Focused Interim Report

April 13, 2007

(Response to NWCCU 2005 Focused Interim Visit Report)

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INTRODUCTION

Green River Community College's most recent full-scale evaluation study and site visit occurred in April 2003, and in June 2003 the Northwest Commission on Colleges and Universities (NWCCU) reaffirmed Green River's accreditation. While the self-study and visit were viewed favorably by the evaluation team, the team did have several findings which resulted in five recommendations from NWCCU. They requested that the College submit a focused interim report to document progress on the five recommendations, and host a focused interim evaluation in April 2005.

The evaluation found that the college had thoroughly addressed and resolved four of the concerns, but that the recommendation concerning student learning assessment had been only partially resolved; they made two recommendations for improvement in this area. In correspondence sent to Green River in July 2005, NWCCU reaffirmed Green River's accreditation on the basis of the interim evaluation. The Commission did request, however, that the College submit a focused interim report to document progress on the two recommendations and prepare for a focused interim evaluation in April 2007.

Green River began addressing deficiencies in summer 2005. The College believes that significant progress has been made, resulting in further improvements. This report contains the College's response to each recommendation. In addition to the report, Green River respectfully submits a set of appendices to support the actions taken on the two recommendations.

2005 NWCCU RECOMMENDATIONS

1.   It is recommended that the College clearly define the educational assessment process as a whole, integrating tools and mechanisms that have been developed into a cohesive, systematic plan with regular timelines for completion. Collegewide planning processes should be considered in establishing these timelines to ensure integration of educational assessment findings in College decisions (Standard 2.B.1).

2.   It is recommended that the College ensure that its educational assessment program is comprehensive and consistently applied to all degree programs or offering and leads to evidence-based improvement of teaching and learning (Standard 2.B.e, 2.B.3, Policy 2.2, Eligibility Requirement 12).

RESPONSE TO RECOMMENDATION ONE

It is recommended that the College clearly define the educational assessment process as a whole, integrating tools and mechanisms that have been developed into a cohesive, systematic plan with regular timelines for completion. Collegewide planning processes should be considered in establishing these timelines to ensure integration of educational assessment findings in College decisions (Standard 2.B.1)

Introduction

Green River Community College has implemented its comprehensive assessment plan. Developed by faculty and published via the learning outcomes website, the plan is designed to assess teaching and learning in courses, programs and campus-wide. The overall objective of the plan is to ensure that the full cycle of assessment is addressed, which includes identifying outcomes, measuring those outcomes, and responding by making adjustments to factors that impact teaching and student learning.

The first part of this report describes the assessment process and notes the various ways that the college supports or helps to facilitate this work. The second part discusses how assessment in each area has led to evidence-based improvement of teaching and learning.

Campus-Wide Assessment Process

Campus-wide Assessment measures the college's four Campus-wide Learning Outcomes (outcomes) within all degrees and 45+ credit certificates. The outcomes are Quantitative and Symbolic Reasoning, Written Communication, Critical Thinking, and Student Responsibility. These were approved by the faculty in December 2004, and components of one or more of these outcomes are required to be embedded in all courses and programs on campus. (Appendix 1)

In fall 2005 faculty approved a process for assessing the outcomes across degrees and certificates. Each outcome receives focus individually, and goes through a three year cycle.
- **Year One**: five faculty from across degree programs assess student learning of the outcome; they report back their findings to all faculty.
- **Year Two**: faculty respond to the findings presented by the assessment team and develop and implement a strategy to improve their teaching and student learning of the outcome.
- **Year Three**: a faculty assessment team examines student learning of this outcome and reports whether the actions taken during year two led to improved student learning.

This three-year process is overlapped, so that during year two of one outcome's cycle, the assessment process for the next outcome is beginning. In this way, the full assessment cycle is completed for all four outcomes within six years. Once the assessment for all outcomes is complete, the process is repeated with the first outcome, ensuring that the overall assessment process is ongoing. (Appendix 2)

Implementation of the assessment plan is overseen by the Learning Outcomes Committee (LOC), a subcommittee of the Instructional Council (IC), the main faculty governance body. The LOC is charged with facilitating outcomes work on campus, and includes one faculty member from each of the 11 instructional divisions, one member from International English as a Second Language, and two instructional administrators. In addition to managing the plan, the LOC provides direction and assistance to the faculty assessment teams. The Office of Research and Planning provides research design, sampling, and statistical support to the assessment teams.

In order to compensate the faculty assessment teams for the time involved in doing this work, money has been allocated from state funds and the College's general fund. These two permanent funding sources ensure that Campus-wide Assessment has sufficient financial support.

Program Assessment Process

The Program Assessment and Improvement (PA&I) process was developed in 1998 to ensure that programs are current, well structured and excel in promoting student achievement. The process was revised in 2001 to place greater emphasis on program effectiveness and the assessment of student learning. Each instructional program goes through this comprehensive review process every 5 years. (Appendix 3)

Program faculty, along with the division chair and dean, complete the review over a five month period. Research and Planning compiles and inserts extensive academic data on the PA&I reporting form, including enrollments, course retention, grade distributions and employment outcomes. The review team then meets with the Executive Vice President, area Dean, and Research and Planning staff to discuss the strengths and challenges of the program and outline a plan for improvement.

The PA&I reporting form requires departments to address numerous questions about their program's goals/objectives, curriculum, student achievements, enrollments, personnel, facilities and institutional support. (Appendix 4) The document was designed to ascertain and ensure that programs have well aligned educational objectives, curriculum and intended student outcomes, and the resources necessary to run the program.

One section of PA&I is devoted to the assessment of student learning. This section asks the department to "develop and implement a project to assess student achievement of a program-level, degree/certificate level, or campus wide outcome," and contains the following five questions.

1. Identify which learning outcome(s) was the focus of this project.

	Learning Outcome
	Written Communication
	Critical Thinking
	Responsibility

	Quantitative and Symbolic Reasoning
	Human Relations*
	Oral Communication*
	Program Level (Write in):

2. What areas needing instructional improvement were identified in the assessment results?

3. Identify changes that were made to address the areas identified in (2). What did you hope would be the result of the changes?

4. Describe the effects the changes identified in (3) had on teaching and learning within your program. Should the changes be permanently implemented or should they be eliminated?

5. What new questions, if any, arose as a result of this process improvement initiative?

Green River helps with the assessment portion of PA&I in a number of ways.
- **Summer Assessment Institute**: This annual, week-long institute is facilitated by the Learning Outcomes Committee. Faculty are guided through the process of designing a rubric to measure student work, and then using this rubric to determine how well students are doing on a given outcome in their program and/or courses. Faculty leave with a better understanding of outcomes assessment, a rubric that tailors one outcome to their courses and/or program, and data that illustrate how well students are learning this outcome. Faculty can use these results to make changes to their teaching and/or program curriculum the following year. Although all faculty are invited to attend, programs that are scheduled to conduct their PA&I the next year are specifically encouraged to participate.
- **Stipends:** The LOC offers stipends for departments to complete an assessment project of their design. Departments submit an application for funding which describes the project details and how it addresses the full assessment cycle required for PA&I. The LOC reviews each application, making recommendations for revisions and/or approving the projects as appropriate. Each project can be funded up to $1000; the LOC budget can support 10 such projects each year.
- **Classroom and Program Assessment Research Specialist:** The LOC secured permanent college funding to hire a faculty member as a part-time Classroom and Program Assessment Research Specialist, to assist departments in designing and conducting assessment projects. The hiring process was recently completed and the Specialist will begin working with programs in spring 2007.

Faculty members who complete the PA&I are offered either a stipend or additional departmental funds as compensation for completing the study.

These are outcomes for certain professional-technical programs that require "related instruction" to be embedded within their program curriculum or in specialized courses.

Course-Level Assessment Process

Course-level assessment is systematically addressed at Green River. First, each Course Adoption Revision form lists both course and campus-wide outcomes. This ensures that all courses embed at least one Campus-wide Outcome. To ensure that each instructor addresses course and campus-wide outcomes in their classes, quarterly each dean collects and retains a syllabus for each class.

The Learning Outcomes Committee also offers a variety of annual workshops designed to help faculty assess and improve their course materials and pedagogy. These activities disseminate concepts and skills that not only better enable faculty to experiment with and evaluate pedagogy in their own courses, but also contribute to more informed and thorough program-level and campus-wide assessments.

- **Summer Assessment Institute**: instructs faculty in assessment concepts and techniques. As noted above, faculty design and use a rubric to assess student work from their course(s) to determine patterns of strengths and weaknesses in student learning.
- **Syllabus Workshop**: orients faculty on outcomes and to prepare a strong syllabus. During this workshop, faculty discuss the relationship between outcomes, assignments, and grading for their courses, as well as exploring appropriate ways to communicate these items to their students via the syllabus.
- **Assignment Workshop**: helps faculty evaluate various sample assignments for content and form. Faculty reflect on how they can improve their own assignments.

