

I⁴ Boundary Spanners Final Report

Executive Summary:

I⁴ Boundary Spanners was a partnership between the NC Policy Collaboratory and The Graduate School at UNC-Chapel Hill. The project trained 6 UNC-Chapel Hill graduate students during the fall semester of 2020 to have humble listening and humanistic skills that would allow them to interact effectively with communities in the state of North Carolina. To practice those skills, the students were matched with COVID-19-related research projects funded by the NC Policy Collaboratory through monies appropriated by Section 3.3 of Session Law 2020-4 in May 2020. In addition to their research projects, I⁴ Boundary Spanner students were also involved in a weekly meeting that introduced them to human centered design, effective strategies for management of qualitative and quantitative data, humble listening, and other skills. To date, the project has resulted in two press releases and two grant proposals, one of which was submitted to the National Science Foundation and proposes a strategy to extend the program to eight sister schools in the UNC System.

Scope:

Although data play an increasingly important role in everyday life, few outside the ranks of professional scientists appreciate the power and potential for data to support and/ or detract from their communities. This issue is particularly acute in marginalized communities which have historically suffered a disproportionate share of the health, environmental, and economic disparities in our nation. The 2017-18 report of the Committee on Equal Opportunities in Science and Engineering (CEOSE) touches on this issue when it charges the National Science Foundation (NSF) with “developing community-based research initiatives that are carried out with community members with a focus on local scientific problems.....to help achieve the interrelated goals of full inclusion, better S&E, and a better society.” However, the strategy for achieving this goal is still somewhat unclear. We argue that a key, missing link is a bevy of individuals who are both data/ science-literate and able to relate to marginalized communities in ways that are authentic and resonate with their fears, concerns, and goals. We further argue that those individuals will be best positioned to serve their communities if they have a fundamental understanding of how policies are developed, enacted, and enforced in their communities, state, and the nation. The I⁴ Boundary Spanners project was a collaboration between the NC Policy Collaboratory and The Graduate School at the University of North Carolina at Chapel Hill. The goal of this project was to train diverse UNC-Chapel Hill graduate students as “I⁴ boundary-spanners”: individuals who appreciate and can mobilize the dataverse to empower their communities to include, identify, investigate, and influence (I⁴) around issues that impact their physical, environmental, and economic health.

The project had four specific goals: (1) To train graduate students to be I⁴ boundary spanners who understand policy and government and also appreciate the power of data influence them both; (2) To deploy these boundary spanners in their communities where they will empower community members to use data to identify their pain points; (3) To work with communities to design the research projects and advocate for resources to address community-specific issues that are revealed by the data and (4) To roll those issues up to state and eventually regional, national levels to leverage and translate solutions across communities. The project engaged graduate students in a diverse array of UNC-Chapel Hill graduate programs and trained them to develop the humble listening skills that are necessary to be effective partners with members of the community. Through other COVID-19 projects funded by the Collaboratory, the students

were deployed to work with communities in North Carolina that are working to recover from effects of the COVID-19 pandemic.

Broader Impacts: The I⁴ program will leverage the wisdom and lived experiences of communities to ensure that the response to COVID-19 is appropriate and tailored to meet their needs. By engaging graduate students and their communities, the I⁴ program addresses the recommendation in the 2017-18 CEOSE report that the NSF “give increased attention to including diverse community voices across its research and education portfolios through community-driven projects.” It will also provide diverse graduate students with insights into careers in policy and advocacy.

Budget:

The budget was used to provide stipend support for six I⁴ Boundary Spanner students and summer salary for the two faculty members (Drs. Aikat and Lowery) who developed/ managed the program. A total of \$ 111,269.39 was committed (93% of award). Details are available in OSBM Form C2, which was submitted along with this report.

