
This document is the compiled information from the Let’s RAD: Rendezvous Around Data meeting. There were five roundtable discussions occurring simultaneously. Each table was tasked with reviewing the data and responding to the four guiding questions provided below. Each table had the opportunity to report out on specific questions. This document has been shared with QEP faculty, so they can review and apply the recommendations they find applicable. The QEP District Director will follow up on the recommendations that fall under her purview.

### 1. What are the major conclusions you would draw about the students’ ability to master each of the learning outcomes?

<table>
<thead>
<tr>
<th>Explain questions, problems, and/or issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Results correlate with Bloom’s expectations. Can also assume students come in with a substantial foundational skill in explaining and analyzing.</td>
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<tr>
<td>• We are close to the target of 75% for this outcome. It is expected that some students will not be able to meet the outcome due to many possible factors/limitations or not willing to do any assignments.</td>
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<tr>
<td>• This may not be as low level thinking as originally suggested. It depends on how the assignment is worded.</td>
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<tr>
<td>• The fact that the red is so small in this category, we should expect to reach the 75%.</td>
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<tr>
<td>• It is the easiest of the skills to master (because few fall below, as compared to the higher level skills)</td>
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<tr>
<td>There is an inverse progression (as the skill is higher, the mastery is lower)</td>
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<tr>
<td>Because students are often given a prompt of some sort, they are basically repeating or re-identifying what they have been given.</td>
</tr>
<tr>
<td>Recurring observation: practical, expedient.</td>
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<tr>
<td>• This may be the best outcome for a couple of reasons. The first being that the question, problem, or issue that is set to be explained is often already framed in the assignment. This is also, perhaps, the “lowest order” outcome for the students to master. [A strategy] to further improve the critical thinking skills associated with this learning outcome is to develop activities that have broader prompts in the assignment so that the students effectively have to come up with the question or problem on their own and explain it with the help of having it framed by the assignment. Essentially, take a hands off approach on this learning outcome.</td>
</tr>
<tr>
<td>• Clearly, attainable for students; results reveal teaching/learning successful; variables include students’ prior knowledge; opportunity to improve/easiest of SLOs to improve; students have background in this SLO.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Analyze and Interpret relevant Information</th>
</tr>
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<tr>
<td>• Once students are able to explain, they are able to analyze and interpret various types of information. Students are able to make clear transition from explain to analyze.</td>
</tr>
<tr>
<td>• 60% met/exceeded due to the approaches standard increased from explain outcome (28%) to analyze to (38%) an increase in 9% whereas the below increased by only 2%.</td>
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<tr>
<td>• What is the question we need to ask to find out what is the percentage of students that need help improving skills to complete assignment so they can have a chance to demonstrate critical thinking skills.</td>
</tr>
<tr>
<td>• The fact that the red is small (3%) in this category, we should expect to reach the 75% because we can work with students who are at least approaching standard and are developing critical thinking skills.</td>
</tr>
<tr>
<td>Evaluate information to determine potential conclusions</td>
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<td>----------------------------------------------------------</td>
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<tr>
<td>• Evaluate and Generate require different sets of thinking skills. Clear disparity between demonstrate and exceeding because this is a higher order thinking skills. What do we do to get the students from analyze to generate.</td>
</tr>
<tr>
<td>• Students are able to exceed and demonstrate standards in the previous categories, we should be able to move them to the meet/exceed in this category to reach the 75% target. They have a starting point by having analyzed the relevant information.</td>
</tr>
<tr>
<td>• This skill is very close to #2 and seems to be reflected in the numbers.</td>
</tr>
<tr>
<td>• Synthesis is very difficult for them to grasp and to pull into conversation.</td>
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<tr>
<td>• Because [students] have been taught to regurgitate, they don’t seem to see that they can weigh in on a question for themselves. This is a key skill, because if not able to do this, the whole exercise crumbles.</td>
</tr>
<tr>
<td>• It is not surprising that the met/exceed percentage continues to drop for this outcome as this is a more difficult outcome to master. In our experience students can often evaluate information but do not actively state more than one potential conclusion; they often come to a conclusion too early in the evaluation process. It was thought that this could be difficult to evaluate more than one potential conclusions in a two-page paper. The most engaged students are the most likely to meet or exceed this outcome.</td>
</tr>
<tr>
<td>• Response time may well be a factor in “thoroughly” assessing and questioning the credibility and significance of the purpose/argument, etc.; seems more subjective than other SLS language, involving “depth” and “breadth”; Implications: Design CT assignment should focus on limited use of sources; adjust time allowed, if assignment online.</td>
</tr>
</tbody>
</table>

