

Measuring DEI within workplaces: questioning the theoretical, empirical, and practical models

Bulletin de Méthodologie Sociologique

2023, Vol. 159 75–89

© The Author(s) 2023

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/07591063231184252

journals.sagepub.com/home/bms



Anica Bowe

Rutgers University, Newark, NY, USA

Elizabeth Drame

University of Wisconsin, Milwaukee, WI, USA

Dominique Duval-Diop

Derute Consulting Cooperative, Milwaukee, WI, USA

Lynnette Mawhinney

Rutgers University, Newark, NY, USA

Carla Melaco

Beloved Community in New Orleans, LA, USA

Résumé

Mesurer la diversité, l'équité et l'inclusion au sein des lieux de travail : remise en question des modèles théoriques, empiriques et pratiques. L'ONG BECO a conçu un outil d'audit de l'équité pour mesurer la diversité raciale, l'équité et l'inclusion (DEI) au sein des lieux de travail. L'outil est décliné en trois versions (écoles K-12, entreprises à but lucratif et entreprises sans but lucratif) et est en cours de normalisation. Cette étude rend compte des résultats quantitatifs et qualitatifs de son usage pour les entreprises à but lucratif et les entreprises sans but lucratif, et élargit ainsi la discussion concernant les problèmes théoriques, empiriques et pratiques auxquels nous sommes confrontés dans la réalité sociale de la mise en œuvre de la diversité. Les résultats empiriques obtenus grâce à des analyses factorielles confirmatoires révèlent au moins un ajustement raisonnable de l'outil, qui en conforte la théorie sous-jacente. Les résultats qualitatifs montrent les opinions mitigées des experts quant à la manière dont

Corresponding Author:

Anica Bowe, Associate Professor, Rutgers University-Newark

Email: anica.bowe@rutgers.edu

les constructions de la diversité, de l'équité et de l'inclusion sont liées, soulignant ainsi l'absence de clarté quant à la façon dont nous devrions nous engager dans les pratiques de diversité sur les lieux de travail. Dans l'ensemble, nos résultats nous conduisent à appeler au travail empirique pour mieux ancrer les théories et les constructions sociologiques, et interroger dans quelle mesure la progression dans le domaine de la gestion de la diversité est alignée avec le succès et la durabilité de la mesure du DEI.

Abstract

BECO designed an Equity Audit tool to measure racial diversity, equity, and inclusion (DEI) within workplaces. The tool has three versions (K-12 schools, For-Profits, and Non-Profits) and is currently undergoing the Standard Setting Process. This study reports on quantitative and qualitative findings for For-Profits and Non-Profits and by doing so, extends the conversation regarding the theoretical, empirical, and practical issues we encounter with the social reality of DEI work. Empirical findings via confirmatory factor analyses reveal at least reasonable fit of the tool which supports the measurement theory undergirding the tool. Qualitative findings demonstrate mixed opinions among experts as to how diversity, equity, and inclusion constructs relate, thus highlighting the unclarity about how we should engage in DEI work in workplaces. Altogether, we discuss findings in relation to the call for empirical work to ground sociological theories and constructs, and the extent to which progression in the field of diversity management aligns with the success and sustainability of DEI work.

Mots clés

audit d'équité, diversité en milieu de travail, mesure de la DEI en milieu de travail, normalisation

Keywords

equity audit, measuring workplace DEI, standard setting, workplace diversity

Introduction

The Beloved Community (BECO) is a Non-Profit organization dedicated toward advancing equity for Black communities in the USA. Recent police killings of Black and Brown people within the USA have led organizations to demonstrate their commitment to antiracism within their workplaces as well as their support of the #Black Lives Matter movement (Bohonos and Sisco, 2021). As part of their work in addressing equity within organizations, BECO designed an Equity Audit tool to measure racial diversity, equity, and inclusion (DEI) within workplaces. Up to a decade ago, the diversity-management literature offered very few guidelines for how to go about developing organizational audits that measure DEI (Trenerry, Franklin & Paradies 2010), though progress has been made in this area (Thompson, 2017). BECO's work with the Equity Audit adds a contribution to this field. The Equity Audit currently has three versions: one for K-12 schools; one for Non-Profit Organizations/Colleges, and Universities (hereafter referred to as Non-Profit); and one for For-Profit Corporations/Companies (hereafter referred to as For-Profit).