Results:

We received 46 applications for the I⁴ Boundary Spanner program, interviewed 12 applicants and made 6 offers, all of which were accepted. The I⁴ Boundary Spanner cohort consisted of students from three schools and six different graduate programs. The students were placed with PIs from either UNC-Chapel Hill or DHIT Global, a non-profit education and research institute that supports communities through an immersive learning platform that harnesses real-world experiences to develop leaders and innovators.

Name	Program	Degree Objective	Project	Project PI
Hamilton, Wesley	Math	PhD	COVID-19 “Commerce with Confidence” Simulator	Michael Levy
Jones, Jazmyne	Social Work	MSW	Understanding Workers Transition to New Digital Labor Jobs	Mohammad Jarrahi
Valmadrid, Luke Carmichael	Health Equity	MPH	Policy and Policy Communication in Polarized Times	Marc Hetherington
Whitcomb, Cason	Health Behavior	MPH	Supporting Adolescents with Suicidal Thoughts and Behaviors in the Context of COVID-19	Marissa Marraccini
Malki Andreina	Geography	PhD	Testing the Keys to North Carolina’s Economic Recovery	Carolyn Fryberger, Mark Little
Rabbani, Rumana	HPM	PhD	Gearing Up: The Response of Manufacturing Extension to the COVID-19 Pandemic	Nichola Lowe

The I⁴ Boundary Spanner project started during the first week of August with an orientation session. The orientation session featured a panel discussion about history, challenges, and opportunities in the state of North Carolina. The panelists were current and retired UNC-Chapel Hill faculty with expertise in a variety of areas:

- Dr. Malinda Lowery (moderator): Dr. Lowery is Professor of History at UNC-Chapel Hill and Director of the Center for the Study of the American South. She is a member of the Lumbee Tribe of North Carolina. Her first book, *Lumbee Indians in the Jim Crow South: Race, Identity, and the Making of a Nation* (UNC Press, 2010), won several awards,

including Best First Book of 2010 in Native American and Indigenous Studies and the Labriola American Indian Center National Book Prize from Arizona State University. She has written over fifteen book chapters or articles, on topics including American Indian migration and identity, school desegregation, federal recognition, religious music, and foodways, and has published essays in the *New York Times*, *Oxford American*, *The North Star*, and *Scalawag Magazine*. She has won fellowships and grants from the Mellon Foundation, the National Endowment for the Humanities, the Sundance Institute, the Ford Foundation, and others. She has produced documentary films, including the Peabody Award-winning *A Chef's Life* (5 seasons on PBS), the Emmy-nominated *Private Violence* (broadcast on HBO in 2014), *In the Light of Reverence* (broadcast on PBS in 2001), and two short films, *Real Indian* (1996), and *Sounds of Faith* (1997), both of which premiered at the Sundance Film Festival.

