

RUNNING HEAD: Nationally Certified

Nationally Certified Educational Diagnostician (NCED):

A Credential with Value-Added Potential

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Manuscript In-Review

*Assessment for Effective Intervention* Journal

August, 2012

### Abstract

Growing a national certification program requires systematic research to determine its impact on certificate holders and effectiveness in serving the public. Launched in 2007, the literature to date on the efficacy and value-added effect of the Nationally Certified Educational Diagnostician (NCED) credential is virtually non-existent. Increased awareness of the educational diagnostician profession coupled with heightened job prospects, however, warrants the need for research on the NCED. The purpose of this study was to investigate whether professional practices of educational diagnosticians holding national certification differed significantly from those without national certification. Researchers administered a 24-item questionnaire to 262 educational diagnosticians which elicited self-ratings of six domains of professional practices. Analysis of variance results showed that NCED holders were engaged significantly more than their non-NCED counterparts in the areas of leadership and collaboration. Acknowledging NCED's value-added potential, researchers offer explanations for these findings in light of related research from other national credentials, as well as implications and limitations to the study.

## Nationally Certified Educational Diagnostician (NCED):

### A Credential with Value-Added Potential

A decade in the making (Joyal, LeTendre, Elsbury, & Sutton, 2000; Sutton, 1999, 2000; Sutton & LeTendre, 2000; Sutton & McElroy, 2001; Sutton, Elksnin, Layton, & McElroy, 2002), the Nationally Certified Educational Diagnostician (NCED) program for special education assessment professionals is firmly established (Frawley & Sanchez, 2007; Frawley & Sutton, 2010; NCED Board, 2012a; Sutton, Frye, & Frawley, 2009; Sutton, Frawley, & McElroy, 2004). Showcased twice at annual meetings of the Council for Exceptional Children's (CEC) Convention and Expo (i.e., Sutton & Frawley, 2011; Sutton, Frawley, & Montani, 2012), the NCED stands as one of the seminal achievements of the Council for Educational Diagnostic Services (CEDs), CEC's division for assessment policy and practice.

The NCED joins other national certification programs that directly or indirectly serve the educational needs of individuals with disabilities. These include the Certificate of Clinical Competence (CCC; American Speech-Hearing Association, ASHA, 2012a), the National Board Certified Teacher (NBCT; National Board for Professional Teaching Standards, NBPTS, 2012), the Nationally Certified Counselor (NCC; National Board for Certified Counselors, NBCC, 2012a), and the Nationally Certified School Psychologist (NCSP; National Association of School Psychologists, NASP, 2012).

Touting a 60-year history, ASHA (2012b) has been awarding the CCC since 1952. Also boasting considerable longevity, the NCC was established in 1982 (NBCC, 2012b). Both NBPTS (2007) and NASP (Batshe & Curtis, 2003) followed soon thereafter with the NBCT in 1987 and the NCSP in 1989. Founded more recently in 2007, however, the first NCED certificates were awarded in 2008. Clearly, the NCED program has plenty of room for growth. Many more years

of development and promotion will be needed by the national leadership in order to build substantial numbers of NCED holders.

Notwithstanding, few would disagree that growing a national certification program necessitates systematic research to determine its impact on certificate holders and efficacy in serving the public. For example, recent studies on CCC recipients have concentrated on demographic characteristics (Specht & Blanchet, 2009) and evidence-based practices (Zipoli & Kennedy, 2005). Similarly, Lewis, Truscott, and Volker (2008) investigated demographics and professional practices among NASP and non-NASP members, whereas Cochrane and Laux (2008) surveyed fidelity of implementation of school-based interventions among school psychologists. Gibson and Pope (1993) surveyed a national sample of NCC holders to ascertain ethics of counseling, while advocacy for the counseling profession was the focus of a study by Myers and Sweeney (2004) of national leaders, many of whom held the NCC credential.

Research on the NBCT credential has received unusual national attention, particularly, as it pertains to the value-added education of learners. *Value-added* is a term that has become part of the measurement process used to determine student growth and achievement related to teachers and their effectiveness through classroom instruction (Hershberg, 2004, 2005; Lowrey, 2012; Cavalluzzo, 2004; Daley & Kim, 2010). Initial studies found benefits in terms of positive outcomes for students who were taught by teachers holding the NBCT (e.g., Cunningham & Stone, 2005; Vandevort, Amrein-Beardsley, & Berlinger, 2004; Drury, & Doran, 2003; Goldhaber & Anthony, 2007).