Since 2018, organizations have partnered with BECO to use the Equity Audit to measure the extent to which DEI are embedded within their organizations' procedures, policies, and practices. Now that the tool has been used by a number of organizations, BECO is gathering information on its psychometric properties to verify the extent to which it is an appropriate tool to use and whether inferences made about organizations - based on their scores - are defensible. Thus, the Equity Audit is currently undergoing the Standard Setting Process (Hambleton, Pitoniak & Copella, 2012) to gather defensible validity evidence on its properties.

The standard setting process is the stage within the *test development process* (Downing, 2006) where cut scores for various performance levels of a test/instrument are established. Standard setting establishes score bands for various performance levels, along with descriptions about the test taker's ability (or exhibited levels of the trait) on the construct(s) being measured (Cizek, 2012). There are a variety of approaches test developers use to set performance standards but ultimately, approaches are determined by the type of items on the test/instrument and the context in which the test/instrument will be used (Cizek, 2012). This study reports on the findings from the standard setting process for the Non-Profit and For-Profit versions of the Equity Audit. By doing so, we extend the conversation regarding the theoretical, empirical, and practical issues encountered when doing DEI work.

Brief Description of Tool

BECO has operationalized diversity, equity, and inclusion using definitions and framing questions. We note that this is a unique way to articulate constructs as educational and psychological testing practices typically use definitions only. BECO's approach to operationalizing DEI perhaps hints towards a nuanced approach for articulating social constructs, though we state this more speculatively rather than as an affirmative stance. BECO operationalized DEI in the following manner:

- Diversity refers to population demographics. Diversity demographics are most impactful when they include historically marginalized populations. Framing question: To what extent does our _____ population reflect our regional demographics?
- Equity requires diversity and inclusion. Within an organization, equity is the lack of discrimination or bias in assigning positive or negative consequences. Framing question: To what extent are the outcomes from _____ program predictable by participants' demographics?
- Inclusion refers to equal participation across demographics. Framing question: To what extent do our diverse populations feel comfortable, respected, and empowered within our organization? To what extent are diverse community perspectives included in decision-making that impacts their lives?

BECO has operationalized DEI standards for workplaces and designed the Equity Audit to assess the extent to which workplaces meet these standards. By doing so, the audit addresses specific attributes and practices for these constructs which responds to

Table 1. Sub-standards of Diversity, Equity, Inclusion

Diversity	Equity	Inclusion
Non-Profit, n = 44 items	Non-Profit, n = 75 items	Non-Profit, n = 56 items
For-Profit, n = 49 items	For-Profit, n = 63 items	For-Profit, n = 54 items
D1: Awareness	E1: Access and Audits	I1: Language
D2: Application	E2: Assignment	I2: Shared voice
D3: Selection	E3: Advancement	I3: Belonging
D4: Participation	E4: Financial	I4: Cultural Relevance
	E5: Performance	

the call in the diversity-management literature (Roberson, 2006). Each standard - diversity, equity, and inclusion - has multiple sub-standards to assess specific areas (see Table 1). This aligns with Chaundry (2022) who argues that while DEI initiatives are often done together, they should be measured separately and distinctly.

In addition to sub-standards, the Equity Audit also accounts for seven stakeholder groups and the extent to which DEI standards are achieved for these groups. The groups are individual, community, vendors, employees, staff, management, board members. Third, the Equity Audit considers stakeholder function and assesses functions within these five areas: Talent & Adult Culture, Governance & Leadership, Supplier Diversity, Resources & Finances, and Pedagogies & Curriculum (for schools, colleges, and universities). The Non-Profit version has 175 items and the For-Profit version has 167 items. Altogether, the Equity Audit is a complex tool designed to measure DEI for specific sub-standards, specific stakeholder groups, and specific stakeholder functions.

The Equity Audit measures five performance levels: Inquiring, Emerging, Developing, Expanding, Refining with Inquiring at the lowest level and Refining at the highest level. BECO created performance level descriptors for each of these performance levels a priori to the standard setting process along with preliminary scoring ranges for each level. All items on the audit were dichotomous items (Yes/No). The items asked about policies, procedures, and practices (YES/NO) and whether the organization had a data tracking tool to measure progress on these (Yes/No). The responses were recoded to the following four-point ordinal scale to facilitate data analysis:

4. Yes, and we have data about it
3. Yes, but we need data tracking tool
2. No, and we have data about it
1. No, and we need a data tracking tool.

This study used confirmatory factor analysis (Brown, 2006) to determine the extent to which the theoretical and statistical models of the Equity Audit aligned. Confirmatory factor analysis (CFA) is a type of structural equation modelling that informs on the relationship between factors (constructs) and the items that represent them. CFA allows researchers to verify whether the theoretical number of factors on an instrument is represented by the collected data, and whether the items on the instrument are statistically related to the factor they represent (Brown, 2006).

