Translating, Teaching, and Assessing Transferable Skills at Mohawk College

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Access Reboot: New Directions for Higher Education
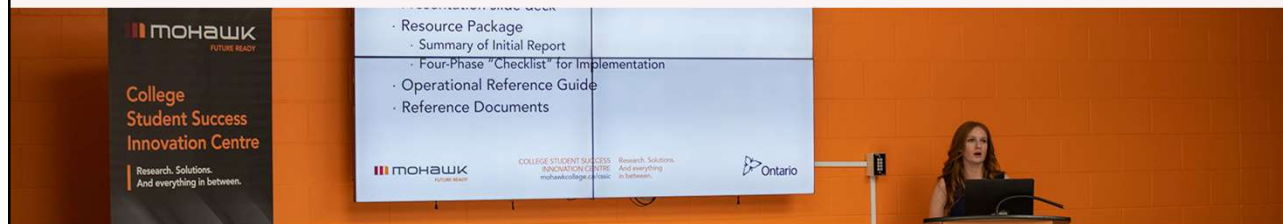
November 3, 2023

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About the **College Student Success Innovation Centre** (CSSIC)

Canada's first research centre on a college campus **uniquely focused on community college student success**.

Since 2015, CSSIC has led or co-led **10 externally funded research projects** with **over 20 partners** (PSE and industry).

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Research on Translating, Teaching, and Assessing Skills

Initiative

VALUE Rubrics

VALUE rubrics are open educational resources (OER) that enable educators to assess students' original work. AAC&U offers a proven methodology for applying the VALUE rubrics to evaluate student performance reliably and verifiably across 16 broad, cross-cutting learning outcomes.

AAC&U

Learning Outcomes Assessment Consortium (HEQCO)
"Assessing Basic Cognitive Skill Development and Transferable Life Skills in College Students from Admission to Graduation" (2017-2019)

College and Community Social Innovation Fund (NSERC)
"Translating Job Performance Expectations for College Contexts: A Demand-Led Solutions to the Skills Articulation Gap" (2020-2024)

Innovation Funding (FSC)
"Building Pathways to Employment for Disadvantaged Groups" (2020-2022)

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The Future Ready Skills Translator

MOHAWK COLLEGE

Social Sciences and Humanities Research Council of Canada

Conseil de recherches en sciences humaines du Canada

Canada

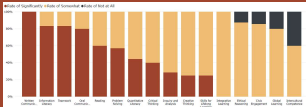4

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FRST Skills Performance Expectations Survey

16 VALUE rubrics

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Slide 6

CRITICAL THINKING VALUE RUBRIC

for more information, please contact value@aacu.org

Association of American Colleges and Universities

Definition
Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Evidence *Selecting and using information to investigate a point of view or conclusion*	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

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FRST Skills Performance Expectations Survey

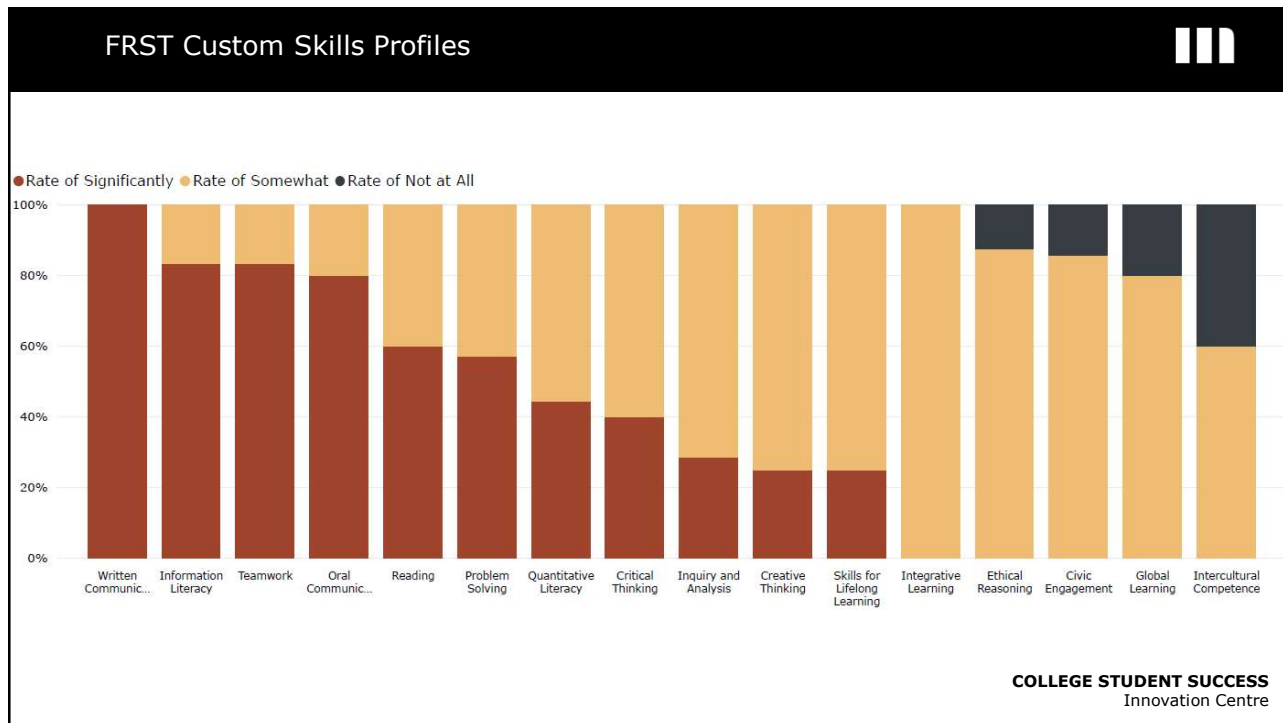| 16 VALUE rubrics | 139 outcomes | 67 survey items | Custom skills profiles |

