

## Report on Portfolio Evaluation for ILO Assessment

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### **Participants:**

Lisa Bjerknes  
Jeanne Digel  
Jeanne Gross  
David Meckler  
Carol Rhodes  
Jill Sumstad  
Diane Tedone  
Jeanette Medina  
Justine Walsh  
Susan White

### **Objectives**

To evaluate use of student eportfolios for assessment of College Learning Outcomes. Specifically, purposes of this session were:

- 1) To examine student portfolios that were produced this spring term and assess them for achievement of Cañada's ILOs using rubrics;
- 2) Discuss this evaluation process and how to make portfolios a worthwhile tool for Cañada faculty and students.

### **A. Evaluation Process**

The task force first addressed the following questions.

#### **1. Are the current rubrics suitable?**

Upon reviewing the rubrics, the primary elements for Critical Thinking were revised to include analysis and synthesis as key components of critical thinking. "Citation of references" was deleted, as that is a key component of Communication (ILO 3). See Appendix A for the rubric form that was used.

Student Reflections were scored, although the rubric was not applicable to all of the reflections. A comment box was part of the assessment form to capture feedback on the quality of the reflections.

The overall quality of the portfolios was not evaluated. Most students had been assigned the task of posting one assignment, so they did not necessarily complete the Welcome or Goals page.

#### **2. Should we evaluate portfolios in groups or individually?**

Based on last year's comments, we decided to evaluate in groups of three. Groups were created to include one experienced evaluator from last year, as well as at least one non-Sci/Tech faculty per group. Although a majority of evaluators were from Sci/Tech, that proved useful in assessing student work, most of which were assignments from biology classes. Each group discussed the evidence in a portfolio and agreed upon each score entered for that portfolio work. Scores were entered online in a Survey Monkey form that aligned with the rubrics.

Differences from last year's Pilot Project: we did not normalize our ratings by together reviewing examples of portfolios. Rubric revision had taken considerable time. Each portfolio was reviewed by one group only, so comparison of evaluator scores for the same portfolio is not possible.

### **3. Which portfolios?**

Links to 130 student portfolios were submitted, but many had permission settings that did not allow this group to examine them. Forty accessible portfolios were divided among the 3 groups of evaluators, such that each group reviewed portfolios from students of each course. A total of 30 portfolios were scored in the time allotted, which is more than was recommended by Dean Hsieh as a reasonable sample size for today's purposes.

### **4. Which ILOs will be scored?**

A majority of these portfolios were done as required assignments in biology courses and consisted of lab reports that followed the format of scientific research reports. ECE and Math students also submitted portfolios. Most (nearly all) of the posted evidence was linked to a PLO and not to an ILO, as students followed instructions of their professors.

These facts meant that evaluators would need to determine which ILOs were addressed by each portfolio. Additionally, any one assignment could demonstrate traits of more than one ILO. Therefore, each group decided which ILOs to assess for any evidence posted within each portfolio. Consequently, the number of assessments for each ILO varies, although 30 portfolios were evaluated.

## **B. Resources**

ILO rubrics – Appendix A

Student portfolios (coded by number) Appendix B

[Rubrics assessment form](#)

[Portfolio feedback survey](#)

## **C. Results**

Numerical scores for the rankings were: Below basic 0; Basic 1; Proficient 2; Advanced 3. Averages do not include any values for N/A ratings. Charts and figures showing these data are appended. (Appendix C)

Critical Thinking (ILO 1) was assessed at the basic or above levels by nearly all students, with nearly half of the portfolios demonstrating proficiency. Selection of information sources was the primary element with the highest average score (1.74). Evaluation and analysis of evidence, as well as synthesis of evidence and use of logic, both scored a bit lower (1.54 and 1.57, respectively).

Communication (ILO 3) ratings were similar, with an overall average of 1.62 for the three elements of this trait. About half of the posted work did not include documentation, so correct format for references could not be assessed. Only 2 of 26 portfolios were rated as below basic for conventions of English language.

Quantitative thinking (ILO 5) was an area in which these students did very well: overall average was 2.87 for all three elements. Between 63% and 78% of the portfolios were rated as proficient or advanced for all of the elements of this ILO. It is notable that 2 of these elements (Analysis and Conclusion) involve critical thinking. However, as noted below, some evaluators felt the standards for this ILO were lower than they should be.

Creativity (ILO 2) was not assessed for any of these portfolios, and Community (ILO4) was assessed for only one portfolio, which was scored as Advanced in all elements.

These results reflect the selection of portfolios for this study: the most common evidence was a lab report that included graphical data and its interpretation. In addition, many of these biology students were well along their academic pathway, as BIOL 225, 250, and 260 are not introductory level courses.