These workshops are funded by the college. Together they bring outcomes and assessment to the course level, give faculty the chance to evaluate the effectiveness of outcomes assessment in their classes, and help them make appropriate changes to their materials and pedagogy in order to improve student learning.

RESPONSE TO RECOMMENDATION TWO

It is recommended that the College ensure that its educational assessment program is comprehensive and consistently applied to all degree programs or offering and leads to evidence-based improvement of teaching and learning (Standard 2.B.e, 2.B.3, Policy 2.2, Eligibility Requirement 12).

Introduction

As described above, the college's assessment plan encompasses teaching and learning at the campus-wide, program and course levels. The schedules for Campus-Wide Outcomes and PA&I ensure that assessment is consistently applied to all degree programs and offerings. The ongoing course-level assessment activities improve course outcomes and instruct faculty in assessment concepts and practices that strengthen assessments conducted at each level. In addition, the college supports assessment by providing permanent funding for the LOC, campus-wide assessment, and PA&I, as well as assistance from Research and Planning in research design, statistical analysis, and similar efforts.

The following describes how each of the three areas of assessment has led to evidence-based improvement of teaching and learning.

Campus-Wide Assessment Activities

Quantitative and Symbolic Reasoning
Soon after the faculty approved the campus-wide assessment process in fall 2005, the first faculty team was charged by the LOC to conduct an assessment of Quantitative and Symbolic Reasoning (QSR), and to issue its report in summer 2006. The assessment effort had two main components.
1. To identify and conduct a peer review of courses that claimed a "Level Three" designation in the Learning Outcomes Tracking System (LOTS) database.
2. To design and carry out an analysis of student learning of QSR.

The LOTS database was developed in 2003-2005 to enable faculty and administrators to identify which learning outcomes each of the college's 1,250+ courses support. Each instructional department was responsible for determining which learning outcome competencies their courses cover, and at which level.
- **Level One**: indicates that the outcome is practiced or taught in the course.
- **Level Two**: indicates that the outcome is assessed but not explicitly taught in the course.
- **Level Three**: indicates that the outcome is taught and assessed in the course.

Departments were well informed about how to designate their courses, and they diligently completed the project.

To ensure that these designations are accurate, the LOC decided that the assessment of each campus-wide outcome should include a peer review of the courses that claim a Level Three. The QSR assessment team found that 14 of the 158 courses claiming a Level Three lacked sufficient documentation to justify this designation. The courses were referred to the LOC Chair, who discussed the matter with the appropriate instructors. In nearly all cases, the course's LOTS designations were changed to Level Two or One.

In addition to verifying Level Three designations, this process provides valuable information as to how many courses and departments cover each of the competencies at the highest level. The assessment team found that four of the six QSR competencies were covered in numerous courses, whereas two of them, 3 and 6, were covered in very few courses at Level Three. This was an important finding. (The competencies are specified in Appendix 1.)

The QSR team then developed a research design and conducted an assessment of student learning in these courses. They examined pretest and posttest assignments given to students in 24 randomly selected courses with Level Three QSR competencies 1, 2, 4, or 5 taught in winter 2006. The courses had a combined enrollment of more than 450 students. The team members used the LOC Community Rubric for Quantitative and Symbolic Reasoning to evaluate the students' work. The rubric assesses student work using four classifications of learning: No Evidence, Emerging, Competent, and Mastering. (Appendix 5)

For the most part, the results were reassuring. The pretest/posttest comparisons indicated that students typically make significant strides in mastering this critical academic skill. This was particularly evident for QSR competencies 2, 4 and 5. However, students exhibited noticeably less proficiency in competency 1. In addition to this, the study reported that although competency 2 contains two distinct components ("recognizing the appropriated method for solving a given problem, and correctly implementing those methods"), most instructors' assignments or exams were designed to ascertain the second, but not the first. The research team highlighted this and the scarcity of courses that teach QSR competencies 3 and 6 at Level Three as concerns the college should address, in addition to the main finding concerning the teaching and learning of competency 1. (Appendix 6)

During 2006-2007, the second year of the QSR assessment process, faculty were asked to respond to the study's findings and recommendations, and implement an improvement strategy. To facilitate this, LOC members elicited from their respective divisions the most important concerns that emerged from the study. These division inputs were submitted to the LOC, which subsequently made a recommendation to the IC regarding the most prevalent issue as the focus for the year's response period. The IC voted to accept the LOC recommendation, which reads:

> *"The campus should focus on QSR competency 1 in order to help faculty better understand it and ensure that students are getting opportunities to learn this competency. The faculty should also reevaluate the QSR competencies in order to address the questions: should competency 2 be split into two competencies? Are competencies 3 and 6 needed as part of the Campus-wide Outcome?"*

In addition, the IC asked the LOC to examine some related issues that may arise with other campus-wide assessment projects. These include the following:

Do we cover all of the campus-wide outcomes' competencies, and at what level, to claim it as a campus-wide outcome?

What factors need to be considered in order to qualify a competency to be a component of a campus-wide outcome?

Given the answers to the two questions above, do QSR competencies 3 and 6 need to be reviewed as part of this Campus-wide Outcome?

The LOC has taken the following steps to implement the recommendation and address the related issues posed by the IC:

1. Sponsored a QSR presentation and discussion session for spring quarter's Faculty In-Service Day (May 11, 2007). All faculty who teach QSR competency 1 will be invited to a presentation and roundtable discussion on enhancing the teaching and learning of QSR, particularly competency 1. Following brief presentations on the meaning of QSR and the QSR assessment study, the session will focus on current and best practices in teaching QSR, and developing strategies to teach it more effectively across the disciplines.
2. Proposed revised language that splits QSR competency 2 into two separate competencies. The proposed language was approved by the IC on February 26, 2007.
3. Determined that the issue of whether QSR competencies 3 and 6 are needed is essentially a broader concern about the ambiguous relationship between Campus-wide Outcomes and their associated competencies. The LOC has drafted a revision of the language to clarify the relationship which clearly states that the Campus-wide Outcomes are of central importance, and that the competencies are meant to clarify the meaning of the outcome. In other words, students need not demonstrate proficiency in every competency in order to claim competency for a Campus-wide Outcome.

Whereas steps two and three pertain to clarifying the learning competencies, step 1 addresses the teaching and learning of QSR. Faculty who attend the In-Service session will be asked to think about their pedagogy and begin experimenting with different approaches to teaching and assessing this competency. In addition to assessments by faculty in their individual courses, the third phase of the Campus-wide Assessment of QSR will begin in 2007-2008. The reanalysis of student learning of this outcome will provide evidence of the extent to which these actions have led to improvements in students' QSR skills.

Written Communication
Following the Assessment Schedule, a team of five faculty members from across divisions convened in fall 2006 to conduct an assessment project for the Written Communication outcome. This team began with a peer review of courses in the LOTS database claiming Level Three for the majority of the ten competencies that define this outcome. They found that the majority of courses claiming Level Three are in the English Division. This led to concern that this campus-wide assessment process might end up being program-level assessment, a problem the team felt would undermine the goals and purpose of campus-wide assessment. They presented this concern to the LOC, which agreed that the Written Communication outcome itself needed to be more global in nature. The LOC advised the faculty team to postpone the collection of student work and its evaluation of this outcome until 2008-2009. This way, the campus can first revise this outcome to better define writing as it exists across the curriculum. The faculty team is

currently working on a report to the faculty that summarizes their review of this outcome in the LOTS Database, as well as their findings. In keeping with the three-year assessment cycle, this report is due by the end of spring 2007. The team will then formally report their findings and recommendation during Opening Week of fall 2007. The faculty will use the 2007-2008 academic year to revise the language that defines this outcome with a faculty vote to approve this revised language. In the third year of the assessment cycle, the faculty team will reconvene to study the effects of the revised language on the campus' ability to address this outcome across degrees and programs of study.

Program Assessment Activities

As previously described, Green River's PA&I process ensures that each instructional program goes through a thorough evaluation once every five years. An important component of PA&I is the assessment of student learning at the program level. The following are examples of these efforts.

- To improve teaching and learning, and to assess students' critical thinking skills, the Geology Program developed a mapping assignment and grading rubric. Students determine the geological history of an area from a map and a set or rock samples that are keyed to the map. Students work in groups on the activity, but are assessed individually. The first three parts of the exam tested students' knowledge of the group maps, whereas the fourth part referred to a map the students had not previously seen. The purpose of this additional map was to test their skills in thinking critically about the area represented by this new map. Students generally did not do well on this part of the exam. In a Summer Assessment Institute, the instructor developed a grading rubric for assessing answers to the fourth part of the exam. Items that had open-ended responses were reviewed and assigned rubric scores. The results indicated that students were having difficulty grasping the significance of certain topics. As a result of these findings, the instructor adjusted his teaching and now devotes additional time to this and related topics.