- **Dean Martin Brinkley:** Martin H. Brinkley is Dean and Arch T. Allen Distinguished Professor at the UNC-Chapel Hill School of Law. A native North Carolinian, Brinkley came to the deanship in 2015 from private practice in Raleigh. In his more than two decades at the bar, he practiced in the fields of corporate law, mergers and acquisitions, antitrust and regulated industries, public finance, and charitable organizations law. He has been recognized in *Chambers USA: America's Leading Business Lawyers* and Woodward/White's *The Best Lawyers in America*. Brinkley is a graduate of Harvard University (A.B. summa cum laude, Classics) and the University of North Carolina School of Law, where he was Executive Articles Editor of the *North Carolina Law Review*. He clerked for Chief Judge Sam J. Ervin, III of the U.S. Court of Appeals for the Fourth Circuit. Before law school, he was a fellow in papyrology at the Institute for Ancient Studies of the University of Cologne. In 2011-12, Dean Brinkley served as President of the North Carolina Bar Association. He was elected to membership in the American Law Institute in 2003. He was the 2017 recipient of the N.C. Bar Association's H. Brent McKnight Renaissance Lawyer Award and is a Master of the Bench of the Honourable Society of the Middle Temple, one of the four inns of court in London. He has research interests in American legal history and the legal institutions of ancient Greece and Rome.
- **Dr. Bill Ferris:** Dr. Bill Ferris: Bill Ferris is Joel R. Williamson Eminent Professor of History; Senior Associate Director of the Center for the Study of the American South; Adjunct Professor in the Curriculum in Folklore; Emeritus. He is widely recognized as a leader in Southern studies, African-American music and folklore. He is the former chairman of the National Endowment for the Humanities. Prior to his role at NEH, Ferris served as the founding director of the Center for Southern Culture at the University of Mississippi, where he was a faculty member for 18 years. Ferris has written or edited 10 books and created 15 documentary films, most of which deal with African-American music and other folklore representing the Mississippi Delta. He co-edited the Pulitzer Prize nominee *Encyclopedia of Southern Culture* (UNC Press, 1989), which contains entries on every aspect of Southern culture and is widely recognized as a major reference work linking popular, folk, and academic cultures. His latest work *Voices of Mississippi* (<https://dust-digital.com/ferris/>) won two Grammy Awards in 2018.
- **Dr. Jim Leloudis:** Dr. James Leloudis: Professor of History, Peter T. Grauer Associate Dean for Honors Carolina, and Director of the James M. Johnston Center for Undergraduate Excellence in the College of Arts and Sciences. James Leloudis's chief interest is the history of the modern South, with emphases on labor, race, and reform. With Professor Patricia Parker (Communication), he co-chairs UNC Chapel Hill's

Commission on History, Race, and a Way Forward. His latest book, *Fragile Democracy: The Struggle Over Race and Voting Rights in North Carolina*, will be available from UNC Press in late August. His other works include *To Right These Wrongs: The North Carolina Fund and the Battle to End Poverty and Injustice in 1960s America*, with Robert Korstad (University of North Carolina Press, 2010); *Schooling the New South: Pedagogy, Self, and Society in North Carolina, 1880–1920* (University of North Carolina Press, 1996); and *Like a Family: The Making of a Southern Cotton Mill World*, with Jacquelyn Dowd Hall, Robert Korstad, Mary Murphy, Lu Ann Jones, and Christopher B. Daly (University of North Carolina Press, 1987 and 2000; W. W. Norton, 1989). He is a recipient of the Students' Undergraduate Teaching Award, the General Alumni Association's Faculty Service Award, and a number of awards and prizes for his publications from national and international scholarly organizations.

- **Dr. Mark Little:** Mark Little is the former executive director of the Frank Hawkins Kenan Institute of Private Enterprise and current executive director of CREATE, a global initiative building shared prosperity through applied interventions, research and policy. He also leads NCGrowth/SmartUp, a multi-state initiative to help communities and business create jobs and equitable opportunities. In these roles, he supports high-growth entrepreneurs, helps communities grow and retain business, facilitates strategic regional economic development, and researches solutions to pressing energy, environment, and climate related problems. Little co-chairs *Black Communities: A Conference for Collaboration*, an annual international convening of scholars and leaders across the African diaspora. Mark has served as an AAAS congressional science fellow to the U.S. House Committee on Foreign Affairs and worked in renewable energy development and the earth and environmental sciences.

The panelists responded to the following questions:

1. North Carolina has evolved over the years to become part of the “new south” with [migration as the engine of state growth](#). As North Carolina grapples with the pandemic, and subsequent recovery, which parts of our state are vulnerable and need help?
2. Does our state have unique strengths that will help it to emerge from the COVID-19 pandemic and associated economic downturn?
3. Does our state have unique vulnerabilities that may hamper its emergence from the COVID-19 pandemic and associated economic downturn?
4. What strategies should state agencies (like UNC-Chapel Hill) use to develop authentic partnerships with vulnerable communities to assist them with emergence from the COVID-19 pandemic?

