

Cultural Awareness, Belonging, and Employee Engagement: Criterion Validity Evidence for the Cultural Awareness and Belonging Survey

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[Abstract] This study examines the predictive relationship between cultural awareness, belonging, and employee engagement using the validated Cultural Awareness and Belonging Survey (CABS). Drawing on the theory of generative interactions, a standard multiple linear regression was conducted with a sample of 632 U.S.-based employees. The CABS Embrace and Enact subscales jointly explained 39.4% of the variance in engagement ($R^2 = .394$, $F(2, 629) = 204.753$, $p < .001$), with both subscales serving as significant independent predictors. Findings advance the criterion validity of CABS and offer practical implications for organizational investment in diversity, equity, and inclusion initiatives.

[Keywords] cultural awareness, belonging, employee engagement, DEI, criterion validity, CABS, generative interactions

1. Introduction

Organizations worldwide have increased their investment in diversity, equity, and inclusion (DEI) initiatives over the past decade, yet a persistent measurement problem limits their ability to evaluate whether those investments produce meaningful workforce outcomes (Hunt et al., 2023; Schwartz et al., 2020). Most DEI measurement efforts stop at awareness or sentiment, leaving leaders without validated tools to connect cultural attitudes and belonging behaviors to downstream performance indicators such as employee engagement. This gap is both a research problem and a practical one: under 15% of organizations believe they are prepared to assess how well their DEI efforts perform (Schwartz et al., 2020).

Muchnick et al. (2024) addressed part of this problem by developing and validating the Cultural Awareness and Belonging Survey (CABS), a two-dimensional instrument grounded in the theory of generative interactions (Bernstein et al., 2020). The CABS Embrace subscale measures cognitive and attitudinal dimensions of cultural awareness, while the Enact subscale measures behavioral participation in DEI efforts. Both subscales demonstrated strong psychometric properties across a sample of 403 U.S.-based employees, with confirmatory factor analysis fit indices well within acceptable thresholds (CFI = 0.98, RMSEA = 0.05).

The present study extends that foundation by testing whether CABS scores predict a consequential organizational outcome: employee engagement. Specifically, this study examines the extent to which Embrace and Enact jointly and independently explain variance in engagement as measured by the Enhanced Engagement Nurtured by Determination, Efficacy, and Exchange Dimensions instrument (EENDEED; Lartey & Randall, 2022). Establishing this predictive relationship provides criterion validity evidence for CABS and supports the argument that cultural awareness and belonging are not merely attitudinal constructs but antecedents of engagement that organizations can actively cultivate.

2. Background and Theoretical Framework

The present study sits at the intersection of three theoretical traditions: the theory of generative interactions, Social Exchange Theory, and the organizational literature on psychological safety. Together these frameworks explain not only why cultural awareness and belonging should relate to employee engagement, but why that relationship operates through both attitudinal and behavioral pathways, and why demonstrating it empirically advances management theory beyond prior instrument validation work.

2.1 Theory of Generative Interactions

The theory of generative interactions (Bernstein et al., 2020) provides the foundational framework for this study, consistent with the original CABS validation. The theory posits that durable inclusion requires overcoming exclusionary dynamics, including self-segregation, communication apprehension, and stereotyping, through the development of adaptive cognitive skills and sustained engagement in positive organizational interactions. Critically, Bernstein et al. (2020) argued that inclusion is not achieved through awareness alone but requires contextually embedded organizational practices that move individuals from cognitive recognition of diversity toward active behavioral participation in inclusive culture. This distinction maps directly onto the CABS two-factor structure: Embrace captures the cognitive and attitudinal dimension of cultural awareness, while Enact captures the behavioral dimension of DEI participation. The present study extends this framework by testing whether movement along the awareness-to-enactment continuum predicts a downstream organizational outcome, employee engagement, that generative interactions theory implies but does not directly measure.

Warren and Warren (2023) furthered this framework by demonstrating that allyship behaviors, wherein members of dominant groups actively advocate for equity, strengthen organizational inclusion in durable and measurable ways. Their work reinforces the theoretical primacy of behavioral enactment over attitudinal awareness alone, which the present study's beta coefficients support empirically. Leslie and Flynn (2024) complemented this contribution by showing that diversity cognitions, the beliefs and ideologies through which individuals perceive DEI, shape organizational climate in ways that move employees along a directional continuum from awareness toward belonging. These extensions of generative interactions theory establish the conceptual pathway from CABS dimensions to engagement outcomes and situate the present study within an active and developing theoretical tradition.