- The Welding Program recognized that students were not building necessary team-work relationships. Students tended to work alone and didn't communicate about coordinating their projects to ensure that workshop cleanup procedures were completed. The program identified team work, responsibility, and communication as areas needing improvement. It was decided that students had to learn how to work and communicate as a group with a common supervisor. The program developed a task list and required students to select a student supervisor, who delegated the tasks to the students. They had to work together and communicate their individual needs to accomplish their portion of the task list. As a result of these changes, students now take complete responsibility for maintaining a clean and well organized welding shop. They begin class by determining the tasks for the day, and assigning individuals to each task. At the end of the day, they review and discuss the completion of the task list. The students work in small groups rather than individually. Team work, communication, and responsibility have all improved. Reflecting the importance of these characteristics, the welding program has changed its course syllabi so that shop maintenance now accounts for 25% of the grade.

- The Reading Program addressed students' critical thinking in their written responses to assigned readings. Program faculty attended the Summer Assessment Institute and developed the critical thinking/reading rubric below.

A Rubric for Reading and Responding Assignments

Level 4
- o Demonstrates a thorough understanding of the complexity of the text by expressing sophisticated ideas, insights, and reflections.
- o There are no major errors in text-based facts.
- o Evaluates the author's perspective and purpose.
- o Makes strong connections to other experiences, texts, concepts, issues, and/or cultural settings.
- o Integrates interpretation of the text with text-based support.
- o Addresses all important aspects of the question(s).

Level 3
- o Demonstrates coherent, adequate understanding and interpretation of the text through some elaboration.
- o There are very few errors in text-based facts.
- o Identifies the author's perspective and purpose.
- o Makes connections to personal experiences, other texts, and/or background knowledge.
- o Partially integrates interpretation of the text with text-based support.
- o Address most important aspects of the question(s).

Level 2
- o Demonstrates an incomplete, limited, and/or sketchy understanding and interpretation of the text; responses may be fragmented or unfocused.
- o There are some errors in text-based facts.
- o Incorrectly identifies the author's perspective and purpose.
- o Makes limited or no connections to personal experiences or other texts.
- o Might use relevant copied text.
- o Addresses some aspects of the question(s).

Level 1
- o Demonstrates very little evidence of understanding of the text; responses are inaccurate and/or irrelevant.
- o There are substantial errors in text-based facts.
- o Does not attempt to identify author's perspective and purpose.
- o Does not make connections or makes irrelevant connections to personal experiences and other texts.
- o Uses irrelevant copied text.
- o Addresses only one or two aspects of the question(s).

Level 0
- o Not turned in.
- o Plagiarized/copied.
- o Illegible.
- o Does not address the question(s).

Program faculty adopted the rubric and reported that it has resulted in more consistent and objective evaluations of students' work. Moreover, faculty members found that using the rubric as a teaching tool has improved student writing. Specifically, instructors have their students apply the rubric to writing samples as a way to recognize and evaluate good and poor writing, thereby enhancing their understanding and ability to write well.

- The Math Division did an analysis to examine the performance of students in Math 102, Math 107, Math 156, and Math 170 based upon the delivery format of their Math 97 course. They wanted to know whether there was a difference between class lab format and lecture format in preparing students for their subsequent 100-level math classes. The analysis examined all students who enrolled in both Math 97 and one of the above courses between summer 2000 and spring 2004. The results indicated that the academic performance of students in Math 102, 107, and 170 did not appear to be influenced by the course format of Math 97. However, students who took the lab format of Math 97 did somewhat worse in Math 156 than their counterparts in the lecture format. Although the study did not uncover a consistent pattern of achievement differences based on course format, the math faculty believed it was still important to improve the advising that students receive as to course format. They have worked with Educational Planning (advising) to develop a procedure for better informing students about each format. Similarly, the Math Division revised its process of advising incorrectly placed students though Math Advising and Placement Sessions that better guide students into the most appropriate course format.

Course-Level Assessment Activities

Each year the LOC offers several ways instructors can engage in formal course-level assessment including the Syllabus Workshop, Assignment Workshop and Summer Assessment Institute. To date, more than 80 instructors have participated in one or more of these professional development activities. The LOC issues extensive reports on how instructors changed their methods and/or materials as a result of attending the Summer Assessment Institute. The following faculty reflections offer a sample of what can be viewed in the reports available at the college.

Summer Assessment Institute 2005
- I think the most important thing that I learned from the process is that I haven't been as clear in outlining my expectations for the students as I thought. Part of the reason for this is that my expectations were really not that clear in my own mind. Taking the time to analyze the points provided in the Community Rubrics and to think about how to apply them in ENGL 113 helped me develop clearer expectations.

  I have already begun to respond to the findings from this week's activities in the ENGL 113 class I'm teaching this quarter. Last Wednesday, I used my revised rubrics to clarify my expectations on the next assignment. The questions that the students asked during the lecture leads me to believe that they had a better understanding of what I want them to accomplish than previous classes have had. I plan to continue working on my rubric and

using it to improve the way I present and assess my students' work. *Part-time Instructor, English*

- I learned a few important things through the process of creating the rubric. First, I learned that I need to create better assignments. I also learned that it is important to create the assignment and the rubric simultaneously…Secondly, I learned that there is a vast pool of existing resources for rubrics…By utilizing the existing resources, I am able to follow patterns and standards that have already been developed by faculty. Thirdly, I learned that creating a rubric is much more difficult than I ever anticipated. Creating a new rubric that is concise, fair, and measurable takes more time and energy than I thought it would.

  I also learned a few important things from the process of assessing the student work using the rubric. First, I learned that the rubric needs some additional revision. I learned this on my own as I discovered that I was marking the border between assessment levels for several of the competencies. Secondly, I learned that my assessments of the student work were different from my partner's assessment of the same work; therefore, once again, I realized that the rubric language was not as precise as it should be.

  This week's activities will improve teaching and learning in my classes and/or program in many positive ways. First, I intend to make rubrics for every assignment in every class. As I prepare to create every new rubric, it will give me a good chance to redesign much of the content and methodology that I use. I plan to use the rubrics as the main "maps" for my classes and to have them better guide me and the students through the learning process. I hope that this will improve the consistency of my teaching and learning and that of the program. *Part-time Instructor, English*

- Sometimes the best laid plans don't always match to the assignment given. I learned that our rubric didn't quite measure up to the answers given on the test that [my co-instructor] and I devised to assess student preparedness for entry into Biology 100. While we were able to make it work more tweaking is necessary for a direct application.

  If the data can reveal where our students are at the beginning of the course compared to the end we can then assess teaching strategies to best meet student needs. Maybe we are expecting too much of our entry level students or not expecting enough. The data should reveal the trend and we can then adjust out teaching styles to fill the need. *Full-time Instructor, Biology*

Summer Assessment Institute 2006
- I gained a deeper understanding of the rubric, how to adapt the rubric to my content area, and how to design assignments so that they better reveal students' achievements. I plan to redesign several student assignments, and add discussion questions to topic areas that will encourage students to engage in critical thinking. *Full-time Instructor, Accounting*

- I learned that I am often too general in my explanations and expectations of assignments. These broad explanations allow for too much subjectivity in my grading. I plan to

reassess my assignments…in terms of what I learned this week. I hope to create rubrics for the major assignments before fall quarter begins so I can provide them to students throughout the quarter. I will specifically look at the details of the assignment to see, one, how they coincide with the campus-wide learning outcomes and, two, how I can be more explicit in my explanations and expectations for each assignment and the classes overall.

Again, I feel what I learned this week in regard to the outcomes and rubric development will help me to be more objective in my grading as well as be a better communicator of the expectations I have for my students. *Part-time Instructor, Communications*

- I learned a lot about the process of developing a rubric, and about adapting pre-existing rubrics to new assignments. I really learned to like rubrics for grading student work, for modifying assignments and for informing students about the grading process so that they can successfully complete the assignment. I was surprised to learn how effective the rubric I developed was at evaluating the quality of multiple choice exam items and determining whether the exam items required critical thinking or not.

  I think that the ability of my students to think critically and troubleshoot operating system and networking problems will increase significantly. I hope to teach them more critical thinking and fewer facts so that they are better able to adapt themselves to the continuously changing technology which they are tasked with managing. *Full-time Instructor, IT*

CONCLUSION

Green River believes we have fully addressed the two recommendations from the 2005 Focused Interim Evaluation Report. To summarize, the college has established a comprehensive assessment plan that faculty support and which demonstrates the full cycle of assessment at the course, program, and campus-wide levels. Furthermore, the college has begun the process of implementing its comprehensive assessment plan. The college is in year two of the three-year cycle for Quantitative and Symbolic Reasoning, and it is in year one of the three-year cycle for Written Communication. The faculty will assess the remaining two Outcomes, Critical Thinking and Student Responsibility, in the next few years as is outlined in the campus-wide assessment schedule. While there has not yet been time to achieve the full cycle of assessment for all outcomes, a plan is in place to do so, and the college can show concrete results from the work completed over the past two years.

The formal process to assess student learning at the program and course levels has had a longer history at the college and has completed the full assessment cycle. Program-level assessment has been an integral component of the college's Program Assessment and Improvement process since 2001, and faculty have conducted various studies of student learning, using the results to improve teaching and student learning. Similarly, course-level assessments and improvements have resulted from faculty participation in the annual Summer Assessment Institute, which has been offered for the past three years.

