

Reaction to Diversity Training: The Role of Epistemic Communication Constructs

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The purpose of this study was to determine if psychological variables (separate knowing, connected knowing, and cognitive flexibility) are linked to reaction to diversity training. Could these psychological variables account for group differences? One hundred thirty-four business majors completed measures of these psychological variables. Analyses revealed that students with a stronger propensity toward connected knowing valued diversity training more. Students with a stronger propensity toward separate knowing devalued diversity training. When connected knowing and separate knowing served as covariates, demographic group differences were no longer significant. This suggests that connected knowing and separate knowing should be considered in diversity training modules.

Keywords: diversity training, connected knowing, separate knowing, epistemic communication

INTRODUCTION

Today we live in a world that demands interaction among people who are diverse. Simultaneously, there is strife among individuals who cannot or will not understand others who are not part of their own in-group. In the 21st Century, the social ambience is changing. Diversity awareness and presence of the social milieu is growing. For example, people are more open to speak about their ethnicity, gender identity, and economic status. Educational institutions, as well as business organizations (e.g., Starbucks) have seen the need for diversity education to teach people to understand others who are different than themselves (McGregor, 2017). Although the effort of diversity training is admirable, it may not necessarily be effective if the learners are not receptive (Bergman, 2012; Dobbin & Kalev, 2016; Lipman, 2018). Connected knowing, separate knowing, and cognitive flexibility are three variables linked to openness to new ideas, group interaction, and diversity interactions. The purpose of this study is to determine if these psychological variables predict people's attitudes towards diversity education.

The constructs of connected knowing and separate knowing are developed from epistemic (also known as epistemological) research. Originally research on people's beliefs about the nature of

knowledge, epistemic beliefs, focused on beliefs about the certainty, source, structure, and justification of knowledge (Perry, 1968). For example, one could believe that knowledge is unchanging, simple, and handed down by authority. Conversely, one might believe that knowledge continuously evolves, is complex, and derived from a combination of reason and evidence.

Many theorists suggest that people pass through developmental stages (Baxter Magolda, 1992; Kitchener & King, 1981). For example, people may move from simple, certain beliefs, to complex evolving beliefs (Kitchener & King, 1981). These beliefs have been linked to comprehension and metacomprehension (Schommer-Aikins, 2004). Although all stages of beliefs have situation appropriateness, it is assumed that earlier stages support basic knowledge and advanced stages support higher order, evaluative thinking.

In later years research led to the uncovering of people's beliefs in how communication should be epistemically processed (Belenky, Clinchy, Goldberger, & Tarule 1997) and are generally referred to as ways of knowing. These ways of knowing relate to people's reactions to assertions that they encounter. For example, they can respond with unquestioning acceptance of authority figures or they can assume that all opinions are equally valid. There are two ultimate beliefs that are thought to support higher order thinking; each with its own lens of processing, connected knowing (CK) and separate knowing (SK). People who have strong propensity toward CK will take other's perspective first, essentially walk in their shoes, then they will evaluate the assertion. People who have a strong propensity toward SK, will argue against other's perspective first. Research indicates that these are gender related (Galotti, Clinchy, Ainsworth, Lavin, & Mansfield, 1999), that is, women have a stronger propensity toward CK and men have a stronger propensity to SK. However, as the theory of Ways of Knowing has developed, it is believed that people with the keenest sense of evaluation use both ways of knowing depending upon the situation (Clinchy, 2002; Schommer-Aikins, 2004).

Both CK and SK have been linked to people's learning habits and reaction to their out groups. For example, people with a strong propensity toward CK prefer to study in groups, have interactions with diverse populations, and have a better understanding of children with special needs (Enns, 1993). People with a strong propensity toward SK are more willing to argue (Schommer-Aikins & Easter, 2009). Both CK and SK have been linked to study habits that encourage deep analytical thinking (Schommer-Aikins & Easter, 2016), better academic performance as measured by GPA (Schommer-Aikins & Easter, 2006), and in conjunction with beliefs in complex knowledge and gradual learning, better performance on mathematical concepts (Schommer-Aikins & Duell, 2013; Schommer-Aikins & Easter, 2016).

