

# **TEST ANALYSIS REPORT**

## **National Counselor Examination for Licensure and Certification (NCE)**

**October 13, 2012**

**Prepared by the:**

**Center for Credentialing & Education (CCE)**

**For the**

**National Board for Certified Counselors & Affiliates  
(NBCC)**

Test Analysis Report  
National Board for Certified Counselors  
National Counselor Examination  
October 2012 Administration

**Overview**

A total of 2,681 examinees completed The National Counselor Examination for Licensure and Certification (NCE) in October 2012. This group of national candidates will be the focus of this report, due to the consistency of eligibility requirements and the relative stability of this candidate population. The October 2012 NCE test form was assembled by the National Counselor Examination Committee of the National Board for Certified Counselors and Affiliates, Inc. (NBCC) (see Attachment B). The test was administered according to standard procedures by the NBCC at 197 established test centers.

**Test Content**

The NCE consisted of 160 items, which were systematically selected such that the test aggregate was appropriately representative of the National Counselor practice domains, with specific dispersion of item content and type delineated by the Examination Matrix adopted by the NBCC. Of these 160 items, 64 comprised the equating block (common to the October 2011 test form), 15 were new items (i.e, previously pretested, but not previously scored) and the remaining 81 were used items from prior forms to provide stability. In addition to these 160 core items, 40 items were included for pretesting. Pretest items are not discussed in this report. The composition of the core examination is shown in Table 1 on the following page.

**Preliminary Test Scoring**

Following the test administration, all test materials were received and inventoried by the NBCC. Candidate test answer sheets were scanned, and upon completion of quality control procedures for answer sheet scanning, scores were posted to candidate records and checked for accuracy. Subsequently, a raw score frequency distribution and total score descriptive statistics were obtained.

**Table 1****October 2012 Examination Composition****Job Analysis Domains**

<b>CACREP CORE AREA</b>	<b>DIMENSIONS</b>	<b>Fundamental Counseling Issues</b>	<b>Counseling Process</b>	<b>Diagnostic &amp; Assessment Services</b>	<b>Professional Practice</b>	<b>Professional Development, Supervision, and Consultation</b>	<b>Total</b>
	<b>Human Growth and Development</b>						<b>12</b>
	<b>Social and Cultural Foundations</b>						<b>11</b>
	<b>Helping Relationships</b>						<b>36</b>
	<b>Group Work</b>						<b>16</b>
	<b>Career and Lifestyle Development</b>						<b>20</b>
	<b>Appraisal</b>						<b>20</b>
	<b>Research and Program Evaluation</b>						<b>16</b>
	<b>Professional Orientation</b>						<b>29</b>
	<b>Total</b>	<b>64</b>	<b>22</b>	<b>19</b>	<b>26</b>	<b>29</b>	<b>160</b>

A preliminary item analysis was obtained using appropriate candidate score data. Research and development staff reviewed the preliminary item analysis to confirm the appropriateness of potentially problematic items (i.e. those with slightly irregular statistics and/or comments by candidates). Appropriate item scoring changes were made, as needed.

## Final Test Scoring

After appropriate final candidate status code changes were made, final scoring of the examination was subsequently accomplished. The distribution of raw scores for all national candidates ( $n = 2,681$ ) approximated the normal curve (see Figure 1). Reliability (KR20) of the 160-item test was 0.86, and the standard error of measurement (SEM) was 6.15, and the single-administration decision consistency index was 0.92. The mean test score was 108.36 and the standard deviation was 16.44.