2.2 Social Exchange Theory

Social Exchange Theory (SET; Blau, 1964; Cropanzano et al., 2016) provides a complementary mechanism through which cultural awareness and belonging translate into employee engagement. Originally developed by Blau (1964), SET proposes that social relationships are sustained through reciprocal exchanges in which individuals respond to perceived support, care, and organizational investment with attitudes and behaviors that reinforce those relationships. Cropanzano et al. (2016) refined this framework for contemporary organizational research, arguing that SET's explanatory power lies in its capacity to specify the antecedents of reciprocal behavior, not merely describe its occurrence. In organizational contexts, employees continuously evaluate the quality of relational and structural support they receive and calibrate their own investment accordingly.

Within this framework, organizational DEI enactment behaviors, the visible and structural commitments that the CABS Enact subscale measures, function as organizational signals of investment in employees as whole persons. When employees perceive that their organization actively appreciates diversity, provides DEI education, and promotes equitably across cultural backgrounds, SET predicts that employees interpret those behaviors as evidence of genuine organizational investment and reciprocate with greater engagement. This reciprocal dynamic is consistent with the stronger predictive weight of Enact relative to Embrace in the present study: visible organizational behavior carries more exchange value than attitudinal climate alone because it represents a concrete and observable commitment rather than a general orientation.

Embrace also functions within SET logic. Employees who perceive their organization's cultural awareness efforts as personally relevant, and who feel more accepted as a result of those efforts, experience a form of relational validation that SET predicts will generate reciprocal investment. The independent contribution of Embrace to engagement variance, above and beyond Enact, is consistent with this argument. Organizations that cultivate both CABS dimensions are, within SET terms, investing in employees through both structural behavior and relational climate, and the engagement returns reflect both channels of investment simultaneously.

2.3 Psychological Safety

A third theoretical bridge connects cultural awareness and belonging to engagement through the construct of psychological safety. Edmondson (1999) defined psychological safety as the shared belief that the interpersonal environment is safe for risk-taking, voice, and authentic participation. Singh et al. (2013) demonstrated that DEI-related constructs hold the key to racial differences in employee performance through psychological safety as a mediating mechanism, implying that cultural awareness and belonging do not operate on engagement directly but may do so partly by creating the conditions under which employees feel safe enough to invest their full cognitive, emotional, and behavioral resources in their work roles.

This theoretical connection has direct implications for interpreting the present study's findings. The CABS Embrace subscale, which measures employees' perceptions that their organization's DEI efforts make them feel more accepted and less likely to leave, captures precisely the psychological conditions Edmondson (1999) identified as prerequisites for full engagement. Enact, which measures organizational behaviors such as DEI education and culturally inclusive promotion practices, creates the structural conditions that sustain psychological safety at scale. Together, Embrace and Enact may function as proximal antecedents of psychological safety,

which in turn enables the engagement outcomes this study measures. Future research examining psychological safety as a mediator of the CABS-engagement relationship would provide a more complete account of the mechanism through which DEI investment translates into workforce performance.

2.4 Theoretical Contribution of the Present Study

Taken together, these three frameworks establish the theoretical basis for expecting that cultural awareness and belonging predict employee engagement, and they clarify why demonstrating that relationship empirically advances management theory. Prior DEI research has largely treated organizational cultural climate as a unidimensional construct, leaving the distinct contributions of attitudinal awareness and behavioral enactment unmeasured and theoretically conflated. The CABS two-factor structure makes that distinction measurable, and the present study demonstrates that it is also consequential: Embrace and Enact carry separable and independent predictive weight for engagement, consistent with the distinct theoretical mechanisms that SET, generative interactions theory, and psychological safety research each assign to them. This finding moves CABS from a descriptive instrument to one with demonstrated criterion validity, and it provides organizations with a theoretically grounded mechanism for connecting DEI investment to a workforce outcome they actively track, report, and manage.

3. Method

3.1 Participants and Sample Design

The sample initially consisted of 650 U.S.-based employees recruited through Saurage Research, Inc. using an online survey platform. Screening criteria required active employment with a supervisor or manager, ages between 21 and 64, and willingness to provide demographic information. Participants were balanced across states and screened to ensure representativeness across gender, race and ethnicity, industry, organization size, income, education level, and remote work status. The survey instrument captured the full spectrum of remote work arrangements, from fully remote to fully on-site, ensuring applicability across both traditional and distributed work contexts. Demographic variables collected included education level, annual household income, and employment tenure. Prior to analysis, 18 cases were removed as outliers based on standardized residuals exceeding ± 3.0 , yielding a final analytic sample of 632 participants.

