



SCOARE

Adapting RE-AIM to Evaluate and Improve Understanding of Mentor Training Interventions

Understanding
Interventions
Conference
August 2023

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The University of Texas MD Anderson Cancer Center

**Funded by the National Institute of General Medical Sciences, R25
GM125640**

*With the participation of Shine Chang, PhD; Hwa Young Lee, PhD; Cheryl Anderson, PhD; and
Erin K. Dahlstrom, PhD.*



This project is funded by
NIGMS R25 GM12564.

What do you know about RE-AIM?

I don't know much about it

I know about it

I have used it

I am an expert



Overview



RE-AIM
background and
use



What is SCOARE



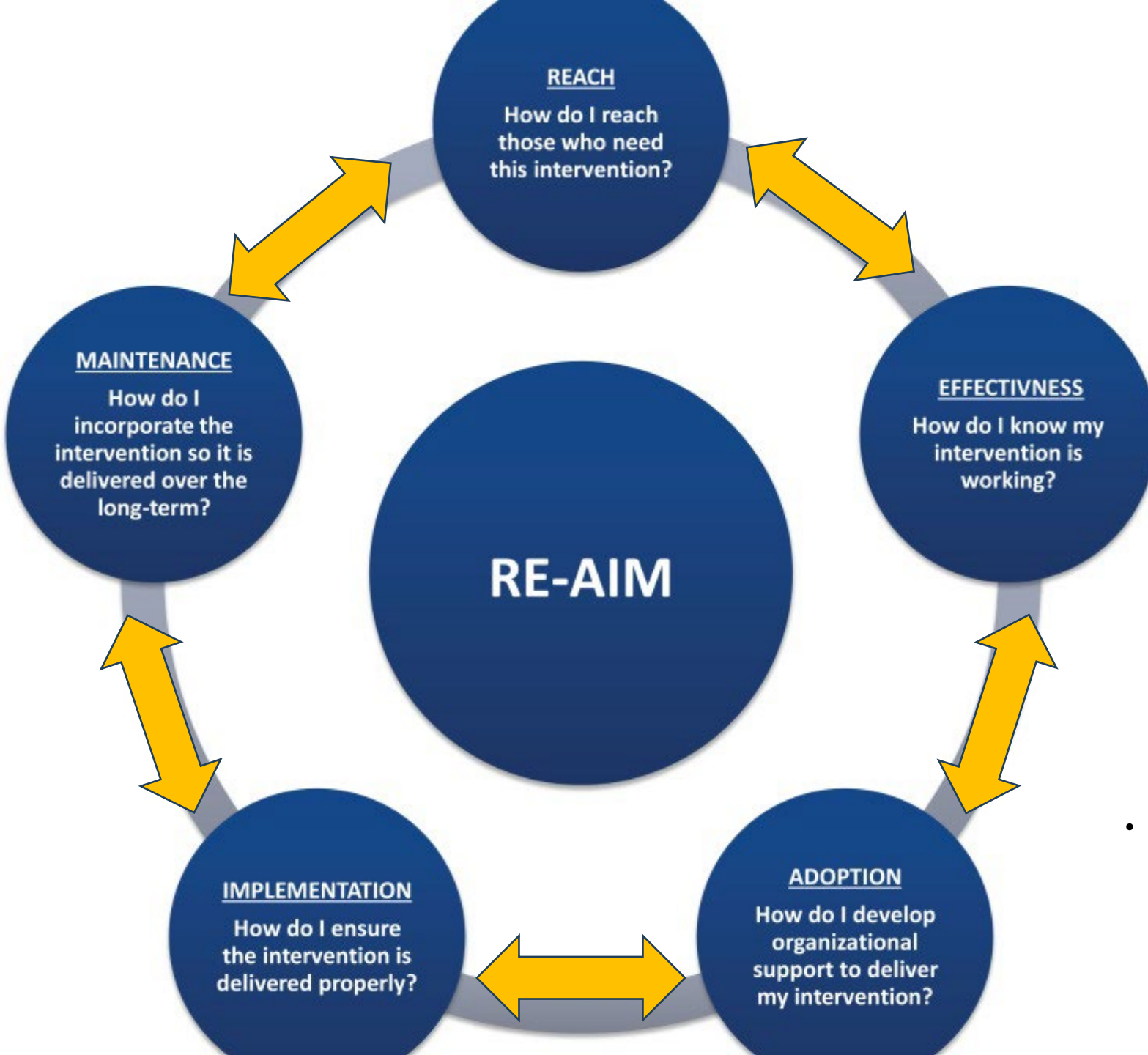
How SCOARE
applied RE-AIM &
what we learned



How you can use
RE-AIM



- Ory, M. G., Altpeter, M., Belza, B., Helduser, J., Zhang, C., & Smith, M. L. (2015). Perceived Utility of the RE-AIM Framework for Health Promotion/Disease Prevention Initiatives for Older Adults: A Case Study from the U.S. Evidence-Based Disease Prevention Initiative.



