

Using rubrics to assess student learning in higher education

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Overview

- Benefits of using a rubric to assess learning
- Strategies to developing a rubric
- Considerations when working with a client
- Explores the VALUE Rubrics
- Provides two case studies
 - Loyola University Chicago
 - Syracuse University

The Goal: Objectivity

Daddy,
do you like
my picture?



Honey,
if you'd like me
to be objective,
I'll have to create
a rubric.



freshspectrum.com

Why Rubrics?

- Potential to guide instructional design and delivery
- Assessment process more transparent
- Clear learning objectives
- Alignment with learning objectives/competencies
- Higher level thinking on what it actually means to learn
- Collaborative process for development

Rubric Category Labels

- Does Not Meet Expectations; Needs Improvement, Meets Expectations, Exceeds Expectations
- Below Expectations, Developing, Acceptable, Exemplary
- Novice, Apprentice, Proficient, Expert
- Below Basic, Basic, Proficient, Advanced

Who assesses the work?

- Individuals with expertise to make valid judgements:
 - Faculty teaching outcomes being assessed
 - Faculty with expertise
 - Potentially students with expertise
 - Colleagues, administrations, board members, etc.
- If feasible, consider having two raters
- Work to develop standards and consensus
- Share examples and have open dialogue

AAC&U: VALUE Rubrics

- VALUE: Valid Assessment of Learning in Undergraduate Education.
- Provide assessment tools to assess students' authentic work, and determine if/how well students meet learning outcomes considered essential by faculty/employers.
- As of December 2015 rubrics have been accessed by over:
 - 42,000 individuals
 - 4,200 unique institutions
 - 2,800 colleges and universities

VALUE Rubrics

VALUE Rubrics include:

- Inquiry and Analysis
- Critical Thinking
- Creative Thinking
- **Written Communication**
- **Oral Communication**
- Quantitative Literacy
- Information Literacy
- Reading, Teamwork
- Problem Solving
- **Civic Knowledge and Engagement**
- Local and Global, Intercultural Knowledge and Competence
- Ethical Reasoning and Action
- Global Learning
- Foundations Skills for Lifelong Learning
- Integrative Learning.

VALUE Rubric: Written Communications

	Capstone 4	Milestones 3 2		Benchmark 1
Context of and Purpose for Writing Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).
Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
Genre and Disciplinary Conventions Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).	Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices	Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices	Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation	Attempts to use a consistent system for basic organization and presentation.
Sources and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
Control of Syntax and Mechanics	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.

Rubric for Grading Oral Presentations (From Mary Allen Handout)

	Below Expectation	Needs Improvement	Satisfactory	Exceeds Expectations	Score
Organization	No apparent organization. Evidence is not used to support assertions. (0-6)	There is some organization, but the speaker occasionally goes off topic. Evidence used to support conclusions is weak. (7-9)	The presentation has a focus and provides some reasonable evidence to support conclusions. (10-12)	The presentation is carefully organized and provides convincing evidence to support conclusions. (13-15)	
Content	The content is inaccurate or overly general. Listeners are unlikely to learn anything or may be misled. (0-4)	The content is sometimes inaccurate or incomplete. Listeners may learn some isolated facts, but they are unlikely to gain new insights about the topic. (5-6)	The content is generally accurate and reasonably complete. Listeners may develop a few insights about the topic. (7-8)	The content is accurate and comprehensive. Listeners are likely to gain new insights about the topic. (7-8)	
Delivery	The speaker appears anxious and uncomfortable and reads notes, rather than speaks. Listeners are ignored. (0-9)	The speaker occasionally appears anxious or uncomfortable, and may occasionally read notes, rather than speak. Listeners are often ignored or misunderstood. (10-13)	The speaker is generally relaxed and comfortable. Listeners are generally recognized and understood. (14-17)	The speaker is professional, relaxed, and comfortable and interacts effectively with listeners. (18-20)	

Total Score

Case Study: Loyola University Chicago

- Modified VALUE Rubrics
 - Civic Engagement and Integrative Learning rubric
- Rubrics were adapted to better understand student learning outcomes of Loyola's Center for Experiential Learning (CEL) programs.
 - Used in experiential learning courses
 - Service-learning courses
 - Community-based research courses
 - Academic internship courses

Case Study: Loyola University Chicago

- Rubrics are used as assessment tools for assignments/projects
 - Develop course portfolios in various academic disciplines.
- Submit assignments in the (they used an e-portfolio system)
 - Use adapted VALUE rubric for assessment—which may or may not be associated with the grading process.
- Students also created a summative course portfolio
 - Integrative Learning rubric is utilized to evaluate the final portfolios.

Case Study: Loyola University Chicago

- Assessment data are used to:
 - Improve experiential learning course delivery
 - Teaching and learning strategies
 - Assignment development
 - Achievement of desired student learning outcomes
 - Identified assignments that need to be altered
 - Enhance teaching and learning strategies
 - Enhanced teaching delivery methods
- Read more:
 - <https://www.aacu.org/sites/default/files/files/VALUE/loyolachicago.pdf>

Case Study 2: National Science Foundation Research Traineeship Program (NRT) at Syracuse University

NRT Goals:

1. Catalyze and advance cutting-edge interdisciplinary research in high priority areas
2. Prepare STEM graduate students more effectively for successful careers within or outside academia
3. Develop models and knowledge that will promote transformative improvements in graduate education

Education Model Program on Water Energy Research (EMPOWER) at Syracuse University