3.2 Instruments

Cultural awareness and belonging were measured using the Cultural Awareness and Belonging Survey (CABS; Muchnick et al., 2024), a validated 12-item instrument scored on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The Embrace subscale (6 items) measures employees' perceptions of their organization's cultural awareness efforts and their personal identification with those efforts. The Enact subscale (6 items) measures behavioral and organizational dimensions of DEI participation. Both subscales demonstrated strong internal consistency in the validation study (Cronbach's $\alpha = .91$ for both) and in the current sample (Embrace $\alpha = .889$, Enact $\alpha = .887$), with confirmatory factor analysis supporting the two-factor structure (CFI = 0.98, TLI = 0.97, RMSEA = 0.05, SRMR = 0.02). The CABS is listed in PsycTESTS and PsycINFO.

Employee engagement was measured using the EENDEED (Lartey & Randall, 2022), a validated nine-item instrument designed to measure engagement in both traditional workplace and remote employee contexts. The EENDEED captures engagement across three dimensions: determination (intrinsic motivation and authentic self-expression), efficacy (competence and control over work outcomes), and exchange (interpersonal investment in workplace communication). The instrument is scored on a 5-point Likert scale consistent with the CABS response format, and a mean composite score was computed across all nine items. Internal consistency in the current sample was acceptable (Cronbach's $\alpha = .803$). The EENDEED is listed in PsycTESTS and PsycINFO.

Internal consistency estimates for all three scales are reported in Table 1. Coefficient omega is reported alongside Cronbach's alpha because omega does not require the assumption of tau-equivalence, that is, of equal item loadings on the underlying construct (McNeish, 2018). The two coefficients converged closely for every scale, and all estimates exceeded the .80 threshold conventionally regarded as acceptable for research instruments, with the two CABS subscales approaching the values reported in the original validation study (Muchnick et al., 2024). Reliability was estimated at the item level in JASP using the 6 Embrace items, the 6 Enact items, and the 9 EENDEED items, respectively.

Table 1

Internal Consistency Reliability and Descriptive Statistics for Study Scales (N = 632)

Scale	Items	<i>M</i>	<i>SD</i>	α [95% CI]	ω [95% CI]
Embrace (CABS)	6	3.40	0.77	.889 [.870, .908]	.889 [.876, .903]
Enact (CABS)	6	3.72	0.73	.887 [.869, .905]	.888 [.874, .901]
Engagement (EENDEED)	9	3.73	0.60	.803 [.778, .827]	.807 [.785, .830]

Notes. *M* = scale mean; *SD* = standard deviation; α = Cronbach's coefficient alpha; ω = McDonald's coefficient omega; CI = confidence interval. Embrace and Enact are subscales of the Cultural Awareness and Belonging Survey (CABS; Muchnick et al., 2024); Engagement was measured with the EENDEED (Lartey & Randall, 2022). All items were scored on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Estimates were computed in JASP (Version 0.17.2).

3.3 Procedure

Data was collected through Saurage Research, Inc.'s online survey platform. Participants completed a consent form prior to survey access, followed by screening and demographic questions. The full survey required approximately 10 to 15 minutes. CABS and EENDEED items were randomized within their respective sections to minimize order effects. The final dataset was provided by Saurage Research, Inc. upon completion of data collection.

3.4 Analytic Strategy

A standard multiple linear regression was conducted in JASP (version 0.17.2; JASP Team, 2023) to examine the extent to which Embrace and Enact predicted EENDEED engagement scores. Mean composite scores were computed for Embrace, Enact, and Engagement prior to analysis. Internal

consistency was estimated for each scale at the item level, and zero-order Pearson correlations were computed among the three composites. Assumptions of linearity, homoscedasticity, independence of residuals, normality, and absence of multicollinearity were assessed using residual plots, a Q-Q plot, variance inflation factors (VIF), tolerance values, condition indices, and the Durbin-Watson statistics. Because all measures were self-reported by the same respondents at a single time point, Harman's single-factor test was conducted on the full item pool to evaluate the plausibility of common method variance (Podsakoff et al., 2003), and the full component structure was inspected to determine whether predictor and criterion items separated by construct. Unstandardized coefficients are reported with 95% confidence intervals, and effect sizes are reported as squared semipartial correlations and Cohen's f^2 (Cohen, 1988).