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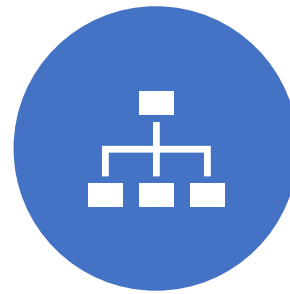
Facilitate translation of research to practice.



Balance internal and external validity.



Emphasize representativeness.



Address multi-level factors: individual, organizational, system: experimental and observational.

Methodology

Realist Evaluation

Qualitative

“What intervention is most effective, for whom, under what circumstances?”

Pawson & Tilley

Use qualitative methods throughout to understand the why and how.

Holtrop, 2018

Checklist: <https://ictr.wiscweb.wisc.edu/wp-content/uploads/sites/163/2016/10/ReAIMCheckListDimensions.pdf>



SCOARE

Scientific Communication Advances Research Excellence

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With the participation of Shine Chang, PhD; Marianne Smith, CPLP, GPHR, SHRM-SCP; Hwa Young Lee, PhD; Cheryl Anderson, PhD; Christine Bell, M.S. and Christine Pribbenow, PhD, of the University of Wisconsin-Madison; and Erin K. Dahlstrom, PhD.



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The SCOARE Program

Workshop

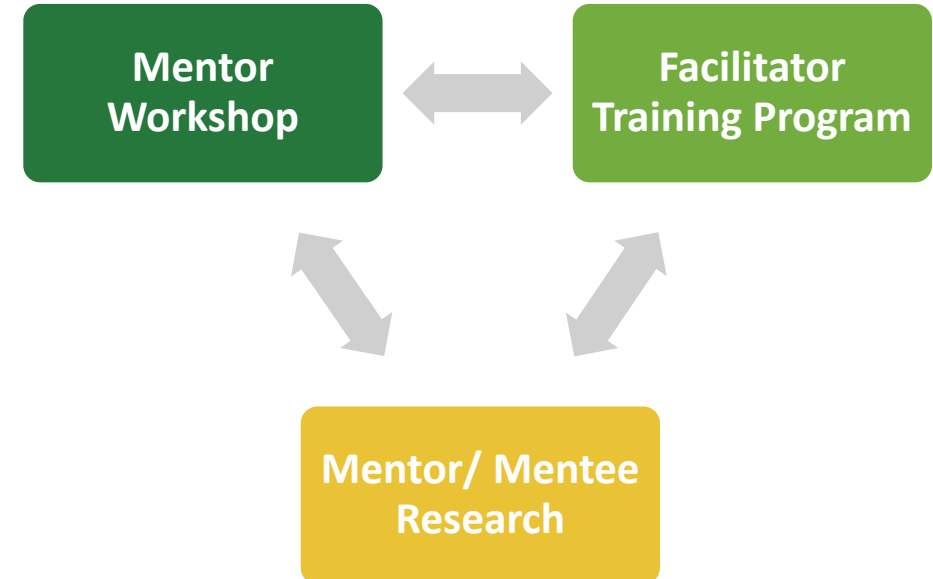
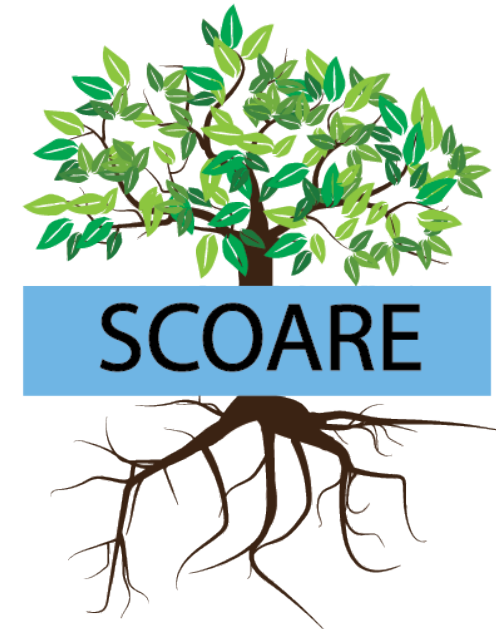
*Strategies for research mentors
to improve scientific
communication mentoring skills*

