Learning Domains Assessment Report
2018-19 Academic Year

Part I: Student Assessment Plan

Overview of the Student Assessment Plan

Our current student assessment plan for learning domains is as follows:

- Each learning domain (and QS capacity) has a specified list of learning goals.
- Each year, one learning domain (or QS capacity) is selected for assessment.
    - The assessment consists of sending a survey to each classroom teacher who is teaching a course with that learning domain code.
    - The survey lists each learning goal for the domain under assessment.
    - The classroom teacher writes down the number of students who, for that goal, exhibit performance that is:
        - Strong (STR) = outstanding performance in course; exceeds expectations of course performance
        - Satisfactory (SAT) = performance that meets the expected level for the course
        - Needs Growth (NG) = some need for improvement, although overall performance meets expected level for the course
        - Unsatisfactory (UNSAT) = overall performance not acceptable for the course
        - Not applicable (NA)= this learning goal is not applicable to the course
    - The sources of evidence for these numbers is then requested; classroom teachers are asked to specify at least two of the following:
        - Grades
        - Papers
        - Presentations
        - Exams
    - The results of the surveys are compiled and analyzed.

Learning Goals

The learning goals for the learning domains (and QS) are as follows:

- **Expressive Arts (EA):** Either through the creation and performance of works of art or through the study of artistic creations within a context of time, culture, or style, students are able to:
    - Understand and respond to works of art in an informed manner.
    - Recognize the manner in which artistic content communicates ideas and feelings.
    - Comprehend the formal processes which go into the creation of selected works of art.
- **Historical Perspectives (HP):** Upon completion of a course in this learning domain, students are able to:

    - Understand some of the diverse ways in which human beings in different cultures and societies have responded to temporal change.
    - Examine contemporary issues from a historical perspective.
    - Use historical perspective to gain insight into their own convictions and actions.
- **Literary Studies (LS):** Upon completion of a course in this learning domain, students are able to:
    - Engage in the practice of written and oral expression.
    - Read a text critically to determine what meanings it holds, how and why those meanings are produced, and the effects of these choices.
    - Examine how literary works provide insight into the human experience.
- **Natural Science Inquiry (NS):** Upon completion of a course with the **NS** domain code, students are able to:
    - Understand and apply the scientific and mathematical principles of their discipline.
    - Understand the distinction between science and dogma.
    - Use basic scientific principles to place information in a larger context.
    - Understand how science does and does not work.
- **Natural Science Inquiry with Laboratory (NS-L):** Upon completion of a course in with the **NS-L** domain code, students are able to:
    - Use the scientific method to gather, interpret and evaluate data.
    - Employ tools to assess the validity of observations related to the natural world.
    - Join scientific principles with critical analysis in a manner that is appropriate to the discipline.
    - Relate their analysis and conclusions to those of the larger scientific community.
- **Social and Behavioral Analysis (SB):** Upon completion of a course in this learning domain, students are able to:
    - Begin to understand human and social behavior through the use of appropriate disciplinary techniques.
    - Use their understanding of human behavior and relationships to discuss policy and/or other interventions.
    - Grasp how human experience is shaped by the social and institutional landscape.
- **Values, Beliefs and Ethics (VA):** Upon completion of a course in this learning domain, students are able to:
    - Articulate an understanding of different value and belief systems that follows upon critical exploration of those systems.
    - Express the commonalities discovered in value and belief systems that follows upon critical exploration of those systems.
    - Express the commonalities discovered in value and belief systems across historical, philosophical, religious, and/or cultural boundaries.
    - Demonstrate familiarity with ways of making reasoned value judgements.

- **Quantitative Skills (QS)**: Upon completion of a course with this capacity code, students are able to:
    - Use mathematical/computing techniques to analyze and solve models.
    - Quantitatively interpret results of analysis as they apply to real world problems.

Strengths and Weaknesses of the Assessment Plan

The Assessment Committee lays out the following criteria for a strong Student Assessment Plan:

- Learning Goals
- A Mapping of Goals to Components (where or how do you make sure that students achieve these goals? For example, in the syllabus, course content, required assignments, parameters for receiving credit, etc.)
- Plans for Gathering Information:
    - At least one form of indirect assessment (student survey, exit interview, etc.)
    - At least one form of direct assessment (rubric for a capstone, common course, or learning goal, standardized exam, etc.)
    - A planned cycle for assessment of the goals (i.e. you don't have to assess all goals every year)

Here is where our assessment plan stands in relation to each of these criteria:

- Learning Goals
    - Our plan has learning goals.
    - In the next section (Action Plan for Improvement) we will discuss the degree to which these learning goals have proven adequate.
- A Mapping of Goals to Components
    - Our plan does not have any mapping of goals to components.
- Plans for Gathering Information
    - We do not have any forms of indirect assessment.
    - Our survey of classroom teachers is a form of direct assessment, in that we ask each classroom teacher to assess achievement of learning goals from direct evidence of student learning.
    - We do have a planned cycle for assessment of the goals, in that our plan is to assess one learning goal per year. We must frankly acknowledge that this goal has not been consistently met.

