Supplemental Table 1. Science Communication Training Effectiveness (SCTE) Construct Measures

Construct	Variable Name	Item Measurement
Motivation	Science Communication Self-Efficacy n = 7 items Anderson et al., 2015; Schwarzer & Jerusalem, 1995	1=Not at all true, 2= Hardly true, 3 = Moderately true; 4 = Exactly true • I can always manage to solve difficult problems in science communication if I try hard enough. • I can remain calm when facing science communication difficulties because I can rely on my coping abilities. • When I am confronted with a science communication problem, I can usually find several solutions. • It is easy for me to stick to my aims and accomplish my science communication goals. • I am confident that I could deal efficiently with unexpected events that may raise in this science communication workshop. • I can solve most science communication problems if I invest the necessary effort. • No matter what comes my way, I'm confident I can handle it during the course of this science communication-training workshop.
	Oral Presentation Self-Confidence n = 4 items Anderson et al., 2015; Rosenberg, 1979	1=Very insecure, 2= Insecure, 3=Neither confident nor insecure, 4=Confident, 5= Very confident. Based on the workshop you just completed, how would you rate your level of confidence in your ability to… • Excel in giving scientific presentations. • Give a scientific talk to a lay audience. • Give an oral presentation at a scientific meeting. • Require little to no assistance with my speaking and presenting skills.
Cognition	Science Communication Knowledge n = 1 item Griffin et al., 2008 Griffin, Dunwoody, & Yang, 2013	• How much do you currently know about science communication? (0 = I know nothing at all about science communication, 100 = I know all I could possibly know about science communication)
Affect	Attitudes Toward Workshops n = 14 items Brownell, Price, & Steinman, 2013; Silva & Bultitude, 2009	1=Strongly disagree, 2=Disagree, 3=Neutral, 4= Agree, 5=Strongly agree • Taught me a lot of new concepts. • Helped me master new skills. • Gave me new ideas on presenting science findings to a lay audience. • Made me feel I can be effective in communicating science in clear terms. • Helped me make sense of how to communicate science effectively to a non-science audience. • Improved my communication style. • Made me feel comfortable with making presentations. • Polished my presentation skills. • Enhanced my ability to use clear science communication principles. • Increased my ability to communicate science verbally to non-scientists. • Delivered the training materials effectively. • Engaged me. • Improved my ability to describe science information accurately. • Helped me create a video relying on nontechnical jargon.

	Attitudes Toward Coaching n = 5 items	1=Strongly disagree, 2=Disagree, 3=Somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6= Agree, 7 = Strongly agree • The coaching session was valuable in polishing my final presentation. • I took the advice provided in the coaching session for my final presentation. • I am quite satisfied with the coaching session. • I made changes to my final PowerPoint slide based on suggestions provided in the coaching session. • My final presentations would not have turned out as well without the coaching session.
	Positive Outcome Expectations n = 11 items Anderson et al., 2015; Bandura, 1997; Lent et al., 2008	1=Strongly disagree, 2=Disagree, 3=Somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6= Agree, 7 = Strongly agree • Allow me to obtain a highly desirable academic faculty position. • Help me to be recognized as an expert in my research area. • Be critically important for me to become a successful independent investigator. • Make me feel good about myself the next time I give a speech. • Inspire me to do great work. • Make me feel confident and secure about my future career. • Make me feel well prepared for my next presentation. • Propel me onto the next stages of my career. • Make me stand out from my peers who are on the job market. • Assist me in getting a job. • Be valuable to me now and later on.
	Training Satisfaction n = 7 items Rosenberg, 1979	1=Strongly disagree, 2=Disagree, 3=Somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6= Agree, 7 = Strongly agree • I am able to use workshop skills as well as most other people in the workshop. • All in all, I am inclined to feel that I failed this workshop. • I am able to do things in the workshop as well as most other students. • I took a positive attitude toward myself in this workshop. • On the whole, I am satisfied with myself in this workshop. • At times, I certainly felt useless in this workshop. • At times, I think I am no good at all in this workshop.
Behavior or Behavioral Intentions	Presentation Preparation n = 6 items	1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree • I relied on multiple kinds of information when I created my presentation. • I drew on the principles I learned in the workshop to create my presentation. • I put a lot of time into creating my presentation. • I put a lot of effort into creating my presentation. • I wasn't sure how to translate the workshop ideas into my presentation. • I'm unsure if I accomplished the goals of the workshop in my presentation.
	Likelihood of Using Learned Skills n = 3 items	1= Not very likely, 7=Highly likely) Based on the workshop you just took, what is the likelihood that you will… • Use the science communication skills the next time you make a speech? • Use the science communication skills the next conference you