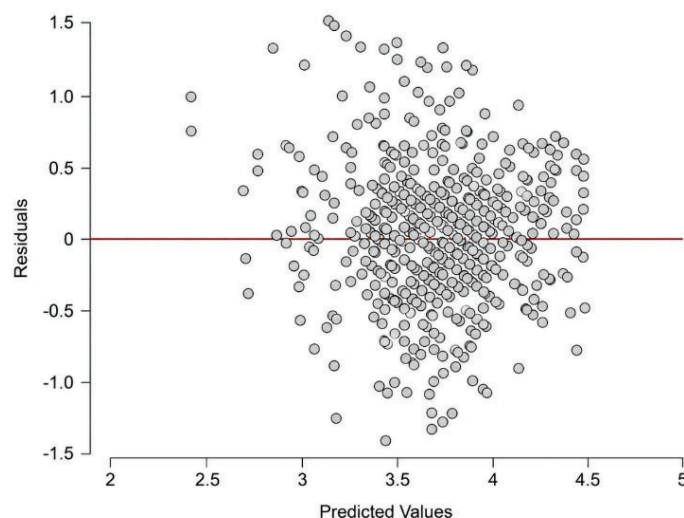
4. Results

4.1 Assumption Checks

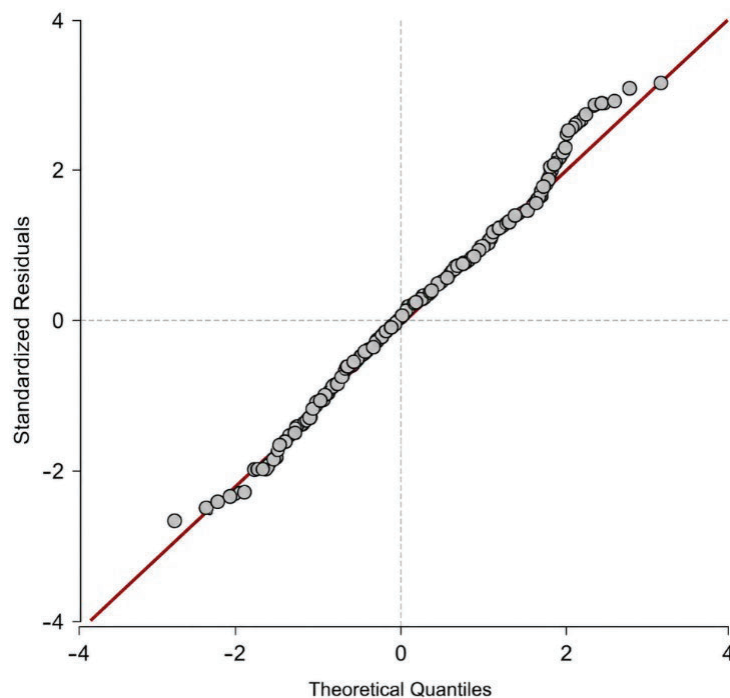
Residual versus predicted value plots indicated that residuals were approximately centered around zero across the range of predicted values, with no systematic pattern or curvature, supporting the assumptions of linearity and homoscedasticity (see Figure 1). The Q-Q plot of standardized residuals indicated approximate normality (see Figure 2). VIF values for both Embrace (VIF = 1.942) and Enact (VIF = 1.942) were well below the threshold of 10, and tolerance values of 0.515 exceeded the 0.2 threshold, indicating no multicollinearity concerns. The highest condition index was 15.497, below the critical threshold of 30. The Durbin-Watson statistic was 1.968, indicating that residuals were uncorrelated. Regression assumptions were reasonably satisfied.

Figure 1

Residuals Versus Predicted Values



Notes. Residuals are approximately centered around zero across the range of predicted values with no systematic pattern, supporting linearity and homoscedasticity. Vertical banding reflects the discrete nature of Likert-based composite scores.

Figure 2*Q-Q Plot of Standardized Residuals*

Note. Standardized residuals fall closely along the diagonal reference line, indicating approximate normality of the residual distribution.