In contrast, Podgursky (2001) questioned the advantages of the NBCT credential which was essentially described as paltry when compared to larger samples using more sophisticated data analysis. With a database that tracked teaching outcomes over a four-year period, Harris and

Sass (2009) examined the relationship between teachers holding the NBCT and student achievement. Results indicated positive outcomes in only a minor number of cases. In another study conducted by Harris and Sass (2011), the value of the NBCT credential was evaluated in relation to those who applied for certification and those who did not apply. A positive value-added factor was established for those who did apply for the NBCT, with recommendations that more data be collected earlier in teachers' careers in order to establish the validity of the comparison.

Research that investigates value-added benefits of other national credentials, however, is far less extensive. Skalski (2011) issued a challenge to NASP members to begin demonstrating how “services provide value in this era of unprecedented accountability and educational reform” (para. 9). One proposed initiative by The Louisiana Department of Education and School Psychological Association Task Force (Duhe et al., 2010), yet to be approved, centers on implementation of value-added portfolios for certified school psychologists. ASHA is currently in the process of developing resources for value-added assessments that members can use nationwide (Adamczyk, 2011). The intent of the projected system is to measure the quality and contributions of speech and language professionals while linking their work with student achievement. One representative effort to explore the value-added work of counselors was conducted by Lapan and Harrington (2005), whose multiple-regression analysis resulted in recommendations to implement comprehensive counseling programs and reduction of non-counseling tasks.

Given the recent inception of the NCED certification program, the literature to date on the credential's impact, efficacy, and value-added effect on certificate holders is admittedly sparse. Yet growing awareness of the educational diagnostician profession (CEC, 2012; NCED Board,

2012a, 2012b), coupled with increased job potential (National Clearinghouse for Professions in Special Education, 2000), supports the need for conducting research on the NCED. Therefore, in addition to obtaining quantitative data on the demographics of a sample of NCED holders and their non-NCED counterparts, the present study investigated one major research question: Do the self-ratings of professional practices of educational diagnosticians holding national certification differ significantly from those without national certification?

### Methodology

#### *Sample*

The national registry of NCED holders numbered 678 in 2011 (NCED Board, 2012c), which represented certificates issued to qualified educational diagnosticians in 18 states during the first three years of the program. However, the preponderance (94%) of certificate holders resided in three states (See Figure 1): Louisiana, 32%; New Jersey, 21%; and Texas, 41%. The departments of education in these states have a long history of recognizing the distinctive work of special education assessment professionals (Sutton, Frye, & Frawley, 2009). Moreover, these states have standards and licensure requirements specific to individuals with a working title of *educational diagnostician* or equivalent (e.g., learning consultant).

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Insert Figure 1

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With assistance from state leaders in Louisiana and New Jersey, researchers identified a sample of 262 educational diagnosticians for participation in the study (see Table 1), which included NCED holders (n=116) and non-NCED holders (n=146). The sample was overwhelmingly (97.3%) female, a gender imbalance that was expected, given most states

require that educational diagnosticians hold a graduate degree in special education, and the national special education teacher workforce is disproportionately female at 85.1% (U.S. Bureau of Labor Statistics, 2010). Additionally, approximately 13% of the sample reflected minority ethnicities, which mirrored their representation of 15% in the national special education teacher population (USBLS, 2010).

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Insert Table 1

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### *Instrumentation*

Researchers gathered data for the study with a 24-item, Likert-type (Likert, 1931) questionnaire. Items prompted respondents to self-assess their work as educational diagnosticians using a four-point scale: 4=frequently; 3=sometimes; 2=seldom; and 1=hardly ever. Items reflected knowledge and skills related to the practice of educational diagnostics and were anchored in the six CEC professional standards adopted by the NCED Board (2012b): Standard 1–Leadership and Policy; Standard 2–Program Development and Organization; Standard 3–Research and Inquiry; Standard 4–Individual and Program Evaluation; Standard 5–Professional Development and Ethical Practice; and Standard 6–Collaboration. Four items for each of the six professional standards (totaling 24 items) were developed by the researchers.

A draft of the questionnaire items was presented to a panel of ten (10) expert educational diagnosticians, all holding graduate degrees in special education with a mean of 25.75 years (range, 11–26 years) of experience as assessment professionals. Experts exchanged ideas, suggestions, and modifications of survey items via email. For added validity, researchers finalized the survey items for the *Educational Diagnostician Practice Questionnaire* (EDPQ; see

Figure 1) and ensured alignment of all survey items with the professional standards. Cronbach's (1951) Alpha was calculated on survey responses from the sample respondents. The resulting  $r$  of .78 indicated acceptable internal consistency and reliability for the EDPQ (Gliem, J. A., & Gliem, R. R., 2003).

