

# Program of Research: Building a Validity Argument for Queen's Rubric Bank

By Dr. Laura McEwen & Ulemu Luhanga  
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# Declaration

Presenters do not have affiliations (financial or otherwise) with pharmaceutical, medical device or communications organizations.

# Overview

- Program of Research
- Rubric Bank
- Validity as a Theoretical Framework
- Studies completed, underway, and planned

# Program of Research

"...defined as a **sustained research enterprise** that includes **one or more** projects or other components, and which is **shaped by broad objectives** for the advancement of knowledge. It might be undertaken primarily by **one investigator** and be encompassed within a single research career, or it could mobilize a **team of researchers** during a specific period. In pursuit of the overall objectives, **specific approaches and methods are advanced, adopted and modified** as the research proceeds and as findings are made and reported."

SSHRC:

[http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/standard\\_grants\\_subventions\\_ordinaires-eng.aspx](http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/standard_grants_subventions_ordinaires-eng.aspx)

# Roots of Inquiry

- Dissertation research in Pediatrics 2009
- Emergence of the Rubric Bank 2010
- Introduction of rubric to other programs 2011
- Development of an electronic platform 2013

# Rubric Bank Example

## Descriptors

### Attributes

<b>Communicator</b>	<b>Opportunities for grow</b>	<b>Developing</b>	<b>Achieving</b>
<b>Doctor/Patient</b> Source: Patient/parent	Disregarded my beliefs and concerns	Respected my beliefs and concerns	Discussed my expectations
<b>Inter-Professional</b> Source: AHP	Overwhelmed by demanding interpersonal situations	Handles demanding interpersonal situation	Manages demanding interpersonal situations with compassion
<b>Case Reporting</b> Source: Attending	Omits pertinent info	Presents all pertinent info	Prioritizes info, Succinct but thorough
<b>Charting</b> Source: Attending	Inaccurate OR Incomplete	Complete Hx, Px, Dx & Rx, adjusting based on patient's course/ investigations	Organized around issues/problems currently being managed

# Validity Research: Historical Perspective

## Pre 1950s

- Prediction (future performance)
- Content (sampling)
- Construct (representation of underlying skills/concept)
- Concurrent (correlation with similar tests)
- Use (impact of results)

“Validity is an integrated evaluative judgement of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of inference and actions based on test scores or other modes of assessment”

Messick, 1989

**Today** Interpretative Approaches to Validity

# Kane's Argument-based Approach to Validity

**Step 1:** Interpretation/use argument - Specify claims inherent in a particular interpretation of a test.

**Step 2:** Validity argument - Evaluate the claims based on empirical evidence and logical argument.

## 4 Types of Inferences

1. Scoring (e.g., criteria & rules for combining scores)
2. Generalization (e.g., reliability)
3. Extrapolation (e.g., what results mean)
4. Decision Rules ( e.g., use/consequences/impact)



# Stobart's Validity Framework

Kane's 4 Types of Inferences	Stobart's Validity Concepts
	Purpose
Scoring	Construct validity & fitness for purpose
Generalization	Reliability
Extrapolation	Results
Decision Rules	Impact

## 3 Step Validation Process:

1. Define the focus of inquiry
2. Identify potential threats to validity
3. Collect and analyze data to explore threats

# Studies Completed/Underway/Planned

- Interviews with PEDs residents & Faculty (2010-12)
- Focus group with PEDs residents (2013)
- Interviews with AHP working in PEDs (2013)
- MSF data from Family Medicine Residents (2013)
- Surgical Procedure Rubrics (2013-14)
- Clerkship Rubrics (2013-14)
- 4 purposefully sampled case studies in PEDs (2013-14)
- Emergent collaboration with Pediatrics at McGill

# Program of Research Revisited

Are we meeting the criteria?

- ✓ **Sustained** research enterprise
- ✓ **Multiple** projects **shaped by broad objectives**
- ✓ **Collaborative** effort
- ✓ **Emergent** – approaches and methods are advanced, adopted and modified

# Thank you

## References

- Brennan, R. J. (2013). Commentary on “Validity the Interpretations and Uses of Test Scores”. *Journal of Educational Measurement*, 50 (1). 74-83.
- Kane, M. T. (2001). Current concerns in validity theory. *Journal of Educational Measurement*, 38, 319-342.
- McEwen, L. A. (2012). *The Emergence of an Autonomy-oriented Assessment Culture in Pediatric Residency Education: A Case Study*. Unpublished Doctoral Dissertation, Queen's University, Kingston.
- Stobart, G. (2009). Determining validity in national curriculum assessments. *Educational Research*, 51(2), 161-179.