Part II: Action Plan for Improvement

In this section, we discuss the following interrelated issues:

- Analysis of the data we have collected about each learning domain.
- Actions to take in response to the analysis of the data.
- The need to rethink and substantively revise our Student Assessment Plan.

We include one section for each of the learning domains (and QS), followed by a proposed action plan and concluding with a discussion as to how we might revise the Student Assessment Plan. Note that all conclusions from our analysis are weakened by the lack of any indirect assessment.

Expressive Arts (EA)

Direct assessment data was collected in 2011-12. Here are the learning goals, followed by the percentage of students who had Satisfactory or better performance on those goals:

Goal	**% Satisfactory or better**
Understand and respond to works of art in an informed manner.	92
Recognize the manner in which artistic content communicates ideas and feelings.	93
Comprehend the formal processes which go into the creation of selected works of art.	94

From this, we can conclude:

- The EA learning goals seem to reflect well the content of the targeted courses.
- Course instruction is proving successful in guiding students towards achieving those goals.

Literary Studies (LS)

Direct assessment data was collected in Spring 2016. Here are the learning goals, followed by the percentage of students who had Satisfactory or better performance on those goals:

Goal	**% Satisfactory or better**
Engage in the practice of written expression.	80
Engage in the practice of oral expression.	83
Read a text critically to determine the meanings it holds.	88
Read a text critically to determine how and why those meanings are produced, and the effects of those choices.	76
Examine how literary works provide insight into the human experience.	77

From this, we can conclude:

- The LS learning goals seem to reflect well the content of the targeted courses.
- The goal of determining meaning from text is easiest to achieve.
- Courses are emphasizing written and oral expression at roughly equal levels.
- There might be room for courses to emphasize to a greater degree how literary works provide insight into the human experience.

Historical Perspectives (HP)

Direct assessment data was collected in Spring 2016. Here are the learning goals, followed by the percentage of students who had Satisfactory or better performance on those goals:

Goal	**% Satisfactory or better**
Understand some of the diverse ways in which human beings in different cultures and societies have responded to temporal change.	79
Examine contemporary issues from a historical perspective.	83
Use historical perspective to gain insight into their own convictions and actions.	77

From this, we can conclude:

- The HP learning goals seem to reflect well the content of the targeted courses.
- HP courses are doing a great job incorporating the examination of contemporary issues from a historical perspective.

Values, Beliefs, and Ethics

Direct assessment data was collected in Fall 2012 and Spring 2013. Here are the learning goals, followed by the percentage of students who had Satisfactory or better performance on those goals:

Goal	**% Satisfactory or better**
Articulate an understanding of different value and belief systems that follows upon critical exploration of those systems.	87
Express the commonalities discovered in value and belief systems across historical, philosophical, religious, and/or cultural boundaries.	90

Demonstrate familiarity with ways of making reasoned value judgements.	68

From this, we can conclude:

- For some reason, one of the learning goals for VA ("Express the commonalities discovered in value and belief systems that follows upon critical exploration of those systems.") was not assessed. It does appear to be a combination of phrases from the preceding and succeeding goals. We will need to examine whether to remove that goal from our list, or to assess it explicitly in the future.
- The goal "Demonstrate familiarity with ways of making reasoned value judgements." shows considerably lower performance in comparison to the others. This is because several courses marked the goal as Not Applicable. Those courses are: three sections of RELI 110, CLAS 200, RELI 331, and RELI 339. If these sections are removed from the analysis, the percentage of students achieving this learning goal rises to 91%, which is similar to the numbers for the other goals.
- One particularly bizarre aspect of this is that two sections of RELI 110 were taught by the same instructor. In one section, the learning goal was marked Not Applicable, and in the other section most of the students were reported as meeting the goal.
- This outcome was reported to the faculty at the November 2013 faculty meeting. No further action was taken.

<u>Quantitative Skills</u>

Direct assessment data was collected in Spring 2019. Here are the learning goals, followed by the percentage of students who had Satisfactory or better performance on those goals:

Goal	**% Satisfactory or better**
Use mathematical/computing techniques to analyze and solve models.	72
Quantitatively interpret results of analysis as they apply to real world problems.	67

From this, we can conclude:

- Achieving satisfactory performance for QS goals seems to be more difficult than for the learning goals for the learning domains.
- Variances in satisfactory performance are extremely large, even when comparing different sections of the same course, sometimes even when those different sections were taught by the same instructor.
- The instructor for CSCI 150 marked the second learning goal as Not Applicable. The course does have assignments where students analyze real-world data, as well as

constructing software that solves real-world problems. The instructor was reluctant to say that constructing these software artifacts qualified as “quantitative interpretation.”

