



# Starting STEM Inclusivity Early: A Workshop to Increase Undergraduate Teaching Assistants’ Diversity Awareness



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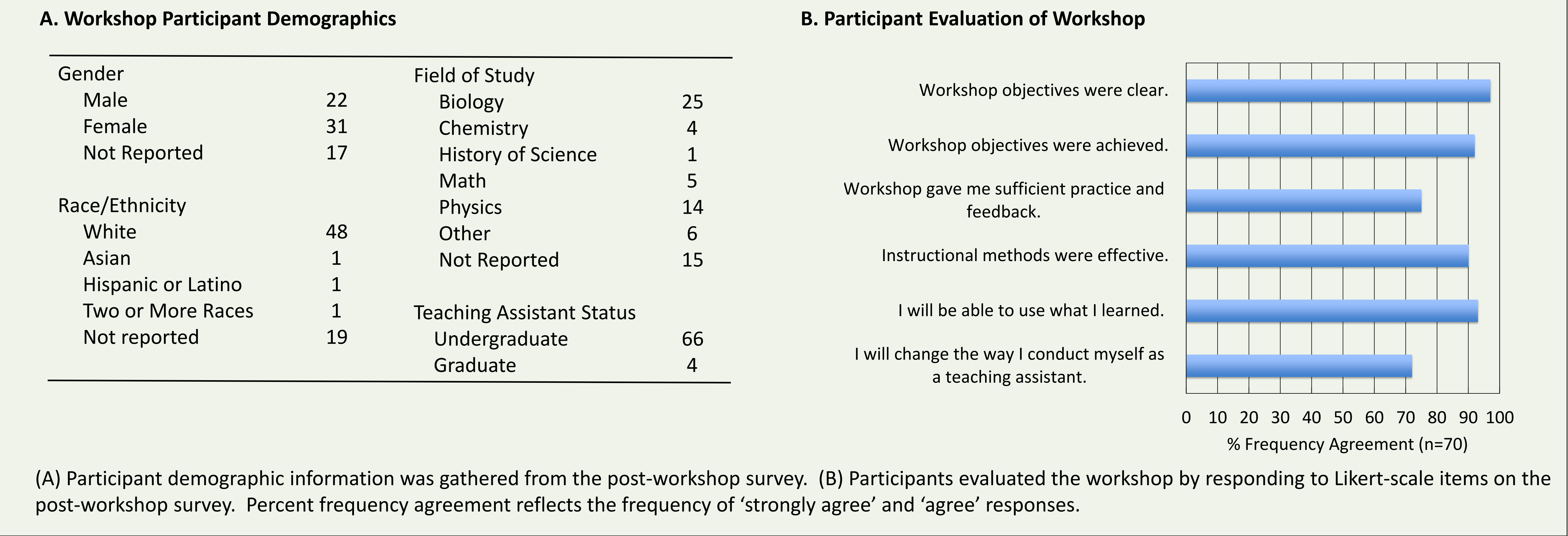
## 1. INTRODUCITON

Purpose: Lyman Briggs College (LBC) is a residential college for students studying science and society at Michigan State University (<http://www.lbc.msu.edu/>). Recent LBC initiatives are aimed at creating an inclusive learning environment that will increase the success and retention of underrepresented students. Since undergraduate teaching assistants are a key component of the LBC teaching teams in Biology, Chemistry, Physics, and Math courses, this initiative focused on inclusivity training for these undergraduate STEM teaching assistants (TAs).  
Methods: We developed, facilitated, and evaluated a diversity workshop for STEM undergraduate teaching assistants. The central goals of the workshop were to increase participant (1) understanding of diversity and (2) awareness of the relationship between diversity and teaching and learning.  
Assessment: Participants completed pre-workshop and post-workshop surveys that included both multiple choice and free response questions.

