Collecting Perishable Data:
Cultural Competence, Ethics, and Reciprocity

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Q: On a scale of 1 to 100, how racially and ethnically diverse* is Seattle?

*Here diversity refers to people of different races or ethnicities living in close proximity to one another.

Q: On a scale of 1 to 100, how racially and ethnically diverse is Seattle?

A)   22
B)   44
C)   73
D)   97

Q: On a scale of 1 to 100, how racially and ethnically diverse is Seattle?
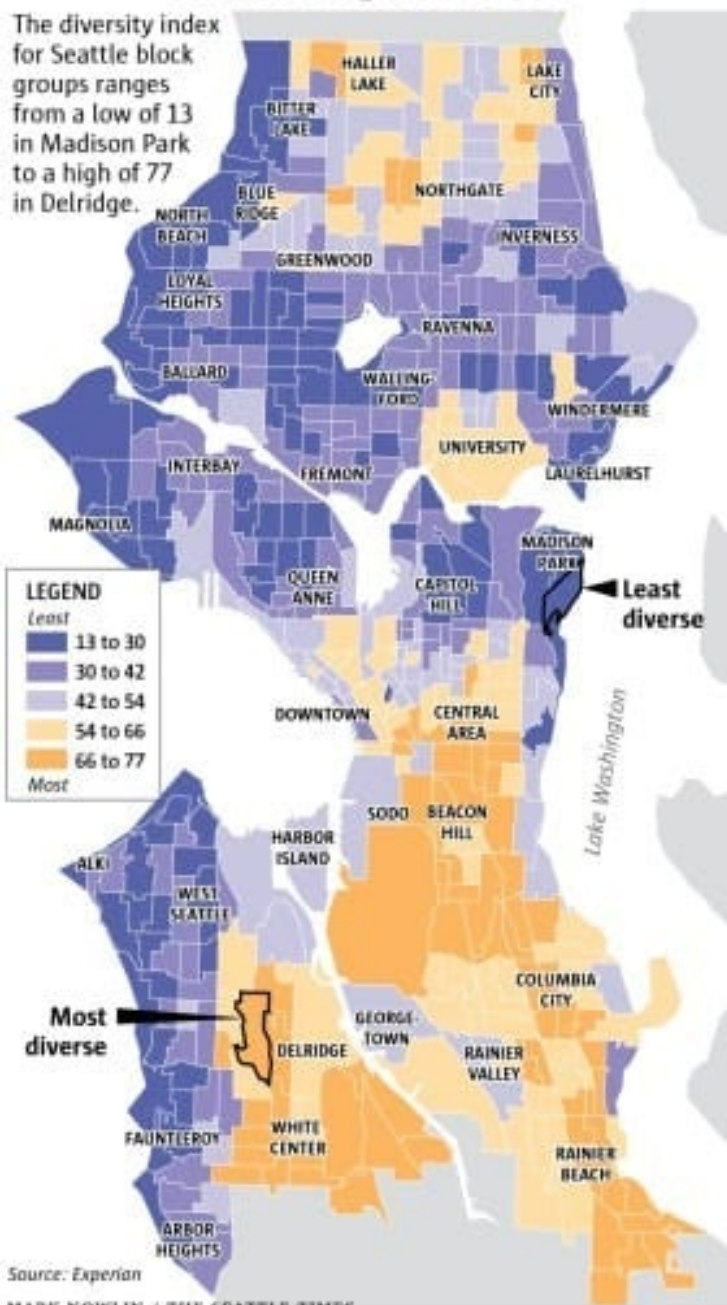
A) 22
B) 44
C) 73
D) 97

