College of Occupational Therapists of British Columbia

ASSESSING SUBSTANTIAL EQUIVALENCE

of Internationally Educated Occupational Therapists:

Principles, Process, & Tools

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Note to Readers

Throughout this paper, words that are followed by a [G] are defined in Appendix A: Glossary.

List of Acronyms

ACA: Academic Credential Assessment

ACOTRO: Association of Canadian Occupational Therapy Regulatory Organizations

CAOT: Canadian Association of Occupational Therapists

CAT: Competence Assessment Test

CBA: competence-based assessment

CEOT: Canadian-educated occupational therapist

CSR: chart-stimulated recall

IEOT: internationally educated occupational therapist

PBA: performance-based assessment

PSCA: Profession Specific Credentialing Assessment

1.0 OVERVIEW

This report describes the WHY, WHAT, HOW, WHEN, and WHERE NEXT in the development and implementation of a substantial equivalence assessment system. This system will determine the substantial equivalence of the education and competencies of an internationally educated occupational therapist (IEOT) to the Canadian educational and practice standards.

This report builds on previous work completed for the Association of Canadian Occupational Therapy Regulatory Organizations (ACOTRO). The work

- Explored the definition and description of the substantial equivalence of IEOTs;[1]

- Described the educational benchmark for the Canadian-educated occupational therapist (CEOT);[2] and

- Described and updated an inventory of the essential competencies for occupational therapists in Canada.[3]

The first section of this report reviews the WHY or purposes for the development of the substantial equivalence framework. The second section includes information about WHAT aspects of IEOTs need to be assessed, and identifies which aspects will be assessed through Qualification Recognition and Competence Verification when building a substantial equivalence system.

The third section outlines HOW the substantial equivalence assessment will be done and includes guiding principles to evaluate the substantial equivalence of IEOTs; the criteria and approach for Qualification Recognition, Profession Specific Credentialing Assessment (PSCA), and Competence Verification; and the rationale used to select the practice-focused interview. The fourth section outlines HOW and WHERE NEXT for implementation of the substantial equivalence assessment system.

1.1 Background

ACOTRO initiated a project entitled Assessing the Competence of Internationally Educated Occupational Therapists (IEOTs) for Practise in Canada. The purpose of this project was to ensure that occupational therapy regulators across Canada have a fair, transparent, and accurate approach for assessing competence.

The IEOT project had two parts with the following purposes:

Part 1 (IEOT 1)

- Establish a common approach to determine the substantial equivalence of the education and competencies of IEOTs to Canadian occupational therapy education and practice standards.

Part 2 (IEOT 2)

- Develop and implement assessment tools to determine the substantial equivalence of the education and competencies of IEOTs to the Canadian occupational therapy education and practice standards.

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[1] *Glover Takahashi, McIlroy, & Beggs, 2008*
[2] *Glover Takahashi, Beggs, & McIlroy, 2009*
[3] *Association of Canadian Occupational Therapy Regulatory Organizations, 2003*

The tools being developed in Part 2 are

- **PSCA**
  The purpose of the PSCA Tool is to assess the comparability of the occupational therapy education of an IEOT to the Canadian occupational therapy education standards.

- **Competence Assessment Test (CAT)**
  The purpose of the CAT is to assess an IEOT's ability to demonstrate practice standards. The assessment involves key aspects of the acceptable level of competence for safe, effective, and ethical practice by an occupational therapist in Canada.

This report is based on the background work done in IEOT 1; focused meetings with the members of ACOTRO; and consultations with the IEOT 2 Tool Development Advisory Group, which includes members from ACOTRO, the Association of Canadian Occupational Therapy University Programs, the Canadian Association of Occupational Therapists (CAOT), and external representatives (see list of members in Appendix B).

2.0 QUALIFICATION RECOGNITION & COMPETENCE ASSESSMENT OF IEOTS

This section includes information about WHAT aspects of IEOTs need to be looked at with each tool, and identifies which aspects are assessed through Qualification Recognition and Competence Verification when building a substantial equivalence system.

2.1 Substantial Equivalence Framework

In IEOT 1, a framework for substantial equivalence was developed (see Table 1). The substantial equivalence framework facilitates the assessment of IEOTs to confirm that

- Their occupational therapy education meets the Canadian education standards (i.e., Qualification Recognition); and

- They demonstrate key competencies acceptable for safe, effective, and ethical practice in Canada (i.e., Competence Verification).

Table 1   Substantial Equivalence Framework

SUBSTANTIAL EQUIVALENCE of an IEOT to CEOTs (WHY) Substantially Equivalent in Competencies + Capabilities Context	
= Qualification Recognition (WHY + WHAT)	**+ Competence Verification (WHY + WHAT)**
✔ Academic Credential Assessment Tool **(HOW)**	✔ Competence Assessment Test **(HOW)**
✔ Profession Specific Credentialing Assessment Tool **(HOW)**	

One of the cornerstones of the substantial equivalence approach is the need to satisfy the regulatory authority with evidence that the applicant's qualifications and competence are equivalent in all essential respects and meet the Canadian standards for safe, effective practice.