4.2 Descriptive Statistics

Descriptive statistics and zero-order correlations for all study variables are presented in Table 2. The mean engagement score was 3.73 ($SD = 0.60$), indicating moderate to high overall engagement across the sample. Mean scores for the CABS subscales were 3.40 ($SD = 0.77$) for Embrace and 3.72 ($SD = 0.73$) for Enact, and all three distributions showed comparable dispersion. Both CABS subscales correlated significantly and positively with engagement, $r = .562$ for Embrace and $r = .592$ for Enact, both $p < .001$. The two subscales were themselves strongly correlated, $r = .696$, $p < .001$, consistent with the continuum relationship posited in the original validation study while remaining well below the level that would indicate redundancy. Because similarity of means carries no information about the association between constructs, the interpretation of shared variance rests on these correlations rather than on the observed mean scores.

Table 2*Descriptive Statistics and Intercorrelations Among Study Variables (N = 632)*

Variable	<i>M</i>	<i>SD</i>	<i>SE</i>	1	2	3
1. Engagement	3.73	0.60	0.024	—		
2. Embrace	3.40	0.77	0.031	.562***	—	
3. Enact	3.72	0.73	0.029	.592***	.696***	—

Notes. *M* = mean; *SD* = standard deviation; *SE* = standard error of the mean. Correlations are zero-order Pearson coefficients. All variables were scored on a 5-point Likert scale. Engagement was measured using the EENDEED (Lartey & Randall, 2022); Embrace and Enact are subscales of the Cultural Awareness and Belonging Survey (Muchnick et al., 2024).

*** $p < .001$.

4.3 Regression Results

The multiple regression model was statistically significant and explained a substantial proportion of variance in employee engagement. As shown in Table 3, Embrace and Enact together yielded a multiple correlation of $R = .628$ and jointly accounted for 39.4% of the variance in engagement scores, $R^2 = .394$, $F(2, 629) = 204.753$, $p < .001$. The adjusted R^2 of .392 differs from R^2 by less than one percentage point, indicating that the explained variance is stable and not an artifact of sample-specific fitting. The RMSE of 0.467 indicates that the model predicts engagement scores within roughly half a point on the 5-point response scale, a meaningful level of precision for an organizational survey context.

Table 3*Model Summary for the Multiple Regression Predicting Employee Engagement (N = 632)*

<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	RMSE	<i>F</i> (2, 629)	<i>p</i>
.628	.394	.392	0.467	204.753	< .001

Notes. RMSE = root mean square error. Predictors: Embrace and Enact. The Durbin-Watson statistic for the model was 1.968 ($p = .683$), indicating independence of residuals.

Coefficient estimates, confidence intervals, and effect sizes for the individual predictors are presented in Table 4. Both Embrace ($B = 0.228$, 95% CI [0.161, 0.295], $\beta = .291$, $p < .001$) and Enact ($B = 0.319$, 95% CI [0.250, 0.388], $\beta = .389$, $p < .001$) were significant independent predictors, and neither interval approached zero. While Enact held a modest advantage in standardized effect size, the beta coefficients for both predictors are of comparable magnitude and their confidence intervals overlap substantially, indicating that cognitive cultural awareness and behavioral DEI enactment each contribute meaningfully and independently to engagement. Neither dimension is redundant with the other. Each predictor accounted for unique variance beyond the other, $sr^2 = .044$ for Embrace and $sr^2 = .078$ for Enact, corresponding to f^2 values of .072 and .129 that fall between Cohen's (1988) small and medium benchmarks. At the model level, the effect was large, $f^2 = 0.65$, well above the .35 threshold for a large effect.

The unstandardized coefficients translate these results into the metric of the response scale, which clarifies their organizational significance. A one-point gain on the Enact subscale, roughly the distance between employees who disagree and those who agree that their organization visibly enacts its DEI commitments, is associated with a 0.319-point gain in engagement on the same 5-point scale; the corresponding figure for Embrace is 0.228. Expressed in distributional terms, a one-standard-deviation improvement in Enact corresponds to an increase of roughly 0.39 standard deviations in engagement, and a comparable improvement in Embrace to roughly 0.29 standard deviations. For an organization benchmarking engagement across business units, differences of this size are large enough to separate units in the upper and lower quartiles of an engagement distribution.