Cognitive flexibility (COGFLEX), as it is used in this study, refers to the propensity to be open to modifying one's thinking when there is a contextual need for change (Schommer-Aikins, 2011). It implies that one is always vigilant in detecting a need for change. However, it also assumes that change is not made without thoughtful reflection. COGFLEX in conjunction with SK and CK has been linked to productive learning habits (Schommer-Aikins & Easter, 2016).

Based on the previous findings, it seems plausible that CK, SK, and COGFLEX may contribute to people's attitudes toward diversity training. People with a propensity toward SK are likely to have productive study habits and hence would presumably benefit from instruction on diversity. People with a strong propensity to COGFLEX are likely to willing to explore customs of a variety of cultures. And people with a propensity toward CK are likely to psychologically walk on the shoes of others different than themselves.

In the United States, diversity training often addresses two major differences, gender and ethnicity. Diversity training has been a part of institutional efforts to make the workplace more amenable and defensible since World War II (Berman, 2012). During the war, women filled jobs that the men who left their jobs to join the military would normally do. When the men returned to their jobs, they felt resentment that women took their jobs. Recently, women have come forth to report that their business superiors have engaged in sexual misconduct by using their power to force sexual favors. This revelation and rebellion to such behavior has become known as the "Me Too" movement (Garcia, 2017).

Efforts to improve relationships between ethnic groups is driven by an effort to improve diversity in hiring people, admitting students to colleges, and as decreasing police racial profiling. In most recent

times, incidents continue to occur indicating the need to improve understandings between ethnic groups, for example, unarmed Black males are killed by police and major stores (e.g., Starbucks) call the police on innocent Black males waiting for a friend (McGregor, 2017).

These social environments suggest that the two major groups of people most likely see diversity training as confrontational, if not detrimental. If the training focuses on ethnicity, then Caucasians may feel more defensive. If, however, the training focuses on gender, men may more likely to feel more defensive. (Lipman, 2018). This does not mean that all men or all Caucasians would feel this way. Rather, a subset within these groups may feel this way. What makes some of these people think negativity about diversity training while others may be more open to diversity or diversity training? Could it be that some of these people have less propensity for CK, SK, and/or COGFLEX?

This study addresses four main questions: (a) Do the three epistemically-related variables (CK, SK, and COGFLEX) predict attitudes towards diversity training?; (b) Do Caucasians (compared to other ethnic groups) have less favorable views of diversity training?; (c) Do men have a less favorable views of diversity training?; (d) Will some of the epistemically related variables account for group differences? This is valuable to know, since the epistemically-related variables can potentially be modified with instruction (Enns, 1993). Moreover, future training may need to focus on the psychological variables as opposed to group membership.

METHODOLOGY

Participants

One hundred thirty-four college students majoring in business participated in this study. Gender distribution was somewhat balanced (females = 57 males = 77) and ages ranged from 18 to 44 (Mean age = 23). Students were predominately upper division undergraduates (freshman = 6, sophomores = 24, juniors = 75, seniors = 28, masters = 1). Ethnicity was diverse (African-American = 7, Asian-American = 47, Euro-American = 29, Latino/Hispanic = 31, Middle Eastern = 3, Other = 17). Students were given extra credit for participation in this study.

INSTRUMENTS

COGFLEX was measured using an instrument developed by Martin and Rubin (1995). This instrument consists of 12 items assessing individuals' willingness to adapt to new situations (e.g., "In any given situation, I can act appropriately."), being aware of varying forms of communication (e.g., "I can communicate an idea in many different ways."), and having self-confidence in being flexible (e.g., "I have self-confidence necessary to try different ways of behaving."). Test-retest reliability is reported at .83 (Martin & Rubin, 1995). Predictive validity is demonstrated in research indicating scores on this measure predict responsiveness to situational needs (Martin & Anderson, 1998).