We present preliminary findings from the CFA performed on the Equity Audit as well as qualitative findings from the discussion that occurred among our panelists during the *Establishing Performance Level Labels and Descriptors Meeting*. We used CFA to determine the extent statistical findings supported a priori theory of how the items related to their DEI constructs while accounting for specific stakeholder groups. Although the items also assess stakeholder functions, we limit our study to just the constructs and stakeholder groups as basic first steps for gathering validity evidence. We also present qualitative findings from the discussion that occurred among the panelists that demonstrate differences in opinions regarding how DEI constructs relate to each other. Together, the quantitative and qualitative findings raise questions to consider regarding the measurement and structural models of tools designed to measure DEI in workplaces, how to go about grounding these sociological constructs in empirical findings, and issues surrounding the social practice of DEI work.

Theoretical framework: Measuring DEI in Workplaces

History of DEI initiatives within workplaces

Scott (2018) outlines a series of executive orders, legislation, and regulations beginning with Jim Crow laws that shape the history and practice of workforce diversity. Post Jim Crow laws, a focus on diversity within US workplaces came as a legal response to the Women's Rights and the Civil Rights Movement in the 1960s (Scott, 2018). Workforce diversity shifted from a legal perspective to a more of a value perspective after the 1980s in response to globalization and cross regional cooperation because it was considered a core strategy for the success of businesses and corporations (Thomas 2006). A focus on inclusion came much later (Nair & Vohra, 2015; Scott, 2018) and according to Romansky and colleagues (2021), most leaders understand that "it is inclusion that unlocks the potential of a diverse workforce" (p. 2). From the turn of the century though, workplaces were not clearly differentiating between diversity and inclusion efforts (Roberson, 2006) and today still struggle to measure it (Romansky et al., 2021). Our scholarly search for literature on measuring diversity, equity and inclusion in the workplace yielded a dearth of literature on measuring workplace equity, which anecdotally suggests that not many headways have been made on articulating this construct as well.

Auditing as methodology

Auditing is recognized as one of the more contemporary measurement approaches within sociology (Smith and Atkinson, 2016). Power (1994) informed that while there is no clear definition of the word audit, the fuzziness around the term allows auditing to take place in a wide variety of organizational contexts. He pointed out there are two dimensions of auditing, the programmatic and the technological. He stated,

Auditing may be a collection of tests and an evidence gathering task, but it is also a system of values and goals which are inscribed in the official programs which demand it. From this point of view, auditing is always for something, an ill-defined goal which it may serve

only imperfectly but through which its daily routines make sense and have value (Power, 1994, pg 8).

Based on Power's assertion, the auditing process appears to be a useful methodological approach to measuring diversity, equity and inclusion within workplaces, because the flexibility of the auditing methodology allows organizations to track their context-specific values, goals, processes, and practices. Thus, here we see a match between the social phenomenon and the measurement tool which was a concern raised by Cicourel (1964) whose seminal work we discuss below.

Measuring DEI constructs

The diversity management literature demonstrates that there is a plethora of ways to operationalize DEI within the workplace. This adds to the challenge of systematically auditing the advancement of DEI within workplaces, especially across organizations. Guidelines to measuring diversity and inclusion in the workplace state that the metrics must be able to track progress toward goals, focus on where the organization is going and how far they have come, and include a variety of indicator types (Thompson, 2017). A major issue with measuring diversity and inclusion is that the data gathered are usually context-specific and cannot be used for cross-organizational comparisons (Thompson, 2017). The Equity Audit was developed for a variety of organizations and is intended to be a tool that could generate cross-organizational comparisons. The flexibility of auditing methodology allows the Equity Audit to also generate data that is context specific. Altogether, the Equity Audit informs on an organizations's DEI policies and practices that center on delineated DEI goals and values.

The foundational work of Cicourel (1964) outlines a myriad of issues we encounter when trying to measure social constructs. Smith and Atkinson (2016) revisited Cicourel (1964)'s work to discuss the extent to which these issues were still prevalent in contemporary measurement practices such as auditing. With audits specifically, Smith and Atkinson (2016) point out continuing challenges such as the difficulty in describing the social phenomenon(s) audits intend to measure, the difficulty in deriving appropriate units for quantification, and question as to whether the tool truly captures the policies, practices, underlying values and goals an organization wants to assess. Other issues include who is actually responding to the audit, contentions between theory and practice, the extent to which the theory undergirding the design of the instrument was based upon empirical data (and not assumptions), and ways in which language is used, made sense of, and interpreted (which relates to bias). There were other issues Smith and Atkinson (2016) commented on, but for now, these are the ones that appear most pressing for our current stage of the standard setting process.

