A Comparison of Institutional Approaches to CEAB Graduate Attribute Requirements

WHAT WORKS to improve learning?

800 meta-analyses

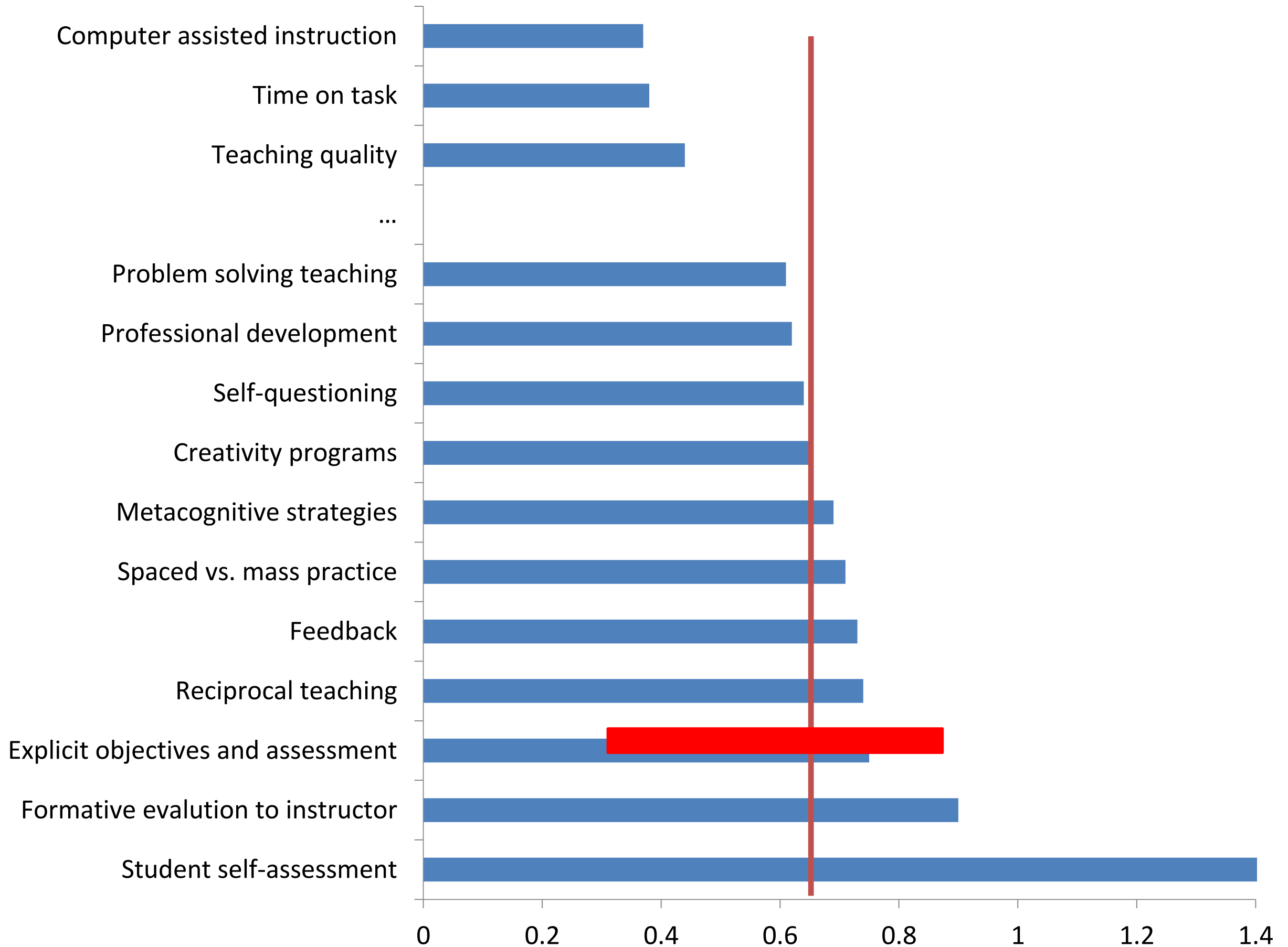**50,000+** studies

250+ million students

Hattie, J. (2009). The Black Box of Tertiary Assessment: An Impending Revolution. In L. H. Meyer, S. Davidson, H. Anderson, R. Fletcher, P.M. Johnston, & M. Rees (Eds.), Tertiary Assessment & Higher Education Student Outcomes: Policy, Practice & Research (pp.259-275). Wellington, New Zealand: Ako Aotearoa

"When teachers claim that they are having a positive effect on achievement or when a policy improves achievement this is almost a trivial claim: virtually everything works. One only needs a pulse and we can improve achievement."

