identification of themes, aligned with the theoretical framing of legitimate peripheral participation. Both notions—career development and networking—are forms of participation in the academic space with networking having explicit expectations for social connection. Two authors read three transcripts initially to develop and refine initial codes. Then, all four authors met and coded three transcripts using the refined codebook. Code categories were further refined. Then pairs of authors recorded the initial three transcripts and coded all remaining transcripts. Any disagreement was resolved via conversation among all four authors.

Preliminary Results

We organize people's reasons for attending the conference into three broad categories; career outcomes, research outcomes, and personal outcomes. Most of the career outcomes such as "earning" lines for a CV, networking as a means of professional advancement, or satisfying a job expectation are well-represented in the literature. Consequently, this report focuses on the research and personal outcomes as they are less well represented in the literature.

Research Outcomes

In terms of research outcomes, we categorized participants' goals as either related to engaging in collaboration, attending research presentations, and presenting their own research. Participants described two different types of goals that they might achieve through conference attendance: developing new or sustaining ongoing collaborations, acquiring knowledge from attending presentations, and sharing their own research.

Collaborations. Several participants reported attending to engage collaboratively with colleagues on already-established research projects. Other participants described a goal of developing new collaborations. For example, Darrell (advanced graduate student) said:

I can pick people's brains and find ways to network and collaborate with them in person that just helps. There's papers I've written just purely by running into people here. And just asking them, hey, I have this idea. What do you think about this? We just kind of spiral off.

Attending presentations. Within this category, participants identified two goals: gaining an overview of the field and learning new research topics or methods. For example, Barbara (graduate student, first time attendee), who trained as a mathematician and was engaged in the process of becoming a mathematics education researcher claimed:

It's a super succinct way to get exposure to, you know, a lot of things that are super relevant to you, new ideas, and you don't have to go sit and read a bunch of papers, you're like, given these nice, succinct entryways into it. And we've been taking copious notes of things to go look up later.

At a smaller grain size, participants claimed that they might gain inspiration for new projects in terms of either new questions to pursue or new methods to use. For example, Joe (professor),

who had participated in the conference for over 10 years, claimed that “you hear ideas that then you think about and wrestle with and they produce new ideas for you to cool study,” and Dave (mid-career associate professor who has been attending since graduate school) described a goal of learning new methods:

I still will come to go to talks and think like, oh, wow, that's a really interesting method. Like, I didn't think about that. Yeah, right. Maybe I could employ something similar. So there is still the potential for refining my understanding of appropriate methods and theories and so on.

In each case, these are outcomes that the participants take away from the conference based on hearing talks and do not, on the face, require discussion with other participants.

Sharing research. Several participants described benefits that resulted from presenting their own research. For example, Jenny (early assistant professor who started coming to RUME as a graduate student) claimed:

I had now built up this big network system, and I knew everybody and, and then it became more of asking richer questions about detailed questions about my research, or how to improve my research. It's, I think it's rare like here, I come to a conference and I can literally like talk to anybody in the room. And they'll just sit down with me and go over technical stuff about research or advice or, like that's common, especially with like, the bigger names.

We interpreted Jenny as saying that she was able to have conversations about her work and get specific and individualized feedback from established members of the community. Participants suggested that access to journal editors and NSF program officers for discussion about ideas and papers was particularly helpful.

Participants also described a sense of excitement about their ideas and the fact that they're doing work they think the field would find interesting. Darrell, who had attended four prior RUME conferences, described a sense of ownership of and pride in his work:

This is the first semester that I'm gonna get to present my work. So I'm excited to actually be able to do that ... It's mine! I remember hours and hours with [my advisor] just like pounding, her pounding me on, like let's start thinking about things... And it's like, this is something that I thought of, everything that's there is something that I did, and it's my idea ... I get to talk about what I like and people have to sit there and listen to me for thirty minutes, they have to they chose to be there.

Other participants described presenting their research to mark one's place within the research community. For example, Dave said:

I think it's through the establishment of a novel research program, or focus that hopefully, it's communicated persuasively to the people who are interested in this community, I think that that can really help establish a kind of personal identity as a researcher.