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Insert Figure 2

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### *Procedures*

The EDPQ was administered to participants during the fall semester of the year. With assistance from the Office of the State Supervisor of Educational Diagnosticians of the Louisiana Department of Education, an email explaining the purpose of the study and a link to the EDPQ was issued to practicing diagnosticians from (a) the Supervisor's email distribution list and (b) the Louisiana Educational Diagnostician Association (LEDA, 2012) membership list. New Jersey participants completed a hard copy version of the EDPQ, administered at the annual fall conference of the New Jersey Association of Learning Consultants (NJALC, 2012). Researchers preserved the fidelity of the EDPQ by ensuring that the online and hard copy versions of the instrument contained identical items with no deviation in the wording of the items and instructions between the two versions.

### *Design and Analysis*

Researchers employed a non-experimental, survey research design to test for differences of self-ratings of professional practices among educational diagnosticians with and without national certification. Survey responses were collapsed into six domains, each containing four items contained in the EDPQ and corresponding to the six CEC/NCED standards (e.g., Domain 1

contained items 1-4 corresponding to Standard 1; see Figure 1). Domain means were then calculated for the comparison groups. A total EDPQ mean comprising the 24-items was also calculated for each group. We used analysis of variance (ANOVA) to test for differences in group means for each EDPQ domain and the total EDPQ means. An alpha level of .05 was adopted as a minimum for statistical difference.

### Results

Table 2 provides group means and standard deviations. Figure 2 displays a comparison of the EDPQ item domain means for the comparison groups. Higher mean ratings occurred in the Leadership and Policy (range, 3.57 to 3.76) and the Research and Inquiry (range, 3.67 to 3.74) domains. The lowest mean ratings occurred in the Professional Development and Ethical Practice domain (range, 2.65 and 2.70).

Table 3 presents ANOVA results. Significant differences were found in the following EDPQ domains: Leadership and Policy [ $F(1,260)=25.42$ ;  $p<.000$ ], in favor of NCED holders; Collaboration [ $F(1,260)=10.56$ ;  $p=.001$ ], also in favor of NCED holders; and Total EDPQ [ $F(1,260)=8.50$ ;  $p=.004$ ], once more, in favor of NCED holders. Results were non-significant for group comparisons on the remaining domain means.

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Insert Table 2

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Insert Figure 3

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## Discussion

The primary purpose of this study was to investigate differences in the self-assessed professional practices among educational diagnosticians with and without national certification. The analysis yielded two key results. First, NCED holders rated themselves significantly higher in Leadership and Policy (Standard 1). Advanced knowledge and skills corresponding to Leadership and Policy (NCED Board, 2012b) revolve around demonstrating the ability to provide leadership, helping others understand the varying needs of individuals with disabilities, and advocating for changes in education policy and necessary resources for those who work with students who have disabilities. This result suggests that NCED holders may engage more frequently than their non-NCED counterparts in assuming leadership roles to help improve student outcomes.

This finding is consistent with the broader literature, as leadership has been identified as a differentiating factor among professionals holding other national credentials. For example, Mason and McMahon (2009) determined that professional licensure was a predictor of leadership among practicing counselors. Petty, O'Conner, and Dagenhart (2003) found that, when compared to educators without national certification, NBCT holders expressed a significantly greater need to become leaders in their profession. Shriberg (2007) outlined the critical importance of leadership for school psychologists generally, and for NASP members specifically (Shriberg, Satchwell, McArdle, & Mills, 2010).

A second key finding in the present study was that NCED holders rated themselves significantly higher in Collaboration (Standard 6). Advanced knowledge and skills consistent with Collaboration (NCED Board, 2012b) centers on consensus-building among stakeholders involved in the education of students with disabilities, conflict resolution, and maximizing

opportunities for all individuals to have access to various program options. This result suggests NCED holders may engage more frequently than non-NCED holders in consultation and partnering with parents and colleagues in sharing assessment results and in implementing relevant interventions.

As with leadership, collaboration has been recognized as a crucial practice that distinguishes professionals with other national certification credentials. Frank et al. (2008) found that teachers holding the NBCT were nominated by fellow teachers significantly more than non-NBCT holders for purposes of offering collaborative help with instructional matters. Along with research and professional preparation, Hoskins and Thompson (2009) identified collaboration as a key component in developing a counselor identity that is more robust and global. Collaboration has long been established as integral to the team teaching approach that speech-language pathologists implement with general education teachers (Peña & Quinn, 2003; Roller, Rodriguez, Warner & Lindahl, 1992).