Table 4

Regression Coefficients, Confidence Intervals, and Effect Sizes for Embrace and Enact Predicting Employee Engagement (N = 632)

Variable	<i>B</i>	<i>SE B</i>	95% CI	β	<i>t</i>	<i>p</i>	<i>sr</i> ²	<i>f</i> ²
(Constant)	1.766	0.099	[1.572, 1.960]		17.811	< .001		
Embrace	0.228	0.034	[0.161, 0.295]	.291	6.740	< .001	.044	.072
Enact	0.319	0.035	[0.250, 0.388]	.389	8.997	< .001	.078	.129

Notes. *B* = unstandardized coefficient; *SE B* = standard error of *B*; CI = confidence interval for *B*; β = standardized coefficient; *sr*² = squared semipartial correlation, the proportion of variance in engagement uniquely attributable to each predictor; *f*² = Cohen's effect size index. Partial correlations were .260 for Embrace and .338 for Enact. Collinearity statistics were identical for both predictors, tolerance = 0.515 and VIF = 1.942. Embrace and Enact are subscales of the Cultural Awareness and Belonging Survey (Muchnick et al., 2024). Engagement was measured using the EENDEED (Lartey & Randall, 2022).

4.4 Common Method Variance

Because the predictors and the criterion were collected from the same respondents through a single self-report questionnaire, Harman's single-factor test was conducted on all 21 CABS and EENDEED items to assess whether a single method factor accounted for the majority of covariance among the measures (Podsakoff et al., 2003). Three components had eigenvalues exceeding 1.00, and the first unrotated component accounted for 40.23% of the total variance, below the 50% criterion conventionally used to flag a dominant method factor (see Table 5). This result does not eliminate the possibility of common method variance, which no post hoc statistical test can rule out, but it indicates that no single factor dominates the covariance structure of the two instruments.

Table 5*Harman's Single-Factor Test: Components with Eigenvalues Greater Than 1.00 (N = 632)*

Component	Eigenvalue	% of Variance	Cumulative %
1	8.447	40.23	40.23
2	1.851	8.81	49.04
3	1.329	6.33	55.37

Notes. Principal component analysis of all 21 CABS and EENDEED items, unrotated. The first component accounted for less than half of the total variance, indicating that a single method factor does not dominate the covariance among the measures. CABS = Cultural Awareness and Belonging Survey; EENDEED = Enhanced Engagement Nurtured by Determination, Efficacy, and Exchange in the Digital workplace.

The structure of the rotated solution provides further evidence against a dominant method factor. Having common method variance driven the observed relationships, predictor and criterion items would be expected to converge on a shared factor, since the artifact arises from the measurement occasion rather than from the constructs. The opposite occurred. As shown in Table 6, the three retained components corresponded almost exactly to the three scales: the six Embrace items loaded on the first component, the nine EENDEED engagement items on the second, and the six Enact items on the third, with no item cross-loading above the .40 display threshold. Predictor and criterion items separated cleanly rather than merging, which is the pattern expected when the instruments measure distinct constructs and the pattern least consistent with a method artifact.

This result carries a secondary implication for CABS itself. The Embrace and Enact items formed distinct components in a sample independent of the original validation study, reproducing the two-factor structure that Muchnick et al. (2024) established through confirmatory factor analysis and doing so in an analysis that made no prior assumption about the number or composition of the factors. The engagement items formed a third component separate from both, supporting the discriminant validity of the CABS subscales relative to the criterion they predict. The single exception was one EENDEED item, Q3, which did not load above the threshold on any component and showed the highest uniqueness in the solution (.772), indicating that it shares comparatively little variance with the remaining items. Because this item belongs to the criterion instrument rather than to the CABS, it does not bear on the structure of the instrument under validation, though it may warrant attention in future work using the EENDEED.

Table 6*Rotated Component Loadings for CABS and EENDEED Items (N = 632)*

Item	1 (Embrace)	2 (Engagement)	3 (Enact)	Uniqueness
Q12EMBRACE	.801			.312
Q11EMBRACE	.764			.386
Q15EMBRACE	.729			.358
Q10EMBRACE	.703			.346
Q13EMBRACE	.703			.389
Q14EMBRACE	.603			.483
Q5PERFORMANCE		.732		.435
Q7SELFRELANCE		.708		.475
Q4PERFORMANCE		.675		.490
Q1PERFORMANCE		.667		.468
Q6PERFORMANCE		.594		.516
Q8SELFRELANCE		.588		.521
Q9SELFRELANCE		.498		.586
Q2PERFORMANCE		.468		.652
Q18ENACT			.765	.320
Q20ENACT			.748	.369
Q21ENACT			.676	.376
Q17ENACT			.673	.361
Q19ENACT			.642	.339
Q16ENACT			.553	.418
Q3PERFORMANCE				.772