Research

*Pre and 6-month post surveys
with mentors and mentees*

Facilitator Training

*Improve sustainability and
reach of the evidence-based
workshop*



Kirkpatrick's Four Levels of Evaluation



RE-AIM & SCOARE

SETTING

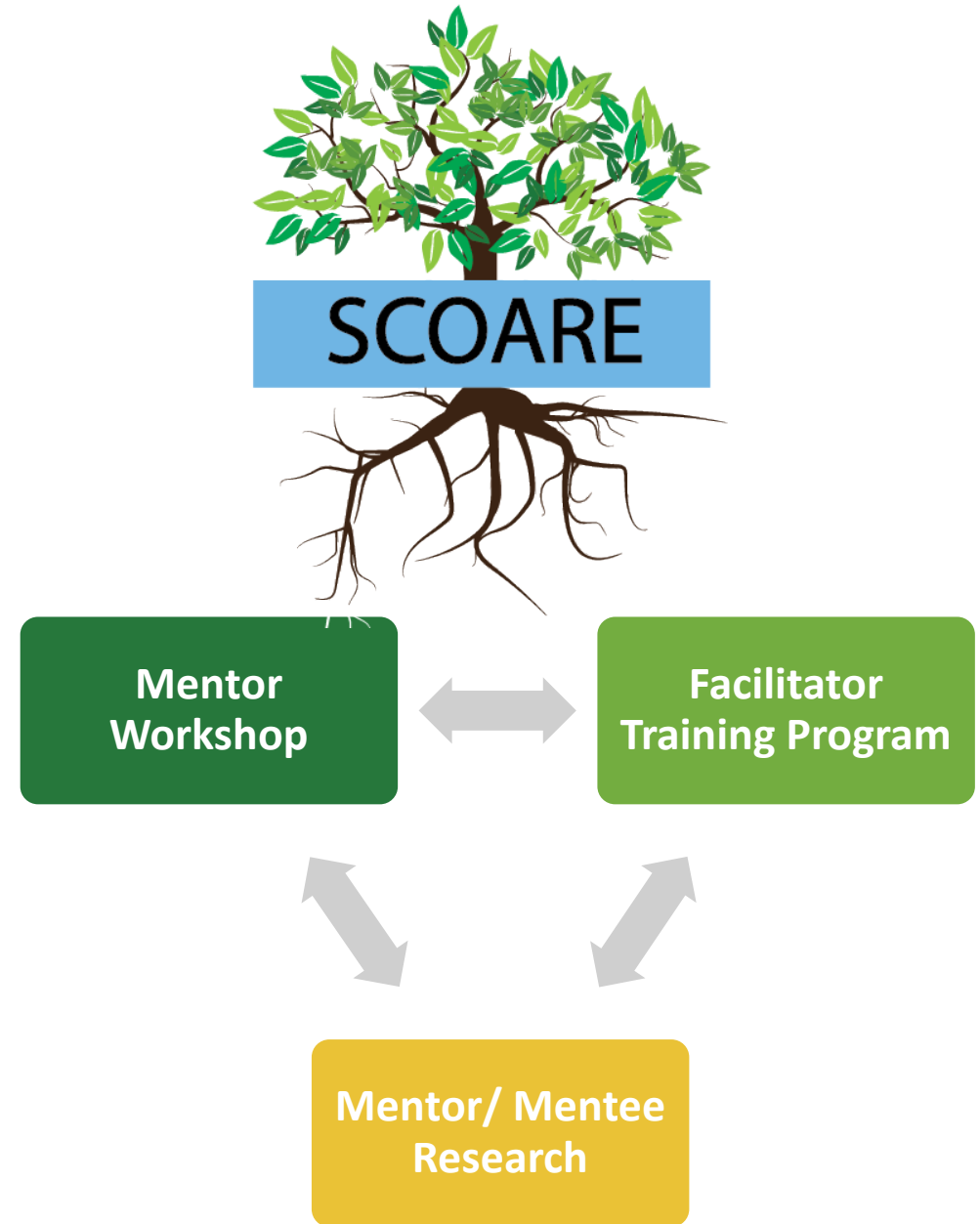
*In-Person, Online, Other
Factors*

FACILITATION

*Program developers/experts,
trained facilitators*

ADAPTATIONS

What and when appropriate



Is the workshop reaching research faculty?