Diversity varies widely among Seattle neighborhoods

The diversity index for Seattle block groups ranges from a low of 13 in Madison Park to a high of 77 in Delridge.
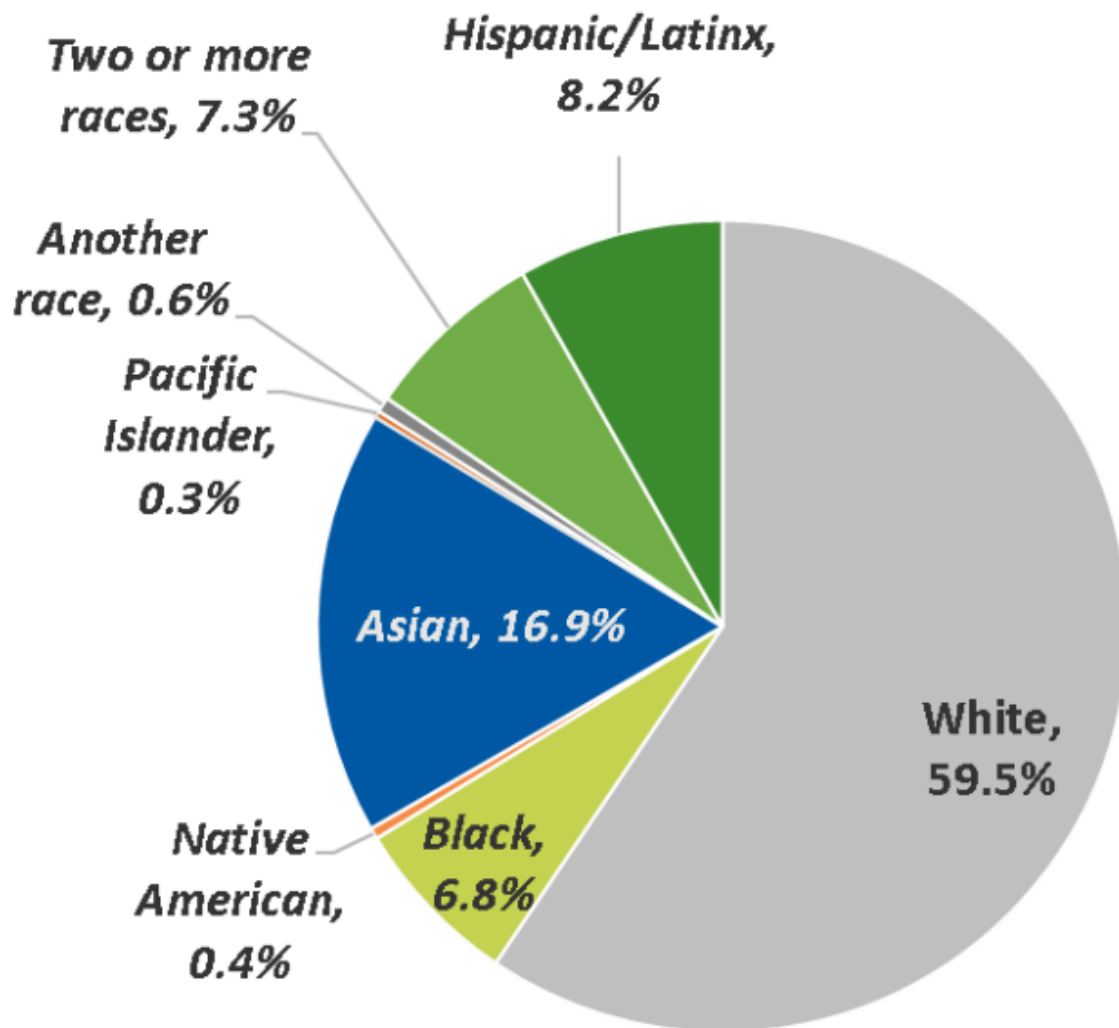
LEGEND
Least
13 to 30
30 to 42
42 to 54
54 to 66
66 to 77
Most

Least diverse

Most diverse

Source: Experian

MARK NOWLIN / THE SEATTLE TIMES

People of Color 40.5%

2020

Two or more races, 7.3%

Hispanic/Latinx, 8.2%

Another race, 0.6%

Pacific Islander, 0.3%

Asian, 16.9%

Native American, 0.4%

Black, 6.8%

White, 59.5%

Q: How many languages are spoken in Seattle public schools and surrounding communities?

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A) 48

B) 98

C) 140

D) 430

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Q: What is the most commonly spoken language in King County?