Throughout the semester, I⁴ Boundary Spanners worked with their PIs on COVID-19 related projects. In addition, they met weekly with the I⁴ Boundary Spanner leadership team:

Name	Position	Role on Project
Suzanne Barbour	Graduate School Dean	PI, Student Advising
Jason Cramer	Director of Experiential Professional Development, The Graduate School	Student Advising

Deb Aikat	Associate Professor, Hussman School of Journalism	Student Advising, Training on Public Engagement, Program Management
Malinda Lowery	Professor, Dept. of History and Director, Center for the Study of the American South	Student Advising, Training on Humble Listening Skills, Program Development

Weekly sessions were designed to provide students with humble listening as well as other skills to maximize their effectiveness in the community. Each session started with a check in, during which students described their progress to date, challenges, and opportunities and each ended with a students only meeting during which students provided peer support and identified their needs/ requests for future sessions. The weekly sessions are described in detail below:

- ▶ August 7, 2020: (8 a.m. to 11 a.m.)
- ◆ 8-9 a.m.: [Meet the I⁴ Boundary Spanners Scholars and Principal Investigators](#).
- ◆ 9-10 a.m.: Answer questions from Scholars; discuss weekly meeting time and structure of each meeting
- ◆ 10-11 a.m.: Scholar “happy hour” – discuss any topic relevant to this semester. Pick a Scholar to report back to Deb and Malinda

Malinda and Deb will alternate leading meetings every week

▶ Format for weekly meetings:

- The first 45 minutes we will check in, take a break, second 45 minutes discussion--
- 1st half of semester scholars lead discussions around readings
- 2nd half of semester scholars teach one another about data analysis models
- The tentative schedule below is based on weekly meetings on Friday.
We will discuss and decide a specific date and time for our weekly meetings

▶ August 14, 2020: (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Quick pre-read for our Friday meeting: [Rumana’s presentation Community of Solutions \(ppt file\)](#)

- ◆ 9 a.m. : Welcome and checking-in
- ◆ 9:15: a.m. [Dr. Malinda Lowery](#) ‘s remarks about the scope and intent of Friday sessions
- ◆ 9:30: a.m.: Remarks by [Dr. Jason Cramer](#), [Dean Suzanne Barbour](#) and [Dr. Deb. Aikat](#)
- ◆ 9:40 a.m.: Discussion of [Rumana’s presentation Community of Solutions \(ppt file\)](#)
- ◆ 10 a.m.: Brainstorming session: “Strategies to get more information about the framework/context/background that our respective PIs and projects employ, including previous documents, or suggested articles/documentaries that our PIs have shared or could share with us so we could have a deeper understanding of their field and expertise,” per Andreina’s Aug. 7 Boundary Spanners Fellows-only meeting report.
- 10:30 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report, like Andreina did last week.
- 11: 00 Session ends

▶ August 21 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Quick pre-read for our Friday meeting: [About Dr. Jeff Warren](#), Executive Director & [About NC Policy Collaboratory](#)

- ◆ 9 a.m.: [Dr. Jeff Warren](#), Executive Director, NC Policy Collaboratory, UNC-Chapel Hill; : Policy and Legislative engagement

- ◆ 10 a.m.: Checking-in
- ◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report.
- ◆ 11: 00 Session ends

► August 28 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012
 Prof. Liz Chen, Design Thinking Lead, Innovate Carolina, UNC-Chapel Hill

◆ 9 a.m.: Prof. Liz Chen, [Intro to design thinking and framing your design challenge](#) (ppt) + Handout: [Framing your design challenge](#)

◆ 10:15 a.m.: Q&A with Prof. Chen

◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report.