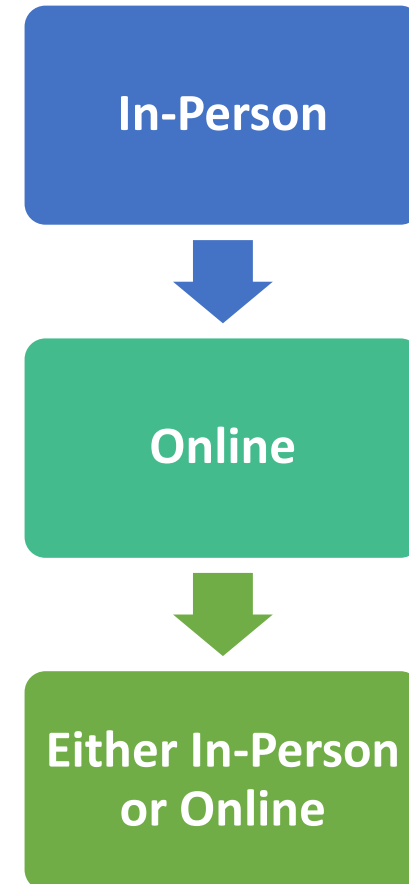
- **Demographic data** collected for registration and research
 - Indicates the eventual reach to diverse mentees, and potential interaction effects between mentor and mentee identities.
- 60% Women
- 86% Non-Hispanic
- 71% White, 14% Asian or Asian American, 5% Black or African American
- 35% Assistant Professor, 25% Associate Professor, 23% Full Professor
- **Academic discipline** collected on anonymous evaluations
- “Participant disciplines ran the gamut from reproductive endocrinology to computer science, however the majority of participants work in basic science research, with significant proportions of participants in **biomedical/bioengineering and clinical disciplines.**”

Dahlstrom et al 2022

REACH

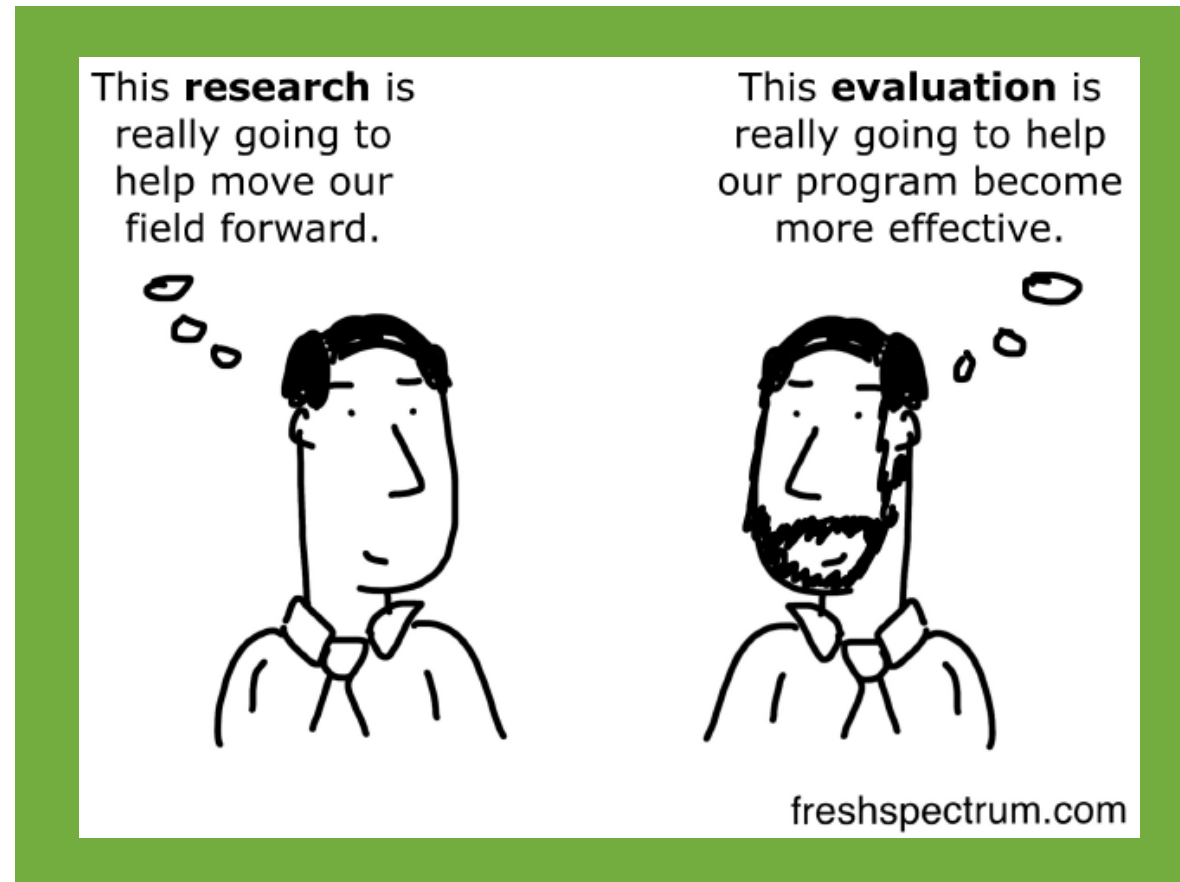
How did we reach our audience?

- Outreach with site partners
- Prioritize study participants
- Limit workshops to 20-30 participants to encourage active learning and participation
- Advertise Facilitator Training
- Reach diverse pool of potential facilitators
 - Indicates the eventual reach to diverse mentees, and potential interaction effects between mentor and mentee identities.