Social and Behavioral Analysis

No data is available at the time of this writing.

Natural Science Inquiry

Direct assessment data was collected in Spring 2018. Here are the learning goals, followed by the percentage of students who had Satisfactory or better performance on those goals:

NS Goal	**% Satisfactory or better**
Understand and apply the scientific and mathematical principles of their discipline.	71.9
Understand the distinction between science and dogma.	72.9
Use basic scientific principles to place information in a larger context.	69.4
Understand how science does and does not work.	68.4

NS-L Goal	**% Satisfactory or better**
Use the scientific method to gather, interpret and evaluate data.	73.3
Employ tools to assess the validity of observations related to the natural world.	78.9
Join scientific principles with critical analysis in a manner that is appropriate to the discipline.	64.2
Relate their analysis and conclusions to those of the larger scientific community.	80.6

The third NS-L goal is a clear outlier. The reason is that the goal was marked as Not Applicable for BIOL 150, a course which represents 18.5% of the students in our sample. 79.9% of the students not enrolled in that course completed that goal at a satisfactory level or higher, which is very much in line with the numbers for the other goals.

This outlier is particularly bizarre, because for this survey each instructor was asked to give a textual description of how the course achieves the learning goal, which the BIOL 150 instructor supplied for this goal.

Overall, from these numbers we can conclude:

- Achieving these goals tends to be more challenging than the EA/VA/HP/LS goals, but a bit easier than the QS goals.
- None of these goals seems particularly easy or hard in comparison with the others.
- These learning goals seem to reflect well the content of the targeted courses.

One instructor submitted the following noteworthy complaint about the split between the NS and NS-L learning goals:

"As we talked about in a curriculum committee meeting, the way the assessment rubric is divided between NS and NS-L simply does not work. My course assessment attached provides several examples. This spring, we had 3 sections of Cell Biology lecture and 4 sections of lab. Students in a particular lecture section can be taking any of the 4 lab sections. Furthermore, I did not teach a lab section at all. Most of the NS-L assessment rubric, as designed, comes from the lab component. Thus, I had no way to assess my NS-L section as an NS-L, so assessed it as an NS.

In the next revision, it is my opinion that NS and NS-L classes should have the same core set of goals. Then one or two additional goals could be added to the NS-L courses to account for lab activities. There would still be problems with this approach, but they would be less egregious than the current model."

Proposed Action Plan

Based on the collected data, here are some ideas for responding to issues that arose:

- The EA, HP, and LS data suggests that those learning domains are largely functioning as intended.
- The VA data showed some significant problems with the third learning goal. There should be communication with the Classics and Religious Studies faculty about that learning goal, to see how it might best be incorporated into those courses. If the faculty decline the opportunity to incorporate it, the Curriculum Committee should consider removing the VA code from the pertinent courses.
- With regard to the second QS goal, there should be communication with the Computer Science faculty as to how that goal might be understood to make sense in the context of their courses, or whether the QS code is appropriate for those courses.
- The NS and NS-L data suggests that student achievement of the goals is solid. However, the presence of eight distinct learning goals is arguably excessive and assessment has become a bureaucratic nightmare for the pertinent faculty. It is recommended that the Curriculum Committee, in conversation with the pertinent departments, develop a streamlined version of these learning goals in which the NS and NS-L classes share up to three core goals, with one or two additional goals for NS-L.

Revising the Student Assessment Plan

In the Strengths and Weaknesses section above, we identified the following weaknesses of our current Student Assessment Plan:

- No mapping of goals to components.
- No forms of indirect assessment.
- An inconsistent cycle for assessment of the goals.

The 2019-20 Curriculum Committee will have to create an improved SAP that addresses all of these issues. It is intended that they will work in conjunction with the Assessment Committee in putting together a coherent plan.

With regard to mapping of goals to components, the NS and NS-L survey from Spring 2018 shows a possible way forward. Each instructor was asked to give a short narrative as to how their course addresses each NS/NS-L learning goal. Examining those narratives could yield some ideas for what a mapping might look like.

With regard to indirect assessment, perhaps each coded course could have incorporated into the Student Feedback Form suitable questions for the learning goals.

With regard to the assessment cycle, work will need to be done to reduce the overall workload of assessment. One idea might be to use something like Google Forms to enable instructors to enter the pertinent information. Google Forms will then generate a single spreadsheet of all the data. As it stands, the person analyzing the data must collate it from each individual spreadsheet submitted by each instructor. This burdensome workflow arguably has had a negative impact on the assessment cycle.