By developing an integrated plan that addresses assessment at these three levels, Green River has achieved a system of assessment that allows this work to be completed regularly and in a meaningful manner across degrees and programs. We believe these actions address the recommendations made by the Northwest Commission on Colleges and Universities.

Appendix 1
Campus-Wide Outcomes

1. Written Communication

Written Communication encompasses all the abilities necessary for effective expression of thoughts, feelings, and ideas in written form. This outcome includes abilities designed to help students:

1.1   Demonstrate use of a writing process.
1.2   Demonstrate a clear sense of purpose, focus, thesis, and design in writing.
1.3   Demonstrate the ability to develop an idea through the use of concrete examples and specific details.
1.4   Demonstrate audience awareness by appropriately modifying writing.
1.5   Demonstrate appropriate methods of integrating and documenting outside sources.
1.6   Demonstrate ability to use common tools of information research.
1.7   Demonstrate clear organization of thoughts in coherent written form.
1.8   Demonstrate appropriate choice of format, style, and tone for each particular writing assignment.
1.9   Use appropriate mechanics, grammar, and word usage based on American Standard Written English.
1.10   Improve the ability to evaluate, revise, edit, and proofread individual work and the work of others.

2. Critical Thinking

Critical thinking finds expression in all disciplines and everyday life. It is characterized by an ability to reflect upon thinking patterns, including the role of emotions on thoughts, and to rigorously assess the quality of thought through its work products. Critical thinkers routinely evaluate thinking processes and alter them, as necessary, to facilitate an improvement in their thinking and potentially foster certain dispositions or intellectual traits over time. This outcome includes abilities designed to help students:

2.1   Apply relevant criteria and standards when evaluating information, claims, and arguments.
2.2   Use appropriate reasoning to evaluate problems, make decisions, and formulate solutions.
2.3   Give reasons for conclusions, assumptions, beliefs, and hypotheses.
2.4   Seek out new information to evaluate and re-evaluate conclusions, assumptions, beliefs, and hypotheses.
2.5   Exhibit traits evidencing the disposition to reflect, assess, and improve thinking or products of thinking.

3. Responsibility

Responsibility encompasses those behaviors and dispositions necessary for students to be effective members of a community. This outcome is designed to help students recognize the value of a commitment to those responsibilities which will enable them to work successfully individually and with others. This outcome includes abilities designed to help students:

3.1   Identify and comply with clearly stated expectations, policies, and procedures.
3.2   Appropriately question or change stated expectations, policies, and procedures.
3.3   Recognize and accept consequences resulting from a failure to comply with stated expectations, policies, and procedures.
3.4   Meet obligations necessary to complete individual and group tasks.
3.5   Clearly communicate to affected parties any difficulties that may prevent them from fulfilling obligations.
3.6   Demonstrate common courtesies and show respect for the needs, difficulties, and rights of others.
3.7   Strive for excellence in contributions, performances, and products.
3.8   Complete work independently and appropriately acknowledge the source of ideas and contributions of others.

4. Quantitative and Symbolic Reasoning

Quantitative Reasoning encompasses abilities necessary for a student to become literate in today's technological world. Quantitative reasoning begins with basic skills and extends to problem solving. This outcome includes abilities designed to help students:

4.1   Evaluate and interpret quantitative and symbolic reasoning information/data.
4.2   Recognize which quantitative or symbolic reasoning methods are appropriate for solving a given problem, and correctly implement those methods.
4.3   Demonstrate the ability to estimate a solution to a presented problem.
4.4   Translate data into various formats such as symbolic language, equations, graphs, and formulas.
4.5   Implement calculator/computer technology to solve problems.
4.6   Demonstrate logical reasoning skills through formal and informal proofs.

Appendix 2
Campus-Wide Assessment Schedule

	2005-2006 Year	2006-2007 Year	2007-2008 Year
Fall Quarter	*Get Feed back on and hone assessment plan (through Nov. 7th). * Present to faculty and get feedback (opening week). *Discuss through LOC representatives (LOC meeting). *Present to chairs and deans and get feedback (Oct. 19th). *Seek approval on assessment plan from I.C. (Nov. 7th meeting-present). *Recruit/ invite faculty to participate in project. *Use LOTS database to find classes and programs that integrate 4 or more QSR competencies in the majority of classes at a level 3. Invite faculty from these areas.	* *Opening Week:* Faculty assessment team for QSR reports to all faculty results of assessment from 2005-2006 year. There is dialogue about the findings and next steps from findings. * LOC meets to review these findings and makes any needed further comment prior to the LOC Chair's report to the I.C. *LOC Chair reports on campus-wide assessment findings and process to the I.C. * Faculty who integrate QSR in their programs will use this year to discuss the findings from last year's study and determine an appropriate course of action to address these findings. Their course of action will be assessed next year to determine its impact on student learning.	* *Opening Week:* Written Communication Assessment Team reports findings to all faculty and presents suggestions for next steps. * LOC meets to review these findings and makes any needed further comment prior to the LOC Chair's report to the I.C. *LOC Chair reports on campus-wide assessment findings and process to the I.C. * Faculty who integrate Writing in their programs will use this year to discuss the findings from last year's study and determine an appropriate course of action to address these findings. Their course of action will be assessed next year to determine its impact on student learning.

	2005-2006 Year	2006-2007 Year	2007-2008 Year
Fall Quarter *(Continued)*	* Send out an all campus e-mail to make sure every discipline area who wants to be involved is included. (This is in case someone is missed via LOTS.) *Make sure there is faculty representation from all major areas that focus on QSR. (Full or part-time faculty can participate.) *Faculty team meets and completes a peer review for all courses that claim a level 3 for QSR competencies in LOTS. Using the report available on the LOTS Database that lists the course, the course content outcomes (from the CAR) and the competencies of the QSR outcome listed as a level 3 in LOTS, the team identifies courses for which the course content outcomes didn't support a level 3 designation in LOTS for one or more of the competencies of the QSR outcome. If there are any courses that don't seem to support a level 3 for the chosen competencies, the LOC rep from that division with the LOC Chair will take this back to the division and guide them in either adjusting the LOTS to fit the course	*Recruit/invite faculty to participate in faculty assessment team for written communication out come. * Send out an all campus e-mail to make sure every discipline area who wants to be involved is included. (This is in case someone is missed via LOTS.) * Faculty team for Written Communication meets and completes a peer review for all courses that claim a level 3 for Writing competencies in LOTS. Using the report available on the LOTS Database that lists the course, the course content outcomes (from the CAR) and the competencies of the Writing outcome listed as a level 3 in LOTS, the team identifies courses for which the course content outcomes didn't support a level 3 designation in LOTS for one or more of the competencies of the Writing outcome. If there are any courses that don't seem to support a level 3 for the chosen competencies, the LOC rep from that division with the LOC Chair will take this back to the division and guide them in either	*Faculty assessment team for QSR repeats first year's study to test conclusions and actions taken to address conclusions. Repeat same assessment tool and collect student work from same designated sample of courses.

	2005-2006 Year	2006-2007 Year	2007-2008 Year
Fall Quarter *(Continued)*	or adding information to the CAR to fit the designation in LOTS. The end goal is synthesis between the course content outcomes and the level designation in LOTS for the Campus-wide Outcome addressed by that course.	adjusting the LOTS to fit the course or adding information to the CAR to fit the designation in LOTS. The end goal is synthesis between the course content outcomes and the level designation in LOTS for the Campus-wide Outcome addressed by that course.	
Winter Quarter	*Faculty assessment team meets to determine an assessment tool they'll use. *One person from Institutional Research and LOC Chair will provide tips, guidelines, models, and consultation to help Assessment Team determine an assessment tool. * Institutional Research provides a list of course sections from which student work needs to be collected. This is to ensure a representative sample across degrees. *Assessment Team gathers student data using assessment tool.	*Faculty assessment team for writing selects/creates an assessment tool to use for the project. * One person from Institutional Research and LOC Chair are on hand to help the team select and/or from the assessment tool. * Institutional Research provides courses from which to gather student work. This is to ensure a representative sample. *Faculty assessment team: Writing = gathers student data using assessment tool.	*Faculty assessment team: QSR = continue process of gathering and analyzing new data from this year.

	2005-2006 Year	**2006-2007 Year**	**2007-2008 Year**
Spring Quarter	*Assessment Team meets to analyze student data and come to conclusions/make recommendations. *LOC to provide template for team to use so answers accreditation will want are provided. This template will also clarify that divisions/programs have ultimate control over curriculum changes; the faculty involved in this team do not have power to enact curriculum changes. *Faculty team prepares report for all faculty members for opening week of next year.	*Faculty assessment team: Writing = analyze student data. *LOC to provide template for team to use so answers accreditation will want are provided. This template will also clarify that divisions/programs have ultimate control over curriculum changes; the faculty involved in this team do not have power to enact curriculum changes. * Faculty assessment team: Writing = prepare report to give to all faculty during next fall's opening week.	*Faculty assessment team: QSR = analyze student data and prepare final report for all faculty regarding findings.