The Equity Audit is still in the early stages of gathering validity evidence to support its use. Findings from Rezai and colleagues (2020) review of measures for workplace inclusion/exclusion demonstrates that while some of these instruments exist, there is limited evidence to support their reliability and validity. By engaging in the standard setting process for the Equity Audit, the work of BECO addresses some of the issues that

persist with measuring social constructs. Against this backdrop, we raise the following questions regarding the Equity Audit:

To what extent does the measurement model fit a priori theory for the Equity Audit?

To what extent do DEI experts agree upon how DEI constructs relate to each other?

Materials and Methods

Data Sources

Organizations who completed the audit. BECO extended invitations to a multitude of US organizations to complete the Equity Audit. At the time of this study, 211 organizations had completed the Equity Audit (Non-Profits, $n = 177$ and For-Profit s, $n = 34$). These organizations were a convenience sample as they were the ones who agreed to take the Equity Audit. Here we note the large discrepancy in sample size between Non-Profits and For-Profits. Anecdotally, there are a number of factors that can contribute to this, e.g. bureaucracies involved in measuring DEI within workplaces, the types of existing partnerships BECO has with organizations, and professional dispositions of workplaces. A limitation of this study is that we do not know reasons surrounding the large discrepancy in sample size.

Panel of experts. The Standards (AERA/APA/NCME, 2014), Loomis (2012), and Crane and Winter (2006) provide guidelines for selecting participants for expert review panels for the standard setting process in terms of expert representation, size, and cost balance. In line with their guidelines, we convened a panel of experts for the For-Profit s/Non-Profit s versions of the Equity Audit for the *Establishing Performance Level Labels and Descriptors Meeting*. This panel met twice due to the size of the task, once in May 2021 and once in August 2021. For the May 2021 meeting, six experts confirmed attendance, but only two attended. For the panel in August 2021, nine panelists were present, with two of them being the individuals from the May 2021 meeting. This diverse group of experts included four Black and Indigenous People of Color (BIPOC) leaders, three white-identified leaders, and 2 LGBTQIA+ leaders who work in the South, Midwest, and West Coast regions. Their workspaces included higher education, an equity organization, three Non-Profit organizations, and a public health institute. Below we present some of the discussion points from May 2021 regarding the definitions of DEI and their opinions on which constructs were easier to engage in within workspaces.

The use of a panel of experts in the standard setting process evokes some of the debate in sociology concerning the use of expert interviews as methodology. Bogner and Menz (2009) draw our attention to the fact that interviewers have interests outside of the research question and these interests tend to surface during the interviews. Therefore, there will be differences between conversations with experts, what surfaces due to these differences, and differences with how the conversation is interpreted. While the methodology involved with using a panel of experts differs from the methodology involved with expert interviewing, the above point is applicable here as well. We acknowledge

that some of the discussion we present below may not have surfaced had there been different facilitators during the standard setting process.

Analyses

Items on the For-Profit and Non-Profit versions

The Non-Profit version of the audit had 175 items while the For-Profit version had 167 items. Recall that all items were dichotomous therefore responses were recoded to a 4-point ordinal scale to facilitate data analysis. They were recoded to this manner:

4. Yes, and we have clear data about it
3. Yes, but we need a data tracking tool
2. No, and we have clear data about it
1. No, and we need a data tracking tool.

There were 177 Non-Profits and 34 For-Profits that had completed the audit resulting in a sample size of 211. To boost the sample size for CFA, we combined the data for these organizations on the items they had in common. There were 105 items in common, and these were used for the confirmatory analyses. A major limitation of this study is that the sample size is rather small for CFA and that not all the items could be subjected to analyses, therefore we could not also attend to each substandard directly.

CFA

We fitted a first order model for the Equity Audit. We used BECO's a priori theory as a guideline and aligned the items within each construct by the stakeholder group they represented (individuals, community, vendors, employee, managers, and board members). Of the 105 items, diversity had 28 items, equity had 44 items, and inclusion had 33 items. We limited the number of items per scale as suggested by Brown (2006) and specified the original size of each scale to be between three to five items. In situations where there were more than five items per scale, we attended to the substandard information as well. For example, Equity_Individuals1 was a 4-items scale measuring the E1 substandard for individuals. Equity_Individuals2 was a 3-item scale measuring E2 and E3 sub-standards for individuals, and Equity_Individuals3 was a 3-item scale measuring the E5 substandard for individuals.