Given that many of these students are finished, or nearly so, with their academics at Cañada, the results give a better idea of how well our college is achieving the college's ILOs than did the Pilot project of last year. The sample is hardly representative of students from all the college's programs. Some information might be gained from examining the portfolios of more ECE students and calculating average scores separately. ECE faculty may do this as part of their Program assessment of PLOs; Biology faculty have similar plans.

Reflections by students scored better than last year, averaging 2.5 and 2.3 for each element (Reflective thinking and Connection). This may be a consequence of greater emphasis by instructors on this part of the portfolio, better prompts in the template, and the new template format that puts the Reflection directly on the Learning Outcomes page.

Further analysis of these data by faculty groups and researchers may reveal more information. There are also an additional 100 portfolios that were not assessed, and if deemed useful, additional evaluations could be done. Probably half of these would need to have the authors reset the permissions to allow viewing by faculty.

## **D. Conclusions**

All participants had a full discussion of the process, its usefulness, and next steps. The comments can be grouped as follows:

### **1. ILOs and Rubrics**

The five ILOs were clear and readily applied to student work. The rubrics worked better this year, especially with the revisions to the elements of ILO 1. Some concern was expressed about the rubric standards for Quantitative Thinking (ILO 5) and it was recommended that the standards be raised.

More direction could be given to students about which ILOs and PLOs to link to their posted work. Faculty could benefit from guidance in this area. One method for this guidance is to involve other faculty in the evaluation process.

### **2. Evaluation process**

The process could be better if samples of work were used to normalize scoring among all faculty in the evaluation groups. Group size of 3 was perfect; 2 people is too small, 4 is unwieldy. This conclusion matches last year's feedback.

Multi-disciplinary evaluation groups were essential in understanding student work. This was deemed especially important when evaluating quality of information sources.

As happened last year, evaluators requested more information about requirements of the original assignment. Missing components may not have been part of the assignment.

Some felt that it worked well to focus mostly on one type of student assignment, i.e., scientific reports. There were no English essays or history reports included. This approach might fit well with a scheme to assess particular ILOs in a rotating fashion each year.

“Excellent learning opportunity about the process, content and assessment. Having faculty that volunteered seemed to work well, as they were highly motivated and engaged in the activity. Using diverse-ish groups to evaluate was very helpful.”

Pace of reviews ranged from 8 to 21 minutes per portfolio, and that was based on evaluating one piece of student work per portfolio. Group agreement and discussion contributed to a slower pace than might be achieved by individuals, but the discussion was deemed worthwhile. This limitation has two consequences: 1) portfolios need to be selected carefully in order to get results that are valid for the college; 2) sufficient

funds for faculty reviewers will be needed on a regular basis.

### **3. Reflections**

There was apparently a wide range of quality among the Reflections, as one reviewer thought they were written better than last year, while 2 other reviewers felt they were still lacking in depth and missed the purpose of a reflection.

There remains a need for more guidance on reflection. In particular, “connectedness” needs more discussion among faculty and should be more clearly presented to students.

Even if one assignment is posted for both an ILO and a PLO, there should be separate Reflections for each. Reviewers felt that each Reflection should have a perspective appropriate for each of these levels.

### **4. Next Steps**

#### For faculty:

Signature assignments need to be carefully crafted to directly address PLO/ILO. Some assignments were missing components that were a primary element of an ILO.

Faculty need to show examples to students of Basic, Proficient, Advanced levels so students know exactly what is expected.

Adjunct as well as FT faculty need information about portfolios and support for incorporating signature assignments into their classes. Recruitment could be helped by emails from dept chairs, publishing lists of trainings for faculty and for students, and having complete instructions for faculty posted online. Instructions could include suggestions for signature assignments that address all elements of an ILO or PLO.

More faculty from across all disciplines need to be part of E-portfolios.

“Provide an opportunity for faculty/staff that have already participated in such get together and talk about next steps. They have a lot of insight on this based upon experience.”

Full support of the administration will help to convince faculty that portfolios are an important part of every Cañada student’s experience.

#### For students:

The most benefit will accrue to students who start a portfolio early in their academic career. Most faculty do not have time/expertise/motivation to teach students how to set up their eportfolios. It will take coordination of all student support and services to make portfolios successful college-wide.

Counselors should incorporate portfolio setup into Orientation classes. The Learning Center and/or Library should set up regular trainings for students. The online tutorials should be expanded to include all instructions. Perhaps portfolios could be taught within a “Career Development Jam” type of workshop.

Samples of student portfolios, authentic or invented, should be accessible to faculty and students. Examples should include postings of artwork, videos of performances and presentations, reports, reflections – all the possibilities.

**5. Student’s thoughts:**

“It was pretty worthwhile to do this. I didn’t think so when I started, but after I finished, I could see the benefits of having a place to show what I can do.”

“While I was not very motivated to do this assignment, it was very helpful. I personally did not know that people began setting up their own sites to display their knowledge and credentials. The E-portfolio was a great way to get us thinking about our careers and what other items we can present on our sites in the future.”