Ways of knowing were measured with the Galotti, et al. (1999) questionnaire referred to as the Attitudes Toward thinking and Learning Survey (ATTLS). Students responded to 10 SK statements (e.g., "It's important for me to remain as objective as possible when I analyze something.") and 10 CK statements (e.g., "I try to think with people instead of against them.") Inter-item correlations from each scale are .83 (CK) and .77 (SK). Details of psychometric properties and instrument development can be seen in (Galotti, et al., 1999).

Attitudes toward diversity training (DT Valuable) was measured with a 10-item scale developed by Schommer-Aikins (unpublished research). Half the items described diversity training as a positive process with admirable goals. The remaining items described diversity training as detrimental. Students responded on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree) to statements such as: "Diversity training in schools will generate leaders for the future." and "Diversity training in schools does more damage than good". This scale was piloted tested with over 200 students. Evidence of predictive validity is shown in the DT Valuable scores correlate with the Miami University Diversity Awareness Scale (Mosley-Howard, et al, 2011) ($r = .76$) and inter-item correlation as strong, Cronbach alpha = .90.

PROCEDURE

Students completed the all questionnaires with online survey software, Qualtrics. The order of measurements was counterbalanced by changing the order of surveys randomly to ensure that there were no effects due to order of surveys.

RESULTS

Scores for each measure were calculated according to the researchers who developed the technique. Examination of Cronbach alphas indicated that the measures of ways of knowing were acceptable (CK alpha = .84; SK alpha = .72, COGFLEX = .84; DT Valuable alpha = .90). Descriptive statistics of these measures are shown in Table 1. Zero order correlations among key variables are shown in Table 2.

TABLE 1
DESCRIPTIVE STATISTICS OF KEY VARIABLES

Variable	Mean	SD	Minimum	Maximum
DT Valuable	30.04	8.11	5.00	42.00
CK	53.94	8.58	20.00	70.00
SK	46.35	8.17	27.00	68.00
COGFLEX	4.22	.57	2.67	5.67

TABLE 2
CORRELATIONS AMONG KEY VARIABLES

	CK	SK	COGFLEX
DT Valuable	.40	-.24	.19
CK		.35	.31
SK			.08

Note. All correlations are significant at $p < .01$.

In order to address the question, Do the three epistemically-related variables (CK, SK, and COGFLEX) predict attitudes towards diversity training? A multiple regression was conducted. DT Valuable served as the criterion variable. And the three epistemically-related variables competed for entry as predictor variables. The variable that accounted of the most variance entered the equation first, followed by the variable accounting for the next most variance. Two variables entered the equation, CK entered first: $F(1, 122) = 24.48$. $p < .001$, $R^2 = .17$, $b = .38$. SK then entered the equation: $F(1, 121) = 35.59$. $p < .001$, $R^2 = .19$, $b = -.45$. The more students adhered to CK, the more they valued diversity training. The more students adhered to SK, the less they valued diversity training.

The next two questions, Do Caucasians (compared to other ethnic groups) have less favorable views of diversity training? and Do men have a less favorable views of diversity training? were addressed with a two-way ANOVA. DT Valuable served as the dependent variable. Gender and ethnic group (Caucasians versus all other ethnicities) served as independent variables. There was a significant main effect for gender: $F(1, 124) = 9.09$. $p < .003$, $\eta^2 = .07$. There was a significant main effect for ethnic group: $F(1, 124) = 5.37$. $p < .02$, $\eta^2 = .04$. Men and Caucasians valued diversity training less compared to women and other ethnic groups. The interaction between these two variables was not significant.

To answer the final question: Will some of the epistemically related variables account for group differences? An analysis of covariance (ANCOVA) was conducted using CK and SK scores as covariates. If group differences would be reduced or eliminated once variance due to CK and SK were taken out of the equation, it would indicate that not all Caucasians and not all men devalue diversity training. Instead,

it would suggest that subgroups within dichotomous groups could be heavily influence by their epistemically-related beliefs rather than simple group identification.