J. Hattie, 2009

Hattie, J. (2009). The Black Box of Tertiary Assessment: An Impending Revolution. In L. H. Meyer, S. Davidson, H. Anderson, R. Fletcher, P.M. Johnston, & M. Rees (Eds.), Tertiary Assessment & Higher Education Student Outcomes: Policy, Practice & Research (pp.259-275). Wellington, New Zealand: Ako Aotearoa
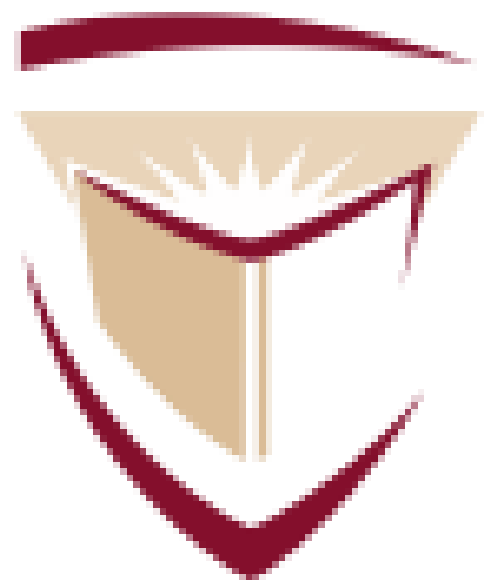
Effect size (performance gain in σ)

Computer assisted instruction
Time on task
Teaching quality
…
Problem solving teaching
Professional development
Self-questioning
Creativity programs
Metacognitive strategies
Spaced vs. mass practice
Feedback
Reciprocal teaching
Explicit objectives and assessment
Formative evalution to instructor
Student self-assessment

0   0.2   0.4   0.6   0.8   1   1.2   1.4

UNIVERSITÉ Concordia UNIVERSITY

DALHOUSIE UNIVERSITY

Inspiring Minds

a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

UNIVERSITY OF
CALGARY

MO · SHÙILE · TOGAM · SUAS

SCHULICH
School of Engineering

The Attribute Assessment Process at the University of ManitobaSandra Ingram and Nariman Sepheri University of Manitoba (10)

Update on the University of Toronto Graduate Attribute ProcessSusan McCahan and Lisa RomkeyUniversity of Toronto (46)

Comparisons & Contrasts

Program Objectives and Management

Institution	Management Structure	Program Objectives
Concordia University	Collaborative management between faculty and departments	Established, not linked with GA
Dalhousie University	Graduate Attribute Committee (Faculty led) with departmental collaboration	Not Established
Queen's University	Guiding Committee (Faculty led) with departmental collaboration	Not Established Program Wide
University of British Columbia	Graduate Attribute Committee (Faculty led) with departmental collaboration	Discussed, Not Established
University of Calgary	Guiding Committee (Faculty led) with departmental collaboration	Not Established
University of Manitoba	Guiding Committee (Faculty led) with departmental collaboration	Established
University of Toronto	Graduate Attribute Committee (Faculty led) with departmental collaboration	Established Global Outcomes (3 per GA)

Indicators

Institution	Indicator Development	Source	Application
Concordia University	Faculty-wide	Graduate Attributes	Selection with malleable indicators
Dalhousie University	Faculty-wide	Graduate Attributes	Selection only
Queen's University	Faculty-wide	CDIO Syllabus, EC 2000, Washington Accord signatories	Selection only, with additional program-specific indicators
University of British Columbia	Faculty-wide	Graduate Attributes	Selection only
University of Calgary	Faculty-wide	Graduate Attributes	Selection only
University of Manitoba	Faculty-wide	Graduate Attributes	Selection only
University of Toronto	Faculty-wide	Global Outcomes	Selection with malleable indicators