◆ 11: 00 Session ends

Pre-read:

Article#1: [Human-centred design in global health](#)

Article#2: [Enhancing Community-Based Participatory Research](#)

Read: [About Innovate Carolina](#)

Pre-session links:

[Graduate Certificate in Innovation for the Public Good](#) (applications due 9/1): <https://innovate.unc.edu/carolina-graduate-certificate-in-innovation-for-the-public-good/>.
[Field Guide by IDEO.org](#) (buy the [hard copy at Amazon](#))

► September 4 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Quick pre-read: About [Dr. Todd BenDor](#): Research at the intersection of quantitative and qualitative data

Article#1: [Dr. BenDor's slides: Research Service and Open Science at the Odum Institute for Research in Social Science](#) (Aug. 25, 2020)

Article#2: [Does removal of federal subsidies discourage urban development? An evaluation of the US Coastal Barrier Resources Act](#) (June 30, 2020)

Article#3: [Fighting the inevitable: infrastructure investment and coastal community adaptation to sea level rise](#) (Jan.-June, 2018)

Article#4: [An Infrastructure Package Could Help America's Economy -- and the Environment](#) (June 23, 2020)

Article#5: [A new form of water-- quality protection](#), Op-ed in N&O (Nov. 1, 2009)

◆ 9 a.m.: [Dr. Todd BenDor](#), Director, The Odum Institute, UNC-Chapel Hill: The intersection of qualitative and quantitative data

◆ 10 a.m.: Checking-in

◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report.

◆ 11: 00 Session ends

► September 11 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Pre-read:

Please prioritize our [list of suggested speakers](#) and be prepared to finalize a list this Friday. We will then send invitations, accordingly.

- ◆ 9 a.m.: Welcome and Checking-in
- ◆ 9:15 a.m.: Part 1 of 2 sessions to engage in a free-wheeling conversation about our Boundary Spanners work on projects and their PIs
- ◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Please prioritize our [list of suggested speakers](#) and be prepared to finalize a list. Pick a scholar colleague to share a short report. Pick a scholar colleague to share a short report.
- ◆ 11: 00 Session ends

► September 18 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

- ◆ 9 a.m.: Welcome and Checking-in
- ◆ 9:15 a.m.: Part 2 of 2 sessions to engage in a free-wheeling conversation about our Boundary Spanners work on projects and their PIs. Share concerns and challenges.
- ◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report.
- ◆ 11: 00 Session ends

► September 25 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Quick pre-read:

- ◆ 9 a.m.: Welcome and Checking-in
- ◆ 9:15: a.m. *Where Do We Come From? What Are We? Where Are We Going?**: Research presentations by [Dr. Jason Cramer](#) [[presentation slides](#)] and [Dr. Deb. Aikat](#) [[presentation slides](#)]
- ◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report.
- ◆ 11: 00 Session ends

► October 2

Break. No meeting.

► October 9 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Quick pre-read: [Read tentative plan and questions for focus group session.](#)

- ◆ 9 a.m.: Welcome and Checking-in
- ◆ 9:10 a.m. to 9:45 a.m. : [Focus group session#1 with Boundary Spanners Scholars](#)
- ◆ 9:50 a.m. to 10 a.m. : Break
- ◆ 10:05 a.m. to 10:40 a.m. : [Focus group session#2 with Boundary Spanners Scholars](#)
- ◆ 10:45 a.m. to 10:55 a.m. : Closing thoughts
- ◆ 11: 00 Session ends

► October 16 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

- ◆ 9 a.m.: Welcome and Checking-in
- ◆ 9:15: a.m. *Where Do We Come From? What Are We? Where Are We Going?**: Research presentations by [Dean Suzanne Barbour](#) [[presentation slides](#)] and [Dr. Malinda Lowery](#) [[presentation slides](#)] [*Title adapted from French artist Paul Gauguin's [1897 painting](#)]
- ◆ 10:15 a.m.: Boundary Spanners Scholars-only meeting: Pick a scholar colleague to share a short report.
- ◆ 11: 00 Session ends

► October 23 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Pre-read: Read links listed under each session.

◆ 9 a.m.: Welcome and Checking-in

◆ 9:15 a.m.-9:45: Wesley Hamilton's session: Quantifying Gerrymandering

► [Jonathan Mattingly](#) and [Greg Herschlag](#) head up the Quantitative Gerrymandering group at Duke. Roughly speaking, they utilize high-performance computing and probabilistic models to quantify and analyzing districting plans and their level of gerrymandering.