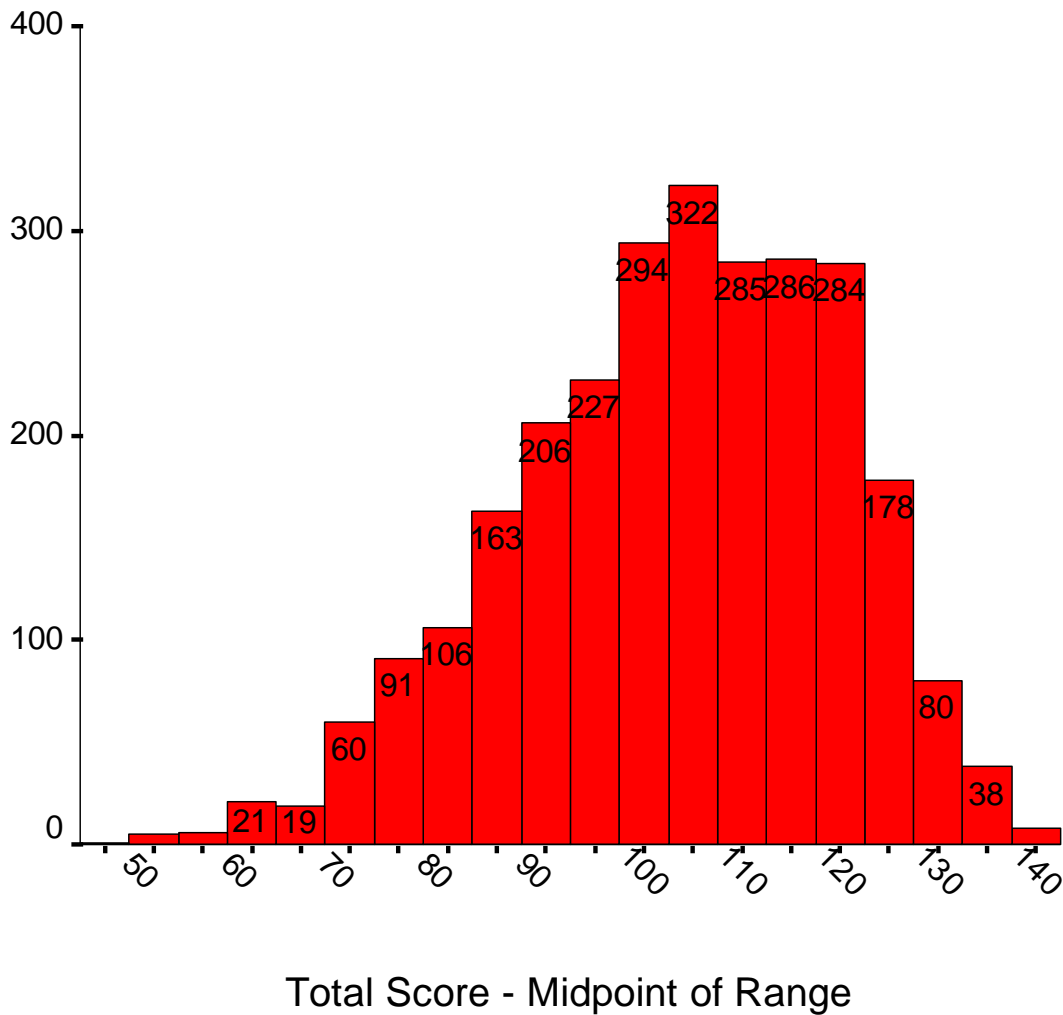


Figure 1. Distribution of October 2012 National NCE candidate scores

## Test Results

Established statistical procedures for test equating were conducted. In accordance with the equating plan, the current test was equated to the October 2011 test form.

Table 2 below summarizes the equating block and total test data for the October 2011 (n = 2,464) and the October 2012 (n = 2,681) candidate groups. The performance of the October 2012 candidate group on the equating block is noted to be similar for the common items of the October 2011 test form. These data indicate that the items constituting the equating block are well suited for equating purposes.

**Table 2. Equating Data  
October 2011 and October 2012 National Examinees**

<b>Statistics</b>	<b>Equator Items October 2011</b>	<b>Equator Items October 2012</b>	<b>Total Test October 2011</b>	<b>Total Test October 2012</b>
Number of Items	64	64	160	160
Mean	42.17	43.07	106.32	108.36
Standard Deviation	8.32	7.47	17.97	16.44
Standard Error of Measurement	3.72	3.65	5.96	6.15
Minimum	11	13	48	51
Maximum	63	61	148	146
KR20	0.80	0.76	0.89	0.86

After final scoring was completed, candidate score data were generated, and checked for accuracy. Each candidate's record included 13 subscores by content area on the two dimensions of the examination (see Table 1).

### **Summary**

The October 2012 National Counselor Examination for Licensure and Certification was administered to two thousand six hundred eighty one (2,681) examinees at 197 test centers. The examination matched the test specifications thereby providing substantial evidence in support of content validity. Upon administration, the psychometric characteristics of the examination were appropriate. The overall reliability of the scores indicated sufficient measurement accuracy to warrant a pass-fail decision. Of the total candidate group, 2,243 (84%) passed.