It is noteworthy, however, that the approach for IEOTs clearly does not require applicants to meet a higher standard than the established standards for Canadian occupational therapy education or practice. But, while the standard that the applicant is expected to meet is that of "substantially equivalent," there may be differences in how an individual IEOT applicant demonstrates substantial equivalence to the Canadian standard.

The substantial equivalence process looks at what component (Qualification Recognition or Competence Verification) is better suited to effectively and efficiently evaluate the different aspects of an individual practitioner's

- Requisite competencies (knowledge, skills, and attitudes);

- Required capability; and

- Necessary work context.

One **competency** is a unit or component part of the whole (i.e., competence). A competency is an outcome statement that reflects the knowledge, skills, and attitudes necessary to perform a major part of a job (a role or responsibility). Each competency can be measured against well-accepted standards, and can be improved via training and development. ACOTRO's *Essential competencies* (3rd edition) is the guiding document.

Capability refers to the physical, mental, and emotional potential and facility[4] of an individual that enables that person to fulfill his or her professional role. Abilities include talents, aptitudes, and adequacies. Most often there are no explicit requirements in this area.

Evidence of capability may include language tests, criminal record checks, verification of application of good standing, standards with respect to capacity, and undertakings with respect to mental and/or psychological fitness to practise.

Context is the environment where practice occurs. The context of practice describes the details about the practice milieu including the who (types of clients, groups, populations), what (areas of practice, types of services), where (practice settings), and how (professional roles, funding models) in which practitioners may work. The areas describing the context of practice are interrelated.

2.2 Requisite Competencies

It is important that the expectations for both CEOTs and IEOTs are grounded in common practice and education standards. The *Essential competencies for occupational therapists in Canada* was recently updated[5] to ensure an accurate and consistent expectation of the practice standards for all occupational therapists. Based on this document an inventory of the competencies, capabilities, and context skills was developed for inclusion in the substantial equivalence assessment, in either the Qualification Recognition or the Competence Verification component.

Through the Qualification Recognition assessment processes, a scan and sampling of the comparability of an IEOT's education are assessed. A more targeted sampling to assess competence (i.e., readiness for practising in the Canadian context) is done through the Competence Verification processes. See Tables 2–5.

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[4] *Synonyms for capability include talent, aptitude, adequacy, facility, and potential.*
[5] *Association of Canadian Occupational Therapy Regulatory Organizations, 2010*

Table 2   **Substantial Assessment of Occupational Therapist's Essential Competencies**

COMPETENCY	Scanned and Sampled via Qualification Recognition	Assessed via Competence Verification
UNIT 1: Assumes Professional Responsibility		
1.1 Demonstrates a commitment to the clients, public, and profession.	✔	✔
1.2 Practises within the scope of professional and personal limitations and abilities.	✔	✔
1.3 Adheres to the code of ethics recognized by the provincial regulatory organization.	✔	
1.4 Applies ethical frameworks to solve ethical situations.	✔	✔
1.5 Demonstrates professional integrity.	✔	
UNIT 2: Thinks Critically		
2.1 Demonstrates sound professional judgment and clinical reasoning in decision-making.	✔	✔
2.2 Engages in reflection and evaluation and integrates findings into practice.	✔	✔
UNIT 3: Demonstrates Practice Knowledge		
3.1 Uses current occupational therapy foundational knowledge in day-to-day practice.	✔	✔
3.2 Demonstrates awareness of the physical, social, cultural, institutional, and economic environment relevant to the jurisdiction of practice.	✔	
3.3 Demonstrates awareness of experiential knowledge of client and occupational therapist.	✔	
3.4 Demonstrates awareness of legislative and regulatory requirements relevant to the province and area of practice.	✔	
UNIT 4: Uses a Practice Process for Occupational Enablement		
4.1 Clarifies the role of occupation and enablement when initiating services.	✔	✔
4.2 Demonstrates a systematic client-centred approach to occupational enablement.	✔	✔
4.3 Ensures informed consent prior to and throughout service provision.	✔	✔
4.4 Assesses occupational performance and enablement needs of the client.	✔	✔
4.5 Develops a client-specific plan with the client, interprofessional team members, and other stakeholders.	✔	✔
4.6 Implements a plan for occupational enablement.	✔	
4.7 Demonstrates commitment to client and provider safety throughout practice process.	✔	