► See [this blog post](#) for a non-technical description of what their group does. In particular, Jonathan Mattingly's work has been the basis for testimony he's provided in some Common Cause cases related to NC redistricting.

► Come with questions you might have, especially as they relate to the interface between humanistic and community centered approaches, and quantitative tools.

◆ 9:50 a.m.-10:20: Luke Valmadrid's session: The Imagination of Strategy

Read about [Chris Massenburg, better known as Dasan Ahanu](#), and [his work](#)

[Creative Futures and our four Artist Fellows](#)

[James Baldwin on the Creative Process and the Artist's Responsibility to Society – Brain Pickings](#) This article informs Chris said will help inform his talk

◆ 10:25 a.m.-10:55: Andreina Malki's session: Zoom Accessibility

► View videos on this page: [NYU Digital Accessibility](#)

► Read: [The challenges of being a deaf lip-reader during the COVID-19 pandemic: Rooted in rights](#)

► Read: [Law professors discuss the ADA, accessibility](#)

► October 30 (9 a.m. to 11 a.m.)

Join Zoom Meeting <https://unc.zoom.us/j/98882934012> or Use Meeting ID: 988 8293 4012

Quick pre-read: Read links listed under each session.

◆ 9 a.m.: Welcome and Checking-in

◆ 9:15 a.m.-9:45: Rumana Rabbani's session: Racial Equity Map (REM)

[Mr. Melvin Jackson](#) will discuss Racial Equity Map (REM), which helps organizations assess and understand their racial equity journey.

Complete [REM survey by 4 p.m., Oct. 29](#) Use password: BoundarySpanning02

◆ 9:50 a.m.-10:20: Jazmyne Jones' session: Social Care and Health

[Dr. Lisa Zerden](#) will discuss [Social Care and Health](#)

◆ 10:25 a.m.-10:55: Cason Whitcomb's session: Integrated Care for Kids (InCK) coordinated care service model

[Dr. Charlene Wong](#) will discuss [Integrated Care for Kids \(InCK\) coordinated care service model](#).

Read [Dr. Wong's article](#) about the impact of COVID19 on children with behavioral health needs, children living in foster care, and children with medical complexities.

◆ 11: 00 Session ends

► November 6 (9 a.m. to 11 a.m.)

Δ ([View Zoom recording with the integrated audio transcript](#)) (Access passcode: E35H@a2%)

Here is the Zoom link to join

us: <https://unc.zoom.us/j/2678191122?pwd=RXJJQTVQd3BMWU1zU01EajVxSHVFUT09>

You may also use the Meeting ID: 267 819 1122 and Passcode: 986591
End-of semester I⁴ Boundary Spanners Scholar panels to share their perspective, thoughts, ideas and insights.

◆ 9 a.m.: Welcome and Checking-in

◆ 9:15 a.m.: Panel session: Wesley Hamilton, Jazmyne Jones & Andreina Malki

◆ Session details:

~~ We will begin with brief reports (*no more than 10 minutes*) on your activities and findings during the semester.

We would like you to cover, as appropriate, the five prompts (see list below) in your panel presentation.

You should feel free to share and prepare slides for your panel presentation.

~~ After your presentation, we will engage in a general discussion.

We have [invited project PIs](#) and other folks to this session.

► Prompts for Nov. 6 & Nov. 13 sessions for I⁴ Boundary Spanners Scholars:

The I⁴ (Include, Identify, Investigate, Influence) Boundary Spanners project (I⁴BSP) addressed COVID-19 concerns in North Carolina.

As I⁴BSP Scholars, you engaged tools of humanistic and data analysis to support teams addressing COVID-19-related concerns in North Carolina communities.

Cover, as appropriate, the five prompts (see list below) in your panel presentation.

1. Valuable lessons learned: What have you learned about community engagement through your research this semester, and how might you carry that knowledge forward into your own research?