We used MPLUS 8.0 and specified the weighted least squares means and variances adjusted (WLSMV) estimator. All items had missing data. The range of missingness was from 17% to 54%. The main reason for missingness was that the item did not pertain to the organization. We conducted seven rounds of model respecification as suggested by warning messages from MPLUS. Model respecification resulted in either collapsing more indicator variables onto a single latent trait (e.g., collapsing Equity_Individuals2 and Equity_Individuals3 together) or eliminating an indicator from the model. The final solution had 20 factors and 100 indicator items (Figure 1).

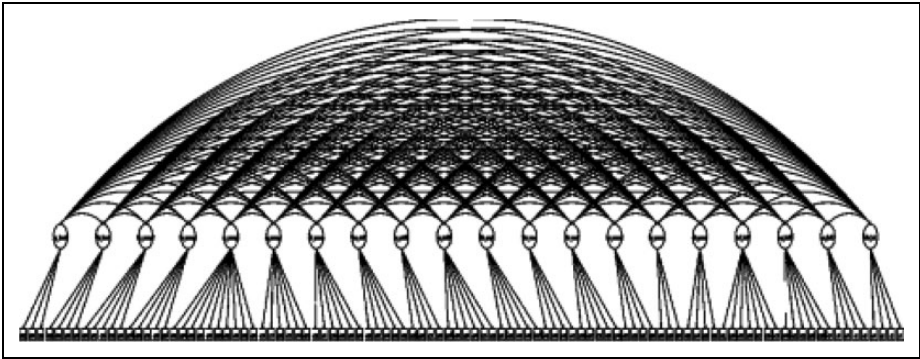


Figure 1. First order factor structure

Table 2. Results of first order, second order, and bifactor model

	χ^2 model fit	χ^2 model fit (df)	χ^2 baseline model	χ^2 baseline model (df)	RMSEA [CI 90]	CFI	TLI
First order model	5552.47	4660	14828.08	4950	.03 [.027,.033]	.91	.90
Second order model	Matrix not positive definite. Attempted to revise the model but error message continued						
Bifactor model	Unable to converge						

Note. Abbreviations: CI90, 90% level for the confidence interval; CFI, comparative fit index; df, degrees of freedom; N, sample size; RMSEA, root mean square error of approximation; TLI, Tucker–Lewis index (Brown, 2006); χ^2 , chi squared.

Out of curiosity, we also fitted a second order model accounting for the three overarching DEI constructs as this aligned with a priori theory outlined for BECO. Third, we fitted a bifactor model because workspaces tend to clump together DEI work as if their goals were interrelated. Thus, we wanted to examine the extent to which DEI work was somewhat entangled together, or whether these ideals should be approached separately as suggested by Chaundry (2022).

We used Brown's (2006) guidelines to judge poor, adequate, or good fit for the model. We report on the fit indices as well as the correlations between the factors. We did not assess for local strains to the solution as this was a small sample size. A larger sample size may make this task more worthwhile.

Results

CFA models

The only model that converged with interpretable findings was the first order factor model (Figure 1 and Table 2). While the second order factor model terminated normally, there was an error message saying that the matrix was not positive definite. It called attention to the Diversity construct and suggested that it could not be identified.

Table 3. Correlations between the factors

Diversity	D_Ind	D_Comm	D_vend	Div_empl	Div_manag	Div_board	
D_Ind		.45*	.23	.27	.31*	.16	
D_Comm			.32*	.29	.37*	.20	
D_vend				.20	.29	.12	
D_empl					.38*	.30*	
D_manag						.23	
Equity	E_Ind1	E_Ind2	E_staff1	E_staff2	E_manag1	E_manag2	E_board
E_Ind1		.40*	.25	.31*	.21	.22	.12
E_Ind2			.33*	.33*	.22	.29	.09
E_staff1				.46*	.30*	.38*	.11
E_staff2					.29	.64**	.15
E_manag1						.50**	.11
E_manag2							.19
Inclusion	I_Ind1	I_Comm1	I_Comm2	I_vend	I_staff	I_manag1	I_manag2
I_Ind1		.49*	.55 **	.50**	.42*	.31*	.36*
I_Comm1			.57 **	.50**	.46*	.30*	.30*
I_Comm2				.57**	.44*	.33*	.34*
I_vend					.47*	.29	.38*
I_staff						.43*	.39*
I_manag1							.31*

Note. Correlations were rounded to two decimal places. * indicates the relationship reached a medium effect size and ** demonstrates a large effect size for Pearson's r estimates (Cohen, 1998). Pearson's r is .10 for small, .30 for medium, .50 for large

The bifactor model could not converge, even after increasing the number of iterations to 10,000. While a larger sample size may address these issues, at this point, we cannot say for sure. We do suspect that given the low correlations between the first order factors (only about 40% of correlations between factors measuring the same construct reached a medium effect size, see Table 3), the second order model may be empirically under-identified in the higher-order portion of the solution (see Brown, 2006 for further explanation of underidentification in higher-order solutions).