COMPETENCY	Scanned and Sampled via Qualification Recognition	Assessed via Competence Verification
UNIT 5: Communicates and Collaborates Effectively		
5.1 Communicates effectively with the client, interprofessional team, and other stakeholders, using client-centred principles that address physical, social, cultural, or other barriers to communication.	✔	✔
5.2 Communicates using a timely and effective approach.	✔	
5.3 Maintains confidentiality and security in the sharing, transmission, storage, and management of information.	✔	
5.4 Collaborates with the client, interprofessional team, and other stakeholders.	✔	✔
5.5 Works effectively with the client, interprofessional team, and other stakeholders to manage professional relationships.	✔	
UNIT 6: Engages in Professional Development		
6.1 Uses self-evaluation, new learning, and evidence in professional development.	✔	✔
6.2 Demonstrates commitment to continuing competence.	✔	
6.3 Enhances competence through integration of ongoing learning into practice.	✔	
UNIT 7: Manages Own Practice and Advocates Within Systems		
7.1 Manages day-to-day practice processes.	✔	
7.2 Manages assignment of service to support personnel, other staff, students, and others under his or her supervision.	✔	
7.3 Contributes to a practice environment that supports client-centred occupational therapy service that is safe, ethical, and effective.	✔	
7.4 Demonstrates commitment to client and provider safety.	✔	
7.5 Participates in quality-improvement initiatives.	✔	
7.6 Advocates for the occupational potential, occupational performance, and occupational engagement of clients.	✔	

Table 3   Assessment of Occupational Therapist's Capabilities[6]

CAPABILITY	Scanned and Sampled via Qualification Recognition	Assessed via Competence Verification
1. Disciplinary finding or current actions	✔	
2. Language proficiency	✔	
3. Professional communication/language		✔

Table 4   Assessment of Occupational Therapist's Practice Contexts

CONTEXT OF PRACTICE	Scanned and Sampled via Qualification Recognition	Assessed via Competence Verification
1. Across lifespan, e.g., Preschool (<4 yrs), School age (4–17 yrs), Adult (18–64 yrs), Senior (65+ yrs)	✔	✔
2. Performance components (physical, cognitive, affective)	✔	✔
3. Environmental conditions (physical, social, cultural)	✔	✔
4. Areas of practice (general physical health, neurological health, musculoskeletal health, mental health)	✔	✔

[6] *While most provincial occupational therapy regulatory authorities have a requirement for provincial criminal record checks, it is not included in the national IEOT substantial equivalence assessment system.*

Table 5   Occupational Therapy Practice Skills

OCCUPATIONAL THERAPY SERVICES	Scanned and Sampled via Qualification Recognition	Assessed via Competence Verification
Activities of daily living	✔	✔
Assessment, prescription, and modification of positioning/seating	✔	
Assistive technology (low technology)	✔	
Behavioural therapy	✔	
Client education	✔	✔
Client safety	✔	✔
Cognitive/perceptual therapy	✔	
Ergonomics	✔	
Fabrication of orthotics/splints	✔	
Functional mobility	✔	✔
Hand functioning	✔	
Initial interview assessment	✔	✔
Instrumental activities of daily living	✔	
Occupational analysis	✔	
Occupational theory/philosophy	✔	
Pain management	✔	
Planning for treatment/discharge	✔	✔
Research and use of evidence-based practice	✔	✔

3.0 ASSESSING SUBSTANTIAL EQUIVALENCE

This section outlines the options to consider HOW the substantial equivalence assessment will be done, including guiding principles to evaluate IEOTs; the criteria and approach for Qualification Recognition, PSCA, and Competence Verification; and the rationale that guided the inclusion of the practice-focused interview in the Competence Verification. Finally, the planned sequence for assessing substantial equivalence will be summarized.

3.1 Guiding Principles for Evaluating Substantial Equivalence of IEOTs

The assessment systems to evaluate the substantial equivalence of IEOTs are based on several guiding principles:

- Transparent and clear assessment processes;

- Development in collaboration with stakeholders;

- Flexibility to address variations in jurisdictions and individual IEOTs;

- Implementation in a fair and equitable manner for all applicants;

- Respect for due process;

- Use of known standards for education and practice (i.e., based on requirements for safe and effective occupational therapy practice in Canada);

- Timeliness (reasonable time frames);

- Cost affordability (as inexpensive as feasible);

- Economic sustainability;[G]

- Acceptance in each jurisdiction for the purpose of mobility; and

- Regular updates to reflect improvements to assessments and changing practice standards.[7]

About Fairness

Fairness is an important principle for all regulatory authorities and in some provinces[8] has been defined in legislation. The proposed approach to registration of IEOTs fulfills all the criteria listed in the legislation. First, the approach to assessment (in both the Qualification Recognition and Competence Verification components of the model) could easily be communicated to the IEOTs for the purpose of transparency. Second, objectivity is achieved through such means as the use of a written examination scored by computer algorithm, and

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[7] *Glover Takahashi, Millette, & Eftekari, 2003*

[8] *Examples of provinces that have specific regulations about fairness for health professions regulators include British Columbia, Manitoba, and Ontario.*

multiple raters of performance on an assessment of clinical skills. Third, impartiality is achieved through the application of the same assessment process and standards of performance to all IEOTs, regardless of country of origin or education. Fairness is achieved by adhering to the foregoing three criteria. It is important to note that fairness does not imply that the same process steps or assessment tools are applied for both IEOTs and CEOTs.