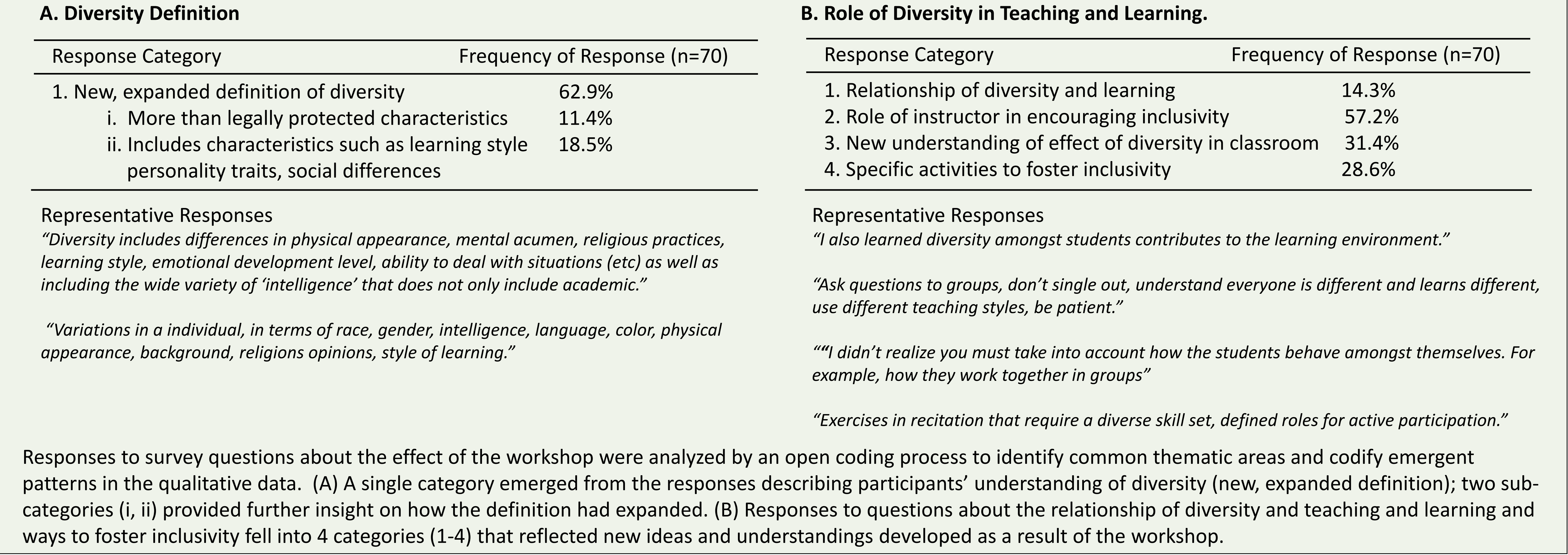
## 2. THE CREATING INCLUSIVE LEARNING ENVIRONMENTS WORKSHOP

Workshop Session	Activities and Goals	References Used in Development
Considering Diversity: How Students See Instructors (Worksheet & Discussion)	Encourage participants to develop self-awareness by considering how they will be viewed by students	•Miller, A. T. (2005). The multi-cultural lab: diversity issues in STEM classes,
Developing a Definition of Diversity: The Diversity Letter Game	Allow participants to construct their own understanding of diversity	•Diversity Resource Center™ <a href="http://imarketingsolutions.com/diversityresources/rc_sample/ice2.html">http://imarketingsolutions.com/diversityresources/rc_sample/ice2.html</a>
Diversity in the Classroom (Mini-lecture)	Engage participants in learning about the value of diversity and creating inclusive learning environments, including examples from the primary literature	•Handelsman, J. et al. (2007). <a href="#">Scientific Teaching</a> , New York: W. H Freeman and Company. •CIRTL Diversity Resources: <a href="http://www.cirtl.net/diversityresources">http://www.cirtl.net/diversityresources</a>
Unconscious Bias (Mini-lecture)	Make participants aware of the presence of unconscious bias by discussing examples from the primary literature	•Handelsman, J. et al. (2007). <a href="#">Scientific Teaching</a> , New York: W. H Freeman and Company.
Case Studies in Inclusive Teaching (Discussion)	Discuss and analyze difficult teaching problems and solve in groups	•CIRTL Case Studies: <a href="http://www.cirtl.net/CaseStudies">http://www.cirtl.net/CaseStudies</a> Case #2: Jeremy Geraci Case #7: Marie Louise Moreau
Learning with Disabilities (Mini-lecture & Discussion)	Expose participants to challenges faced by students with learning and physical disabilities  Familiarize participants with resources available for persons with disabilities	•Opening Doors Diversity Project: <a href="http://cc.brockport.edu/">http://cc.brockport.edu/</a> •Whoopi: Back to Broadway: The 20th Anniversary Show, 2005 (segment on the challenges of a physically disabled character) •MSU Resource Center for Persons with Disabilities: <a href="http://www.rcpd.msu.edu/">http://www.rcpd.msu.edu/</a> •MSU Learning Resources Center: <a href="http://lrc.msu.edu/">http://lrc.msu.edu/</a>
Forming Diverse Teams (Exercise)	Encourage participants to consider the diverse characteristics of students by challenging them to form the ‘most diverse group’.	•N/A
Diversity in Group Learning (Exercise)	Engage participants in a team building exercise which included analysis of their own interactions in terms of diversity and their use of constructive/destructive group behaviors.	•Karl Smith Workshops <a href="http://www.ce.umn.edu/~smith/links.html">http://www.ce.umn.edu/~smith/links.html</a> •CIRTL Diversity Resources •Brunt .(1993). Facilitation Skills for Quality Improvement. Quality Enhancement Strategies. Madison, WI

## 3. PARTICIPANTS AND POST-WORKSHOP ATTITUDES



## 4. QUALITATIVE ANALYSIS OF DIVERSITY AWARENESS



## 5. CONCLUSIONS AND FUTURE DIRECTIONS

- The Creating Inclusive Learning Environments Workshop is a valuable model for professional development of undergraduate STEM TAs. Participants were exposed to diversity and inclusivity issues that are not typically part of a STEM curriculum.
- Participants evaluated the workshop session positively, with a majority indicating that they would change the way they conduct themselves as a teaching assistant.
- A majority of participants described newly expanded definitions of diversity and were able to articulate the role of the instructor in creating an inclusive learning environment.
- More work is needed to help TAs develop their own understanding of how diversity enhances teaching and learning in science.

## 5. ACKNOWLEDGEMENTS

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