Professional/Technical Programs	**Academic Transfer**	**Exempt Programs**
Accounting (Tech)	Anatomy-Physiology	Adult Basic Education/GED/
Aviation Technology	Anthropology	ESOL
Business Education	Art (includes Photography)	Natural Resources (every other time)
Business Management	Astronomy/Physics	Occupational Therapy Asst.
Carpentry Technology	Behavioral Science	Physical Therapist Asst.
Computer Information Technology	Biology/Env. Science/Natural Science	Practical Nursing
Criminal Justice	Business Admin. (incl. Acct. and Law)	
Early Childhood Education	Chemistry	
Engineering/Computer Science	Drama	
Fiber Optic Technologies	Economics	
Geographic Information Systems	Education	
Natural Resources (every other time)	English	
Manufacturing Technology	Foreign Languages	
Water/Wastewater Technology	Geography	
Welding Technology	Geology	
	Health/Physical Education	
	History	
	Journalism	
PA&I Section E, G and H	Mathematics	
Auto Body Technology	Music	
Automotive Technology	Philosophy	
Computer Reporting Technologies	Political Science	
Design Drafting Technologies	Psychology	
	Reading/Study Skills	
	Sociology (includes AMES)	
	Communication Studies	

PA&I Program Schedule

Division	AY 06-07	AY 07-08	AY 08-09	AY 09-10	AY 10-11
Business	Business Mngt	Business Education			Accounting (PT)
	Business Administration (& Law & Acct.)				Computer Reporting Technologies
Health Science & Family Studies					Early Childhood Ed.
Technology	Aviation	Engineering/ Computer Science	Water/Wastewater	Natural Resources	Design Technology
		Info. Technology			
		GIS			
Trades			Manufacturing Tech.	Automotive Technology	Carpentry Technology
					Auto Body Technology
					Welding Technology
Fine Arts		Drama	Art (incl. Photo)	Music	
Mathematics					Mathematics
Social Science	Economics	Sociology	Journalism	History	Criminal Justice
	Geography	(& AMES)	Political Science	Behavioral Science	
	Psychology		Anthropology		
English		English		Reading/Study Skills	
Humanities		Philosophy	Foreign Languages	Communication Studies	
Science	Chemistry		Anatomy-Physiology	Biology/Environmental Science/Natural Res.	Geology
			Astronomy/Physics		
Law			Health/PE		

PROGRAM ASSESSMENT AND IMPROVEMENT

FOR

<u><PLEASE ENTER PROGRAM NAME></u>

CONDUCTED BY: (Name of Faculty Members)

DATE: (Date Completed)

PROGRAM ASSESSMENT AND IMPROVEMENT
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SECTION A - DESCRIPTION OF THE PROGRAM

1. **Name/description of instructional unit, transfer discipline, or academic program being assessed:**

2. **Instructional division:**

3. **Division or department mission statement:**

4. **Goals/objectives of program, or instructional unit:**

5. **Relation of program/unit mission and goals to college mission and goals:**

6. **Members of the PA&I committee completing this document:**

Table 1: Student Demographics

PROGRAM:	2003-04	2004-05	2005-06
TOTAL UNDUPLICATED HEADCOUNT			
GENDER[1]			
Male			
Female			
AVERAGE AGE			
ETHNICITY[2]			
% of color			
TARGETED PROGRAMS			
Running Start Students			
Worker Retraining			
WorkFirst			
DISTANCE EDUCATION			

[1] Excludes students not reporting gender.
[2] Excludes international students and students not reporting ethnicity.

Table 2: Enrollment Trends

PROGRAM:	2003-04	2004-05	2005-06
Fall Quarter FTEs (Total Enrollment)			
Fall Quarter Headcount (Total Enrollment)			
Academic Year FTEs (Total Enrollment)			
Academic Year Headcount (Duplicated HC)			
CIP:			
Student Faculty Ratio (Academic Year)			

Table 3: Summer Course Enrollment

SUMMER	2003-04		2004-05		2005-06	
Course#	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]

[1] Total headcount includes state, international and Running Start students.

Table 4: Fall Course Enrollment

FALL	2003-04		2004-05		2005-06	
Course#	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]

[1] Total headcount includes state, international and Running Start students.

Table 5: Winter Course Enrollment

WINTER	2003-04		2004-05		2005-06	
Course#	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]

[1] Total headcount includes state, international and Running Start students.

Table 6: Spring Course Enrollment

SPRING	2003-04		2004-05		2005-06	
Course#	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]	State-funded Headcount	Total Headcount[1]

[1] Total headcount includes state, international and Running Start students.

Table 7: Summer Course Offerings/Cancellations

DAY	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

EVENING	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

DIST. ED.	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

Note: Cancelled sections include scheduled classes with zero enrollments.

(Refer to Table 19 for relevant information.)

Table 8: Fall Course Offerings/Cancellations

DAY	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

EVENING	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

DIST. ED.	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

Note: Cancelled sections include scheduled classes with zero enrollments.

(Refer to Table 19 for relevant information.)

Table 9: Winter Course Offerings/Cancellations

DAY	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

EVENING	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

DIST. ED.	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

Note: Cancelled sections include scheduled classes with zero enrollments.

(Refer to Table 19 for relevant information.)

Table 10: Spring Course Offerings/Cancellations

DAY	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

EVENING	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

DIST. ED.	2003-04			2004-05			2005-06		
Course #	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled	# Sections Scheduled	# Sections Cancelled	% Sections Cancelled

Note: Cancelled sections include scheduled classes with zero enrollments.

(Refer to Table 19 for relevant information.)
.

Table 11: Summer Course Completion

SUMMER	2003-04			2004-05			2005-06		
Course #	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed

Note: Number of completed excludes students receiving "I", "W", and a grade less than 0.7.

Table 12: Fall Course Completion

FALL	2003-04			2004-05			2005-06		
Course #	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed

Note: Number of completed excludes students receiving "I", "W", and a grade less than 0.7.

Table 13: Winter Course Completion

WINTER	2003-04			2004-05			2005-06		
Course #	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed

Note: Number of completed excludes students receiving "I", "W", and a grade less than 0.7.

Table 14: Spring Course Completion

SPRING	2003-04			2004-05			2005-06		
Course #	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed	# Enrolled	# Completed	% Completed

Note: Number of completed excludes students receiving "I", "W", and a grade less than 0.7.

Table 15: Employment and Wage Status[1]

STUDENT TYPE	Number	Median Wage[2]	% Employed
Early Leaver			
Completer			

[1] Data reported for all students exiting from 2001-02 to 2004-05 academic years.
[2] Median wage is reported in 2006$ (inflation adjusted).

Data Source: SBCTC Data Warehouse, Phase VI Data Linking for Outcomes Assessment file, which is based on the annual process of matching college records with the unemployment insurance data of Washington, Oregon, Idaho, Alaska, and Montana and federal government agencies.

SBCTC estimates that 27% of the completers and 25% of the leavers are not found in ESD unemployment insurance records in the 3rd quarter after college because they are either self-employed or employed in states other than Washington, Oregon, Idaho, Alaska, and Montana.

Early Leaver is categorized as a student who left the program prior to completing 45 credits or more.

Completer is categorized as a student who graduated from the program with a degree or certificate or who completed 45 credits or more towards their degree with a 2.0 GPA.

SECTION B - PERSONNEL SUMMARY

RESPONSIBILITY:
Questions 1-2 completed by Research & Planning
Questions 3-7 completed by faculty
Table 16 completed by Research & Planning

OVERALL STAFFING SUMMARY

FACULTY STAFFING	
1. # F/T faculty	
2. # P/T faculty per quarter (2005-06 average)	
3. # F/T faculty in probationary status	

FULL-TIME VS. PART-TIME FACULTY	
4. # P/T faculty hired per quarter over the past year	Fall _____ Winter _____ Spring _____ Summer _____
5. Issues related to securing qualified P/T faculty	

SUPPORT STAFFING	
6. # Staff performing instruction related support services	
7. # Staff performing clerical duties	

Table 16: Courses Taught by Fulltime vs. Part-time Faculty

Course#	2003-04				2004-05				2005-06			
	# of Sections Taught	# Taught by FT faculty	# Taught by PT* faculty	% Taught by FT faculty	# of Sections Taught	# Taught by FT faculty	# Taught by PT* faculty	% Taught by FT faculty	# of Sections Taught	# Taught by FT faculty	# Taught by PT* faculty	% Taught by FT faculty

* Includes sections taught by moon-lighting F/T faculty.