Adapts and applies, independently, skills, abilities, theories, or methodologies gained in one situation to new situations to solve difficult problems or explore complex issues in original ways.
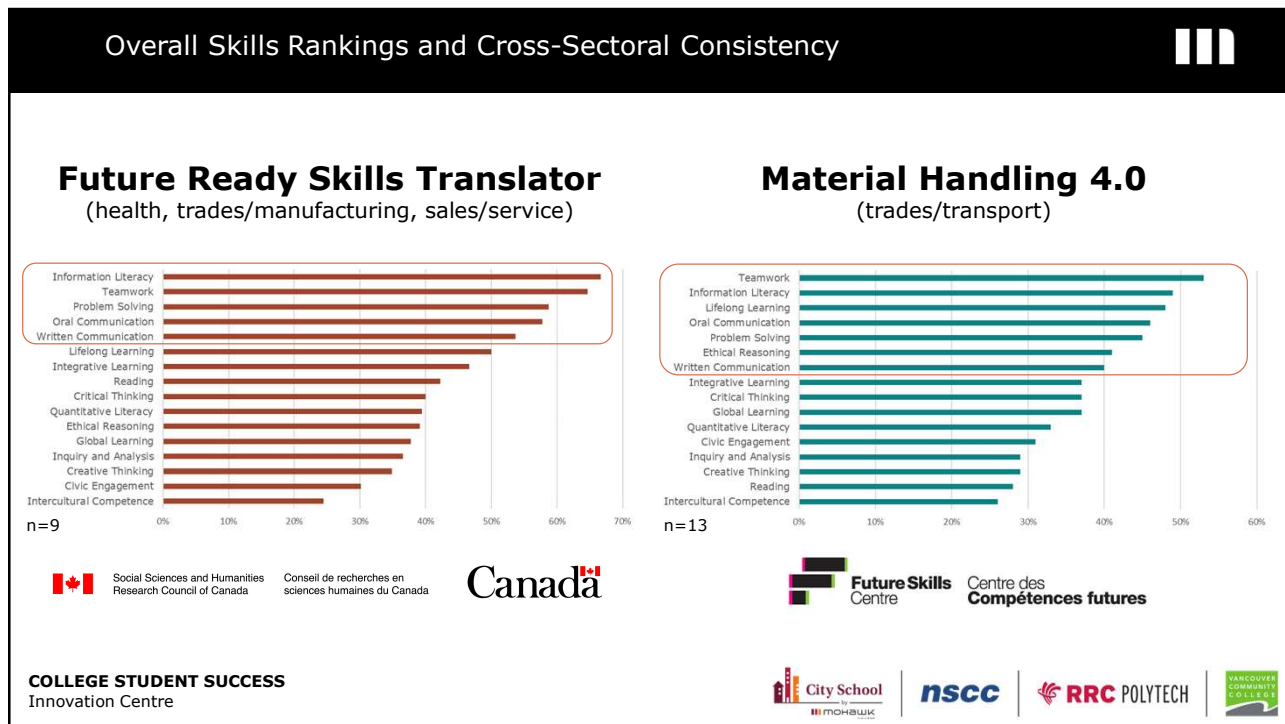
Apply previous learning to new situations.
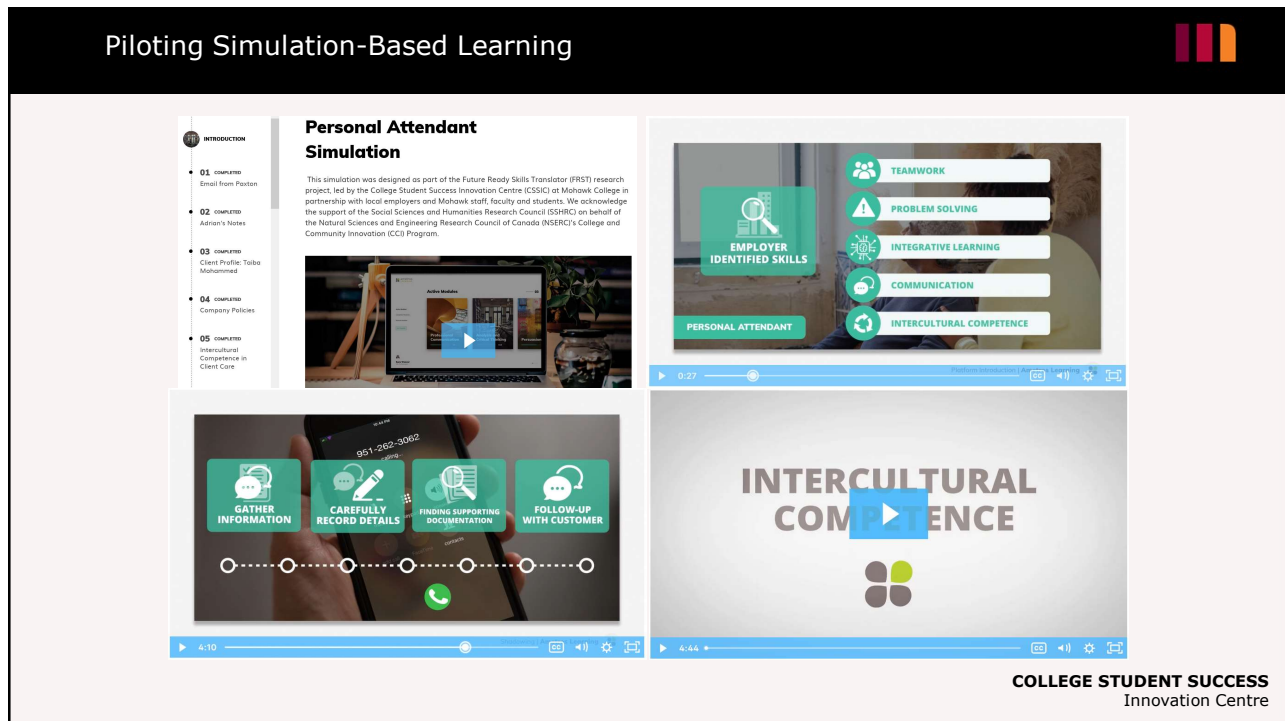
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FRST Custom Skills Profiles