Personal Outcomes

Participants highlighted three interrelated personal reasons for their conference attendance: they think of the conference as their intellectual home, they enjoy the community, it supports their mental health in important ways.

Intellectual home. Several participants described the RUME conference as their intellectual home. For example, Brooke (associate teaching professor, trained as a mathematician) stated:

RUME is consistently the conference where I feel like I belong, because it's more I feel like I find more people who are mathematicians and math ed researchers here. I like that I can talk about advanced mathematics but also frame it theoretically in conversation about

research. So I got just really excited about that there are a lot of people here that I have a lot of respect for as mathematicians who are also doing really good math ed research. Similarly, Ralph (associate professor) described the conference as an academic home: It's my academic home. ... I've always tried to straddle – well, since grad school - like trying to straddle like, Math Department life and education mindset kind of life and RUME is like a really good place to do that. I think we're all kind of—a lot of people, have experienced similar kinds of issues. And they're like—most of us, or a lot of us, are housed in math departments and a lot of us are math ed or schools of ed. But like, just like understanding that kind of balance of like, needing to always like having to kind of put in a little bit extra work to get the cred among your own peers in your in your department, stinks. And then you come here, and it's like, we all kind of like, have earned this. Like, we don't have to do that in this group as much, I don't think. So that's good. In both cases, the participants highlighted the importance of balancing significant mathematics with quality research. Ralph went farther than Brooke and noted that he, like other participants, may not feel valued or appreciated in his home department, but found that his work is valued and appreciated within the RUME community.

Community. This notion of professional and intellectual home was coupled with claims about enjoying the community of scholars who gather for the conference. For example, Sam (professor, attending for 15 years) said:

This conference is a delight for me. I love coming to it. I'm paying my own way this time. Like, I am just doing it because I want to be here so much. You know, I have I don't have a grant this year. And we have no travel money in our department. So yeah, that's how much I like, really, like I love the people here. There's a lot of friends that I have that I don't want to miss.

Similarly, Robert (associate professor, attending since graduate school) described the community and friends that make the conference enjoyable:

I just enjoyed, like, the ultra-supportive and just good group of people that this conference generally brings about, there's something different about this particular conference compared to other education conferences or other even math conferences.

For both Sam and Robert, the conference community included numerous friends who they enjoy reconnecting with each year.

Mental health. Participants described coming to the conference for a variety of reasons that we described as mental health, which included being re-energized, “loving people as human beings,” and being offered support for life challenges. For example, Kelly (associate professor, attending since graduate school) said, “I come here to fill my cup. And I'm never disappointed. And I want that to be the title of the paper.”

Structures that support goal achievement

In addition to describing personal attributes that supported their goal achievement, such as being willing to “just go talk to people,” participants described two aspects of the conference that helped them achieve their intended outcomes. First, participants mentioned the importance of conference size. For example, Sally (full professor, first RUME conference in 2009) said, “this conference matters because is small, it's intimate,” and contrasted this with larger conferences (such as PME-NA or JMM) where it can be challenging to find talks of interest and to find people among the other participants. Second, participants mentioned structural elements of the conference that they believed made it easier to participate both intellectually and socially, often

claiming that social interactions would facilitate subsequent intellectual ones. For example, Irene (first attended RUME in 2016) said:

What I really appreciate is the intentionality that the RUME—like the RUME conference has done to make it more welcoming to have spaces where it's more inclusive. I mean, having more non-drinking options is great. Having like the faith community this year, having the trans community this year.

Marge (started attending RUME in 2017 as a graduate student) highlighted some of these same elements, concluding “Like, it makes it clear that our community is diverse and welcoming of that diversity”.

Darrell also noted the importance of the option for conference buddies because:

For outsiders, it can be intimidating. But I like that idea of the big buddy system. to at least get hey you're alone. ... Here's someone that would be willing to like chaperone you or lead you to people or things like that. I thought that was really cool.

Darrell claimed that the conference space could be intimidating to outsiders but that by offering people the opportunity to sign up for a buddy, it could help decrease barriers to participation.