SECTION C - PROGRAM CURRICULUM

RESPONSIBILITY:
Questions 1-12 completed by faculty
Tables 17 – 18 completed by Curriculum Support Services
Tables 19 – 20 completed by Research & Planning

CATEGORY	Within the past six months	Within the past year	Within the past two years	More than two years ago	NA
1. When was the curriculum last reviewed to ensure accuracy and relevance? (Select the time frame that *best* represents when the review was conducted.)					
Explanation (Optional unless you indicated "More than two years ago"):					

	Within the past six months	Within the past year	Within the past two years	More than two years ago	NA
2. When was the curriculum last evaluated with respect to current transfer and/or general education expectations? (Select the time frame that *best* represents when the review was conducted.)					
Explanation (Optional unless you indicated "More than two years ago"):					

	Strongly Disagree	Disagree	Agree	Strongly Agree	NA
3. CARs are up-to-date, accurate, inclusive of one or more of the campus-wide outcomes.					
Refer to Table 17 in this section and Table 23 in Section E for relevant information **Explanation (Optional unless you indicated Disagree or Strongly Disagree):**					

	Strongly Disagree	Disagree	Agree	Strongly Agree	NA
4. PARs and PIGs are up-to-date and accurate.					

Refer to Table 18 in this section and Table 24 in Section E for relevant information
Explanation (Optional unless you indicated Disagree or Strongly Disagree):

	Strongly Disagree	Disagree	Agree	Strongly Agree	NA
5. Individual class syllabi up-to-date, accurate, and include the eleven campus syllabi requirements.					

Explanation (Optional unless you indicated Disagree or Strongly Disagree):

	0 – 2	3 – 5	6 – 8	9 – 11	12
6. During how many of the past 12 quarters were there inadequate numbers of sections offered to allow students complete their degrees or certificates in a timely manner?					

(Refer to Table 19 for relevant information.)
Explanation (Optional unless you indicated "6 – 8, 9 – 11, or 12"):

	Strongly Disagree	Disagree	Agree	Strongly Agree	NA
7. The materials available to students (e.g. catalog, program information guide, etc.) clearly describe the program's admission standards, skills levels, expected learning outcomes, and graduation requirements?					

Explanation (Optional unless you indicated Disagree or Strongly Disagree):

	Strongly Disagree	Disagree	Agree	Strongly Agree	NA
8. Individual course prerequisites are reviewed and assessed for relevancy and/or changing needs as often as needed.					

(Refer to Table 20 for relevant information.)
Explanation (Optional unless you indicated Disagree or Strongly Disagree):

	Strongly Disagree	Disagree	Agree	Strongly Agree	NA
9. Individual course placement requirements are reviewed and assessed for relevance and/or changing needs as often as needed.					

Explanation (Optional unless you indicated Disagree or Strongly Disagree):

	Annually	Every two years	Every three years	Less frequently than every three years	NA
10. How frequently are textbooks and other instructional materials reviewed for accuracy and relevance?					

Explanation (Optional unless you indicated "Less frequently than every three years"):

	Ineffective	Marginal	Effective	Highly Effective	NA
11. How effective are procedures designed to ensure consistency between classes taught by full-time and part-time instructors?					
Explanation (Optional unless you indicated "Ineffective" or "Marginal"):					

	Ineffective	Marginal	Effective	Highly Effective	NA
12. How effective are procedures designed to ensure consistency between traditional and distance-learning classes?					
Explanation (Optional unless you indicated "Ineffective" or "Marginal"):					

Table 17: Course Adoption Revision (CAR) Status

Course #	Course Title	Date of last CAR revision	Course linked to campus-wide learning outcomes

Percentage of CARs modified within the last 5 years: x%
Percentage of CARs linked to one or more campus-wide learning outcomes: x%

Table 18: Program Adoption Revision (PAR) Status

Degree or Certificate	Title	Date of last PAR revision	PAR linked to program-level learning outcomes

Percentage of PARs modified within the last 5 years: x%
Percentage of PARs linked to one or more program-level learning outcomes: x%

Table 19: Course Availability

Course #	Course Title	Credits	# Summer Sections	# Fall Sections	# Winter Sections	# Spring Sections

Table 20: Course Prerequisites

Course #	Course Title	Prerequisites

SECTION D - PROGRAM SUPPORT: Instructional Resources

RESPONSIBILITY:
Questions 1- 9 answered by faculty

	Poor	Fair	Good	Excellent	NA
1. How would you rate the full-time faculty staffing level of the program?					

Table 16 and Section B contain relevant data.
Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
2. How would you rate the part-time faculty staffing level of the program?					

Table 16 and Section B contain relevant data.
Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
3. Support staff staffing levels should be adequate for the workload of the program and the continued development of the curriculum. How would you rate the support staff staffing level of the program?					

Section B contains relevant data.
Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
4. How would you rate the ability of tutorial support services (i.e. Math Learning Center, Help Center, Writing Center) to adequately support student needs?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
5. How would you rate the ability of library/information resources to adequately support instructional needs?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
6. How would you rate the audio-visual and multimedia resources provided to support instructional needs?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
7. How would you rate the adequacy of media staff services in supporting instructional needs?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
8. How would you rate the support services for assessment and other program testing requirements (i.e. Assessment and Testing Center, Office of Research and Planning, Learning Outcomes Committee)?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
9. How would you rate the adequacy of professional development funding available to faculty and staff?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

SECTION D - PROGRAM SUPPORT: Facilities, Equipment & Budget

RESPONSIBILITY:
Questions 10 - 20 completed by faculty
Tables 19 - 20 completed by EVP Office

	Poor	Fair	Good	Excellent	NA
10. How would you rate the number and quality of general use facilities (classrooms, offices, etc.) available to the program?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
11. How would you rate the adequacy of dedicated space (e.g. storage, specialized labs, display areas, practice facilities, etc.) provided to support program needs?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

12. What additional space, specialized facilities, or significant remodeling will be needed during the next 3 - 5 years?

Explanation (Optional unless additional space, facilities, or remodeling are needed in the next 3- 5 years.):

	Poor	Fair	Good	Excellent	NA
13. How would your rate the adequacy and availability of specialized instructional equipment needed to support the program?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
14. How would you rate the safety of facilities and equipment used by staff and students in the program?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
15. How would you rate the lighting, heating, and ventilation provided for the program?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
16. Professional/Technical Programs Only. How would you rate the adequacy of the maintenance and replacement plan budgeted (and in effect) for the equipment used in the program?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
17. How would you rate the adequacy of the operating budget and other financial resources needed to support the program ?					

Tables 19 and 20 contain relevant data.

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
18. How would you rate the adequacy of supplementary sources of financial resources (e.g., lab fees, coop fees, donations, grants, etc.) which support the program?					

Tables 19 and 20 contain relevant data.
Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
19. How would you rate the adequacy of the expendable equipment and supplies budget used by the program?					

Tables 19 and 20 contain relevant data.
Explanation (Optional unless you indicated "Poor" or "Fair"):

20. Are non-recurring or one-time funding sources currently supporting any basic program needs? If so, explain plan to continue services when temporary funding ends.

Tables 19 and 20 contain relevant data.
Explanation (Optional unless non-recurring or one-time funding sources are currently supporting basic program needs):

Table 21: Program Budget and Expenditures

	2002-03			2003-04			2004-05		
	Budget	Expend.	Diff.	Budget	Expend.	Diff.	Budget	Expend.	Diff.
Salary F/T Faculty									
Salary P/T Faculty									
Salary Other									
Benefits									
Goods & Services									
Travel									
Equipment									
Total:									

*For all years printing/photocopy (Goods and Services) and travel budget are part of main division budget.

Table 22: Co-Op Fees and Recoverables

	2002-03			2003-04			2004-05		
	Revenue	Rollover	Expend	Revenue	Rollover	Expend	Revenue	Rollover	Expend
COOP Fees (dollars)									
Recoverables (dollars)									

SECTION D - PROGRAM SUPPORT: Miscellaneous Support Services

RESPONSIBILITY: Questions 21-26 completed by faculty		

	Poor	Fair	Good	Excellent	NA
21. How would you rate the adequacy of the custodial services which maintain classrooms, work areas, labs, practice areas, etcetera?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
22. How would you rate the adequacy of the secretarial support services provided for the program?					

(Refer to Section B, Questions 6 – 7 for relevant information.)
Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
23. How would you rate the adequacy of the advising services (including Educational Planning and faculty advising) which support students in the program?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
24. Is student follow-up from the Office of Planning and Research adequate to meet program needs?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					

	Poor	Fair	Good	Excellent	NA
25. How would you rate the advertising and marketing support for the program?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					

26. Are other support services needed that are not currently being provided?
Explanation (Optional unless additional support services are needed)

SECTION E - LEARNING OUTCOMES

Assessment of student learning outcomes is a key component of teaching and learning improvement. By using assessment results to improve instruction, we enhance student learning and satisfy accreditation requirements.

Campus-wide and degree/certificate learning outcome assessment projects are ongoing with new reports periodically being published by the Learning Outcomes Committee and Institutional Effectiveness Department.

For this evaluation cycle, use the results of a published assessment report to improve teaching or learning within your program. Or, if you prefer, develop and implement a project to assess student achievement of a program-level, degree/certificate level, or campus wide outcome. (The Learning Outcomes Committee and Institutional Effectiveness Department can help you design your project and analyze the results.)