The results of this study contribute to the literature in several notable ways. First, it represents the first empirical study on the NCED since its inception in 2007. Second, it establishes baseline data and groundwork for the NCED's impact on certificate holders, which is important in growing the credential nationally and helping it gain wider recognition in the professional community. Third, the current research expands the available literature on the impact of a cadre of national certification programs (i.e., CCC, NCC, NCED, NCSP) that serve the needs of students with disabilities. Fourth, and perhaps most important, this study's key findings that leadership and collaboration differentiated NCED holders from their non-NCED counterparts suggests that the NCED has value-added potential. Reaching a similar conclusion about the NBCT, Frank et al. (2008) posited, "The potential value added by NBPTS-certified

teachers as help providers has policy and practice implications in an era when teacher leadership has risen to the fore as a critical force for school improvement” (p. 3).

Although the current research is a first of its kind on the NCED, future research efforts will need to address several limitations in the present study. One limitation had to do with the sample. We achieved a sufficient sample size of 116 NCED holders, which reflected almost one-fifth of the national population; however, the representation (Salvia, Ysseldyke, & Bolt, 2013) of this group was limited to two states, Louisiana and New Jersey. Yet at the time of the study, NCED credentials had been issued to professionals in 18 states. The sample for this study was also one of convenience. Replication efforts will need to strive for a stratified random sample.

Another limitation centered on the quantity and quality of survey items. We believe the essential design of the EDPQ was appropriate, in that it contained items (four per domain) that aligned with the six CEC professional standards adopted by the NCED Board (2012b). However, Korb (2011) recommended that survey items per variable should range from four to ten. Increasing the number of items per domain would contribute to greater variability, and, hence, higher reliability of the EDPQ. Additionally, when compared to the mean ratings of the other five mean domains (range,  $M=3.29$  to  $M=3.76$ ), the observably lower mean ratings from respondents (NCED=2.70; non-NCED=2.65) on the Professional Development and Ethical Practice (Standard 5) domain suggests a possible issue with item content validity. Upon reflection, we concluded this domain contained a disproportionate number of items (three out of four) having to do with presenting workshops and publishing, which may have been unrealistic for typical NCED holders.

A final limitation of this study was that results hinged exclusively on self-report data. Common as they are in educational research, Chan (2009) noted a twofold universal concern

among researchers in using self-report data: (a) validity is threatened; and (b) substantive inferences are weakened. Yet in his final analysis, Chan concluded, “There is no strong evidence to lead us to conclude that self-report data are inherently flawed or that their use will always impede our ability to meaningfully interpret...” (p. 330). Nonetheless, future research that definitively verifies the value-added impact of NCEDs will need to include more direct measures, possibly, in the form of value-added portfolios as proposed by Duhe et al., 2010.

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Table 1

*Sample Demographics*

	NCED Holders ( <i>n</i> =116)		Non-NCED Holders ( <i>n</i> =146)		Total Sample ( <i>n</i> =262)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>State</b>						
Louisiana	68	58.6%	19	13.0%	87	33.2%
New Jersey	48	41.4%	127	87.0%	175	66.8%
<b>Gender</b>						
Female	115	99.1%	140	95.9%	255	97.3%
Male	1	0.9%	6	4.1%	7	2.7%
<b>Ethnicity</b>						
African-American	9	7.8%	15	10.3%	24	9.2%
Asian-American	5	4.3%	1	0.7%	6	2.3%
Caucasian	101	87.1%	126	86.3%	227	86.6%
Hispanic	1	0.9%	2	1.4%	3	1.1%
Undisclosed	0	0.0%	2	1.4%	2	0.8%
<b>Years of Experience</b>						
Mean*	13.8	–	11.7	–	12.7	–

\*Data unavailable on 5 non-NCED holders.

Table 2

*Means and Standard Deviations of EDPQ Domains*

EDPQ Domains	NCED Holders ( <i>n</i> =116)		Non-NCED Holders ( <i>n</i> =146)	
	<i>M</i> *	<i>SD</i>	<i>M</i> *	<i>SD</i>
1. Leadership and Policy	3.76	0.28	3.57	0.32
2. Program Development and Organization	3.37	0.45	3.29	0.42
3. Research and Inquiry	3.74	0.31	3.67	0.34
4. Individual and Program Evaluation	3.62	0.42	3.61	0.39
5. Professional Development and Ethical Practice	2.70	0.51	2.65	0.51
6. Collaboration	3.57	0.43	3.35	0.62
Total EDPQ	3.46	0.27	3.36	0.28

\*Four-point Likert scale.