Factors that Limit Participation

The participants identified two factors that inhibited their ability to achieve their conference goals: a perceived lack of intellectual or disciplinary capital and a perceived lack of social capital or difficulty ‘breaking into’ the conversations. Barbara described feeling that she lacked disciplinary knowledge and expertise, which could have inhibited her participation:

I guess the big takeaway from my first RUME, which was the Boston one ... two things I took away; first thing was like, “Oh, my God, I know nothing.” And the second thing was like, but that's okay, this community will accept me and nurture me and I will eventually know more. Not everything, but I will learn I will start knowing more.

Brooke highlighted a similar challenge, framing this perceived lack of disciplinary capital in terms of impostor syndrome:

The first time I came to RUME was in 2017. And I was a massive imposter. I spent a lot of time in my room because I'm, like, so nervous, and I didn't know how to speak the language. Now I'm a lot more comfortable with that. And I'm, I'm more aware, like I'm, I still have plenty of gaps in my, I'm not formally trained as a researcher. So I have plenty of gaps. We're more aware of that. But I'm also aware of what different skills I bring to the table by being here.

Both Barbara and Brooke were trained as mathematicians and transitioned to mathematics education research. With Barbara stating that “My PhD is in mathematics. And then as postdoc, I started my transition into room. And I'm a rumer 100% of the time” and Brooke explaining “sort of sidestepped from algebraic topology into math education in 2016. Now I'm starting to feel like I kind of know what I'm doing”.

Multiple participants described difficulty “becoming part of the conversation.” For example, Marianne (fifth year attending RUME) framed this challenge in terms of access:

I guess certain people have more regular access to key players in the field.... And it's hard to know how to get it'd be nice to be able to sit down sometimes with key players and just talk a little bit like see, even if it's just like as friends just to like, not feel so intimidated. So that then that could lead to conversations

Anne (mid-career, started coming as a graduate student) also described the amount of time and effort it could take to begin engaging in conversations:

Yeah, cause you're right. I don't just like walk up to people during those breaks.... So, like, because it's every year and you see the same people every year, like, there's someone I met, maybe two or three years ago that I barely spoke to, but then I see them again the next year, and we speak a little bit more. And I'll find them during a coffee break and be like, oh, yeah, remember, we met last year and we'll talk a little bit more and then so even if it's a long term, slow relationship.

We might understand the difficulty in breaking into conversation to be a consequence of the existence of a strong community with tight friend groups among the conference participants.

Discussion

We make two minor claims advancing the literature on professional conferences, share some speculative points, and make a call for additional research. First, the participants we interviewed provided intended outcomes from attending a professional conference that went beyond what we found in the literature. They described the excitement of presenting their own work and ways that they learned from participating in the conference—in particular, through discussions with individuals—that could help them improve their research beyond what they might learn by only attending talks. Second, participants described numerous personal outcomes from attending the conference related to the fact that they felt a real sense of both intellectual and personal connection with the conference community. In contrast, though, some participants cited feelings of deficiencies in both their intellectual and social capital, and, thus, difficulty in being part of the ongoing conversations at the conference. Multiple participants cited the existence of conference structures such as affinity groups and the “buddy system” that lowered barriers to participation and signaled that all are welcome. Finally, as a speculative point, we noticed that claims about career advancement or technical goals tended to be cited by participants who were further from the “center” of the community. Conversely, participants near the “center” cited community and friendship as significant aspects of the conference. We suggest that if one reason for attendance drops in importance, another factor must continue to motivate attendance.

There are some significant limitations to the study that necessitate further research. Our sampling methods (approaching people in the lobby during breaks and throughout the conference) resulted in potential selection bias. In particular, our participant recruitment pool did not include people who were in-person RUME conference attendees but were not in the lobby when we were recruiting participants, people who attended RUME virtually, or people who had attended RUME in the past but were not in attendance in 2024. Potential participants could have also been too busy to participate in an interview or may have not been interested in or willing to participate. Thus, we cannot make claims regarding the generalizability to all RUME attendees – past, present, in-person, or virtual – regarding their intended and realized outcomes for their personal RUME conference participation. Further, while we noted career stage and prior attendance at the conference in the results as a proxy for centrality in the community, research is needed to understand trends and nuance. For instance, do attendees in different career stages value the social or community aspects in different ways, how does attending virtually facilitate or hinder attendees in achieving their intended conference outcomes, and is it the case that people who no longer attend had outcomes that were not being met?

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