As a part of this process improvement initiative, please answer the following questions.

1. Identify which learning outcome(s) was the focus of this project.

	Learning Outcome
	Written Communication
	Critical Thinking
	Responsibility
	Quantitative and Symbolic Reasoning
	Human Relations
	Oral Communication
	Program Level (Write in):

2. What areas needing instructional improvement were identified in the assessment results?

3. Identify changes that were made to address the areas identified in (2). What did you hope would be the result of the changes?

4. Describe the effects the changes identified in (3) had on teaching and learning within your program. Should the changes be permanently implemented or should they be eliminated?

5. What new questions, if any, arose as a result of this process improvement initiative?

Table 23: Learning Outcomes that are Taught, Practiced, and Assessed in Program Courses (Level 3)

Course #	Written Communication	Critical Thinking	Responsibility	Quantitative and Symbolic Reasoning	Human Relations	Oral Communication

(Competency numbers are shown in the table.)

Table 24: Program Level Learning Outcomes

AAA X –
AAS X –

Competency #	Competency

SECTION F - ADVISORY COMMITTEE/INDUSTRY RELATIONS

RESPONSIBILITY:
Questions 1-12 completed by faculty
Questions 13 -14 completed by faculty (Professional/Technical Programs Only)
Tables 25 completed by faculty (Professional/Technical Programs Only)
Table 26 completed by Employment Security.

	Poor	Fair	Good	Excellent	NA
1. How would you rate the effectiveness of the program advisory committee?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					

	0	1	2	More than 2	NA
2. How many times a year does the program advisory committee meet?					
Explanation (Optional unless you indicated "0" or "1"):					

	Poor	Fair	Good	Excellent	NA
3. How would you rate the quality and completeness of committee minutes and other records?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					

	Poor	Fair	Good	Excellent	NA
4. How would you rate the effectiveness of the advisory committee in reviewing and discussing program curriculum and course content?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					

	Poor	Fair	Good	Excellent	NA
5. How would you rate the effectiveness of the advisory committee in reviewing and discussing instructional materials and equipment?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					
6. How would you rate the effectiveness of the advisory committee in reviewing and discussing employment demand for graduates?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					

	Poor	Fair	Good	Excellent	NA
7. How effective is the advisory committee in helping with the placement of graduates?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					
8. How would you rate the effectiveness of the advisory committee in establishing effective communication between the program and the local industry?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					
9. How would you rate the responsiveness of the program to advisory committee recommendations to improve the program?					
Explanation (Optional unless you indicated "Poor" or "Fair"):					
10. In the space below, cite some of the ways the advisory committee has made an impact on the program and/or decisions related to it.					

	Poor	Fair	Good	Excellent	NA
11. How would you rate the responsiveness of the college to the recommendations and suggestions made by the advisory committee?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
12. How would you rate the ability of the program to incorporate changes required to meet current industry standards?					

Explanation (Optional unless you indicated "Poor" or "Fair"):

13. In the near future, what changes do you see in your industry? What could be the impact of these changes on your program?
Refer to Table 26 for relevant information. **Explanation:**
14. How does your program serve the needs of the community?
Refer to Table 26 for relevant information. **Explanation:**

Table 25: Licensure or Standard Testing

1. **What is the name of the state or national licensure or standard test required for students to graduate from your program? (If there is no such test, write "N/A".)**	
If you did not answer "N/A" to the question above, continue with questions 2-4.	
2. Number of students taking test (last year):	
3. Number of students passing test (last year):	
4. Average test score (last year):	

Table 26: Employment Outlook

List potential occupational title(s) for graduates of this program:	

	King County	Pierce County	WA State	Natl
Base Year and Projection Year:	*1995-2005*	*1995-2005*	*1995-2005*	*1996-2006*
Current number of jobs *(Base Year)*:				
Projected number of jobs *(Project Year):*				
Annual growth or decline:				

SECTION G - OVERALL ASSESSMENT OF PROGRAM

Directions:
Questions 1- 4 completed by faculty

	Poor	Fair	Good	Excellent	NA
1. **Description of Mission Statement**					

Explanation (Optional unless you indicted "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
2. **Description of program objectives including program-level outcomes (as applicable)**					

Explanation (Optional unless you indicted "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
3. **How would you rate the adequacy of mentoring/training available for part-time faculty?**					

Explanation (Optional unless you indicted "Poor" or "Fair"):

	Poor	Fair	Good	Excellent	NA
4. **How would you rate the usage of student evaluations as a teaching improvement tool in the tenure and post-tenure review processes?**					

Explanation (Optional unless you indicted "Poor" or "Fair"):

SECTION H- PROGRAM ASSESSMENT SUMMARY

**PROGRAM STRENGTHS, SIGNIFICANT AREAS OF
CONCERN, AND RECOMMENDATIONS**

RESPONSIBILITY:
Questions 1-9 completed by faculty

1. Describe the major strength of the program or instructional area.

2. Are there significant concerns related to the overall quality and effectiveness of the program? If so, identify them and indicate what actions need to be taken.

3. Are there significant concerns or needs regarding program staffing? If yes, explain. Identify actions to be taken. (*Refer to Section D: 1 – 4 for relevant information.*)

4. Are there significant concerns or needs regarding program support services? If yes, explain. (*Refer to Section D: 5 – 9, 22 – 26 for relevant information.*)

5. Are there significant concerns or needs regarding financial support? If yes, explain. (*Refer to Section D: 16 – 20 for relevant information.*)

6. Are there significant concerns or needs regarding facilities? If yes, explain.
   (*Refer to Section D: 10 – 12, 14, 21 for relevant information.*)

7. What are the most important actions that need to be taken to maintain the current quality of the program?

8. What are the most important actions that need to be taken to improve the quality of the program?

9. Are there other concerns that need to be addressed?

SECTION I - SUMMARY OF MEETING WITH ADMINISTRATORS

Date of Meeting:

Those Attending:

Record of Major Areas of Discussion:

Actions to be Taken:

Action	Person/agency responsible	Anticipated completion date

SECTION J - ACTIONS COMPLETED IN RESPONSE TO RECOMMENDATIONS

Major Area of Concern	Recommended Action	Action Time and Date

Appendix 5
Quantitative and Symbolic Reasoning Rubric

Definition: Quantitative Reasoning encompasses abilities necessary for a student to become literate in today's technological world. Quantitative reasoning begins with basic skills and extends to problem solving.

COMPETENCY		NO COMPETENCY	EMERGING	COMPETENT	MASTERING
4.1 Evaluate and interpret quantitative and symbolic reasoning information/data.		• Is unable to extract data presented in a direct form • Is unable to extract implied data in most contexts • Is unable to access resources to find unknown data • Is unable to discriminate between relevant and irrelevant data	• Needs assistance to extract data presented in a direct form • Needs assistance to extract implied data in most contexts • Needs assistance to access resources to find unknown data • Needs assistance to discriminate between relevant and irrelevant data	• Extracts data presented in a direct form • Extracts implied data in most contexts • Is able to access resources to find unknown data with limited guidance • Discriminates between relevant and irrelevant data	• Extracts data presented in a direct or indirect form • Extracts implied data in any context • Independently accesses resources to find unknown data • Independently discriminates between relevant and irrelevant data
4.2 Recognize which quantitative or symbolic reasoning methods are appropriate for solving a given problem, and correctly implement those methods.		**No Persistence** • Has no clear idea of what the problem is asking or what task is to be accomplished • Unable to brainstorm methods that might apply • Unable to apply different methods	**Low persistence** • Has a clear idea of what the problem is asking or what task is to be accomplished • Is able to brainstorm a limited number of methods that might apply • Is able to apply a	**Mostly persistent** • Has a clear idea of what the problem is asking or what task is to be accomplished • Is able to brainstorm methods that might apply • Is able to apply different methods	**Consistently persistent** • Can clearly state what the problem is asking or what task is to be accomplished • Is able to brainstorm methods that might apply

COMPETENCY		NO COMPETENCY	EMERGING	COMPETENT	MASTERING
		• Unable to assess if a method makes progress while solving a problem • Unable to completely solve the problem even with considerable assistance	limited number of methods • May not be able to assess if a method makes progress in solving a problem • May not completely solve the problem • May need considerable assistance	• Is able to assess if a method makes progress in solving a problem • Completely solves the problem with some guidance	• Is able to apply different methods • Is able to assess if a method makes progress in solving a problem • Completely solves the problem independently
4.3 Demonstrate the ability to estimate a solution to a presented problem.		Is unable, even with considerable assistance, to: • Use minimal but essential parts of a problem solving method along with approximate numbers to get a quick answer • Check the reasonableness of an answer	Needs Considerable Assistance to: • Use minimal but essential parts of a problem solving method along with approximate numbers to get a quick answer • Check the reasonableness of an answer	Needs Limited Guidance to: • Use minimal but essential parts of a problem solving method along with approximate numbers to get a quick answer • Check the reasonableness of an answer	Independently can: • Use minimal but essential parts of a problem solving method along with approximate numbers to get a quick, reasonable answer • Check the reasonableness of answer • Submit consistent and reasonable answers
4.4 Translate data into various formats such as symbolic language,		• Is unable to use mathematical operators or logic symbols to create an	• Can use mathematical operators or logic symbols to create an equation/formula or	• Can use mathematical operators or logic symbols to create an equation/formula or	• Can use mathematical operators or logic symbols to create an equation/formula or