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A)   Chinese
B)   Russian
C)   Spanish
D)   Somali
E)   Vietnamese

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A) Chinese
B) Russian
C) Spanish
D) Somali
E) Vietnamese

	Language	Avg Rank	Tier
First Tier: **Materials Shall be Translated**	**Spanish**	1	1

	Language	Avg Rank	Tier
Second Tier:	Vietnamese	2	2
	Russian	4	2
Translation	Somali	4	2
	Chinese	4	2
Recommended	Korean	6	2
	Ukrainian	7	2
	Amharic	8	2
	Punjabi	9	2

	Language	Avg Rank	Tier
Third Tier:	Tagalog	10+	3
	Cambodian	10+	3
	Laotian	10+	3
Translation	Japanese	10+	3
	Hindi	10+	3
	Arabic	10+	3
Encouraged	Farsi	10+	3
	Tigrinya	10+	3
	Oromo	10+	3
	French	10+	3
	Samoan	10+	3

Key:

First Tier: "Public Communication Materials" shall be translated into target language as soon as feasible within available resources.

Second Tier: Translation of Public Communication Materials is recommended, depending on target audience.

Third Tier: Translation of Public Communication Materials is encouraged, depending on target audience.

What is the goal of post-disaster reconnaissance?

A. To collect perishable data.

A. To collect perishable data in a culturally competent and ethical manner.

After the deadly 2004 Indian Ocean earthquake and tsunami, hundreds of researchers from Japan, Russia, France, the U.S., and elsewhere rushed to the region to collect perishable data. The influx of foreign scientists angered and fatigued some locals. The former governor of Aceh province, Indonesia, where 128,000 people died, described foreign researchers as "guerrillas applying hit-and-run tactics."[1]

[1] Source: Gaillard, JC & Peek, L. (2019). Disaster-zone research needs a code of conduct. *Nature* 575: 440-442.

What is the goal of post-disaster reconnaissance?

To collect perishable data in a culturally competent and ethical manner.

Perishable Data

Perishable data is highly transient data that may degrade in quality, be irrevocably altered, or be permanently lost if not collected soon after it is generated. Perishable data includes ephemeral information that exists before, during, or after a disaster that, if gathered, can characterize pre-existing hazardous conditions, near-miss or actual disaster events, and longer-term recovery processes. This data may need to be collected at multiple points in time across varying geographic scales to accurately characterize exposure, harm, and coping capacity.[1]

[1]Adams, R. M., Evans, C. M., & Peek, L. (2023). Defining, collecting, and sharing perishable disaster data. *Disasters* 48(1): e12592. https://doi.org/10.1111/disa.12592

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Collecting and Sharing Perishable Data

The *context* of perishable data collection introduces unique **ethical challenges** and considerations of our **collective responsibilities** as disaster researchers

Time Pressures

- Rapid data collection *and* need for data sharing

Power and Resource Gaps

- Outside researchers in culturally unfamiliar contexts

Emotional Challenges

- Researchers exposed to widespread damage, destruction, and loss of life

- Witnesses to disproportionate impacts among marginalized populations and newly vulnerable people

Coordination Complications

- Teams must balance the need to collect perishable data while not interfering with emergency response efforts

- Locally-affected colleagues may be disaster survivors *and* disaster first responders

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Broader Ethical Considerations for Hazards and Disaster Researchers

Collecting and Sharing Perishable Data

Conducting Emotionally Challenging Research

Cultural Competence in Hazards and Disaster Research

Disaster Mental Health

Indigenous Sovereignty in Disaster Research

Institutional Review Board (IRB) Procedures and Extreme Events Research

Positionality in Hazards and Disaster Research and Practice

Public Health Implications of Hazards and Disaster Research

Reciprocity in Hazards and Disaster Research

Social Vulnerability and Disasters

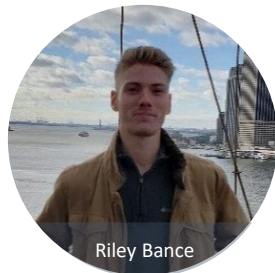Understanding and Ending Gender-Based Violence in Fieldwork