Correlations between the scales

We report the correlations between the scales of a given construct in Table 3. That is, we report on how the diversity factors relate to each other, how the equity factors relate to each other, and how the inclusion factors relate to each other. The correlations shed some light on the extent to which factors align with apriori theory. Table 3 shows that the factors accounting for Inclusion had the strongest relationships while the factors accounting for Diversity and Equity had weaker relationships. We placed an asterisk next to correlations that reached a medium (*) and large (**) effect size. Within the

Diversity construct, none of the correlations reached a large effect size signifying that these factors were the least related to each other.

Qualitative Findings: Panelists Comments

During the first *Establishing Performance Level Labels and Descriptors Meeting*, we asked the panelists how they conceptualized DEI. For example, does one come before the other and is one more easily achieved than the other? We asked this question out of curiosity and for a warm-up, as it was tangential to the task at hand and was asked due to the facilitator's interest. We present their responses here because they illuminated the miasma around the relationship between DEI constructs. One of the panelists responded to the question which one was more easily achieved. She said,

"I would say that equity and inclusion are harder to achieve than diversity, but diversity to me feels like the bare bare minimum. I think diversity can be achieved just by using data and by tracking data, and you can have diversity but not be equitable or inclusive."

This response aligns with the findings in the literature that diversity is easier to track and measure (Romansky et al., 2021), but the attainment of diversity does not mean inclusion or equity are occurring.

The other panelist voiced his opinion regarding how DEI constructs relate. He said,

"We would say that the broader umbrella is equity and that diversity and inclusion are components of what allows for equity. And there's varying definitions of equity - you know which includes outcomes, but also, you know, it kind of includes a level of co-creation... and again this gets to the overlap of inclusion - of the level of shared ownership..."

For this person, equity encompasses diversity and inclusion, with diversity and inclusion being necessary parts. In short, while it appears as though diversity standards may be easier to achieve, these panelists differed in their perspectives on how DEI constructs relate to each other. For the first panelist, diversity is a standalone construct whereas for the other, it is a component of equity.

This finding highlights the continuing issue of the need to undergird social theory with empirical findings (Smith & Atkinson, 2016). It also connects with the work of Bogner and Menz (2009) on the use of expert interviews for an exploratory tool. Note that the use of a panel of experts for the standard setting process typically entails multiple rounds of discussion to reach consensus around the given task. The above question we raised to the panel was not pursued further with the larger group the second time we met due to time constraints with the agenda and it being a tangential question to the given task. The relationship between DEI constructs then is an area for future research where researchers could use a panel of experts to explore assumptions regarding the relationships between DEI constructs.

Discussion

The Equity Audit is one of the few existing instruments designed to measure racial diversity, equity, and inclusion in ways that are applicable across a variety of organizations. It is also one of the few DEI instruments for which validity evidence is being gathered. So far, statistical findings demonstrate reasonable fit for how items relate to factors. This suggests then the theory undergirding how the items relate is at least reasonable, which satisfies a major concern with sociological measures. These findings are steps toward a milestone in the fields of diversity management and organizational development. Since the audit was theoretically designed to account for stakeholder function, future studies accounting for the variation introduced by stakeholder functions may improve model fit. Once the measurement model for the tool is fully established on all items, we can then begin hypothesizing structural models for how the overarching DEI constructs relate to each other.

Our findings demonstrate that the correlations between the factors for diversity and equity were low to medium, whereas they were much higher for inclusion. On one hand, the lower correlations among the diversity and equity factors provide evidence of discriminant validity and informs that the items are measuring different aspects of that construct as the creators of this tool intended. On the other hand, it does raise concern about convergent validity as we did expect the factors within each construct to have higher correlations. Accounting for variances associated with the five areas for stakeholders and their related functions (that is, Talent & Adult Culture, Governance & Leadership, Supplier Diversity, Resources & Finances, and Pedagogies & Curriculum) may result in higher correlations because these sources of predictable variance would be accounted for. More sophisticated analyses with larger sample sizes can attend to this.