		attend?
		• Use the science communication skills once on the job?

Supplemental Table 2. SCTE Scale Items Created to Measure Perceived Workshop Knowledge

Workshop #1: Science on Stage n = 8 items	• I am able to improvise and interact with the audience in a natural way. • When I am nervous during public speaking, I tell myself to focus on what I am doing in order to calm down quickly. • I know how to use nonverbal communication. • I know how to use nonverbal communication to connect with the audience. • I am able to apply acting techniques to science communication. • I will be able to connect with the audience in a natural way. • I think science communication is a good opportunity to act on stage. • I want to use acting exercises to help me improve my science communication.
Workshop #2: Visualization and Design n = 6 items	• I have a good knowledge of how to use design tools to help with science communication. • I know how to create effective visual presentations. • I am able to identify the nature of information and choose appropriate visual structure accordingly. • I understand basic principles of graphic/information design. • I know how to choose effective digital tools for communication. • I am able to tell good visual stories.
Workshop #3: Being Comprehensible and Engaging n = 10 items	• I understand the meaning of effective communication. • I am able to communicate science topics effectively. • I understand the limitations of audience thought processes and memory. • I am aware of audience biases. • I can set appropriate goals for my messages during science communication. • I am able to adapt messages to stay within my audiences' cognitive limits. • I make sure my audience gets the "take-home" message. • My knowledge on coping with biases and framing messages helps me to communicate more effectively. • I know how to design a message that an audience can retain. • I know how to account for audience biases in message design.
Workshop #4: Telling Your Story n = 6 items	• I know how to conduct audience research to communicate my science findings. • The knowledge of my audience is important for me in science communication. • I understand how to tailor messages for audiences. • I know how to tailor messages to fit audiences. • I am able to create tactics and strategies to reach an audience. • I know how to translate research findings to be understood by my target audience.

Note: These items were developed to measure the cognition construct, in addition to the ones listed in Table 1. Workshop items were measured on 6-point scales, where 1= false, 2 = mostly false, 3=more false than true, 4 = more true than false, 5=mostly true, 6=true

Supplemental Table 3. Correlations Between SCTE Measures and Personal Involvement After Each Workshop

	Personal Involvement	Perceived Workshop Knowledge	Attitudes Toward Coaching	Presentation Preparation
Workshop #1				
Personal Involvement	1			
Perceived Workshop Knowledge	.474*	1		
Attitudes Toward Coaching	0.092	-0.120	1	
Presentation Preparation	-0.034	0.254	-0.038	1.000
	1			
Workshop #2				
Personal Involvement				
Perceived Workshop Knowledge	.709**	1		
Attitudes Toward Coaching	0.160	-0.065	1	
Presentation Preparation	.622**	.822**	-0.225	1
	1			
Workshop #3				
Personal Involvement				
Perceived Workshop Knowledge	.407*	1		
Attitudes Toward Coaching	.417*	0.322	1	
Presentation Preparation	0.092	.502*	0.206	1
	1			
Workshop #4				
Personal Involvement				
Perceived Workshop Knowledge	0.396	1		
Attitudes Toward Coaching	.794**	0.252	1	
Presentation Preparation	0.078	0.248	-0.149	1.000

*p<.05
**p<.01