

Design Considerations for Implicit Bias Training

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This paper identifies the issues with implicit bias training (IBT) and its ineffectiveness to reduce biased behavior. We seek to transform implicit bias training from introductory and reactive information sessions to training that supports students in obtaining fundamental skills that promote behavior change. We seek to design and develop a professional open educational resource (OER) instruction to support IBT for cross-disciplinary organizations that incorporate more behavior-focused implicit bias training within their diversity, equity, accessibility, and inclusion (DEAI) initiatives.

Design considerations for implicit bias training (IBT)

Implicit bias training (IBT) is increasingly presented as a solution to issues related to diversity, equity, and inclusion in organizations (see FitzGerald et al., 2019). In general, the goal of IBT is to inform participants what implicit bias is and how it operates to reduce individual bias. However, research on the effectiveness of IBT indicates that these trainings do little more than raise awareness; few have successfully changed participant behavior (Forscher et al., 2019; Gleicher et al., 2022). For IBT to move beyond awareness, it must be intentionally designed to support behavioral change. Currently, there is little guidance in the literature about how to design IBT for behavior-based outcomes.

Below, we propose a framework based on social cognitive theory and metacognition that addresses how to support behavioral change in IBT. Using this framework, we propose several design considerations for IBT. Ultimately, we plan to implement these design considerations in an open educational resource (OER) IBT. The purpose of this work is to meaningfully impact IBT designs to meet the critical needs of society.

Theoretical framework

Social cognitive theory (SCT) and behavior change

Bandura (2001) proposed that behavior is the result of interactions between an individual's self-efficacy, outcome expectations, sociostructural factors, and goals. Self-efficacy refers to an individual's belief in their ability to complete a

task. Behavioral change may be brought about through changes to an individual's perceived self-efficacy, provided appropriate skills and incentives are also present (Bandura, 1977; 2001). One way to support learner's perceived self-efficacy is through the development of metacognitive skills (Cera et al., 2013).

Metacognition, schema theory, and knowledge acquisition

Metacognition refers to how one monitors, controls, and evaluates their cognition. There are several components to metacognition including metamemory, metacomprehension, self-regulation, schema training, and transfer (Osman & Hannafin, 1992). Metacognitive processes both impact and are impacted by one's perceived self-efficacy. For example, self-regulation involves not only the ability to understand the why and how of one's thinking, but also the motivation to take control of this process (Zimmerman, 2001). This motivation relies, in part, on one's self-efficacy. Similarly, schema training focuses on making learners aware of their own schemas, as well as how these schemata were/are formed. This allows learners to see how their prior knowledge and experiences influence the way they make sense of new information and experiences. As learners gain these metacognitive skills, they become more critical and flexible in the application of knowledge (i.e., behavior) (Spiro, 1988).

Implicit bias and implicit bias trainings (IBT)

The National Institutes of Health defined implicit bias as "a form of bias that occurs automatically and unintentionally, that nevertheless affects judgments, decisions, and behaviors" (NIH, 2022). Implicit bias refers to the ways attitudes, stereotypes, or prejudices influence our behavior and decision making towards certain social groups. Therefore, the goal of implicit bias training is to promote more equitable and inclusive behavior (NIH, 2022). However, IBT programs do not reliably achieve this goal (FitzGerald et al., 2019). Reviews of the literature on IBT revealed that a majority of IBT implementations involved single-session, knowledge-based interventions (Forscher et al., 2019; Gleicher et al., 2019). Additionally, assessments of IBT programs rarely included behavioral outcomes, or longitudinal data (FitzGerald et al., 2019). Related to this, little attention has been paid to factors that may influence changes in behavior, such as participant defensiveness and/or perceived lack of agency around implicit biases (Vitriol & Moskowitz, 2021).

Design considerations to address current gaps in IBT

Bandura (1977) defined four sources of efficacy expectations: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Each source influences how an individual perceives their ability to complete a particular task, i.e., their self-efficacy. By attending to each of these four sources, IBT can positively impact individual self-efficacy around issues of bias, thereby impacting behavior. We pulled from both Bandura's social cognitive theory of behavior change (1977; 2001) and the components of metacognition (Osman & Hannafin, 2012) to develop design considerations that attend to each source of efficacy expectations (See Table 1).

Table 1

Design Considerations for IBT by Efficacy Expectation Source (Bandura, 1977)

Efficacy Source	Expectation Definition	Design Considerations for IBT
Performance accomplishments	Experiencing or practicing the behavior change	<ol style="list-style-type: none"> 1. Support development of metamemory (I know how I think and feel) 2. Support development of metacomprehension (I can regulate my thoughts and feelings) 3. Include opportunities for the identification of implicit bias behavior 4. Provide opportunities to develop a plan for specific adaptations (changes in behavior)

Efficacy Source	Expectation Definition	Design Considerations for IBT
Vicarious experience	Observing the behavior change in others	5. Share real world experiences of bias and harm (case studies) 6. Humanize/relate the experiences of those who experience bias to the individual learner
Verbal persuasion	Encouragement and constructive feedback during and after practicing the behavior change	7. Include messaging that supports agency – e.g., implicit does not mean you cannot enact change. 8. Provide constructive and timely feedback
Emotional arousal	Attention to the emotions during the development of the behavior change	9. Explicitly attend to the emotional aspects of bias training (e.g., defensiveness, anger) 10. Provide opportunities to externally visualize emotions around IBT to reduce avoidance behaviors

Instructional strategies that support IBT design considerations

Concept mapping is a key strategy that supports the design considerations detailed in Table 1. Concept mapping demonstrates relationships between ideas, and, as such, is a useful strategy in developing and restructuring schemata (Neumann & Kopcha, 2018). Concept mapping provides a visual representation of a learner's current schema – i.e., the relationships they see between various pieces of knowledge. Engaging learners in reflective discussion around their concept maps may support learners in the development of metamemory (design consideration #1) and metacomprehension (#2) skills. These skills in turn support learners to make connections between their current schemas and newly introduced content knowledge around implicit bias (#3). When coupled with constructive feedback (#8), these concept maps may support learners to not only identify biased behaviors, but also to identify the situational influences that trigger these behaviors and decide to notice and change these behaviors in the future (#4).

Similarly, concept maps can attend to the emotional aspects of IBT that impact its ability to change behavior (#9). Concept maps allow for the adverse thoughts and feelings associated with bias to be externalized (#10). This can be particularly useful for learners who experience less bias, who may avoid and/or become unresponsive during IBT (Vitriol & Moskowitz, 2021). Externalizing adverse feelings associated with bias creates space for critical analysis. Again, when coupled with constructive feedback (#8), emotional concept maps may support learners in recognizing the human impact of biased behavior (#5, #6) while recognizing this behavior is NOT inevitable (#7).

Conclusion

This paper addresses both the reflective and the transformative aspects of AECT's 100-year convention theme. We reflected on foundational learning theories – social cognitive and schema theories – and asked how they can support the present-day needs of our diverse yet inequitable society. We then proposed design considerations to develop the next evolution of implicit bias training. Overall, this work aims to transform IBT from an awareness focused, DEAI checklist approach towards one that supports continuous and sustainable behavior change.

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