

Rocket Science Self-Assessment Data Sources

Benchmark Year 2008-09

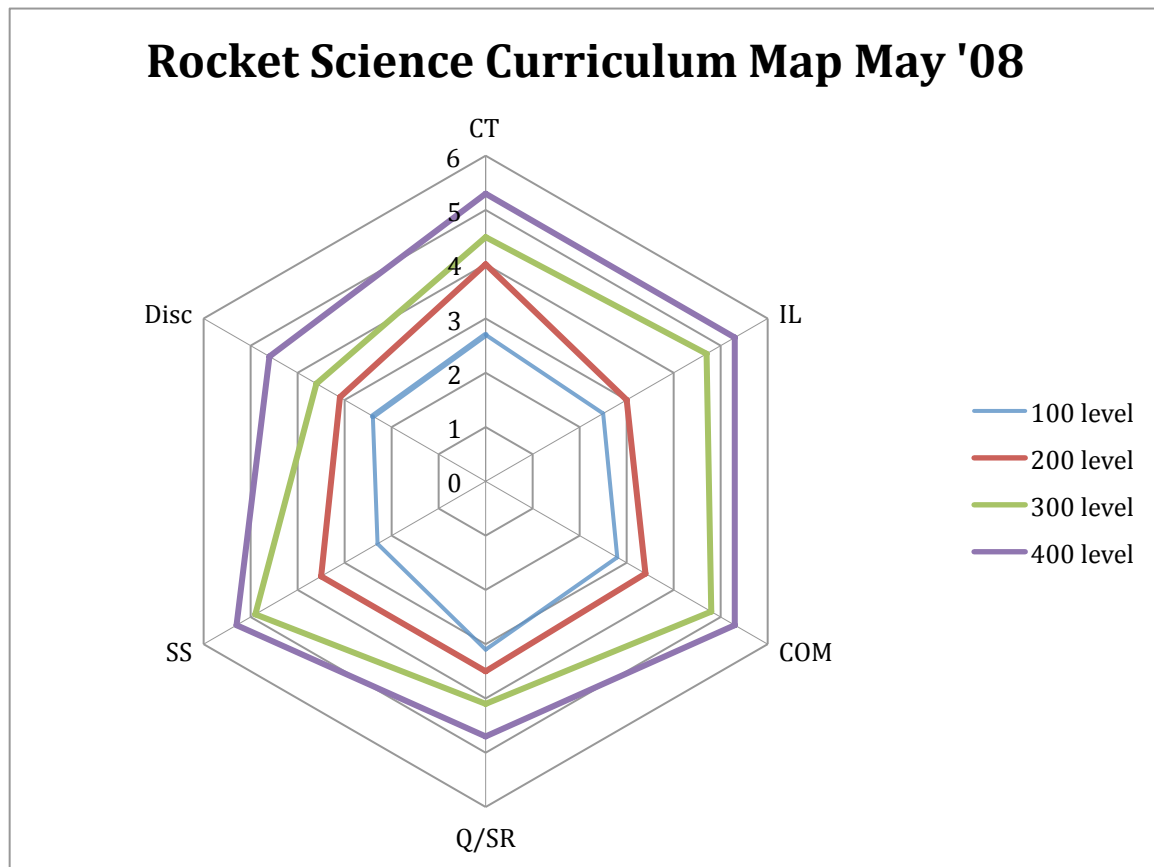
Summer 2009

This report addresses the three key data sources being gathered by the Department during the past academic year.

- Curriculum map, based on faculty reports of course goals
- Assignment assessment using the Departmental goals and rubric
- Course Evaluations related to student perception of course goals

Compared to earlier studies, the instructional staff (faculty, adjuncts and TAs) are coming into greater agreement about the learning targets and proficiencies. Most notable in the data presented here is that the students' *perceptions* of the course goals is not aligned with the faculty intentions and self-assessments.