Notes. Principal component analysis with promax rotation, three components retained by the eigenvalue-greater-than-one criterion. Loadings below .40 are suppressed for readability. Uniqueness is the proportion of an item's variance not accounted for by the retained components. Components are labeled by the scale whose items define them. The model chi-square was significant, $\chi^2(150) = 584.591, p < .001$, which is expected at this sample size and does not affect the variance decomposition reported in Table 5. CABS = Cultural Awareness and Belonging Survey; EENDEED = Enhanced Engagement Nurtured by Determination, Efficacy, and Exchange in the Digital workplace.

5. Discussion

This study tested whether CABS scores predict employee engagement, providing the first criterion validity evidence for the instrument. The results support that prediction clearly: Embrace and Enact together explain nearly 40% of the variance in engagement, a substantial effect in organizational research. Both subscales contribute independently, and their comparable beta magnitudes carry a

finding that is theoretically coherent and practically relevant. The modest advantage of Enact over Embrace in predictive weight aligns with the theory of generative interactions (Bernstein et al., 2020), which holds that behavioral participation in positive interactions, not cognitive awareness alone, drives durable inclusion. Employees who perceive their organizations as actively enacting DEI commitments through education, appreciation of diversity, and equitable promotion practices report higher engagement. This is consistent with Warren and Warren's (2023) finding that allyship and behavioral advocacy strengthen organizational inclusion more durably than awareness-level efforts. The practical implication is direct: DEI programs that remain at the awareness stage without translating into visible organizational behavior are less likely to generate the engagement returns that organizations seek.

Equally important is the independent contribution of Embrace. The fact that attitudinal and cognitive cultural awareness explains engagement variance beyond what behavioral enactment alone predicts means that the two dimensions are not interchangeable. Organizations that invest exclusively in structural DEI behaviors without cultivating genuine personal awareness and acceptance among employees will capture only part of the available engagement benefit. The full return on DEI investment appears to require both dimensions working in concert, which is precisely the continuum argument Muchnick et al. (2024) advanced in the original CABS validation.

The EENDEED's applicability to both traditional and remote work contexts (Lartey & Randall, 2022) strengthens the interpretive reach of these findings. The sample included employees across the full spectrum of remote work arrangements, and the instrument's cross-context validity supports confidence that the engagement outcome reflects a stable construct rather than one confounded by work arrangement. This is particularly relevant given the sustained prevalence of hybrid and remote work in contemporary organizations.

Although the present findings are grounded in a U.S.-based sample, the theoretical mechanisms underlying the CABS-engagement relationship are not inherently culture-specific. Social Exchange Theory operates on the norm of reciprocity, which research has documented across a wide range of national and cultural contexts, though the specific behaviors that signal organizational investment vary across cultures (Blau, 1964; Cropanzano et al., 2016). Similarly, the theory of generative interactions posits universal exclusionary dynamics, such as self-segregation and communication apprehension, while acknowledging that the organizational practices needed to overcome them are contextually embedded (Bernstein et al., 2020). These theoretical considerations suggest that the Embrace-Enact distinction may generalize across organizational contexts, but that the specific items constituting each subscale may require cultural adaptation for non-U.S. samples, as the original CABS validation study also noted (Muchnick et al., 2024). Cross-cultural validation of CABS, particularly in collectivist organizational contexts where belonging and awareness may be operationalized differently than in Western individualist settings, represents a priority direction for international management research. IMR readers are particularly well positioned to advance that agenda.

6. Managerial Implications

The present findings carry practical implications across several domains of organizational management. For organizational culture assessment, CABS provides leaders with a diagnostic instrument that distinguishes between attitudinal and behavioral dimensions of DEI climate, enabling more targeted intervention than global DEI sentiment measures allow. An organization whose Embrace scores are high, but whose Enact scores are low, for example, has employees who cognitively value DEI but do not perceive organizational behaviors that enact those values, a gap that points directly toward structural rather than attitudinal intervention.

For leadership development, the independent contribution of both CABS dimensions to engagement suggests that leaders should be developed to model both cultural awareness and visible DEI enactment behaviors. Awareness without enactment, consistent with the generative interactions framework, produces incomplete inclusion and captures only part of the available engagement benefit. Leadership programs that cultivate empathy and cultural humility alongside concrete behaviors such as equitable promotion advocacy and inclusive team practices are more likely to generate the engagement returns organizations seek.