Is the training effective?

Study data shows favorable and significant pre/post changes in both mentor and mentee social-cognitive and behavioral measures (forthcoming).



Evaluation survey

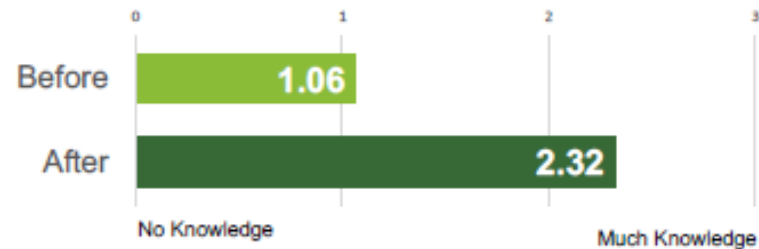
- Satisfaction
- Self-reported changes in knowledge and skills
- Intention to implement strategies

Is the workshop effective? (how can we know ASAP?)

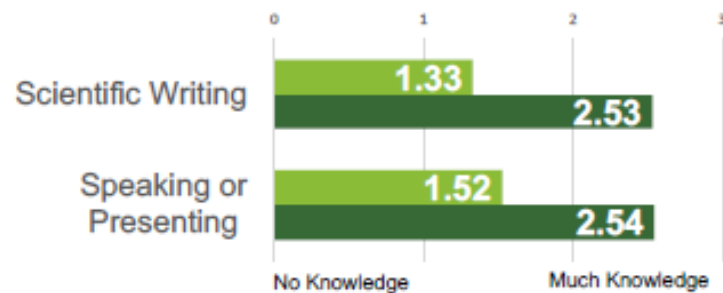
Level 2. Changes in knowledge and skills – Participant self-reported levels of knowledge and skills increased after the workshop. (N=93) unless noted

Average Level of Knowledge Before and After Workshop

Research about the impact of SC on training outcomes. (N=160)



Various strategies to encourage trainee engagement in...

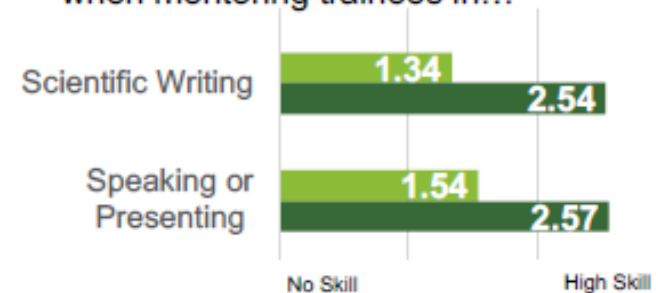


Average Level of Skill Before and After Workshop

In providing feedback to a trainee about their...



In applying new and various techniques when mentoring trainees in...



