

SREE Conference Poster Proposal  
The Evidence Behind Evidence Use: When Does Education Research Inform Practice?

Title: Development of a District Capacity Assessment to Drive Implementation Fidelity

Authors: Caryn Ward, Jennifer Coffey, Dean Fixsen,

Presenting Author: Caryn Ward; contact email [caryn.ward@unc.edu](mailto:caryn.ward@unc.edu)

Affiliations: Ward and Fixsen, University of North Carolina at Chapel Hill; Coffey, U.S. Department of Education Office of Special Education Programs

Email: [caryn.ward@unc.edu](mailto:caryn.ward@unc.edu); [jennifer.coffey@ed.gov](mailto:jennifer.coffey@ed.gov); [dean.fixsen@unc.edu](mailto:dean.fixsen@unc.edu)

Abstract:

Many current education reform efforts are centered on developing, identifying, and scaling up evidence-based practices, and much is known about the effectiveness of these evidence-based instructional practices (EBPs; DeCoito & Richardson, 2016; Hattie, 2009). Although many education leaders attempt to use evidence-based practices, not all attempts result in the promised outcomes (Dynarski, 2015; National Center for Education Statistics, 2013). Careful examinations of the challenges of using evidence-based practices, consistently highlight the need for effective district implementation systems to support the use of these instructional practices (Fullan, 2010; Newman et al., 2012; Superfine, Marshall, & Kelso, 2015). However, a recent research synthesis shows that implementation supports to help teachers use these practices are still lacking (Rittle-Johnson & Jordan, 2016).

Often the failure of evidence-based practices to produce promised outcomes is due to the limited implementation capacity of the district to support the practices, rather than the effectiveness of the selected EBPs themselves. Thus, improving academic achievement requires school districts to ensure use of both effective instructional practices and effective implementation supports (i.e., those actions designed to put a specific instructional practice into use). In the last decade, several researchers and theorists have developed frameworks that outline key constructs of diffusion, dissemination and translation of research (as reviewed in Brownson, Colditz, & Proctor, 2012; Tabak, Khoon, Chambers, & Brownson, 2012). In addition, implementation processes and practices, such as the Active Implementation Frameworks (Fixsen et al. 2005), have been developed and operationalized to assist in the use of implementation supports.

However, the lack of adequate measures of these implementation supports has hindered study of the capacity to support evidence-based practices (Durlak & DuPre, 2008; Lewis, et al., 2015). While some implementation capacity measures are available, these measures: (a) lack specificity to address core implementation components (Landenberger & Lipsey, 2005), (b) are specific to a particular program (Begeny, Upright, Eaton, Ehrenbock, & Tunstall, 2013), or (c) only indirectly assess the influence of some of the core implementation components (Aarons, Cafri, Lugo, & Sawitzky, 2012). Education leaders need reliable and valid assessments to measure and strengthen their district's implementation capacity.

In response to the lack of adequate measures of implementation capacity, the National Implementation Research Network (NIRN) developed the District Capacity Assessment (DCA; Ward et al., 2015). The DCA items are based on key components of the evidence-based and practice-based Active Implementation Frameworks that outline methods to enhance teacher and staff competencies, assure effective leadership, and facilitate organizational supports in every school. The DCA is administered twice a year to teams of district leaders who score the district's capacity using a rubric and a consensus scoring process facilitated by SISEP and their State Implementation Team. The results of the DCA are then used in planning to identify actions or strategies to develop and improve capacity.

The purpose of this poster presentation is to describe the methods and results that establish the DCA's construct validity and internal consistency as well as propose a methodology to establish the instrument's consequential validity (Shepard, 1997, p. 5), as it is used to support districts' decision making in using EBPs.

The results of a three-part study to begin the validation process of the DCA include (a) test content validity, (b) response process validity, and (c) internal consistency analysis will be presented. Test content validation occurred through a four-part online survey completed by participants independently (see Table 1). Response process validation occurred through a one-on-one interview between the participant and an individual from the DCA development team. Participants included (a) researchers with at least one publication in the area of implementation science; (b) state or national technical assistance providers for implementation of effective EBPs at the state or regional levels; and (d) school district practitioners directly involved in the training or coaching structure for district implementation teams. Throughout the two validity procedures, a variety of quantitative and qualitative responses were collected and will be presented.