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Training Module Developers and Collaborators
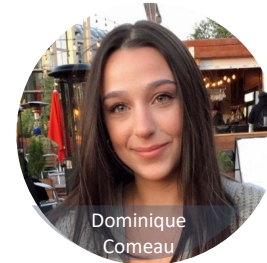

Jessica Austin

Riley Bance

Paulette Blanchard

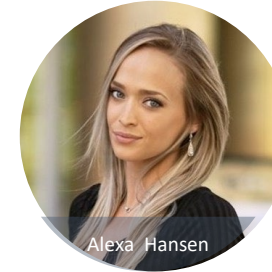Heather Champeau

Dominique Comeau

Tracy Fehr
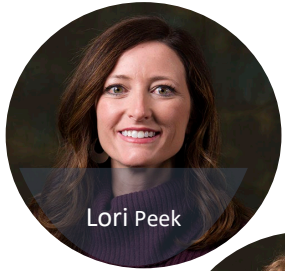
Lin Frazer

Patrick Freeland

Christine Gibb

Ciarra Greene

Alexa Hansen

Jerika Heinze

Lori Peek

Candace Evans

Lesley Iaukea

Julie Maldonado
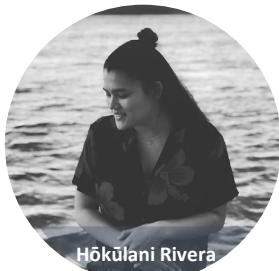
Brigid Mark

Molly McKeown

Michelle Montgomery

Jasmine Neosh

Skye Niles

Rachel Adams

Hōkūlani Rivera

Bella Runza

Bertha Tapia

Melissa Villarreal

Courtney Welton-Mitchell

Jocelyn West

Haorui Wu

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Cultural Competence

- Familiarizing yourself **cultural context** of the research site can help ensure that your research approach is not unintentionally causing harm

- Rigorous, ethical research can be driven by **both** engineering/scientific needs **and** the needs of locally-affected populations

- Working with **local partners** can help bridge cross-cultural boundaries, enhance research capacity and feasibility, and empower members of the disaster-affected community

Wu, H., Peek, L., Mathews, M. C., & Mattson, N. (2022). Cultural competence for hazards and disaster researchers: Framework and training module. *Natural Hazards Review*, 23(1), 06021005. ttps://doi.org/10.1061/(ASCE)NH.1527-6996.0000536

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Emotionally Challenging Research

- Disasters wreak havoc on communities and can make research in these settings emotionally challenging

- Examples of emotional challenges include vicarious trauma, compassion fatigue, and burnout

- This is *not* just a "social science issue" – engineers and physical scientists are often first on the scene after a disaster and may be witness to death and destruction

- There are **strategies** to help cope with emotionally challenging research

Bermúdez Tapia, B., Fehr, T., Niles, S., Peek, L., Evans, C., & Adams, R. Conducting emotionally challenging research: Lessons from the field. Under Review.

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Recommendations for Addressing Emotional Challenges in Research

Strategies for Individual Researchers	• Writing fieldnotes and journaling • Participating in counseling or coaching sessions • Balancing research activities and taking breaks • Seeking religious or spiritual support • Practicing mindfulness • Caring for one's physical and emotional health • Expressing gratitude and acknowledging the positive aspects of your work
Strategies for Research Collaborators	• Developing peer support networks • Participating in advocacy or activism
Strategies for Research Mentors or Supervisors	• Allowing time and space for discussing emotionally challenging research • Establishing advising or mentoring contracts
Strategies for Leaders or Institutions	• Integrating discussions of Emotionally Challenging Research into the research culture • Providing financial resources and expertise

A Question:

- How do you plan to *give back* to the community you study?