Fairness of regulatory requirements for all applicants will be judged on a number of criteria, including the extent to which the requirements for registration are necessary for or relevant to the practice of the profession. The extent to which the proposed framework for the assessment of IEOTs meets this criterion is a) indisputable and b) well-documented. The regulatory requirement has been validated through the review of the project background papers, the use of consensus-building efforts, and the use of the *Essential competencies*.

About Selecting Assessment Tools

There are several considerations for selecting an assessment tool to verify the competence of IEOT applicants.

Profession-specific considerations include

- The guiding purpose (i.e., to determine substantial equivalence);

- The selected framework (see Table 1);

- The guiding principles as outlined on page 9; and

- The aspects of competence to be assessed (competencies, context, and capability).

Evaluation considerations include

- The reasonable application of the evidence and best practices illustrated in the evaluation and measurement literature;

- The avoidance of false positives (i.e., registering IEOTs who are not competent to practise occupational therapy in Canada); and

- The avoidance of false negatives (i.e., not registering IEOTs who are competent to practise occupational therapy in Canada).

The goal is to assess as many of the competencies as possible using the available assessment tools. It is worth noting that some assessment tools are better suited to assess some types of competencies. For example, written assessments are considered useful to assess knowledge and problem-solving, clinical reasoning, and written communication skills. Clinically focused or performance-based assessments (PBAs[G]) are considered more useful to assess such areas as data-gathering abilities, physical examination skills, client centredness, and verbal communication skills. The types of assessment can be further classified as follows:

- **"Competence-based assessment"** *(i.e., assessment that measures what [clinicians] can do in controlled representations of professional practice)* that includes paper-based, computer-based, and standardized client-based assessment or any other methodology that simulates practice without being situated in a real client-clinician interaction; and

- **"Performance-based assessment"** *(i.e., assessment that measures what [clinicians] do in actual professional practice)* that includes supervised practice and peer assessment.[9]

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[9] *Rethans et al., 2002*

This distinction is relevant to determining which aspects of competence will be assessed with which tools and when these aspects will be assessed (i.e., before or after entry into the clinical environment).

A number of credentialing and assessment bodies use both written assessments and PBAs because the two methods are considered to assess two separate and distinct constructs. Both the National Board of Medical Examiners in the United States and the Medical Council of Canada have published data to support the fact that the two examination formats are not highly correlated, and therefore are assessing different constructs.[10] These data consist of correlation coefficients showing low correlation between written and clinical (performance-based) examination formats, factor analysis confirming the presence of two distinct constructs where scores from both assessment formats are included in the analysis, and analysis of failure rates on the two assessment formats. All these findings support the conclusion that the two assessment formats are not redundant (i.e., they are measuring different constructs).

Additionally, there are data to support the use of both written assessments and PBAs in predicting which practitioners may run into difficulty in practice. In a cohort of over 3000 practising physicians in Ontario and Quebec, scoring in the bottom quartile on the communication score of the MCC Part II (a clinical examination) was highly predictive of client complaints to the regulatory authority. Scores on the clinical decision-making component of the MCC Part I (a written examination) were also found to be predictive of both communication-related and quality-of-care-related complaints.

PBA should involve a targeted, focused approach, rather than an assessment of all areas of practice. Two reasons support this:

- The need for a feasible, cost-effective approach (one that effectively evaluates the competencies of interest while using the least amount of time and lowest cost); and

- The fact that in some areas of practice the Canadian occupational therapist's role is well developed vis-à-vis other countries (e.g., mental health as an area of practice, autonomy of role, advocacy for client needs, models for occupational enablement, evidence-based practice).

As such, the assessment for readiness for integration into full practice needs to be both comprehensive and, where appropriate and possible, targeted.

3.2 Qualification Recognition

As noted in IEOT 1, the Academic Credential Assessment (ACA)[11] will be completed by an agency that is a member of the Alliance of Credential Evaluation Services of Canada. The agency will use such criteria as

- Authenticity of original documents;

- Approval and recognition by home government/agency; and

- Ability to meet the Canadian education standards (i.e., 12 years of primary and secondary education, four-year professional degree at a university level or equivalent).