For DEI program evaluation, CABS offers a mechanism for assessing whether DEI initiatives are producing measurable workforce outcomes rather than simply demonstrating compliance or awareness. Organizations can administer CABS longitudinally alongside engagement measures such as the EENDEED to track whether improvements in cultural awareness and belonging precede improvements in engagement over time, providing evidence-based justification for continued DEI investment.

For talent management and retention, the present findings suggest that employees in organizations with higher CABS scores, particularly Enact scores, are likely to report higher engagement, which research consistently associates with reduced turnover intention. Organizations navigating competitive talent markets can use CABS as a leading indicator of engagement risk, identifying units or departments where cultural awareness and belonging scores are low before engagement declines become visible in exit interviews or turnover data.

Finally, for organizational change initiatives, CABS provides a pre- and post-measurement tool for assessing the DEI climate impact of structural changes such as mergers, leadership transitions, or policy reforms. Because both CABS and the EENDEED are listed in PsycTESTS and PsycINFO, practitioners can cite their use with confidence in the psychometric rigor of the measurement approach.

7. Limitations

Several limitations should inform interpretation. The cross-sectional design precludes causal inference; the regression establishes prediction, not directionality. The removal of 18 outliers identified through standardized residual screening, while statistically justified, modestly reduces sample size and may limit representation of employees at the extreme ends of the cultural awareness and engagement distributions. Longitudinal designs are needed to examine whether changes in CABS scores precede changes in engagement over time. The sample is limited to U.S.-based employees, which constrains generalizability to other national and cultural contexts, a

limitation the original CABS validation study also identified (Muchnick et al., 2024). Finally, the EENDEED exchange dimension includes communication style items that may carry different meaning across organizational cultures and work arrangements, a nuance worth examining in future cross-cultural applications of these instruments together.

The regression model included only the two CABS subscales as predictors, and the omission of established engagement antecedents warrants explicit acknowledgment. Leadership quality, organizational size, job level, tenure, work arrangement, and industry all plausibly influence engagement and may also covary with employee perceptions of cultural awareness and belonging. Although the sampling frame was balanced across several of these characteristics, the demographic variables collected during screening were not retained in the analytic dataset and therefore could not be entered as covariates. The coefficients reported here should accordingly be read as estimates of predictive association rather than of unique causal contribution and omitted-variable bias cannot be ruled out: any unmeasured factor correlated with both the CABS subscales and engagement would inflate the observed relationships. Hierarchical designs that enter organizational and demographic controls in a first step, and the CABS subscales in a second, would establish how much incremental variance the instrument explains beyond these known antecedents and represent a priority for replication.

Relatedly, all variables were measured through self-report at a single point in time, so common method variance may inflate the observed relationships. Harman's single-factor test provided no evidence of a dominant method factor, but that test is diagnostically weak and cannot establish the absence of method bias (Podsakoff et al., 2003). The procedural remedy applied here was limited to randomizing items within each instrument. Future research would be strengthened by procedural separation of predictor and criterion measurement, whether temporal, methodological, or by source, such as pairing employee-reported cultural awareness with supervisor-rated or behaviorally anchored engagement indicators, and by statistical remedies such as a marker-variable approach or an unmeasured latent method factor within a structural equation framework.

8. Conclusion

This study advances the empirical case for the Cultural Awareness and Belonging Survey as an instrument with demonstrated criterion validity. CABS scores do not merely describe organizational DEI conditions; they predict a consequential workforce outcome. The comparable and independent contributions of Embrace and Enact suggest that organizations should pursue DEI strategies that develop both cultural awareness and visible enactment behaviors, rather than treating either dimension as sufficient on its own. Future research should examine these relationships longitudinally, test CABS in non-U.S. organizational contexts, and explore whether engagement mediates the path from cultural awareness and belonging to harder performance outcomes such as retention and productivity. Organizations that can measure cultural awareness and belonging with precision, and connect those measures to engagement outcomes, are better positioned to make DEI investment decisions that are defensible, targeted, and effective.

AI Disclosure

The authors used Claude (Anthropic) as a writing assistance tool to support drafting, structural refinement, and editorial review of this manuscript. All analytical decisions, interpretations, and

conclusions are the authors' own. The authors take full responsibility for the accuracy and integrity of the work as submitted.

Author Disclaimer

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