Reciprocity in Research

- Researchers have an **ethical obligation** to not only collect data, but also to work to produce meaningful benefits for the people involved with or affected by the hazards and disaster research process

- **Reciprocity** in research involves an ongoing practice of reflection, relationship-building, and **mutually-beneficial exchange** between researchers and partners/participants

- Examples of reciprocity include: **compensation**, **training**, **cultural preservation**, and the provision of **research resources** such as the return of data, findings, or other information

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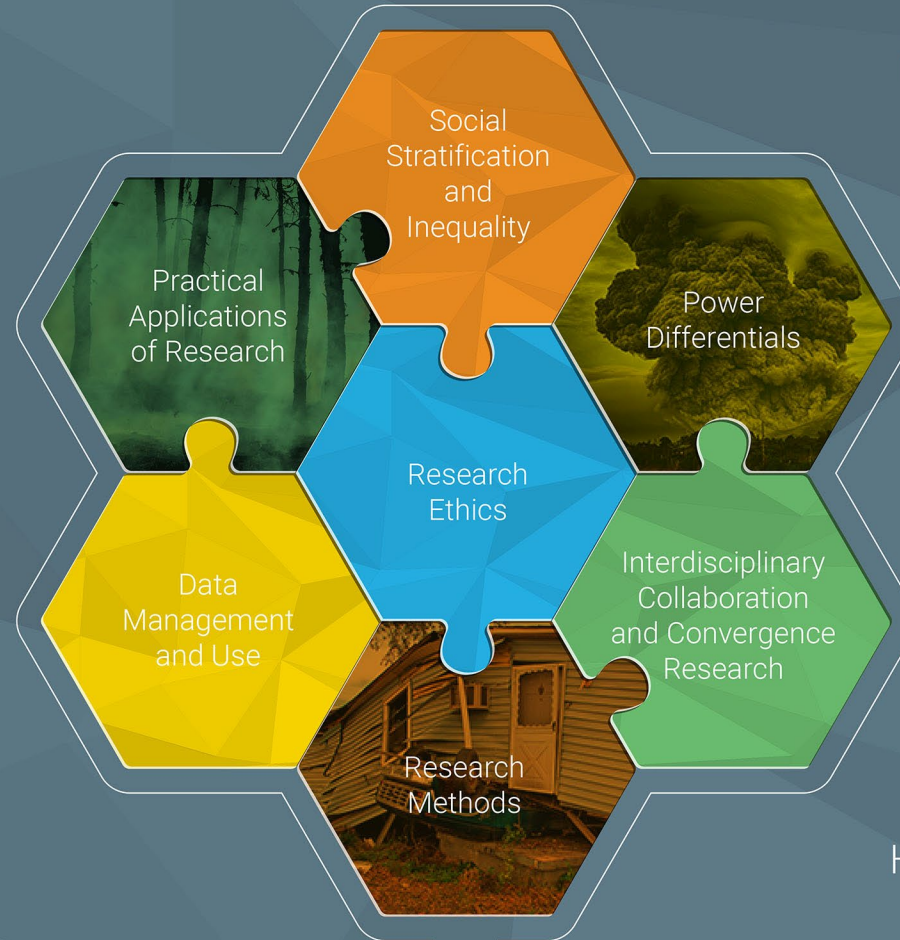
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Training Modules