[10] *See, for example, Harik et al., 2006, and Dauphinee, 1995*

[11] *ACA looks at the nature of the system in which the applicant was educated and its equivalence to the receiving jurisdiction: recognition of an institution by a governmental agency, standards for grading, program entry and requirements, grading systems, length of academic semester/year, and name of exit credential. An important feature of effective ACA is the authentication of credentials and the comparative description of the level and extent of the education completed.*

The ACA will include data from several sources such as

• Application form,

• Official educational transcripts, and

• Reports by the Alliance of Credential Evaluation Services of Canada.

3.3 PSCA

Development of the PSCA is part of IEOT 2 and currently under construction based on the Canadian educational benchmark; a survey of educational programs; focused meetings with ACOTRO members; and consultations with the IEOT 2 Project's Tool Development Advisory Group, which includes members from ACOTRO, the Association of Canadian Occupational Therapy University Programs, the CAOT, and external representatives (see list of members in Appendix B).

The PSCA Tool will incorporate data from several sources such as

• Application form;

• Official educational transcripts;

• Reports by the Alliance of Credential Evaluation Services of Canada;

• Self-report regarding capabilities;

• School/program reports including fieldwork and course descriptions;

• Regulator report, if applicable; and

• Curriculum vitae (in specified format to identify gaps).

The purpose of the PSCA Tool is to enable Qualification Recognition of the **occupational therapy specific education** of an IEOT to the Canadian occupational therapy education standard. Qualification Recognition on its own should not be viewed as an accurate measure of substantial equivalence to the education and practice standards. The predictive value of a credentialing assessment as a means to assess readiness for practice and competence has not been dealt with in the assessment literature. However, the examination outcomes of professions that use written and/or performance-based examinations to assess competence for practice readiness have demonstrated that the pass rates are consistently and significantly lower for internationally educated candidates.

Additionally, those professions that have specific assessments of competence for internationally educated applicants to determine practice readiness in Canada have found that different types of assessments provide different information about readiness (e.g., knowledge acquisition, demonstration of practice skills).

These results are not surprising given the limitations of assessment tools used in Qualification Recognition; these limitations include the practical realities of analyzing and scoring highly variable educational documents. Qualification Recognition, while highly necessary to establish a baseline for comparability of professional education, should not be viewed as a sufficient or complete indicator of substantial equivalence.

3.4 Competence Verification

Once an applicant's education is deemed comparable through Qualification Recognition, he or she can demonstrate equivalence to the Canadian occupational therapy practice standards through the use of a CAT.

During deliberation about what tools to use for the Competence Verification of IEOTs, competence-based assessments (CBAs[G]) and PBAs were considered (see Section 3.1 for definitions). Three tools were explored most closely: chart-stimulated recall (CSR), practice-based interviews, and supervised practice.[12] (Appendix C describes a longer list of tools explored as part of the IEOT 1 Project.) A brief overview is included:

- **CSR** is a tool where actual client charts are used as the basis for discussion of clinical reasoning and client management approaches. CSR permits the emergence of client, environmental, system, and other factors that can influence clinical decisions. Whereas chart audits assess what clinicians wrote, CSR allows further probing, thereby possibly decreasing the chance that omissions in charting penalize the candidate. Rater differences can be tempered through the use of standardized scoring rubrics and/or multiple raters.

- A **practice-based interview** is a structured interview where interviewees are required to describe practice experiences where they demonstrated specific competencies. This approach can be useful for clarifying or verifying competencies related to attitudes, ethics, general approach towards clients, decision-making and problem-solving skills, etc. A skilled interviewer, standard criteria, and scoring systems are needed for this approach to be used for assessment of substantial equivalence.

- **Supervised practice** is a structured field placement that permits assessment of performance in practice. Supervised practice is comprehensive for both the reviewer and the person being reviewed. Rater agreement and reproducibility of assessment findings require standardized approaches and scoring/performance assessment criteria. Standard criteria for sites, supervisors, assessments, and scoring systems are needed for this approach to be used for assessment of substantial equivalence.

An overview of features of sample CBAs and PBAs is shown in Table 6.

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[12] *In addition to these three assessment tools, other approaches were explored to ensure congruence—namely, the approaches used by the Ordre des ergothérapeutes du Québec in its program developed to assess the competence of IEOTs.*

Table 6 Overview of Features of a Sample of Competence-Based Assessments (CBAs) and Performance-Based Assessments (PBAs)

	Practice-Based Interviews (CBA)	Supervised Practice (PBA)	Chart-Stimulated Recall (PBA)
Description	• Behavioural based • Real cases • Retrospective • Work samples/assignments • Competencies beyond direct client care	• Based on real practice • Supervised by licensed occupational therapists • Involves real clients	• Case based • Documentation of care prompts discussion • Raters typically external • Usually based on direct client care competencies
Development	• Content/questions (blueprint) • Scoring • Standards • Training guides/materials • Rating forms	• Based on Bossers's work • Adopt/adapt	• Content/questions • Scorings • Standards • Training
Implementation	• Requires training • Issues re face-to-face assessment, multiple assessors	• Requires training, calibrating/scoring • Use of independent raters • Issues re provisional licensure, capacity	• Requires clients • Issues re provisional registration, raters

Tables 7, 8, and 9 summarize the positive characteristics and limitations of using practice-based interviews, supervised practice, and CSR for the Competence Verification of IEOTs.