Pearson product-moment correlation coefficients were conducted to determine relationships between the District Capacity Assessment (DCA) subscales using a sample of 195 completed assessments within districts across 18 states. This analysis determined that the majority of DCA subscales are significantly correlated with each other (see Table 2). Cronbach's alpha coefficients were conducted to determine internal consistency of the DCA composite scales and subscales. The total DCA has strong internal consistency with a Cronbach's alpha coefficient of .908. The three composites also have adequate internal consistency: Leadership ( $\alpha = .794$ ), Competency ( $\alpha = .791$ ), and Organization ( $\alpha = .805$ ). The eight subscales vary in internal consistency. Finally, the 26 DCA items were subjected to principle components analysis (PCA). The KMO value (.865) met the necessary level to run a factor analysis, and Bartlett's Test of Sphericity reached statistical significance. The PCA revealed five components with eigenvalues exceeding 1 within the DCA. These five factors explain 32.16%, 9.66%, 6.36%, 5.51%, and 5.05% of the variance respectively. See Table 3 for the results.

From the results, the DCA was found to have adequate construct validity and internal consistency. It was determined that additional data are needed to further analyze the internal structure of the instrument before making significant changes to the items themselves and the composition of the subscales. The basis of this decision was made on factors such as the theory the DCA is built upon, the flooring effect observed in low scores across several items due to the

current state of the field, and sample size. A methodology to examine the DCA's consequential validity to answer the following three questions will be proposed: 1) to what extent are the results of the DCA used by district leaders in action planning and in formulating policies and practices; 2) to what extent does the action planning process use the DCA as intended; and 3) how do participants perceive the usefulness of the action planning process?

Table 1. *Test Content Validity Survey Components*

Survey	Components Included in the Survey
Consent and Edits	<ul style="list-style-type: none"> <li>• Consent form</li> <li>• Opt in/out of listing as a DCA contributor</li> <li>• Downloadable Microsoft® Word® document of the DCA</li> <li>• Upload DCA with edits, suggestions, questions provided through track changes</li> </ul>
DCA Item Analysis	<ul style="list-style-type: none"> <li>• Attainability of each DCA item rated on a 3-point scale</li> <li>• Importance of each DCA item rated on a 3-point scale</li> <li>• Opportunity to select the 5 most critical DCA items</li> </ul>
DCA Constructs	<ul style="list-style-type: none"> <li>• Comprehensiveness of each DCA construct definition rated on a 3-point scale</li> <li>• Clarity of DCA construct definitions rated on a 3-point scale</li> <li>• Open-ended comments on construct definition</li> <li>• Indication of the best fit for each DCA item within each implementation driver construct</li> </ul>
Sequencing, Frequency, Format	<ul style="list-style-type: none"> <li>• Suggestions for reordering DCA items</li> <li>• Frequency DCA should be administered</li> <li>• Comprehensiveness of each DCA section rated on a 3-point scale</li> <li>• Clarity of each DCA section rated on a 3-point scale</li> <li>• Open-ended comments on sections of the DCA</li> <li>• If participant had experience administering a previous version of the DCA or another capacity assessment asked: (1) whether current version of the DCA is an improvement from previous versions and (2) to give input on what benefits have been experienced from using the DCA or similar measure in the past</li> </ul>

Table 2. *Bivariate Correlations Between DCA Subscales*

Subscale	1	2	3	4	5	6	7	8
1. Leadership	--							
2. Planning	.504**	--						
3. Performance Assessment	.500**	.633**	--					

4. Selection	.321**	.470**	.501**	--				
5. Training	.280**	.529**	.465**	.591**	--			
6. Coaching	-.002	.269**	.287**	.384**	.449**	--		
7. Decision Support Data System	.393**	.775**	.617**	.518**	.522**	.314**	--	
8. Facilitative Admin.	.526**	.682**	.529**	.515**	.536**	.274**	.632**	--
9. Systems Intervention	.181*	.196**	.148*	.154*	.089	.113	.146*	.318**

Note. DCA= District Capacity Assessment.

\*\*  $p < .001$  (2-tailed)

\*  $p < .05$  (2-tailed)

Table 3. *Five Factor Solution Simplified*

Factor	Items loaded into factor (DCA Subscale)	Factor Loadings
1	19 (DSDS)	.832
	18 (Planning)	.818
	17 (Leadership)	.714
	14 (DSDS)	.698
	15 (DSDS)	.688
	8 (Planning)	.651
	9 (Planning)	.583
	13 (Performance Assessment)	.560
2	16 (Facilitative Administration)	.443
	25 (Coaching)	-.856
	24 (Coaching)	-8.49
	23 (Training)	-.662
	21 (Selection)	-.494
3	26 (Performance Assessment)	-.486
	2 (Leadership)	.815
	1 (Leadership)	.770
	3 (Leadership)	.745
4	4 (Facilitative Administration)	.693
	7 (Leadership)	.711
	20 (Selection)	.533
	22 (Training)	.473
5	11 (Facilitative Administration)	.434
	12 (Systems Intervention)	.739
	5 (Facilitative Administration)	.666
	10 (Facilitative Administration)	.481
	6 (Facilitative Administration)	.363

DSDS = Decision Support Data System

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