Table 3

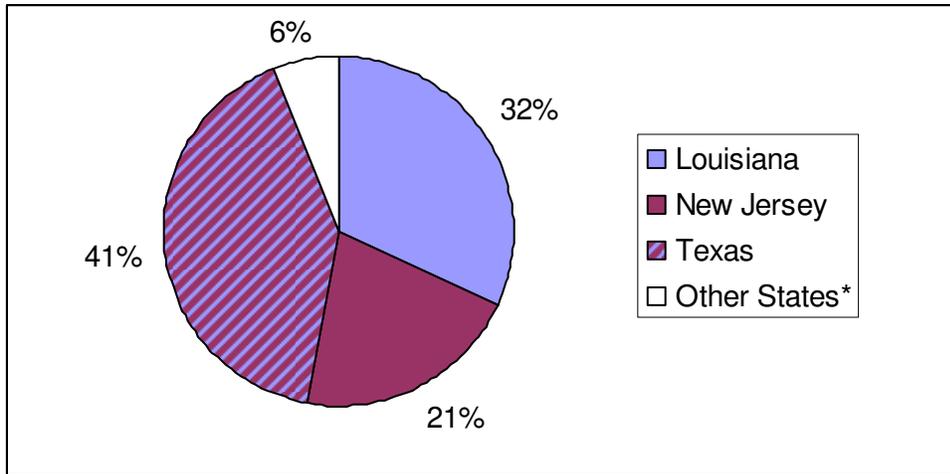
*Analysis of Variance (ANOVA) Results*

EDPQ Domains	NCED / Non-NCED Holders		
	<i>F</i>	<i>p</i>	Signif.
1. Leadership and Policy	25.42	.000***	s
2. Program Development and Organization	2.20	.139	ns
3. Research and Inquiry	2.96	.086	ns
4. Individual and Program Evaluation	0.04	.842	ns
5. Professional Development and Ethical Practice	0.62	.431	ns
6. Collaboration	10.56	.001**	s
Total Domains	8.50	.004*	s

\*  $p < .005$ ; \*\*  $p < .001$ ; \*\*\*  $p < .000$

Figure 1

*State Representation of NCED Holders*



\* Alabama, Arkansas, California, District of Columbia, Florida, Mississippi, Missouri, New Hampshire, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, Virginia, and Wyoming. Data reflect 2011 national registry.

Figure 2

*Educational Diagnostician Practice Questionnaire (EDPQ) Items and Aligned NCED**Professional Standards*

Questionnaire Item	NCED Standard	Knowledge or Skill
1. I am open to new or different leadership roles as an assessment professional.	1	ACC1K2
2. I know the implications for assessment from new and changing federal and state laws.	1	ED1K1
3. I am confident in my understanding of the RTI (Response to Intervention) process.	1	ED1K1,2,3
4. I work with general education and/or special education faculty on RTI projects.	1	ED1K1,2,3
5. I determine instructional accommodations/modifications from specific assessment results.	2	ED2K4
6. I consider a student's race/ethnicity in deciding whether an evaluation warrants follow-up assessment.	2	ED2K3
7. I question disproportionately high numbers of male referrals as female students struggle without referral.	2	ED2K3
8. I outfit my test battery with instruments that assess more than one recognized disability.	2	ED2K1
9. I research and investigate best practices in instructional interventions.	3	ACC3K1
10. I read published reviews of new assessment instruments and techniques.	3	ED3S1
11. I use the most current editions of newly-published tests.	3	ED3K1
12. I reflect on new assessment techniques as they relate to established learning theory.	3	ED3S1

Figure 2 (cont.)

*Educational Diagnostician Practice Questionnaire Items and Aligned NCED**Professional Standards*

Questionnaire Item	NCED Standard	Knowledge or Skill
13. I incorporate classroom observations of students as an integral component in my assessments.	4	ED4S1
14. I develop and implement informal assessments.	4	ED4S2
15. I reference technical/examiner's manuals in interpreting individual student test scores.	4	ED4K3
16. I strive to make my assessment reports increasingly more thorough.	4	ED4S5
17. I attend professional conferences related to assessment.	5	ED5S2
18. I make presentations/workshops at state and/or national conferences related to assessment.	5	ED5S2
19. I make presentations/workshops to local school staff and/or parents.	5	ED5S2
20. I contribute articles to professional journals or newsletters.	5	ED5S2
21. I solicit parental input and their choices/goals regarding their child's education program.	6	ACC6S1
22. Teachers at my school(s) consult with me in development of pre-referral interventions and strategies.	6	ED6S3
23. I assist fellow educators in developing curriculum-based probes in measuring student growth.	6	ED6S4
24. I emphasize a team problem-solving approach in my assessment practice.	6	ED6S1

Figure 3

*Mean EDPQ Domain Scores Among NCED and Non-NCED Holders*