Table 7 Summary of Positive Characteristics and Limitations of a Practice-Based Interview

Positive Characteristics	Limitations
• Assesses beyond direct patient care • Can be done pre-registration • Provides information about a variety of practice settings • Cost-effective (can be done electronically or via Skype) • Administratively manageable • Manageable with modest staff resources • Can complete prior to leaving country of origin • Standardized answers and scoring • Can screen language skills including occupational therapy specific • Can link past experience with Canadian context	• Shows level of occupational therapy process awareness and planning, but not performance • Not linked to actual practice in a Canadian context • High emphasis on communication • No technical component • Potential discrepancy between language scores and actual ability • Security an issue; need to verify that person being interviewed is the applicant?

Table 8   Summary of Positive Characteristics and Limitations of Supervised Practice

Positive Characteristics	Limitations
• Assesses actual practice • Allows mentor support • Shows all aspects of care • Operates as training tool	• Limited focus of practice • Very labour intensive • High risk to public • Costly for system and applicant as an evaluative tool • Less control over practice setting • Limited sites; difficult in private practice/rural areas

Table 9   Summary of Positive Characteristics and Limitations of Chart-Stimulated Recall

Positive Characteristics	Limitations
• Linked to real Canadian practice • Multiple uses • Assesses written communication/clinical reasoning • Easy to standardize	• After partial/limited registration • Possible risk to public (i.e., linked to real patients) • Limited to charting • Not applicable to all applicants (i.e., those with non-clinical competencies) • Labour intensive • Electronic documentation may be limiting to assessing occupational therapy records • Cost of bringing evaluator to site if no evaluator in province

In considering all the options, the clear consensus amongst ACOTRO members was that

• CBA better matched the principles outlined in the substantial equivalence framework (Table 1) and the identified features of competence, capability, and context (Tables 2, 3, and 4);

• The working name for the CBA is Competence Assessment Test (CAT);

• A sample of occupational therapy practice skills (Table 5) will be assessed; and

• A practice-based interview will be used as the main component of the CAT.

3.5 Timing & Integration of Substantial Equivalence Assessment System

The timing and integration of the different dimensions of the substantial equivalence assessment system for IEOTs is a complex challenge. The desire to approve an IEOT for practice as soon as possible is balanced by the need to ensure readiness for practice. Most regulatory authorities anticipate that some steps may be done concurrently. Table 10 depicts the draft sequence for the substantial equivalence assessment system for IEOTs.

Table 10   Draft Sequence for Substantial Equivalence Assessment System

When	Purpose(s)	Key Steps		
A. Pre-Application		**0. Optional Self-Inventory** (Competencies, criteria, checklist of documents)		
B. Application	• Inventory Documents and Determine Readiness for Assessment	**1. Application Form, Fees, and Documents** (Documents — Internally assessed)	Application	**SUBSTANTIAL EQUIVALENCE IN EDUCATION AND PRACTICE**
		2. Language (Testing — Externally assessed)		
	• Establishing Substantial Equivalence of Applicant's Education to Canadian Occupational Therapy Education and Practice Standards	**3. Academic Credential Assessment** (Documents — Externally assessed)	Qualification Recognition	
		4. Profession Specific Credentialing Assessment (Documents — Internally assessed)		
		5. Competence Assessment Test (Testing — Internally assessed)	Competence Verication	
C. Partial Registration	• Confirmation of Competence	**6. Supervised Practice** (Partial, provisional, limited, or supervised practice with provincial occupational therapy regulator) **7. National Occupational Therapy Certification Examination** (Testing — Externally assessed)	Competence Confirmation	
D. Full Registration	• Competence	*Move to continuing competence requirements as applicable*		

4.0 SUMMARY & NEXT STEPS

This section summarizes the HOW and WHERE NEXT for implementation of the substantial equivalence assessment system.

HOW?

With the completion of IEOT 2 comes the approval of the full development of a substantial equivalence assessment system that has the following features:

- The system will be based on the *Essential competencies*, 3rd edition.

- The system will assess as many of the competencies as feasible using the available, approved tools.

