Test Analysis Report

International Board Certified Lactation Consultant® (IBCLC®) Certification Examination

2017 October Administrations

Prepared for the:
International Board of Lactation Consultant Examiners® (IBLCE®)

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Overview

The IBCLC certification examination 2017 October test form was administered in 837 locations across 67 countries and territories in 17 languages: Chinese Traditional, Croatian, Danish, Dutch, English, French, German, Greek, Hungarian, Indonesian, Italian, Japanese, Korean, Polish, Portuguese, Slovene, and Spanish. A total of 3,917 candidates sat for the examination in October 2017. Of all candidates, 3,911 (99.8%) candidates tested through computer-based test (CBT), and 6 (0.2%) candidates tested through paper-pencil test. Data from CBT and paper-pencil administrations were combined for analysis in this Test Analysis Report.

Test Construction

The IBCLC certification examination is based on a detailed content outline that was derived from a practice analysis completed in 2014 by the Board, in conjunction with its Examination Committee members and a Representative Panel of Experts (RPE). On the basis of this study, the Board arranged the examination content according to content areas and chronological periods. The detailed content outline appears in its entirety on the IBLCE website (www.iblce.org).

The examination is scored as a single integrated test. However, it has two multiple-choice item formats: text-based and image-based multiple-choice. The images usually present a photograph depicting an aspect of breastfeeding, or breast anatomy or pathology that the candidates must resolve. These test items have a particularly high degree of clinical relevance. Of the 175 items comprising the test, 85 reference images.

Following standard operating procedures, the 2017 October examination was developed by an Examination Committee that prepared, reviewed, edited, and selected test items. The Committee includes broad geographic and practice setting representation of subject matter experts.

A preliminary item analysis was conducted after test administrations using all candidate score data (n = 3,917). Psychometrics staff at PSI reviewed the preliminary item analysis with members of the Examination Committee to confirm the appropriateness of potentially problematic items (i.e., those with slightly irregular statistics or adverse candidate comments). Appropriate item scoring changes were made as needed. In addition, an analysis of item performance by the various linguistic versions of the examination was conducted, and items with potential issues were reviewed by the Examination Committee and translators to confirm the comparability of the items in the various languages.

Test Scoring

These statistics are computed for the first-time candidate population of 2,503 candidates, based on the combined text-based and image-based portions. The statistics are presented for the overall test rather than for the two subtests because the examination was designed and intended to be one comprehensive, integrated test.

The distribution of raw scores for first-time candidates (n = 2,503) had a slight negative skew (see *Figure 1*). Reliability (KR20) of scores from first-time candidate responses to the 175-item test was 0.89, the standard error of measurement (SEM) was 4.93, the conditional SEM at the cut score was 5.63[1], and single administration decision consistency index estimates were 0.87[2] and 0.91[3]. The mean test score was 138.20 with a standard deviation of 14.69.
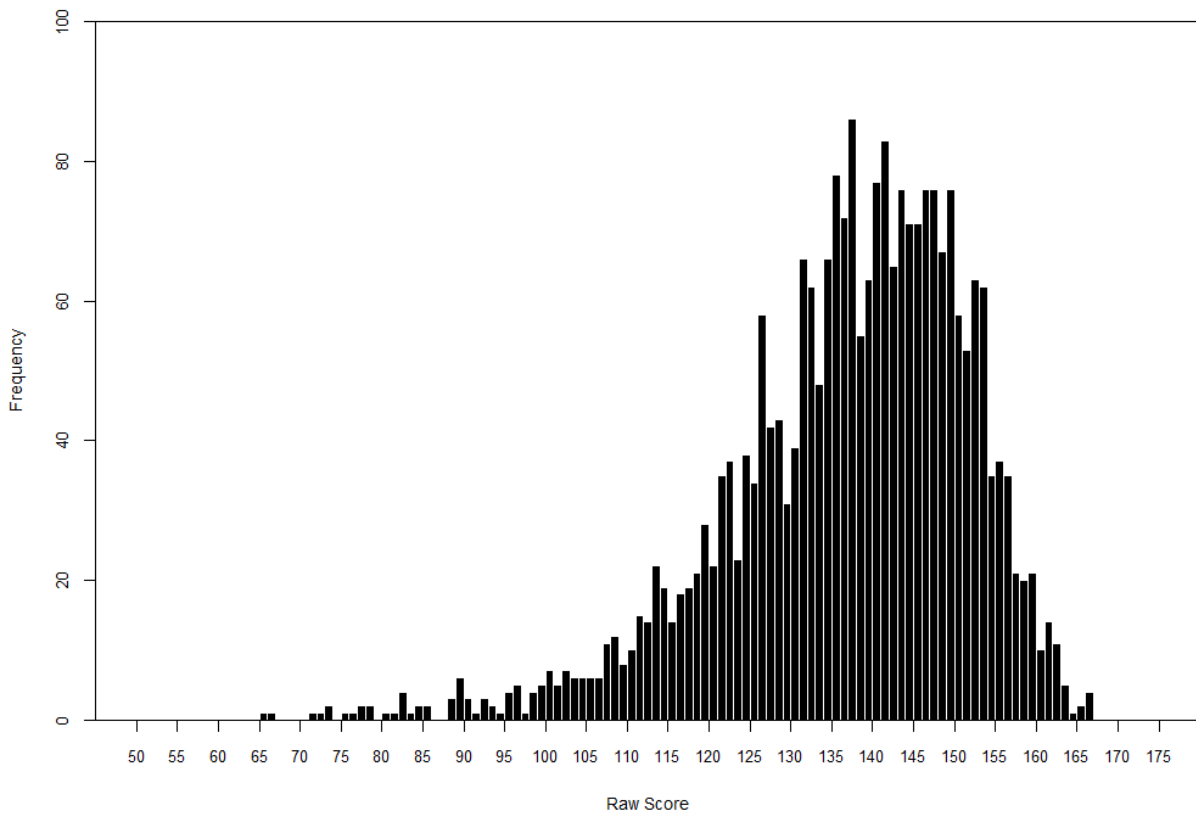