Results from the ANCOVA eliminated both group differences after the effects of CK and SK were taken into account. CK was significant: $F(1, 124) = 32.80. p < .001, \eta^2 = .21$. SK was significant: $F(1, 124) = 25.30. p < .001, \eta^2 = .17$. Neither gender nor ethnic group were significant. Descriptive statistics for these analyses are shown in Table 3.

TABLE 3
DESCRIPTIVE STATISTICS OF VALUING DIVERSITY TRAINING BY GROUPS

Group	ANOVA		ANCOVA	
	Mean	SD	Adjusted Mean	Std. Error
Men	27.64	8.28	28.63	6.92
Women	33.43	6.65	30.73	1.22
Caucasian	26.61	9.52	28.69	1.34
Non-Caucasian	31.03	7.47	30.67	1.67

DISCUSSION

These results indicate that epistemically-related variables predict attitudes toward diversity training. The more people have a proclivity toward CK, the more they value diversity training. This is consistent past research that indicates CK is linked to working in groups (Enns, 1993) and openness toward interactions with diverse populations.

In contrast, the more people have a proclivity toward SK, the less they value diversity training. Past research has been mixed regarding the links between SK and other variables that are tangentially related to diversity training. For example, stronger propensity toward SK has been linked to greater willingness to argue (Schommer-Aikins & Easter, 2009) and better study habits (Schommer-Aikins & Easter, 2016). Better study habits might indicate a better learner. However, a stronger inclination to argue, may indicate a stronger inclination to resist the content of diversity training.

These results also indicated group differences. Caucasians (in contrast to non-Caucasian group in this study) valued diversity education significantly less. Men (in contrast to women) also valued diversity education much less. These findings may reflect the possibility that these two groups experience a greater burden on being the target of change. In most diversity training modules, Caucasians are expected to understand perspectives of their out-groups and to acknowledge their implicit privileges. Men are expected to understand the perspectives of women and acknowledge that their behavior may be inappropriate, unethical, and/or illegal.

Perhaps the most important finding is that the epistemically-related variables accounted for group differences. When CK and SK were included as covariates, both group differences were no longer significant. What this suggests is that simply being Caucasian or simply being male does not predetermine one's attitude toward diversity training. Rather, two individual variables may help or hinder one's reaction toward diversity training. If people have an inclination toward taking other's perspectives in general, they are perhaps less threatened to be in training which imposed the views of their out-group. However, if people have an inclination to argumentation in general, they may spend more effort in doubting the training and ultimately perceive other's perspectives as punitive or irrelevant.

It should be kept in mind that theoretically, the most evaluative thinking is supported by the use of both CK and SK. The challenge is determining the conditions in which way of knowing should be emphasized. And perhaps the most mentally challenging is the switch between both ways of knowing within a single situation.

If people come to diversity training with strong SK inclinations and the absence of CK to balance their learning, then it is likely they will experience resentment. Bias will remain cloaked in the undercover of microaggressions and forced political correctness.

What does this mean for diversity training? Some have suggested to eliminate this kind of training (Berman, 2012; Dobbin & Kaley, 2016). The complete rejection of diversity training seems like an overreaction from people who resented the experience. It's like saying, let's not have fire drills, since no one takes them seriously anyway and fires will happen no matter what.

One possibility is to modify diversity training such that there is a safe environment for all participants to share their perspective of the world, ensuring that the diversity training takes the perspective of those being targeted. More multicultural interactions in enjoyable situations may provide less arguing and more sharing.

Another possibility is to instill both CK & SK before the onset of diversity training, per se. Both of these epistemic beliefs can be modified with instruction (Enns, 1993). If these two ways of knowing are taught in less emotional or political academic domains, it may be possible to have both ways of knowing applied to diversity training.

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