• Is mastery of this skill higher in part because the question/problem/issue is given to the student, rather than the student having to identify for him/herself?
  Part of the problem doing this is finding resources for themselves; so they are given information that teachers have often “interpreted” for them to some degree.
  There is less disparity between demonstrate and approach than for #1
  Synthesis may belong here
• Students often seek out information that has already come to a conclusion on the topic at hand. They also let their previous bias and/or cultural influences drive their interpretation and the information that they choose to begin with. There are also two factors that can impact their success on this outcome. The first and most obvious is their analysis and interpretation skills but perhaps a second item that is having an impact is the actual selection of the information and whether or not it is relevant in the first place.
• Data show that it’s possible for students to recognize relevant information; may show need for more emphasis on “breaking down” the information, thus, focus for improvement on this area; implications: sharing the rubric.
Generate a well-reasoned conclusion

- Few are able to make the transition between demonstrate and exceeding. We also have to question how many critical thinking skills have these students had prior to this certain skill. Since this is a skill that requires mastery of the above three skills. This skill follows the bloom’s hierarchy. Skill takes time and practice to develop.
- Students need more practice in generating conclusions. Less than 50%
- While there has been a progress from 1 to 2 to 3, 4 seems to be a leap (the number below standard is almost double for #3) While synthesis means one thing to me, the others use it differently. (this taught us something about how we as CT scholars use these rubrics)
- This is the hardest to do, so is not surprising. It was mentioned that there are two ways to not meet this outcome: (1) come to a conclusion too early and so it is not well-reasoned, or (2) the student could determine well-reasoned potential conclusions but then not come to a conclusion. There may be different ways to approach these two different reasons as to why the students do not meet this outcome.
- “Integration” a high level skill; students need more practice in drawing logical, sufficient and integrated conclusions.

2.

Do the results indicate any strengths; if so, what are the strengths?

- Positive movement among the outcomes
- Consistency in the numbers
- Strong Correlation with Bloom’s
- Room for continuous improvement
- The fact that the red (below standard) percentages are small, is a strength of the data. We expect to reach the 75% for at least first 2 learning outcomes. We can work with students who are at approaching standard and are developing critical thinking skills to get them to the meet/exceed standards.
- The consistency of number of students in the yellow (approaches standard) is consistent for the 3 outcomes
- There are no major red flags. There is not anything that shows we should be concerned. The data is looking as expected. It matches the way we think about the learning outcomes.
- Gap between demonstrate and approach is smaller and smaller
- We have more students above the red than not
- Need continuity for this to get even better
- They seem to be grasping it, “getting” it
- We did not see very much in terms of strength besides the “explain” learning outcome. This may be because the problem is already framed in the assignment which was discussed earlier. The biggest strength aside from the outcomes themselves was that we are attempting to do this (increasing critical thinking skills) in the first place.
- “Explaining” familiar to students from K-12 education
- “Identifying” relevant information also evident
- Overall, data show good results
### What concerns, if any, are raised by the results?