2. Boons and banes: Mention two or three triumphs or challenges, as you deem fit.

3. Peer lessons: What are the most valuable lessons you've learned from one another throughout the semester?

4. Surprises and Affirmations: In what ways did the I⁴ Boundary Spanner experience affirm your perspective on work with communities? In what ways did it challenge your assumptions?

5. Advice: We are working on a grant proposal to continue and expand the I⁴ Boundary Spanners concept to institutions across the state of North Carolina. What advice do you have for us as we develop that proposal? What advice would you give to a new cohort of I⁴ Boundary Spanners?

► November 13 (9 a.m. to 11 a.m.)

Δ ([View Zoom recording with the integrated audio transcript](#)) (Access passcode: 2d7xjp!u)

Here is the Zoom link to join

us: <https://unc.zoom.us/j/2678191122?pwd=RXJJQTVQd3BMWU1zU01EajVxSHVFUT09>

You may also use the Meeting ID: 267 819 1122 and Passcode: 986591
End-of semester I⁴ Boundary Spanners Scholar panels to share their perspective, thoughts, ideas and insights.

◆ 9 a.m.: Welcome and Checking-in

◆ 9:15 a.m.: Panel session: Rumana Rabbani, Luke Valmadrid & Cason Whitcomb

◆ Session details:

~~ We will begin with brief reports (*no more than 10 minutes*) on your activities and findings during the semester.

We would like you to cover, as appropriate, the five prompts (see list below) in your panel presentation.

You should feel free to share and prepare slides for your panel presentation.

~~ After your presentation, we will engage in a general discussion. We have [invited project PIs](#) and other folks to this session.

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Program Outcomes:

There are several noteworthy outcomes from the I⁴ Boundary Spanners project:

- In Fall 2020, The Graduate School magazine featured a [story](#) about the I⁴ Boundary Spanners project and the project has just been featured in another [article](#) by Innovate Carolina.
- The PI who worked with Rumana Rabbani applied for additional funding to continue Ms. Rabbani's engagement on the project (proposal was declined).
- In November 2020, the Collaboratory partnered with UNC-Chapel Hill and 8 sister institutions in the UNC System (Appalachian State University, East Carolina University, North Carolina Agricultural and Technical State University, North Carolina Central University, UNC-Charlotte, UNC-Greensboro, Western Carolina University, and Winston Salem State University) on an Innovations in Graduate Education proposal to the National Science Foundation. If funded, the project would support development of North Carolina Boundary Spanners, which will provide graduate students in STEM disciplines with training in the "humanistic" skills needed to effectively engage communities. The proposal is pending.
- The Graduate School is developing a partnership with the Racial Equity Learning and Action Community to pilot use of its Racial Equity Map (REM) to mitigate bias in graduate programs. That partnership grew out of a presentation by an I⁴ Boundary Spanners student during one of the weekly sessions.

Recommendations for future research

- Most of the I⁴ Boundary Spanners had productive and enriching experiences in their research placements. In the most effective placements, students were placed in ongoing, well-established projects. Given the short duration (one semester) of the

project, this is the most appropriate strategy to ensure a positive experience for both the student and their research mentor.

- The weekly meetings were essential to establish a sense of cohort among the students. That cohort, in turn, provided the students with peer support which helped them to navigate the challenges associated with their projects. It also provided them with the opportunity to “lead” their peers, by sharing their expertise, which boosted confidence, morale and self-actualization.
- As indicated above, I⁴ Boundary Spanners was the model for the North Carolina Boundary Spanners program that was proposed in our Innovations in Graduate Education proposal. I⁴ Boundary Spanners was developed at UNC-Chapel Hill and tailored to meet the needs of students at a research-intensive, well-funded institution. In the process of writing the proposal, we learned that some of our approaches were not tenable at the smaller, masters-level institutions in our partnership and we modified the proposal accordingly. While we still believe that the I⁴ Boundary Spanners concept is scalable and can be adopted by other institutions, it must be tailored to meet their specific needs.