

Using Rubrics for Program Evaluation: NRC Pilots

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Presentation Content

- Rubrics at NRC: opportunities and challenges
- Rubrics from design to report writing
- Lessons learned
- Next steps

NRC Context

- NRC's mandate is to create wealth for Canada through mission-oriented research and technology development
- This is achieved through different portfolios, located across the country which are focused on key industry sectors and areas of R&D
- At NRC, evaluations are conducted at the portfolio level

A **portfolio** is a collection of programs and/ or projects that are grouped together to facilitate effective project management and meet strategic business objectives

Rubrics at NRC

Opportunities	Challenges
<ul style="list-style-type: none"><li>• Aid in delivering a clear verdict on portfolio performance<li>• Create a shared understanding between portfolio management and evaluators	<ul style="list-style-type: none"><li>• No models for science-based organization<li>• Lack of internal expertise<li>• Tailoring rubrics and managing expectations

Introduction to Rubrics

- We are used to reading scoring rubrics ...
- Evaluation rubrics are presented in the same format

Ontario Secondary Report Card, Grade 9-12

Achievement Chart – Mathematics, Grades 9–12

Categories	50–59% (Level 1)	60–69% (Level 2)	70–79% (Level 3)	80–100% (Level 4)
Knowledge and Understanding <i>Subject-specific content acquired in each course (knowledge), and the comprehension of its meaning and significance (understanding)</i>				
<u>The student:</u>				
Knowledge of content (e.g., facts, terms, procedural skills, use of tools)	– demonstrates limited knowledge of content	– demonstrates some knowledge of content	– demonstrates considerable knowl- edge of content	– demonstrates thorough knowledge of content
Understanding of mathematical concepts	– demonstrates limited understanding of concepts	– demonstrates some understanding of concepts	– demonstrates considerable under- standing of concepts	– demonstrates thorough understand- ing of concepts

From: MacDonald, C. J., Mace, H., Archibald, D., & R. Sun. (2013). *Lesson Plans to Rubrics: A Practical Guide to Curriculum Design for K-12 Educators*. Ottawa, Canada: CollaLearning Corp.

So why use rubrics in evaluations?

- Evaluation rubrics:
 - make explicit what performance or excellence 'look like'
 - clarify the basis on which judgments are made
 - describe different levels of performance
 - can strengthen evaluation tools
 - can increase use and credibility

“Rubrics offer a process for making explicit the judgments in an evaluation and are used to judge the quality, the value, or the importance of the service provided.”
(Oakden, 2013).

Rubrics from design to report writing

- Embed the development of rubrics in your design process
- Use a collaborative approach:
 - to facilitate thinking about ‘excellence’
 - to surface the context affecting ‘performance’
- Organize and moderate workshop with the right people:
 - to validate indicators and develop rubrics
- Seek input during rubric writing process
 - literature, continuous feedback and expert review

Questions to keep in mind when developing rubrics

- Are the selected **performance dimensions**;
 - explicitly stated?
 - equally important for each indicator?
 - consistently addressed from one level to the next on the progression scale?
 - mutually exclusive?
- Are the **attributes (indicator, data sources)** explicitly stated for each performance dimension?

Implementation of evaluation rubrics

- Embed rubrics wording and performance dimension in your **data collection instruments**
- At the analysis, integration and reporting stage:
 - dimensions of performance can provide a ready-made, logical reporting structure for questions and thematic sub-headings
 - using rubric wording, findings can be presented concisely under each sub-heading
 - dashboard can be used to help visualize and summarize the levels of performance based on rubrics

Lessons Learned: Benefits

- Greater involvement of the clients
- Greater understanding of the portfolio/programs
- Common understanding on what “excellence” means and on how to measure performance levels
- Better planning phase and discussion leading up to the data collection
- More useful evaluation for clients

Lessons Learned: Resources

- Work with invested clients
- Add at least one month to your evaluation timeline
- Dedicate two resources from your team with experience in rubrics or hire an expert consultant
- Be prepared to educate your client before attempting to develop the rubrics
- Will take a minimum of two full days to develop the rubrics with your client

Integrating evaluation rubrics in the process ...

“This exercise is not for the faint of heart”

Lessons Learned: Approach

- Develop rubrics for a subset of key evaluation issues
- Do not over complicate with too many indicators or performance dimensions
- Make sure that the statements are credible and measurable
- Validate your rubrics with external experts
- Be flexible, rubrics can be used as a design and analytical tool, but not necessarily for reporting
- Manage expectations, throughout the evaluation, on how the rubrics will be used

Next steps: Where we are going from here

- A practice note on the first pilot accepted by CJPE for publication
- Committed on reporting back on second pilot using rubrics for performance indicators (possibly at AEA 2017)
- Contact us for more information



Thank you

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