Curriculum Mapping

Institution	Mapping Method	Mapping Tool(s)	Specialized Options
Concordia University	Mapped attributes to curriculum	Graduate Attributes & Curriculum information	N/A
Dalhousie University	Mapped indicators to curriculum	Faculty indicators & curriculum information	Co-op Program Student Portfolio & Student Self-assessment
Queen's University	Alignment Mapping	Currikit	N/A
University of British Columbia	Mapped attributes to curriculum	Custom-developed survey	N/A
University of Calgary	Activities & Outcomes Mapping	CDIO Syllabus & ITU Analysis	N/A
University of Manitoba	Mapped indicators to curriculum	Graduate Attributes & Curriculum information	N/A
University of Toronto	Mapped objectives to curriculum	Departmental preference	N/A

Assessment & Data Collection

Institution	Assessment Type	Assessment Tool(s)	LMS & Data Collection
Concordia University	Direct & Indirect (Graduates, Alumni, Employers)	Instructor-developed 4-tiered rubrics, Surveys	AAS
Dalhousie University	Direct & Indirect (Co-op Students)	Customizable, faculty-wide 4-tiered rubrics, Surveys	eLumen
Queen's University	Direct (embedded) & Indirect (Graduates)	Instructor-developed 4-tiered rubrics, Surveys, Focus Groups, Design Assessment Tool	Moodle
University of British Columbia	Direct (embedded) & Indirect (Students & Co-op)	Instructor-developed 4-tiered rubrics, Surveys, Some Course Grades	N/A
University of Calgary	Direct (embedded) & Indirect (Graduates, Alumni, Employers)	Instructor-developed 4-tiered rubrics, Surveys, Course Materials	N/A
University of Manitoba	Direct & Indirect (Graduates, Alumni, Industry, Students)	Instructor-developed rubrics, Surveys	N/A
University of Toronto	Direct and planed indirect	Customizable, faculty-wide 4-tiered rubrics	N/A

Curriculum Improvement

Institution	Plan	Assessment Schedule	Current Status
Concordia University	3 year cycle	4 GA Directly/year 12 GA Indirectly/year 3 staggered groups resulting in 2-3 full assessments per Accreditation Cycle	Data Analysis
Dalhousie University	Under Development	Under Development	Data Collection and Analysis
Queen's University	Annually (Professional Spine)	10-12 GA Directly/year 12 GA Indirectly/year	Data Collection, Analysis & Curriculum Improvement
University of British Columbia	Under Development	Under Development	Data Collection and Analysis
University of Calgary	Multi-year Assessment	4 GA Directly/year 12 GA Indirectly/year 2-3 data sets per Accreditation Cycle	Curriculum Improvement
University of Manitoba	Continuous Assessment	4 GA Directly/year 12 GA Indirectly/year	Data Collection and Analysis
University of Toronto	Under Development	Under Development	Data Collection and Analysis

Common Themes

Collaborative Management Processes

Faculty-wide Indicators developed from GA Bottom-up Curriculum Mapping

Direct Rubric-based assessment

Indirect assessment via stakeholder surveys

Use of Learning Management Systems

Areas of Difference

Establishment of Program Objectives

Source material of developed indicators

Methodology of Curriculum Mapping & Tools

Variety between LMS platform

Curriculum improvement plans

Assessment schedule

Varying stages of compliance with CEAB

Re-developing first-year courses to implement discovery based learning

Investigating how CEAB attributes manifest in engineering curriculum and how they are measured and their link to course proficiency

Developing faculty-wide four year sequence of design and professional practise courses as the primary means of developing and assessing graduate attributes

Emphasizing assessment of problem analysis and critical thinking

Continued investigation in incorporating their Co-curricular Record (CCR) into graduate attribute assessment

Currently developing an engineering-specific set of CCR learning outcomes mapped to CEAB graduate attributes

Conclusions

Similarities in approaches provide a point of commonality

Variations illustrate the freedom and customization inherent in developing an institution-specific plan

Room for targeted development aligned with institutional priorities