



FACTS & FIGURES

Issue 4

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TOUCHSTONE
INSTITUTE
COMPETENCY EVALUATION EXPERTS

CELBAN

READING TEST RENEWAL

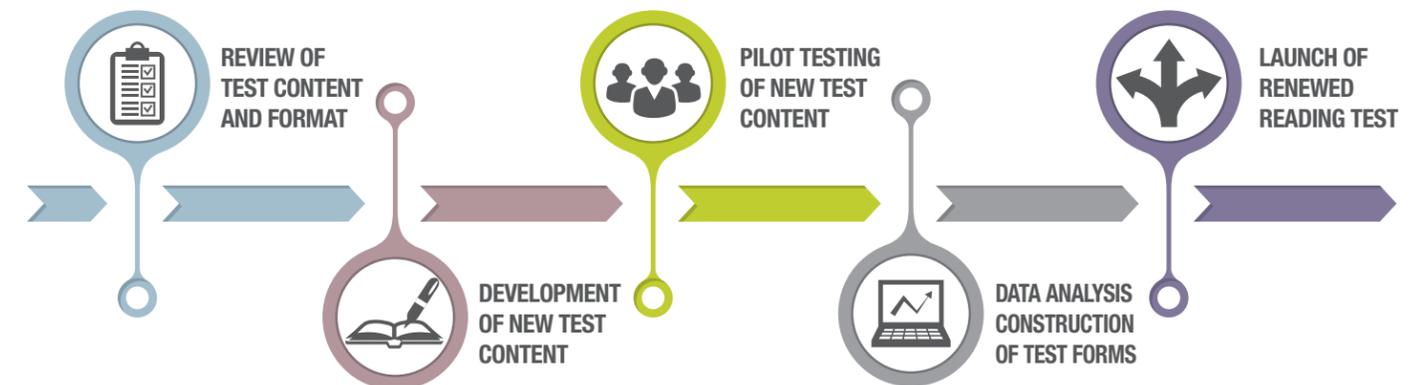
The Canadian English Language Benchmark Assessment for Nurses (CELBAN) is an occupation-specific language assessment that offers Internationally Educated Nurses (IENs) the opportunity to demonstrate their proficiency within a real-world context that is both familiar and relevant. Developed by the Centre for Canadian Language Benchmarks (CCLB) through a partnership of nursing regulators and language training specialists, CELBAN is built on communication tasks essential to nursing that represent authentic language use. CELBAN is one of two tests accepted by nursing licensing bodies across Canada as evidence of English language proficiency for licensure.

Background

CELBAN is an assessment of four separate language skills (listening, speaking, reading and writing) that are essential for successful communication in the nursing profession. The test is task-based and embeds the use of language within a profession-specific framework with a focus on constructs that are fundamental to nursing practice. CELBAN scores are referenced to the Canadian Language Benchmarks (CLB), a descriptive scale of communicative ability in English as a Second Language (ESL).

The CELBAN test renewal project was launched in 2014, when The CELBAN Centre was first established at Touchstone Institute. The purpose of the renewal project was to develop additional forms of the test that would retain the features of the original model and also introduce some new task types and fresh content.

The renewal process for each skill test involved a review of test content and format, development of new tasks and items, pilot testing, data analysis, construction of renewed forms and a launch of the renewed procedures and test materials.



This issue of *CELBAN Facts & Figures* presents a summary of the work that was carried out to produce renewed forms of the CELBAN Reading Test. For information on the Speaking Test renewal process, see *CELBAN Facts & Figures, Issue 3*.

Reading Test Review and Consultations

The renewal process began with a review of the current Reading Test by a test development specialist. Each task was examined, and its items were categorized based on the reading ability or strategy required to respond correctly. Items were scrutinized for quality, independence, and integrity. Following this review, an approach was designed for consultation with a small group of nurses serving as subject-matter experts (SMEs). The SMEs were brought together in a facilitated workshop, during which they were invited to share their feedback on the authenticity of the task types, currency of the test themes and relevance of the test items. Consultations were also held with ESL experts who provided their observations, focussing mainly on item quality and scoring procedures.

The original CELBAN Reading Test consisted of two separate components: comprehension, and skimming and scanning. The information gathered during the consultations was compiled and analyzed for each component.