A second important finding in our study were the differences in opinions among the experts about how the DEI constructs relate. Differences in opinions call for a larger study that centers the voices of experts regarding the relationship of DEI work. These differing opinions have implications for how a) theorists should go about articulating the structural model for DEI, and b) how DEI work should be engaged within workplaces. Theoretically, the literature shows almost a linear progression of DEI work within workplaces with a focus on diversity then inclusion, with equity still mostly missing (Nair & Vohra, 2015; Scott, 2018). We should take strong caution though to allow the progression we see in workplaces dictate the structural model for DEI constructs. For example, Sabharwal (2014) found that the pursuit of inclusion is a more powerful strategy for workplace harmony and productivity than diversity management, and not the other way around. It is possible then that a focus on equity may quite naturally set the stage for inclusive practices as one of the experts alluded to.

Phenomenological and ethnographic studies are sound methodological approaches that can shed light on how DEI constructs relate. Smith and Atkinson (2016) point out that Cicourel's (1964) call for more phenomenological and ethnographic studies in sociology is often overlooked, but these are necessary to ground our theoretical understandings. Ethnographic and phenomenological approaches within workplaces would provide empirical evidence regarding the relationships between DEI constructs. In addition to ethnographic and phenomenological approaches, researchers could evoke the

methodology of using an expert panel for exploratory purposes. Expert panels are used in the Delphi method (Dalkey, 1969) and we propose that they could also be used in concept mapping methodology (Kane and Trochim, 2007) as well. Both approaches may prove useful for DEI theory building.

The above methodological approaches would also inform on barriers that hinder the progress of DEI initiatives. Various authors have highlighted barriers to DEI work. A perusal of their findings show certain barriers are common across workplaces while others are more context specific (Beeman, 2021; Kluch et al., 2022; Roberson & Scott, 2022; Spalter-Roth, 2021). While we do not go into discussion on these barriers here, we point out that instruments designed to measure DEI within workplaces should consider capturing the extent to which these barriers are present. It is important to understand barriers to effective DEI work as these barriers can serve as potential mediators or moderators or even suppressor variables for structural models that describe the relationship and impact of DEI initiatives within workplaces. For example, a major barrier to DEI initiatives is persistent racism within organizational structures. Scott (2018) warns though that if racism continues to persist within our workplaces, then even workforce diversity (the construct that appears the least challenging to attain) would not be possible to truly achieve, value, and embrace.

Within workplaces, DEI initiatives are often articulated simultaneously, lumped together, and worked on concurrently (Roberson, 2006). If, however, diversity standards are easier to attain, it may be better for workplaces to articulate theories of change that begin with diversity and then move onto inclusive and equitable practices. For example, theories of change beginning with diversity are articulated in O'Donovan (2018) and Bernstein et al (2020). We suggest outlining theories of change for DEI work because these types of works are oftentimes facilitated by people who mean well but are ill-equipped for the task. Understanding which DEI initiatives are easier to achieve would help in setting DEI goals as well as scaffolding the work so folks could see the progress that is occurring. A summary of diversity initiatives that are effective versus ineffective are found in Portocarrero and Carter (2022). The diversity management field could take these a step further and create an outline for which ones are easier and more difficult to do as this would help organizations to decide upon their entry point for this work.

For the Equity Audit specifically, item response theory could be helpful in deciphering which DEI standards and sub-standards are easier to attain because we can utilize this analytical framework to obtain parameter location estimates for items and scales. The utilization of this analytical framework, though, requires a much larger sample size than what The Beloved Community has so far. A possible dilemma to identifying a theory of change for DEI work is that the structural model for DEI may conflict with the practical model for DEI work. If the theoretical and practical models are in conflict, then the actual attainment and sustainability of DEI goals may not be possible. Altogether, if we want DEI work to progress in authentic, meaningful and sustainable ways, the structural model for how diversity, equity, and inclusion relate is of utmost importance to clarify.

Acknowledgement

This study acknowledges the Beloved Community as the developers of the Equity Audit.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This study was funded by the Walton Foundation.