● Rate of Significantly ● Rate of Somewhat ● Rate of Not at All

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Piloting Simulation-Based Learning

Problem Solving: Define Problem

EXEMPLARY DEMONSTRATION OF SKILL
Based on the blueprint, image of the site, and measurements from Callum, you were able to deduce that there will be problems fitting equipment where you need it to complete the installation. Great work!

Incomplete demonstration of skill
Problem Solving: Defining a Problem
The first step towards solving a problem is understanding it in detail. In this interaction, you had an opportunity to ask Callum for the car wash site measurements. This information will help you define the problem that he pointed out to you.

Problem Solving: Evaluate Potential Solutions

SUFFICIENT DEMONSTRATION OF SKILL
Good work! The first option is the least accurate because it is the most difficult to coordinate by holding a plate and welding at the same time. This method has the most room for error in the final fitment if performed with inexperience. However, it is the most cost-effective because an employee can perform the work without any type of assistance and minimal set-up. It is also safe because the beam is laying flat on a support, which puts it closer to ground level.

Level set:

The site measurements are as follows:

- Overall measurement of building is 82'x16'x 25'
- Ground level width is 16'
- Top of building is 15' 2"
- There are metal pieces for car wash equipment @ 12' high which will interfere with the beam install. If metal plates are installed before welding, we will only have 2" of extra space to wiggle the beams into place, which will be a problem.

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Collecting and Analyzing Performance Data and Stakeholder Feedback

Skill Demonstration (all simulations; n=200)

Communication (n=149)
Intercultural Competence (n=149)
Creative Thinking (n=51)
Teamwork (n=149)
Problem Solving (n=200)
Quantitative Literacy (n=51)
Information Literacy (n=39)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
■ Exemplary ■ Sufficient ■ Incomplete

Post-Simulation Skill Recall (coded responses)

Communication
Problem Solving
Information Literacy
Teamwork
Quantitative Literacy
Intercultural Competence
Creative Thinking
Lifelong Learning
Integrative Learning

0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50%

- **84%** self-reported observable skill improvement or recognition

- **77%** agreed the simulation was relevant to their program to their desired field of work

- **63%** agreed that the simulation would help them find a job in their desired field or a field related to their program   [n=171]

"It did force us to think a little bit more tangibly of what [those skills] actually meant." - Employer

"I could really see how they interpret things, where the gaps are, what we need to [do]." - Faculty

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Thank You

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