- The students we get: Students have been taught “how to take the test” not been taught how to answer questions or “how to think”
- How do we move them from lower order thinking to higher order thinking in the time constraints we have.
- Where’s the continuity or carry over? How do we ensure continuity?
- Some of the students will be unable to perform these learning outcomes because they lack basic reading and writing skills. These skills are necessary to demonstrate critical thinking skills.
- It might be difficult to have an assignment that can capture all the learning outcomes in one artifact.
- What is the incentive for the students to meet all the learning outcomes? To use their energy? What’s the motivation? Can this be done in one 2-page assignment and done well. Do they really understand what the learning outcomes mean and how this can be demonstrated in one artifact?
- How do we make sure that we expose students to critical thinking in all their classes? So the critical thinking language is part of their language and every day problem solving.
- A bit odd that the skills of the top level goes lower in number
- Could this reflect students who “coast” when they get the early phases (in other assignments) get lax for the one assignment that assesses all 4 SLOs
- Is there discrepancy between disciplines? Does that affect how we teach these ideas?
- Learning styles: higher level, independent thinkers get lost or lose motivation when asked to do things step by step
- Need for consistency between courses; perhaps different data for different disciplines
- Need for continuity
- Concern about assessment: while discipline faculty assess in context of their field, do “outside” faculty do so/can they do so?
- Many of the concerns that are raised within this workshop (some of which have been raised previously) should be documented in a “best practices” or “teaching strategies” document that is given to faculty to help them prepare learning activities. The meetings with the certified scholars already meet some of the need for this, i.e., the certified scholars are already imparting their knowledge of what works and what doesn’t. A document collecting all of this information may help faculty in a big way.
- Timing of CT assignments
- Practice necessary
- Design of the assignment
- Feedback loop – must be substantive
- Use Rubric in small groups of student peers
- Use Rubric verbiage in feedback to students
- Consistency of faculty implementation
### 4. What are some recommendations for using these results to improve learning for each outcome?

| Explain questions, problems, and/or issues | - For all of the skills: how can we track or see if they are repeating these across courses, or at least developing as critical thinkers (“owing” the process):  
  - Putting a CT module on each professor’s D2L shell: could put it on the resources section for all faculty |
| Analyze and Interpret relevant Information | - Faculty need to reflect on how the questions or problems are framed in the learning experience.  
  - Faculty should make sure that the students also have the skills to find relevant information.  
  - Workshops and programs on information literacy should be developed for both faculty and students that are focused toward the goals of QEP. |
| Evaluate information to determine potential conclusions | - Faculty can possibly increase the success of this outcome if they explicitly inform students about developing more than one potential conclusions. |
| Generate a well-reasoned conclusion | - Is there a way to retest these students before they leave BC (before we send them into the world) especially for reaching conclusions.  
  - Exit interviews: more specific than general survey; perhaps with preparative writing  
  - Learning communities to incorporate CT principles more holistically.  
  - Best practices guides (for faculty AND for students)  
  - More PD workshops  
  - Separate workshops specifically for students  
  - Again, faculty can possibly increase the success of this outcome if they explicitly inform students to come to a well-reasoned conclusion. |
| Recommendations for all outcomes | - Teach teachers to teach (teach professors the science of learning; how students learn)  
  - When looking at the data, consider the time of day and length of classes  
  - Are students putting more effort into the first learning outcomes? Is there a way to encourage effort for the last 2 outcomes because they seem to be more difficult?  
  - Create the point system for the assignment so that the last 2 outcomes are worth more points to match the level of difficulty of these learning outcomes (Evaluate, draw conclusions).  
  - Are we providing students with enough experience to become comfortable with the explicit use of the critical thinking language? To students really understand what it means to analyze and to evaluate? This needs to become a part of their everyday vocabulary.  
  - Offer professional development or create cohorts that teach professors how to design assignments for various learning styles  
  - Best Practices for teaching/learning experiences |
| General Recommendations | • Separate the assignment into parts to be worked on throughout the semester, focusing on 1-2 learning outcomes at a time.  
• Make sure faculty scaffold assignments so that students begin to really understand what is expected of them  
• We need more opportunity for faculty to share assignments and strategies to find out what is working. We need to have more space for these conversations.  
• More info/promotions on CT in the Pathways  
• Strengthen “Integration” skill through LCs  
• Make online CT course required as part of Professional Development  

|      | • Developing the best practices guide for faculty  
• Make more examples of assignments from faculty available on the Sharepoint site  
• Create and share videos of faculty members actually employing these activities, experiences, and pedagogical techniques. |