Figure 1. *Distribution of Raw Scores for First-Time Candidates*

[1]Lord, F. M. (1984). Standard errors of measurement at different ability levels.
  Journal of Educational Measurement, 21(3), 239-243.
[2]Subkoviak, M. (1976). Estimating reliability from a single administration of a criterion-referenced test.
  Journal of Educational Measurement, 13(4), 7-10.
[3]Livingston, S. A., & Lewis, C. (1995). Estimating the consistency and accuracy of classifications based on test scores.
  Journal of Educational Measurement, 32, 179-197.

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The performance for each content area is shown in Table 1. Candidates received scores in these seven major content areas, along with guidance on how to interpret these scores for either retesting (for unsuccessful candidates) or future professional development (for passing candidates).

Table 1. Candidate Performance Summary for All Candidates by Content Area (n = 3,917, % passing =73.81)

Content Area	n of items	Mean
I. Development and Nutrition	26	20.79
II. Physiology and Endocrinology	24	17.81
III. Pathology	31	24.65
IV. Pharmacology and Toxicology	13	9.39
V. Psychology, Sociology, and Anthropology	21	16.49
VI. Techniques	25	21.10
VII. Clinical Skills	35	27.96
Total	**175**	**138.20**

Test Results

Established statistical procedures for test equating were conducted to adjust for differences in difficulty across test forms and to maintain the minimum competency standard pre-established by the IBLCE. After adjusting scoring for the items as indicated, the 2017 October form was equated to the 2016 October form using 45 equator items identified at the examination development stage. The IBLCE approved and adopted a final cut score of 131 raw score units (out of 175) for the 2017 October test form.

Final results for the examination forms are shown in Tables 2 and 3, displaying means and pass/fail summary by certification status and eligibility pathway, respectively.

Table 2. Mean Score and Pass/Fail Summary by Certification Status

Status	*N*	*Mean*	*% Passing*
Initial	2,503	137.28	72.91
Lapsed	110	140.71	82.73
Recertification by Exam at 5 Years	84	142.58	85.71
Recertification by Exam at 10 Years	508	145.35	90.16
Recertification by Exam at 15 Years	66	147.80	95.45
Recertification by Exam at 20 Years	168	149.83	96.43
Recertification by Exam at 25 Years	11	152.27	100.00
Recertification by Exam at 30 Years	16	153.31	100.00
Repeat	451	127.19	42.79
Total	**3,917**	**138.20**	**73.81**

Table 3. Mean Score and Pass/Fail Summary by Eligibility Pathway

Pathway	N	Mean	% Passing
Pathway 1*	2,720	135.46	67.68
Pathway 2**	81	144.22	86.42
Pathway 3***	85	139.89	81.18

*Pathway 1: Health professionals and non-health professionals earning clinical hours in an appropriate setting
**Pathway 2: Accredited Academic Programs
***Pathway 3: Mentorship for clinical hours with an IBCLC