Foundational Training
Module Topics

Advanced Training
Module Topics

Shared Themes

Institutional Review Board
(IRB) Procedures and
Extreme Events Research

Conducting Emotionally
Challenging Research

Cultural Competence

Collecting and Sharing
Perishable Data

Social Vulnerability
and Disasters

Disaster Mental Health

Social Stratification and Inequality

Practical Applications of Research

Power Differentials

Research Ethics

Data Management and Use

Interdisciplinary Collaboration and Convergence Research

Research Methods

Broader Ethical Considerations

Positionality

Reciprocity

Understanding and Ending
Gender-Based Violence
in Fieldwork

Public Health Implications of
Hazards and Disaster Research

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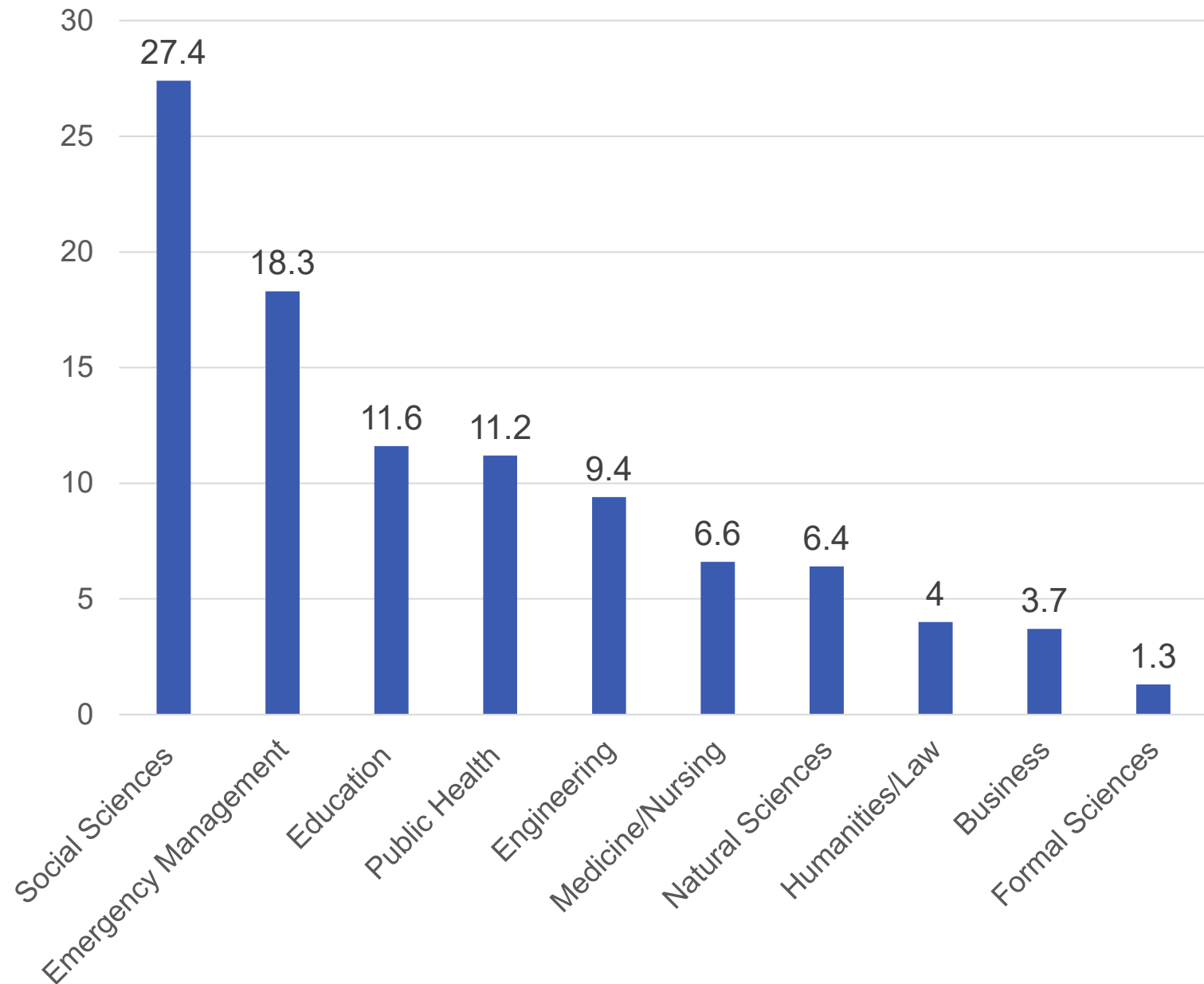Learn more about CONVERGE at converge.colorado.edu

Training Module Evaluations

CONVERGE Training Modules: Use and Impact

- **10,423 Training Module Registrants**

- **11,513 Successfully Completed Modules**

- **Improved knowledge, skills, and attitudes**

- **Completing the modules was "the most helpful thing" in preparation for rapid research after the Marshall Fire.** –Oregon State University engineering graduate student
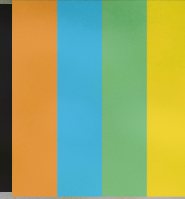
% Completions by Discipline

Discipline	%
Social Sciences	27.4
Emergency Management	18.3
Education	11.6
Public Health	11.2
Engineering	9.4
Medicine/Nursing	6.6
Natural Sciences	6.4
Humanities/Law	4
Business	3.7
Formal Sciences	1.3

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THANK YOU

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