Curriculum map, based on faculty reports of course goals

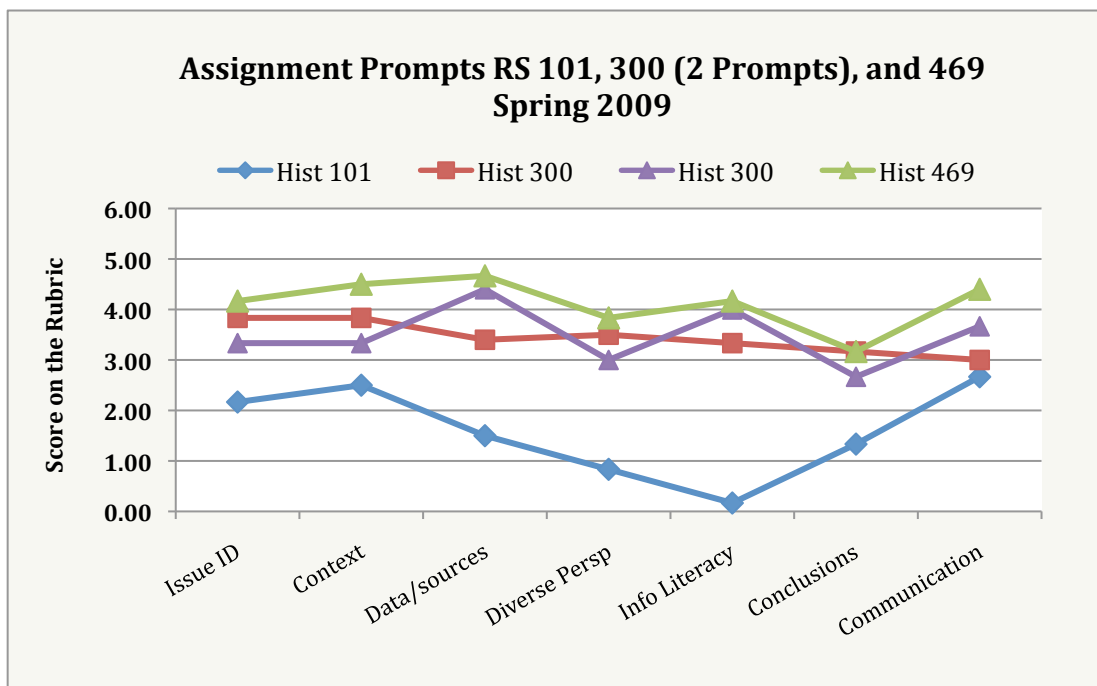


The procedure to collect this data is unchanged from 2006-07. A survey is conducted of each course and faculty member, asking faculty to describe the level of proficiency that is targeted in each of the 6 goals.

This diagram shows better curricular coherence (no overlaps of the polygons) than in first time. The variance among faculty scores has also decreased and is now approximately +/- 0.3, in each dimension.

Assignment assessment using the Departmental goals and rubric

Representative assignment prompts (Fall 08) from four courses were assessed by a team of 6 faculty using the Departmental rubric. Following norming, the inter-rater reliability was at 68% with one clear outlier. The data below are for the 5 best normed raters, with a 85% reliability



The data are in general agreement with the curricular mapping. By faculty intention, the 100 level course is expecting students to perform at an entry level and the 400 level course is aiming for professional proficiency. Faculty raters are in agreement that the assignments are approximately correctly calibrated for these learning objectives.

Course Evaluations related to student perception of course goals

The Department updated its course evaluation instrument to better align one question with the Departmental goals. This item was tested in Summer 2008 (5 classes) and a revised version administered in Fall 2008 and Spring 2009 (all classes).

The data from this question are not yet used as part of annual review for instructors.

1. How do you following goals were addressed in this course?

| This goal was... | Not mentioned/ Not applicable | Mentioned (in syllabus or lecture) but not included in assignments | Included (in some assignment or homework) but not emphasized | Emphasized (in some class discussion or activity) not a central focus of the course | A central course focus (in discussion, assignments, syllabus, grading, etc) |
|-------------------------------------|--|---|---|--|--|
| Critical and creative thinking | <input type="radio"/> 10% | <input type="radio"/> 25% | <input type="radio"/> 30% | <input type="radio"/> 25% | <input type="radio"/> 10% |
| Quantitative and Symbolic reasoning | <input type="radio"/> 5% | <input type="radio"/> 10% | <input type="radio"/> 20% | <input type="radio"/> 25% | <input type="radio"/> 40% |
| Information Literacy | <input type="radio"/> 5% | <input type="radio"/> 20% | <input type="radio"/> 40% | <input type="radio"/> 25% | <input type="radio"/> 10% |
| Communication | <input type="radio"/> 15% | <input type="radio"/> 20% | <input type="radio"/> 35% | <input type="radio"/> 20% | <input type="radio"/> 10% |
| Self and Society | <input type="radio"/> 35% | <input type="radio"/> 25% | <input type="radio"/> 20% | <input type="radio"/> 15% | <input type="radio"/> 5% |
| Knowledge of the Specialty | <input type="radio"/> 0% | <input type="radio"/> 5% | <input type="radio"/> 15% | <input type="radio"/> 25% | <input type="radio"/> 55% |

Data from all courses Fall 2008 and Spring 2009 are summarized in the question above. The Assessment Team is in the process of analyzing this data by course level (100,200) and by required vs elective courses and comparing the data to faculty curricular mapping reports in the same courses.

From this data the Assessment Team is concluding that faculty may have an expert blind spot, assuming that syllabi and assignments are clear in their intentions relative to the Department goals, where, in fact, students are not perceiving the emphasis being placed on some of the goals.