The consultation findings indicated that the variety of genres of the reading passages, the task types and the level of difficulty were appropriate and valid. This process confirmed the suitability of CELBAN's existing blueprint. Given the concerns regarding the skimming and scanning component, the determination was made to repurpose that section only.

Comprehension **C**

- Task types provide relevant representation of reading requirements for the nursing profession
- Level of difficulty sufficiently challenging
- Variety of genres appropriate

Skimming & Scanning **SS**

- Task types authentic
- Task types posed concerns regarding its administrative and scoring complexity
 - administered in a second, separate booklet
 - complex, time consuming scoring process

Development of New Test Content

Based on feedback from the trained assessors, and in efforts to retain the skills assessed by the skimming and scanning tasks, all open-ended items from the previous test model were converted to multiple-choice to enhance efficiency and reliability of scoring. Following a test development process, a prototype of the new test model was then configured so that content could be developed for pilot testing.

Original Test

Skimming & Scanning

- Short answer questions, open-ended items
- Trained assessors required for scoring

Reading Comprehension

- Texts in a variety of genres including charts, patient notes, manuals, and information texts related to health issues and health administration
- MCQs, cloze exercise
- Scoring based on standardized answer key

Pilot test

Reading Comprehension

- Texts are charts, patient notes, manuals, and health information texts
- MCQs evaluate ability to skim and scan for critical info (factual details, main ideas, supporting details), and general comprehension (vocabulary, idiomatic language, etc.)
- Cloze passage on a general health topic tapping general language ability
- Scoring based on standardized answer key

Content Development

A development team consisting of five ESL experts and two nursing professionals was established to create a battery of new passages and items. The team worked with a set of CELBAN development guidelines and modelled their tasks and items on the prototypes that had been designed for each task type.

5 ESL Experts

Provided input on the level of difficulty, linguistic skill, and background knowledge of tasks and items

2 Nursing Professionals

Provided input on the level of difficulty, authenticity, and content relevance of tasks and items



Pilot Testing of New Test Content

Pilot Test Participants

As a crucial element to test renewal, piloting allowed developers to evaluate the quality of the new content and ultimately select the tasks and items that would be most effective, reliable, and authentic. Accordingly, the newly developed tasks were assembled into pilot reading tests. IENs were recruited to participate in the pilot, and interested volunteers were asked to provide some demographic information and specify their levels of English proficiency based on a set of CLB-referenced descriptors.

As is typical in many occupation-specific test development contexts, the practicalities of recruitment and administration imposed restrictions on the pilot sample size. To facilitate a Classical Test Theory (CTT) data analysis model, an important pilot feature was ensuring a well-stratified sample. As such, great care was taken to ensure participants were recruited across the range of language ability that is typical of actual CELBAN test takers, and each pilot cohort included a mix of all levels. Efforts were also made to ensure an appropriate representation of gender, culture, language background, and experience. The demographic survey indicated 17 different nationalities and 25 different language groups. As is typical of IENs seeking registration in Canada, the majority of participants were between 26 and 45 years of age, and the gender distribution was weighted toward females.



Pilot Test

Pilot administrations were concentrated in Winnipeg and Vancouver, where the demand for CELBAN is highest. Participants remained on site for approximately 4.5 hours in order for the different cohorts to attempt every item in the various test booklets containing parallel tasks and items.

Participants were grouped into three cohorts, counterbalancing the order in which each group completed the items. This process was planned to ensure that all of the items received a fair trial. Items administered at the beginning of a pilot session can sometimes be affected by participant restlessness or nervousness, and items administered at the end of a session can be affected by fatigue or burn-out. Rotating the order of test booklets across the cohorts ensured that each group of items was administered in the initial, middle, and final position.

The pilot test was coordinated and administered by the CELBAN management team from Touchstone Institute. To ensure that conditions were standardized, each session was proctored according to a scripted procedure. The pilot testing ran smoothly, and the process was not interrupted or affected by any unusual circumstances or unforeseen events.

Data Analysis and Item Selection

Independent analyses of the pilot data were carried out by the psychometric team at Touchstone Institute and an external measurement expert. Data analysis was performed with the intent of identifying item difficulties and characteristics to inform the construction of operational test forms.