- The steps of the system will include

  - Self-inventory,

  - Application form including necessary documents,

  - ACA,

  - PSCA,

  - CAT, and

  - Language assessment.

- The practice-based competence assessment will include a

  - Practice-based interview, and

  - Sampling demonstration of occupational therapy services.

WHERE NEXT?

The next steps to implement a substantial equivalence assessment system are

- Pilot testing and refining of the PSCA,

- Pilot testing and refining of the CAT,

- Clarifying the role of upgrading in the substantial equivalence assessment system,[13]

- Developing the self-inventory, and

- Establishing the language benchmarks.

[13] *The role of upgrading in the substantial equivalence assessment system will need to be clarified during the pilot testing and the move to implementation. Policies and approaches to upgrading of background vary. There are examples in other professions, such as physiotherapy, based on meeting a minimal threshold (i.e., 80% minimum of coursework hours/credits in foundational areas) that can be upgraded, while for other areas specific to Canada (e.g., Canadian Health Systems), an online module is completed by almost all applicants. In other professions (e.g., medicine), there is no upgrading opportunity, because applicants' schools need to be on the list of approved schools.*

5.0 REFERENCES

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APPENDIX A: GLOSSARY

This section provides key definitions related to assessment of competence.

Competence-Based Assessment (CBA)
Refers to assessment of an individual's ability against established standards for competence, and which is conducted in a simulated or controlled environment. CBAs include such approaches as paper-based, computer-based, and standardized client-based assessment or any other methodology that simulates practice without being situated in a real client-clinician interaction.

Face Validity
Face validity is a characteristic that describes how closely the tasks or actions required of the applicant match the actual competencies the tool is designed to assess. Tests of knowledge should appear on their "face" to be assessing knowledge, and tests of practice skills should appear to be assessing practice skills.

Performance-Based Assessment (PBA)
Refers to assessment of an individual's ability against established standards for competence, and which is conducted in a clinical practice environment (i.e., *in vivo*). PBAs include such approaches as supervised practice and peer assessment.

Reliability
Reliability means that the tools used in the substantial equivalence assessment program can give reproducible results. In other words, the same conclusion can be drawn in different but parallel assessment conditions (e.g., different raters, different cases or items, different occasion of assessment).

Sustainability
Sustainability is an important feature of assessment programs and implies that the assessment program has sufficient infrastructure and resources when initially developed, as well as quality monitoring, improvement, and renewal. Sustainability can be enhanced by ongoing research and periodic examination reviews of content tested and by testing program processes. Professions and measurement practices change over time, and a licensure program must ensure that it remains current.

Validity
Validity is a measurement concept that relates to the accuracy of the inferences of the assessments. For the purposes of the substantial equivalence assessment programs, this means that those applicants who pass the assessments are in fact competent (i.e., capable of delivering safe, effective occupational therapy services in the context of the receiving jurisdiction). Additionally, it means that the tools utilized in the programs can identify those applicants not competent for practice in their jurisdiction.

APPENDIX B

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APPENDIX C: ASSESSMENT TOOLS EXPLORED IN IEOT 1 PROJECT

CBA Tools

Competence-based assessment involves any approach to evaluation or assessment that measures what clinicians can do in controlled representations of professional practice.

Written and Oral Examinations of Language Proficiency

There are a number of off-the-shelf tests assessing language proficiency, the most prevalent of which is TOEFL (Test of English as a Foreign Language). Many of these assessments include a written and an oral component. These tests are developed for a number of broad-ranging purposes, and many are not specific to the domain of occupational therapy.

The tests are typically reliable, however, in that the scores are reproducible over test forms and occasions. The scores are likely valid for making decisions regarding how the test-taker would perform in an academic (i.e., post-secondary) setting and are often used as eligibility criteria for entry into post-secondary educational institutions in North America.

Users of the results of TOEFL, or similar tests of language proficiency, need to understand the stated purpose of the test, the constructs that it purports to measure, and most importantly, what it does not measure (e.g., communication in the context of client care as an occupational therapist).

Written Examinations of Application of Clinical Knowledge

There are many types of written examination formats (e.g., multiple choice, short answer, long answer). Written examination formats can be oriented towards recall of factual knowledge, or they can evaluate clinical reasoning skills in a case-based situation.

The examination delivery mechanisms can be paper and pencil or computer. Written simulations (paper based or computer based) fall here under the category of written examinations.

The more open ended the examination response format (e.g., essay), the more discerning the test can be about the person's ability, but more time and effort are required to score the examination. The less open ended the examination response format (e.g., true-false, multiple choice), the less discerning the test can be about the person's ability, but less time and effort are required to score the examination.

To develop the common approach to the assessment of the substantial equivalence of IEOTs, document analysis and a meeting were conducted and a preliminary report was developed.

