

FIRE-UP Institute 2011
ASNS Program Learning Outcomes Assessment
May 19th 2011

Faculty participants: Wendy Kuntz (Biology), Amy Patz-Yamashiro (Physiology), Naresh Pandya (Chemistry), Matt Fleming (Mathematics & Pre-engineering), Maile Lam (Biology), Charles Matsuda (Biology), Dan Brayton (Chemistry), Mackenzie Manning (Biology), Tim Brilliande (Biology), Teena Michael (Biology), John Berestecky (Microbiology), Mohamed Aghili (Pre-Engineering), Maria Bautista (Physics, Department Chair).

Morning training and assessment of at least ten out of forty-seven choices of artifacts from ASNS students:

1. Training for use of ASNS STEM rubric was conducted for norming and discussion of the rubric definitions in the early part of the day to refresh and orient faculty.
2. Forty-seven learning artifacts were available for STEM faculty to assess via the e-portfolio FIRE-UP Lulima data management system.
3. Thirteen STEM teachers were present and were asked to assess a minimum of ten artifacts out of the forty-seven in the morning. After each assessment, faculty submitted their rankings and comments to an online data collection system. Subjective analysis was collected for individual rationale and considerations for each artifact's ranking.
4. The ASNS STEM rubric, approved by Math Science faculty in December 2009, was used.
5. A data collection excel file of the 124 assessments collected was provided for the afternoon discussion.
6. Four groups of faculty were then asked to discuss their rankings, especially of the artifacts' rankings where there was a disparity of ranking. Healthy discussion and agreement ensued when the groups revisited artifacts. These discussions were captured via facilitators Amy Patz-Yamashiro and Susan Inouye.
7. Results:

Ranking Options

- 0= Not Meeting--No evidence of routine expertise or acquiring scientific literacy
- 1= Approaching--Shows evidence of routine expertise and acquiring scientific literacy (first-year students)
- 2= Meeting--Shows evidence of adaptive expertise, uses scientific literacy in communicating hypothesis driven inquiry and research (second-year students)
- 3= Exceeding--Transfer ready, uses adaptive expertise in communicating to community and public audiences (interns, ready for third-year work)
- na=Not applicable

Average of Ranking of 47 artifacts for each STEM Outcome

Communication	Critical Thinking	Disciplinary Integration	Self and Community
2.0	1.9	1.9	1.6

The STEM Program Learning Outcomes are clearly being met from these rankings. The lowest score, Self and Community, should be subject to further analysis. Faculty felt the outcome could be better defined with examples, or integrated into other outcomes as curriculum decisions evolve learning resources are developed in the STEM program.

Afternoon two-hour follow-up discussion of ASNS STEM LOA Process and Outcomes

Capture of feedback on the process used in Assessment of ASNS STEM Learning Outcomes

Questions:

1. Should we consider evaluating more artifacts in order to capture ASNS as a whole because this sample [47 artifacts] is not representative of the 400+ ASNS students?
2. Should we look at exams?
3. Should we align course level outcomes with ASNS Outcomes?
4. Is the purpose of assessment just to satisfy ACCJC, or should we be looking at other reasons?