- Interdisciplinary graduate education program focused on research at the interface of water and energy cycles
- Prepares students with the technical knowledge and professional skills for various fields
- Broad training across management, policy, communication, and law
- Training in a self-designed focus area most applicable to the trainee's career objectives
- Draws on faculty across the University

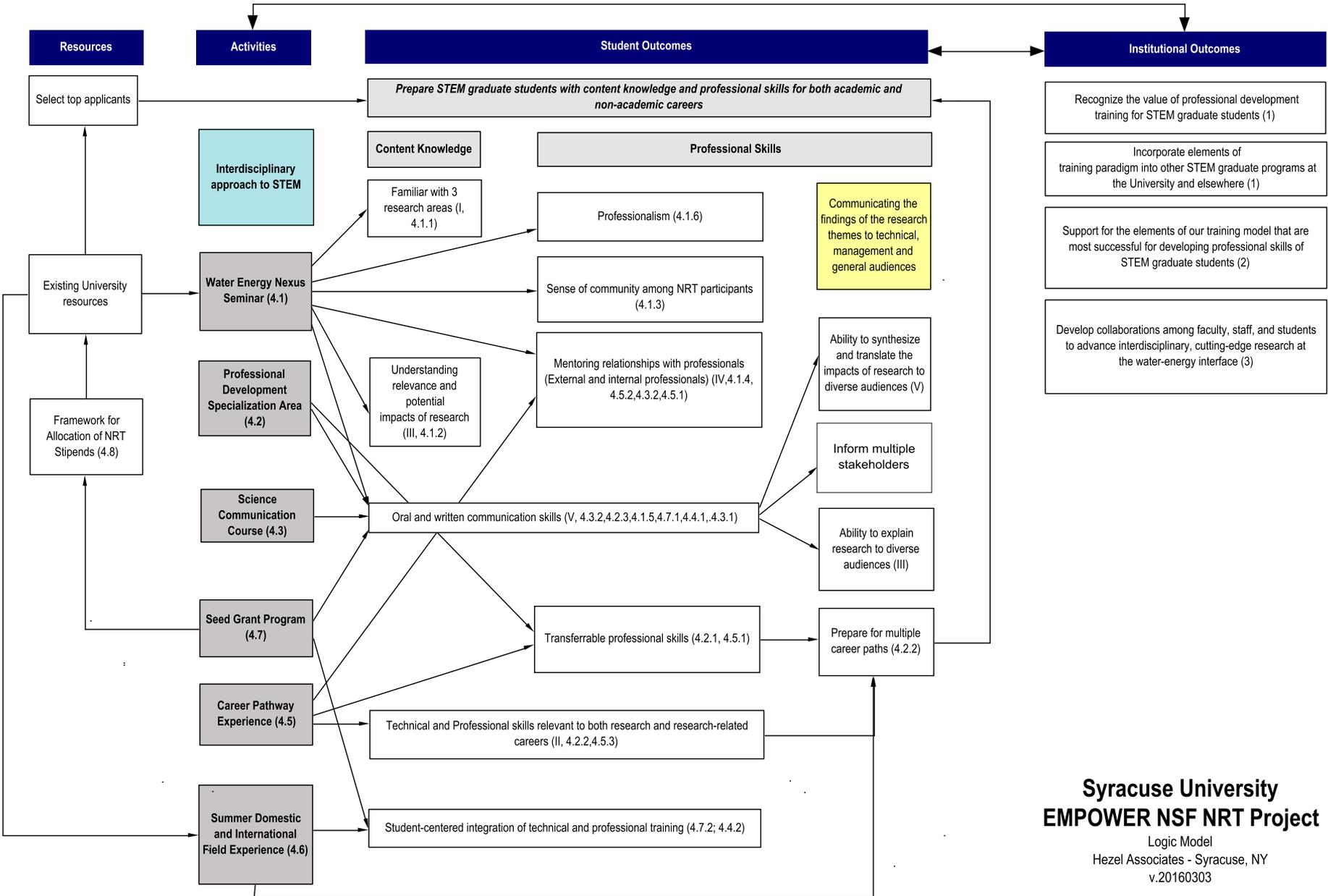
EMPOWER Program Elements

1. Water-Energy Seminar
2. Professional Development Coursework
(~Certificate of Advanced Study)
3. Science Communication Course
4. Field Experiences
 - Domestic
 - International
5. Career Path Experience
6. Seed Grants (linked to dissertation proposal)

EMPOWER Evaluation

- Mixed methods
 - Pre/post test
 - Interviews (Faculty/External Advisor Committee)
 - Document review
 - Rubrics as a value add
- Implementation and impact evaluation
 - Student outcomes (content knowledge, professional skills, employment)
 - Institutional change (sense of community, professional networks)

Broader Impacts: Outcomes of training activities and Transformation of STEM graduate training through assessment, dissemination, and adoption of program activities across SU and nationally.



Where we are going...

- Modify version of VALUE Rubrics
 - Download for free, modify to fit needs
 - Written and Oral Communication
- Implement with the Science Communications course
 - Emphasis on oral communication skills
 - Communicating to diverse audience
 - Syllabus to be created
- Create a collaborative process

Be sure to explain...

- Higher level of thinking / stronger assessment
- Alignment with learning outcomes
- Another means to evaluate competencies
 - Individual/program benefits
- Potentially adds weight to already existing evaluation
- Benefits the students
- Recommend changes to instructional design or delivery

Best Practices & Lessons Learned

- Don't reinvent the wheel
- Use a collaborative process for development
- Assure alignment with competencies/objectives
- Communicate value with client
- Don't get tunnel vision, integration
- Develop standards and consensus
- Make data actionable

Final thoughts

“The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative,” John Dewey.

References

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