The review of the National Occupational Therapy Certification Examination was primarily focused on information-gathering so that the project consultants could ensure that they had been able to access and review all publicly available information provided by the CAOT regarding the examination. The summary of the review of public documents notes that:

- There are numerous well-developed documents to help candidates prepare for the exam;

- The available public documents and the highly regarded psychometric consultants provide confidence in the design and administration of the exam; and

- For a full understanding of the suitability of the exam as a registration requirement by the occupational therapy regulators, additional information not available publicly is required. The additional information could include examination psychometric indices for each administration of the exam, including scale reliability;[G] decision consistency; and evidence of validity[G] including content validity, face validity,[G] internal structure, and/or criterion-related (concurrent or predictive) validity.

Portfolio Assessments

Portfolios provide a flexible, multi-faceted means of collecting evidence. Depending on the competencies being assessed and criteria for assessment, the evidence gathered by the candidate will differ. A portfolio might be the label placed on a number of documents and a variety of information that the occupational therapy regulator may ask the IEOT to gather for the Qualification Recognition and/or the Competence Verification.

A logbook of clinical activities, a resumé, and documentation of professional development activities are examples of evidence that might be gathered for a portfolio. The portfolio may have some utility in substantial equivalence assessment of IEOTs, or in Prior Learning Assessment and Recognition processes.

Portfolios are excellent for providing ongoing formative assessment and for facilitating dialogue with the applicant or learner. However, as in other open-ended written assessments that do not have one right answer, standard criteria and scoring systems are needed for a portfolio to be used for assessment of substantial equivalence.

Practice-Based Interview

Using a structured interview, interviewees are required to describe practice experiences where they demonstrated specific competencies. This approach can be useful for clarifying or verifying competencies related to attitudes, ethics, general approach towards clients, decision-making and problem-solving skills, etc. A skilled interviewer, standard criteria, and scoring systems are needed for this approach to be used for assessment of substantial equivalence.

PBA Tools

PBA involves any approach to evaluation or assessment that measures what clinicians actually do in real-life professional practice. The face validity of performance-based tools will, by virtue of being situated in actual clinical practice, be higher than the tools described in the previous section. A limitation of performance-based tools is that they are less standardized than a controlled environment, so they require specific criteria and scoring systems.

Direct Observation of Practice

Direct observation refers to the ongoing observation, assessment, and documentation of actions taken by the learner in a real clinical setting during the training period. The critical factor that distinguishes direct observation from other forms of assessment is that the learner is observed performing authentic actions that occur naturally as part of daily clinical experience.

Evaluation forms are completed by supervisors/observers at a prescribed frequency. Ideally, there are specific performance criteria, expectations for performance, and rater training. The clinical setting determines the extent of what can be evaluated. Because clinical settings vary, it may be necessary to develop a menu of types of situations, clients, and interventions that need to be evaluated. Pre-existing tools, such as the Bossers et al. tool, may need to be adapted and validated for use with IEOTs.

Peer Assessment of Practice

Peer assessment on its own, or as part of a 360-degree or multi-source feedback assessment system, evaluates what is done in the actual clinical setting; therefore, face validity is high. Feedback is typically provided by completing a questionnaire that is designed to assess clinical behaviours.

Multi-source feedback can include input from people who do not normally have a hierarchal responsibility for providing feedback (i.e., clients, peer colleagues, other professional groups, administrative staff), yet may have a different perspective on the candidate's actual day-to-day performance.

Explicitly incorporating the input of peers into the assessment of IEOTs may have the added benefit of additional opinions (raters) of performance, thereby decreasing bias associated with single-rater approaches.

Chart Audit

Chart audit entails reviewing a sample of a clinician's charts (i.e., notes on client interactions) to glean information about competence. The tool can be either a checklist with standardized criteria, or global ratings of the therapist's competence on a number of pre-defined domains as assessed by the rater.

Chart-Stimulated Recall

Chart-stimulated recall (CSR) is a tool where actual client charts are used as the basis for discussion of clinical reasoning and client management approaches. CSR permits the emergence of client, environmental, system, and other factors that can influence clinical decisions. Whereas chart audits assess what clinicians wrote, CSR allows further probing, thereby possibly decreasing the chance that omissions in charting penalize the candidate. Rater differences can be tempered through the use of standardized scoring rubrics and/or multiple raters.

Practice Review

Practice review is an intensive, often practice-based, review of all aspects of a clinician's practice. Tools incorporated into the review may include some combination of practice interview and review of learning portfolio, work samples, recent cases, or decisions made.

Practice review is comprehensive for both the reviewer and the person being reviewed. It is a lengthy, labour-intensive process used most often for those who have been flagged through screening assessments or for disciplinary cases. Rater agreement and reproducibility of assessment findings require standardized approaches and scoring/performance assessment criteria.

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