## **ATTACHMENT A**

### October 2012 National Counselor Examination for Licensure and Certification All National Candidates (n = 2,681)

<b>VARIABLE</b>	<b>N</b>	<b>MEAN</b>	<b>STD DEV</b>	<b>MINIMUM</b>	<b>MAXIMUM</b>	<b>POSSIBLE</b>
<b>CACREP Area</b>						
Human Growth and Development	2681	7.43	1.92	1	12	12
Social and Cultural Diversity	2681	8.52	1.5	2	11	11
Helping Relationship	2681	24.98	4.41	8	35	36
Group Work	2681	10.68	2.24	2	16	16
Career Development	2681	12.63	3.16	3	20	20
Assessment	2681	13.25	2.75	2	20	20
Research and Program Evaluation	2681	10.53	2.67	1	16	16
Professional Orientation & Ethical Practice	2681	20.35	3.23	7	28	29
<b>Work Behavior Area</b>						
Fundamental Counseling Issues	2681	20.98	4.02	7	31	32
Counseling Process	2681	31.9	5.41	11	44	45
Diagnostic and Assessment Services	2681	15.39	3.44	4	25	25
Professional Practice	2681	26.71	4.42	10	38	38
Professional Development, Supervision, & Consultation	2681	13.39	2.59	1	20	20
<b>Test Total</b>	2681	108.36	16.44	51	146	160

**National Counselor Examination for Licensure and Certification (NCE)  
Development Process**

Evidence of the NCE validity is established through content validity. Content validity refers to the degree to which the items on a licensure/certification examination are representative of the knowledge and/or skills that are necessary for competent performance.

The federal Uniform Guidelines on Employee Selection Procedures (1978) state that content validity is an appropriate strategy when the "job domain is defined through job analysis by identifying important tasks, behaviors, or knowledge and the test . . . is a representative sample of tasks, behaviors, or knowledge drawn from that domain." (p. 19).

The NBCC conducted a job analysis to serve as the basis for documenting the content validity of a National Counselor Examination. The purpose of the study was twofold: (1) to determine and comprehensively describe the job of the professional counselor, and (2) to evaluate this description through the ratings of job experts to define areas that should be assessed in a certification / licensure examination.

The NBCC NCE Job Analysis Advisory Committee prepared a comprehensive list of activities and issues related to the job. This inventory was completed by a representative sample of job experts throughout the United States, and the rating results were reviewed by the Advisory Committee. These results were used to develop test specifications directly related to the important activities performed and the client issues dealt with by practitioners. These test specifications, empirically derived from a national job analysis study, represent the plan for development of a criterion-referenced examination. Each form of the exam contains the exact number of problems as identified in the test specifications. Each test form developed to match these job-related specifications has strong evidence of content validity.

Every NCE item is reviewed by the NCE Examination Development Committee. The NCE Examination Development Committee is comprised of twelve (12) subject matter experts representing a variety of degrees levels and work settings. The committee includes three representatives from state licensure boards.



The NCE Exam Development Committee(s) perform the following in order to ensure the validity of the NCE:

1. Classify items according to the Detailed Content Outline derived from the national job analysis of professional counselors.
2. Refine the item pool by rejecting items that are too specialized, that is, considered to be “out of the domain” in terms of the content knowledge considered to be necessary for a “minimally” competent professional counselor.
3. Review each item used on an examination every time it is scheduled to be used on an examination. The committee checks for psychometric properties of each item, ensures content accuracy, content distribution and overlap, and verification of quality items. The items are also re-checked for potential gender, race/ethnicity, geographical/cultural or other types of bias.
4. Review each form of the NCE to ensure the examination contains the specified number of items, with representative sampling of tasks within each major category. The committee is guided by the test specifications, which were empirically derived from the job analysis study.
5. After each administration of the NCE, committee and staff psychometricians review the psychometric properties of each of the items and of the examination as a whole.
6. Item and examination development processes are periodically reviewed to ensure the NCE adheres to the *Standards for Educational and Psychological Testing* (1999) and the U.S. federal *Uniform Guidelines on Employee Selection Procedures* (1978) when evaluating the test, testing practices, and the interpretation of test scores.