References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2004; 2014). *Standards for Educational and Psychological Testing*. American Educational Research Association.
- Beeman A (2021) If only we are brave enough to be it”: Demanding more from diversity, equity, and inclusion efforts to support women faculty of color. *Critical Sociology*, 47(7-8): 1099-1109.
- Bernstein R S, Bulger M, Salipante P and Weisinger J Y (2020) From diversity to inclusion to equity: A theory of generative interactions. *Journal of Business Ethics*, 167: 395-410.
- Bohonos J W and Sisco S (2021) Advocating for social justice, equity, and inclusion in the workplace: An agenda for anti-racist learning organizations. *New Directions for Adult and Continuing Education*, 2021(170): 89-98.
- Bogner A and Menz W (2009) The theory-generating expert interview: epistemological interest, forms of knowledge, interaction. In: A. Bogner, B Littig & W. Menz (eds) *Interviewing Experts*, 43-80.
- Brown T A (2006) *Confirmatory factor analysis for applied research*. Guilford Press.
- Chaudhry S (2022) Measuring diversity, equity and inclusion: a holistic approach. *Development and Learning in Organizations: An International Journal*, (ahead-of-print).
- Cicourel A V (1964) *Method and measurement in sociology*. Free Press of Glencoe.
- Cizek G J (2012) An introduction to contemporary standard setting. In Cizek (ed) *Setting Performance Standards: Foundations, Methods, and Innovations*, Routledge, 3-14.
- Cohen J (1998) *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates.
- Crane E and Winter P C (2006) Setting coherent performance standards. Council of Chief State School Officers. Available at: http://www.pacificmetrics.com/white-papers/Setting_Coherent_Performance_Standards.pdf.
- Dalkey N C (1969) The Delphi method: An experimental study of group opinion. RAND CORP SANTA MONICA CA.
- Downing S M (2006) Twelve steps for effective test development. In Haladyna & Downing. *Handbook of Test Development*. Lawrence Earlbaum Associates, 3-26.
- Hambleton R K, Pitoniak M J and Copella J M (2012) Essential steps in setting performance standards on educational tests and strategies for assessing the reliability of results. In Cizek [Ed]. *Setting Performance Standards: Foundations, Methods, and Innovations*, Routledge, 47-76
- Kane M and Trochim W M (2007) *Concept mapping for planning and evaluation*. Thousand Oaks, CA: Sage.
- Kluch Y, Wright-Mair R, Swim N and Turick R (2022).”It’s Like Being on an Island by Yourself”: Diversity, Equity, and Inclusion Administrators’ Perceptions of Barriers to

- Diversity, Equity, and Inclusion Work in Intercollegiate Athletics. *Journal of Sport Management*, 1(aop), 1-14.
- Loomis S C (2012) Selecting and training standard setting participants. In Cizek [Ed]. *Setting performance standards: Foundations, Methods, and Innovations*. Routledge, 107-134
- O'Donovan D (2018) Diversity and inclusion in the workplace. In Machado and Davin [Eds]. *Organizational Behaviour and Human Resource Management*. Springer, Cham, 73-108
- Portocarrero S and Carter J T (2022) Diversity initiatives in the US workplace: A brief history, their intended and unintended consequences. *Sociology Compass*, 16(7): e13001.
- Power M (1994) *The audit explosion* (No. 7). Demos.
- Rezai M, Kolne K, Bui S and Lindsay S (2020) Measures of workplace inclusion: a systematic review using the COSMIN methodology. *Journal of Occupational Rehabilitation*, 30(3): 420-454.
- Roberson Q M (2006) Disentangling the meanings of diversity and inclusion in organizations. *Group & Organization Management*, 31(2): 212-236.
- Roberson Q and Scott W (2022) Contributive Justice: An Invisible Barrier to Workplace Inclusion. *Journal of Management*, 01492063221116089.
- Romansky L, Garrod M, Brown K and Deo K (2021) How to measure inclusion in the workplace. *Harvard Business Review*, 27.
- Sabharwal M (2014) Is diversity management sufficient? Organizational inclusion to further performance. *Public Personnel Management*, 43(2): 197-217.
- Scott C L (2018) Historical perspectives for studying diversity in the workforce. In Byrd and Scott (eds). *Diversity in the workforce: Current issues and emerging trends*. Routledge.
- Smith R J and Atkinson P (2016) Method and Measurement in Sociology, fifty years on. *International Journal of Social Research Methodology*, 19(1): 99-110.
- Thomas R R Jr (2005) Building on the promise of diversity: How we can move to the next level in our workplaces, our communities, and our society. AMACOM Div American Mgmt Assn.
- Thompson S (2017) *Defining and measuring 'inclusion' within an organisation*. K4D Helpdesk Report. Brighton, UK: Institute of Development Studies.
- Trenery B M, Franklin H and Paradies Y (2010) Review of audit and assessment tools, programs and resources in workplace settings to prevent race-based discrimination and support diversity. Victorian Heath Promotion Foundation (VicHealth), Carlton, Australia.