

Student Learning Outcomes Assessment Summary

Master's Natural Resources Management

SNRE

2017-18

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1. Assessment information collected

1) 2 project defenses (4 unique assessments) were evaluated by committee members with the Oral Communication VALUE Rubric.

2) 3 project reports (5 unique assessments) were evaluated by committee members with the Written Communication, Critical Thinking, Problem Solving, and Inquiry and Analysis VALUE Rubric.

3) 5 project defenses were evaluated by a five-question audience questionnaire. While 55 questionnaires were completed, the distribution was not equal across defenses, ranging from 2 to 14.

The VALUE rubrics range utilize a 4-point scale, where 1 = benchmark and 4 = capstone; scores ≥ 3.0 will be taken as evidence of competence related to the goal. The rubrics can be found at:

<http://www.uaf.edu/files/provost/SLOA/NaturalResourcesManagementBSPlan2017.pdf>

(Note, the same rubrics were applied to all NRM degrees, but are only displayed in the BS.)

Questions on the defense audience survey utilized a 5-point response scale where 1 = weak and 5 = excellent. A score of ≥ 4.0 will be taken as evidence of competence related to the goal. The questionnaire can be found at:

<http://www.uaf.edu/files/provost/SLOA/NaturalResourcesManagementMNRMPPlan2017.pdf>

4) Graduates were tracked to assess career advancement.

2. Conclusions drawn from the information summarized above

1) Defense presentations evaluated by graduate committee.

Overall, across the 5 individual items within the Oral Communication Rubric evaluated, the average score was => 3.0 for 4 of the 5. For "central message" the mean score was 2.75 (Table 1, Appendix A). Examining scores by students (with caution regarding the low sample size for Student 1), reveals both students scored low relatively low on the supporting material and central message rubrics.

2) Project reports evaluated by graduate committee.

Of the 22 individual items evaluated within the rubrics, 7 were => 3.00, and 15 were < 3.0 (Table 2, Appendix A). Examining across students – although the n is far too small for quantitative analysis – it appears there is variation in scores across the students, but no pattern is apparent (i.e., no particular student scores consistently higher/lower).

3) Thesis defense as evaluated by audience.

Overall, 4 of the 5 questions (topic selection/focus, conclusions, oral communication, and supporting material) had mean scores => 4.0; the questions relating to methods and analysis had mean score of 3.95 (Table 3, Appendix A). While the sample size for several of the students are too low for statistical testing, anecdotally, there appears to be variation within students (i.e., high scores on several questions, low scores on others) and variation across students (i.e., several students receiving high scores on a question, other students receiving low scores). One student appears to have consistently received relatively low scores.

When examining scores across the type of rater, e.g., faculty, staff, student, general public it appears (again, anecdotally), on average, faculty provided the highest scores for oral communication, whereas faculty provided the lowest scores on the other 4 questions (Table 4, Appendix A).

4) Tracking of graduates.

Of the five graduates during this period, 2 were contacted and both are employed in the natural resources management field.

Of note from the above results are the project paper evaluation's low scores for critical thinking, written communication, and inquiry and analysis. Also of note is the faculty in the audience defense evaluation's average low score for methods and analysis.

3. Curricular changes resulting from conclusions drawn above

Although not directly as a result of the conclusions drawn above, we plan to drop the graduate-level NRM research methods course and encourage students to take the graduate-level BIOL research methods course. We feel this course will be more rigorous than the NRM research methods course.

At the first faculty meeting in fall 2018, we will discuss expectations for MNRM projects. Clear expectations, shared across faculty, might improve committee member mentoring and clarify guidelines for evaluation of MNRM students, both among committee members and non-committee members.

4. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting

Peter Fix, David Valentine.

5. Has your SLOA plan been updated to include assessment of the program's Communication Plan, as required by Faculty Senate motion? (required for baccalaureate programs only)

Yes, the Communication VALUE rubric was included.

Appendix A: Supporting Data

Table 1. Oral Communication Scores from Defense Presentations.

Rubric	Student 1 (n = 1)	Student 2 (n = 3)	Combined (n = 4)
Oral Communication: Organization	3.00	4.00	3.75
Oral Communication: Language	3.00	3.33	3.25
Oral Communication: Delivery	3.00	3.67	3.50
Oral Communication: Supporting Material	3.00	3.00	3.00
Oral Communication: Central message	2.00	3.00	2.75

Table 2. Project Reports Evaluated by Graduate Committee.

Rubric	Student 1 (n = 1)	Student 2 (n = 2)	Student 3 (n = 3)	Overall (n = 5)
Critical Thinking: Explain issues	3.00	3.00	2.67	2.80
Critical Thinking: Evidence	3.00	2.00	2.33	2.40
Critical Thinking: Influence context assumptions	2.00	3.00	2.00	2.20
Critical Thinking: Position	3.00	3.00	2.67	2.80
Critical Thinking: Conclusions	4.00	2.00	3.00	3.00
Problem Solving: Define problem	4.00	2.00	3.00	3.00
Problem Solving: Identify strategies	3.00	2.00	3.00	2.80
Problem Solving: Solutions-hypotheses	3.00	3.00	3.00	3.00
Problem Solving: Evaluate solutions	3.00	3.00	2.67	2.80
Problem Solving: Implement solutions	3.00	3.00	3.33	3.20
Problem Solving: Evaluate outcomes	4.00	3.00	3.00	3.20
Written Communication: Context purpose	3.00	3.00	2.00	2.50
Written Communication: Development	2.00	3.00	3.00	2.75
Written Communication: Disciplinary conventions	3.00	2.00	2.50	2.50
Written Communication: Sources evidence	3.00	2.00	2.50	2.50
Written Communication: Syntax mechanics	3.00	2.00	2.50	2.50
Inquiry and Analysis: Topic selection	4.00	3.00	3.33	3.40
Inquiry and Analysis: Existing knowledge	3.00	2.00	2.33	2.40
Inquiry and Analysis: Design	2.00	3.00	2.33	2.40
Inquiry and Analysis: Analysis	3.00	2.00	2.67	2.60
Inquiry and Analysis: Conclusions	3.00	3.00	3.33	3.20
Inquiry and Analysis: Limitations	3.00	2.00	2.33	2.40

Note, for written communication, the n was only 2 for student 3.

Table 3. Audience Evaluation of Project Defense Presentations, by Student.

Questionnaire topic	Student					
	1 (n = 14)	2 (n = 11)	3 (n = 2)	4 (n = 2)	5 (n = 26)	All (n = 55)
Topic selection/focus	4.36	4.27	3.50	4.50	4.27	4.27
Methods & analysis	4.50	3.73	3.50	3.00	3.85	3.95
Conclusions	4.57	4.64	4.00	4.00	4.08	4.31
Oral communication	3.57	4.91	3.50	5.00	4.12	4.15
Supporting material	3.79	4.45	3.00	4.00	4.00	4.00

Table 4. Audience Evaluation of Project Defense Presentations, by Evaluator Classification.

Questionnaire topic	Evaluator Classification			
	Faculty (n = 12)	Staff (n = 13)	Student (n = 22)	Public (n = 8)
Topic selection/focus	4.00	4.15	4.45	4.38
Methods & analysis	3.25	4.00	4.05	4.63
Conclusions	4.00	4.31	4.41	4.50
Oral communication	4.33	4.15	4.00	4.25
Supporting material	3.92	3.85	4.00	4.38