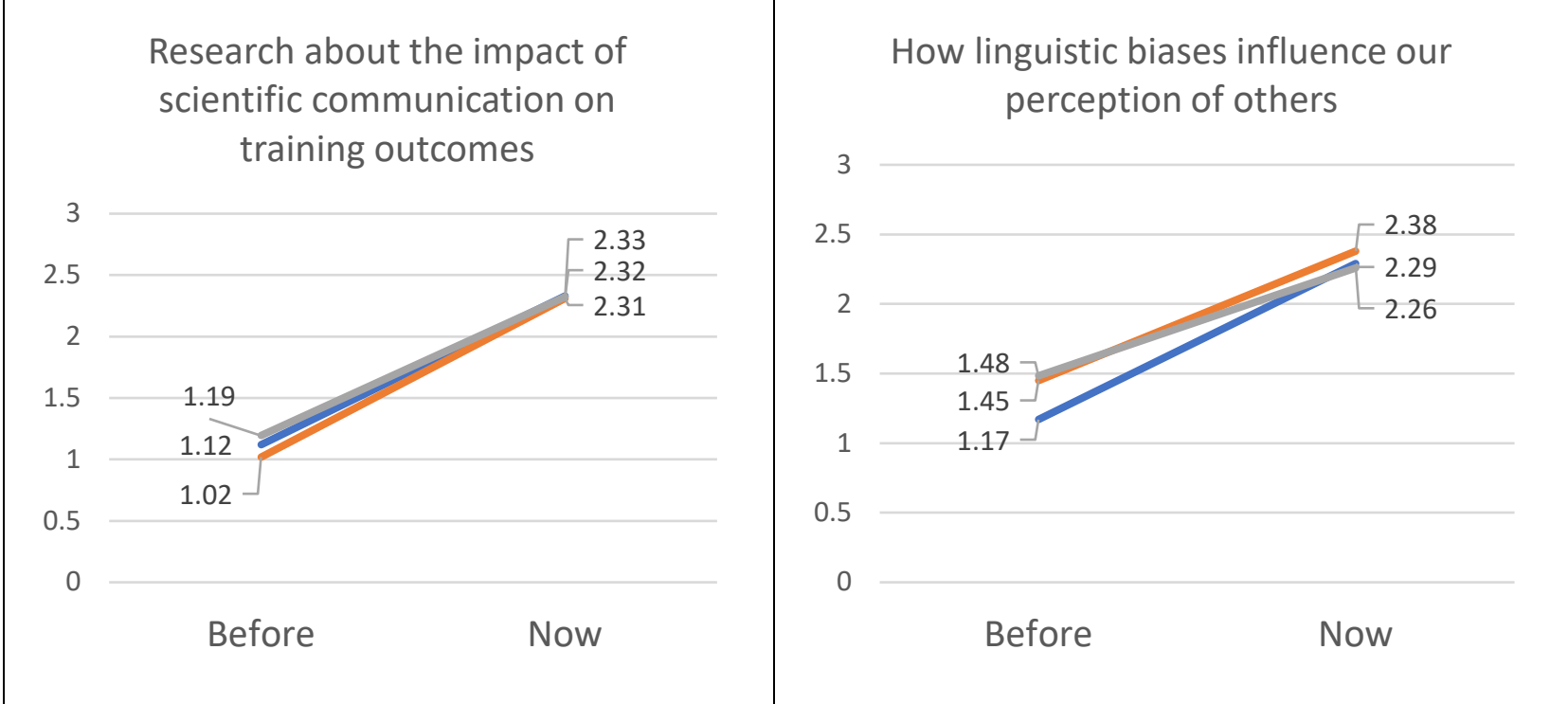


EFFECTIVENESS

Measured effectiveness of facilitator training through changes in confidence and compared evaluation data over time.

Is the facilitator training effective?

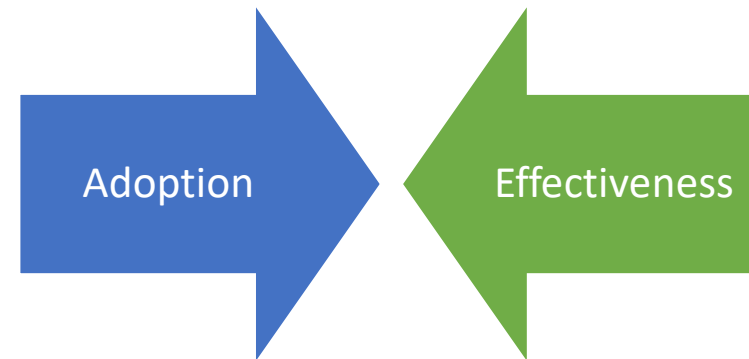
Level of Knowledge Before the Workshop and Now
Scale: 0 = No Knowledge to 3 = Much Knowledge



— PI led Y1 - Y3 (n=255) — TF led Y4 - Y5 (n=123) — TF led 2.0 (n=31)

Who is adopting the program and why?

- **RE-AIM's Adoption** is intended for public health interventions. Characteristics of settings/staff that have/have not adopted the intervention and organizational capacity to support adoption.
- **SCOARE's Adoption** is more complex and relevant to effectiveness.

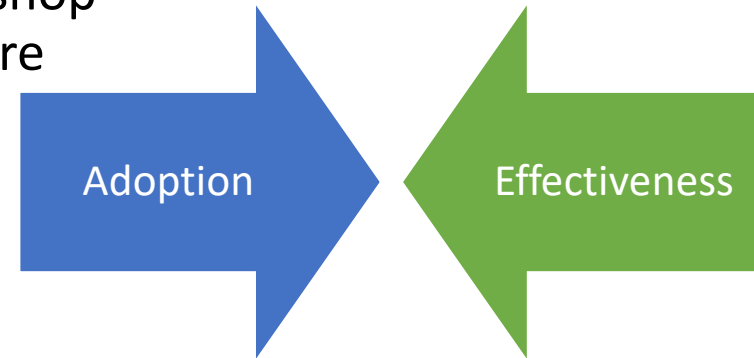


Are the mentor strategies effective?

- IF strategies are **adopted** by the workshop participants, HOW do we know they are **effective**?

It takes me less time to give [mentees] feedback on their manuscripts because it's more structured and it's coming to me better organized, better thought out.

I'm being more intentional on the feedback. All the students say it's helping and I'm seeing improvement when they send revisions.