An analysis of variance (ANOVA) was performed to investigate whether the pilot results were influenced by the order in which the tasks were administered. The ANOVA showed no statistically significant differences in the total CELBAN scores between the three cohorts. Analyses determined that order effects did not impact the results.

Reliability indices were calculated based on the item combination in the different booklets to provide an indication of overall reliability. All of the booklets achieved values in excess of .80, a respectable degree of internal consistency. Difficulty and discrimination values were calculated for every item within each task set, and items with unacceptable values were discarded from the pool.

Items from the pilot test were then rank ordered based on their calculated difficulties, and a team of CLB experts worked together to assign CLB levels to the item groupings. This important step had to be carried out before the operational forms could be constructed so that items could be selected based on their relationship to CLB levels as CELBAN test results are referenced to the CLB framework.

Blueprints for the final test forms were constructed using the CLB levels determined by the experts, and when the renewed forms had been configured, the CLB expert team was reconvened to review the final forms by answering the items just as test takers would. The team then engaged in a facilitated process to determine the linkage of test results to CLB levels.

Results of the Reading Test Renewal Process

Building on feedback gathered over a decade of CELBAN administration, pilot results, and data analysis, the Touchstone Institute development team has produced an updated blueprint and new content for the Reading Test. New test forms have been constructed from this content into Reading Tests with six tasks and 48 items. These new forms preserve the original CELBAN model, representing a range of tasks that reflect different nursing contexts, situations and genres. The items emphasize a variety of reading skills and strategies that are relevant to the nursing profession.

Genre	Original Test Forms (50 min)	Renewed Test Forms (60 min)
Basic Patient Information Form	This skimming and scanning task involved finding patient information for a basic form and answering factual questions through open-ended, short answer items.	This form is not included in the renewed test as it was deemed to be too simple for CELBAN's target audience. Instead, skimming and scanning for basic factual information are incorporated into the other reading comprehension tasks.
Nurse's Narrative Notes	This skimming and scanning task involved reading Nurse's Narrative Notes and answering factual questions through open-ended short answer items.	This genre has been retained and expanded for the renewed test forms. Skimming and scanning skills are now tested through multiple-choice questions.
Nursing Policy	This task required test takers to demonstrate comprehension of basic facts, critical information and procedural instructions in an excerpt of a policy manual by answering multiple-choice questions.	This genre has been retained in its original design and format.
Health-related Article	This task required test takers to demonstrate comprehension of more complex nursing topics by answering multiple-choice questions.	This genre has been retained and appears twice (different topics) in each renewed test form because it measures higher levels of reading comprehension.
Nursing Manual Excerpt	This task required test takers to demonstrate comprehension of nursing-specific procedures by answering multiple-choice questions.	This genre has been retained in its original design and format.
Cloze Passage	This task required test takers to demonstrate comprehension of grammatical features in reading such as discourse markers, organization and syntax by selecting the correct response from multiple-choices.	This genre has been retained, but the number of items has been reduced.

Ongoing Renewal

Through consultation and collaboration, the development team has accomplished Reading Test task specificity to the nursing domain, ensuring that CELBAN can continue to provide test takers with the opportunity to demonstrate their reading capabilities in an authentic, meaningful, and relevant context.

Under the stewardship of Touchstone Institute, and with input from language and nursing subject matter experts, CELBAN content and test administration have been continuously evolving. The CELBAN renewal process has focussed on preserving and building on the excellent foundation that was established in the original CCLB test development project.

After the launch of the renewed test forms in the fall of 2018, research and development will remain an ongoing aspect of quality control. The Touchstone Institute psychometric team has been conducting regular data analysis on CELBAN tasks and items over a period of several years, and this practice continues as one component of Touchstone Institute's commitment to ensuring reliability, fairness, and excellence in assessment.

Facts & Figures Reports are developed and published by The CELBAN Centre to support transparency in test research and development, and to document our experiences and activities as administrators of CELBAN. The publication is available from The CELBAN Centre's website. For more information, contact celban@tsin.ca.





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The CELBAN Centre is the national administrative centre for the Canadian English Language Benchmark Assessment for Nurses (CELBAN).


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CELBAN was developed by, and remains property of, the Centre for Canadian Language Benchmarks (CCLB)