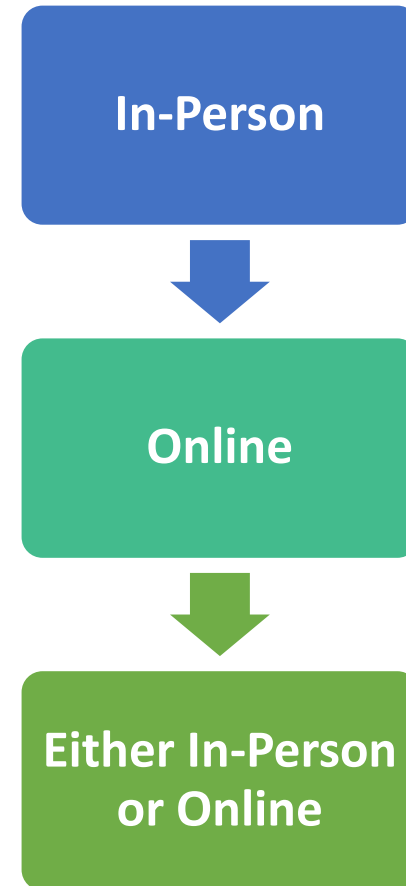




Can the workshop be adapted to different settings?

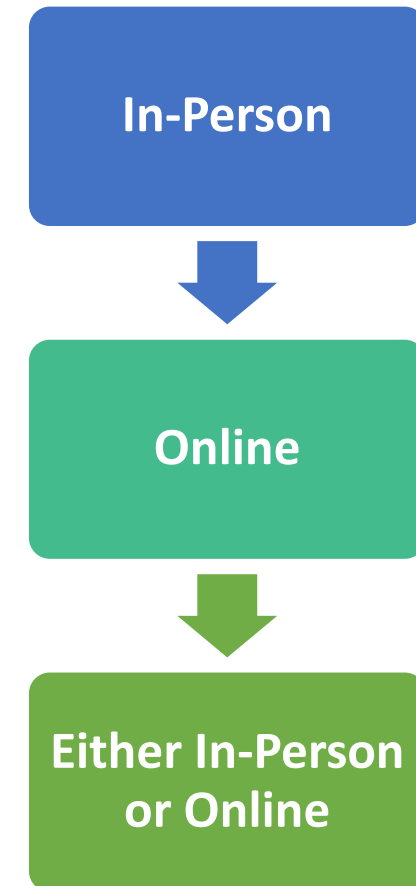
Measured effective adaptation from in-person to online (compare satisfaction to see increases over time) participants gave feedback about the workshop logistics and responded to items about satisfaction with aspects of the workshop on a scale of 1 strongly disagree to 5 strongly agree

Table 1. Satisfaction with online workshop experience	1	2	3	4	5
Zoom was used effectively to facilitate this workshop.	-	-	5% 4	29% 23	66% 52
The number of people in my breakout room was appropriate.	-	3% 2	1% 1	34% 27	62% 49
There was enough time and opportunity in the breakout rooms for everyone to contribute.	-	6% 5	8% 6	41% 33	45% 36
The amount and length of breaks was appropriate.	1% 1	20% 16	5% 4	51% 41	23% 19



Implementation Fidelity

- Context and changing needs throughout the lifecycle of SCOARE
- Fidelity of workshop delivery during study
 - Developed annotated slides and other tools to support fidelity
- Fidelity of translating workshop from in-person to online
- Trained facilitators use same evaluation survey to check fidelity



Maintenance and Sustainability

- SCOARE is being **sustained** through the facilitator training program.
- **Adapting** by adding new modules based on participant feedback and needs: supporting L2 mentees, neurodiverse mentees, and providing useful feedback.
- Expanding **reach** by leveraging trained facilitator expertise.
- Pool of trained facilitators has greater racial, ethnic, and disciplinary diversity.
- Can lead to greater support for more mentees.



Tips and Resources to Support your RE-AIM Journey

Embrace Feedback

Cycle of continuous feedback and improvement

Awareness

Of intervention context, setting, facilitation, adaptation, and phases

Qualitative methods

Beneficial for understanding meaning

Complexity is okay!

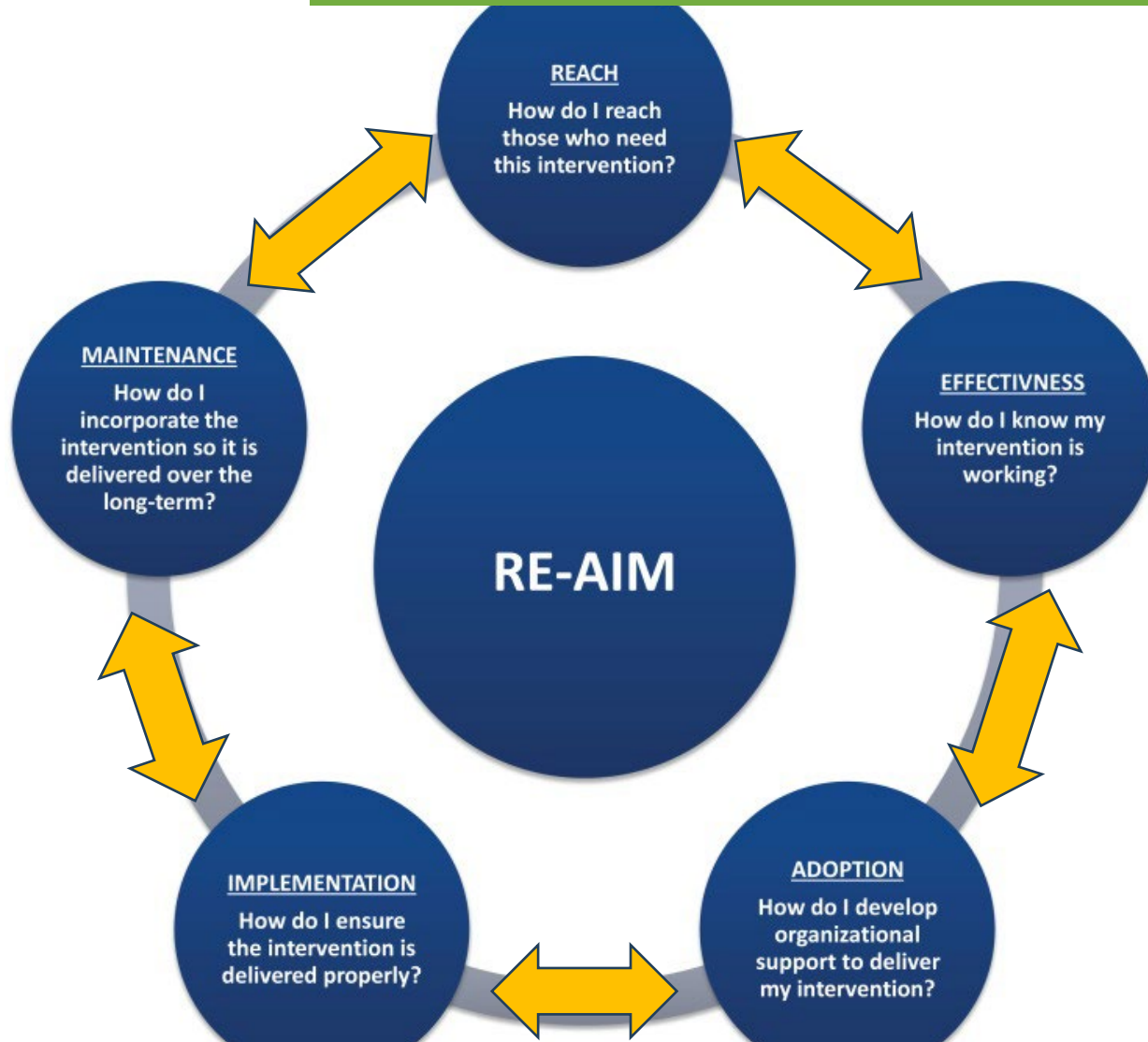
Delegate and communicate



Measuring the Use of the RE-AIM Model
Dimension Items **Checklist:**
<https://ictr.wiscweb.wisc.edu/wp-content/uploads/sites/163/2016/10/ReAIMCheckListDimensions.pdf>



Can you think of ways to apply RE-AIM dimensions throughout your research and evaluation plan?



- **Reach**
- **Effectiveness**
- **Adoption or Adaptation**
- **Implementation**
- **Maintenance or Sustainability**

• Ory, M. G., Altpeter, M., Belza, B., Helduser, J., Zhang, C., & Smith, M. L. (2015). Perceived Utility of the RE-AIM Framework for Health Promotion/Disease Prevention Initiatives for Older Adults: A Case Study from the U.S. Evidence-Based Disease Prevention Initiative.

Thank you!

Acknowledgements

We would like to thank our team members Shine Chang, PhD, for co-PI; Christine Pribbenow, PhD, for program evaluation; Hwa Young Lee, PhD and Cheryl Anderson, PhD, for data analysis; and Erin Dahlstrom, PhD, for project management.

And CIMER for sharing facilitator training implementation planning tools, evaluation tools, and Dissemination & Implementation resources

Resources

- Dahlstrom EK, Bell C, Chang S, Lee HY, Anderson CB, Pham A, et al. (2022) Translating mentoring interventions research into practice: Evaluation of an evidence-based workshop for research mentors on developing trainees' scientific communication skills. PLoS ONE 17(2): e0262418. <https://doi.org/10.1371/journal.pone.0262418>
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- Measuring the Use of the RE-AIM Model Dimension Items Checklist: <https://ictr.wiscweb.wisc.edu/wp-content/uploads/sites/163/2016/10/ReAIMCheckListDimensions.pdf>