COMPETENCY		NO COMPETENCY	EMERGING	COMPETENT	MASTERING
equations, graphs, and formulas.		equation/formula or statement with any necessary information • Cannot visually represent symbolic information with a graph or logic chart clearly or correctly • Cannot correctly read necessary information from a graph or logic chart	statement with some information relevant to given problem • Can visually represent symbolic information with a graph or logic chart somewhat clearly and correctly • Can correctly read some necessary information from a graph or logic chart	statement with most information relevant to given problem • Can visually represent symbolic information with a graph or logic chart mostly clearly and correctly • Can correctly read most necessary information from a graph or logic chart	statement with all information relevant to given problem • Can visually represent symbolic information with a graph or logic chart clearly and correctly • Can correctly read all necessary information from a graph or logic chart
4.5 Implement calculator/ computer technology to solve problems.		Is unable to: • Identify appropriate computational tools and resources • Use computational tools	With considerable assistance can: • Identify appropriate computational tools and resources • Use computational tools	With minimal assistance can: • Identify appropriate computational tools and resources • Effectively use computational tools	Independently can: • Identify appropriate computational tools and resources • Efficiently and effectively use computational tools
4.6 Demonstrate logical reasoning skills through formal **and/or** informal proofs.		• Cannot explain, formally or informally, the reasoning behind formulas, techniques, arguments, assumptions, or conclusions	• Can incompletely explain, formally or informally, the reasoning behind formulas, techniques, arguments, assumptions, or conclusions	• Can mostly explain, formally or informally, the reasoning behind formulas, techniques, arguments, assumptions, or conclusions	• Can fully explain, formally or informally, the reasoning behind formulas, techniques, arguments, assumptions, or conclusions

Campus Wide Assessment Project Quantitative and Symbolic Reasoning 2005/2006

Assessment Team:
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With assistance from:

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David Hyllegard, Institutional Research
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August, 1, 2006

Purpose

The Learning Outcomes Committee (LOC) gave the Campus Wide Assessment Team two tasks. First we were to provide a peer review of the courses in the Learning Outcome Tracking System (LOTS) database. The goal of the review was to determine whether there was agreement between the LOTS database and the specific class competencies listed on the official course syllabi (CARS). The second task was to perform a campus-wide assessment of the Quantitative and Symbolic Reasoning Outcome. The goal of the campus wide assessment is to improve student learning by identifying areas where we can collectively improve our teaching.

The following report describes
- the assessment method used for each task
- the results of each assessment
- this team's recommendations

Quantitative and Symbolic Reasoning in the LOTS database

The Learning Outcomes Tracking System links the campus wide outcomes to specific courses where the outcomes are taught. The LOTS database requests departments to rate the courses they offer according to each competency under the campus wide outcomes. The rating scale used by individual instructors or departments is:

Level 0: The competency is not taught, practiced, or assessed.
Level 1: The competency is taught or practiced but not assessed
Level 2: The competency is assessed, but is not taught as part of the course.
Level 3: The competency is taught and assessed in the course.

The faculty of Green River Community College have defined the Campus Wide outcome of Quantitative and Symbolic Reasoning as follows:

Quantitative Reasoning encompasses abilities necessary for a student to become literate in today's technological world. Quantitative reasoning begins with basic skills and extends to problem solving. This outcome includes abilities designed to help students

1. *Evaluate and interpret quantitative and symbolic reasoning information/data.*
2. *Recognize which quantitative or symbolic reasoning methods are appropriate for solving a given problem, and correctly implement those methods.*
3. *Demonstrate the ability to estimate a solution to a presented problem.*
4. *Translate data into various formats such as symbolic language, equations, graphs, and formulas.*
5. *Implement calculator/computer technology to solve problems.*
6. *Demonstrate logical reasoning skills through formal and informal proofs.*

Assessment Method – LOTS database

Currently there is no formal peer review of the LOTS database. Because of this, the assessment team was directed to review the LOTS database in order to assess the validity of the information it contains.

The assessment team reviewed the documentation of all courses claiming level 3 for at least one of the QSR competencies as of December 2005. Initially the assessment team reviewed the Course Learning Outcomes listed on the official course syllabus (CAR). The team as a group reviewed a sample of courses to establish a rubric and to ensure that individual team members were uniformly applying the rubric, and then evaluated every course on the list. Team members rated the documentation in the CARS on the following scale:

2: Support of QSR competencies is explicit in the CAR
1: Support of QSR competencies is unclear, but could be inferred from what is present.
0: Support of QSR competencies is not evident in the CAR

The rankings of all 5 team members were averaged and any course with an average score of 0.6 or less was flagged for further review. At this point team members examined the course description and the campus wide outcomes sections on the CAR more carefully. Based on the information found, the team identified several additional courses with CARs that support the QSR competencies, even though the support was not obvious in the original documentation.

Results

Out of 158 courses claiming Level 3 for at least one of the competencies in the LOTS database, fourteen were flagged as having inadequate documentation of QSR support. These courses were referred to the LOC Chair. The remaining gross of courses formed the population from which we formulated our sample.

The LOC Chair and LOC representative from the divisions whose classes were flagged in the review contacted and met with a leading instructor for each of the fourteen courses with documentation that was deemed inadequate. To date, nearly all level 3s that were claimed in LOTS but not supported by evidence in the CAR have been changed to level 2s or 1s. The only exception is Behavior Science which never responded to e-mails asking that either the LOTS levels be adjusted or the CAR be revised to provide support for the level 3s currently claimed in LOTS for QSR. Since neither the LOC nor the review team has the authority to require instructors or departments to change their claims in LOTS, Behavioral Science may end up not making any changes at all. The lack of authority or process to ensure that the LOTS and CAR databases align in content is a potential problem that needs attention.

Recommendations – LOTS database

As mentioned in the Results section above, the issue of authority and control of assignment of competencies needs to be decided.

The QSR assessment team recommends that faculty establish a regular peer review of the LOTS database to insure that the content of the LOTS and CAR databases align. Future Campus Wide Assessment Teams could be assigned this role, although the review of QSR courses will take place only once every three or four years.

Campus Wide Assessment – QSR Outcome

In order to measure effective instruction of the QSR outcome across the campus, the QSR team collected assessments of student learning in courses with documented QSR competencies. The team examined competencies 1, 2, 4, and 5, since these were the most commonly listed level 3 competencies in the LOTS database. A random sample of courses was chosen from all courses that claimed level 3 (instruction and assessment) in these competencies.

Assessment Method – Quantitative and Symbolic Reasoning

Course Classification
To guarantee a representative sample of day and evening courses as well as courses taught by full-time and adjunct faculty, courses were classified based on the time offered and by instructor's employment status. Courses between 7 am and 4 pm were coded as day courses and courses between 4 pm and 10 pm were coded as evening courses. Courses taught by full-time instructors (including moonlight and contract) were coded as full-time and courses taught by adjunct instructors were coded as adjunct.

During spring quarter, 66% of our courses were offered during the day and 40% of our courses were taught by adjunct faculty. The team decided on a sample of approximately 8 courses for each competency. Approximately 5 of these courses would be day classes, and approximately 3 courses would be taught by adjunct faculty.

Sampling
The second step was to identify courses claiming level 3 instruction for the four competencies selected for the assessment project. Courses were clustered according to the specific competencies claimed for the course. For example, courses listing competencies 2 and 4 were only considered for assessment of only those competencies while courses listing all competencies were included in all 4 clusters.

Using SPSS statistical software, Fia Eliasson randomly selected 8 courses from each cluster. In order to provide a broader sample and reduce the burden on individual instructors, courses selected from more than one cluster were randomly assigned to only one competency to be assessed. To replace the course for the other cluster(s), the next course with the same time and employment status was selected. If a course taught by one of the assessment team members was selected, Fia selected a new course following the process listed above. If a course was part of a GRCC course-cluster, she included all courses in the sample to avoid singling out certain students.

Means of Assessment

To measure student learning within courses selected for the sample, the team used an embedded pre assessment and post assessment method. Since all the courses selected claimed Level 3, instructors should ordinarily be teaching and assessing the outcome. Thus we asked that the instructors administer an assessment that they would normally give to their students, albeit with the addition of a pre-test if none would otherwise be given.

Team members contacted individual instructors to ensure that pretest and posttest assignments addressed the specific competency. In some cases, team members helped instructors choose a relevant assignment. The degree of communication between team members and instructors was highly variable. The team requested the instructor to provide us with a copy of the assessment, and the student work (both pretest and posttest).

Team members then used the LOC Community Rubric for Quantitative and Symbolic Reasoning to evaluate the students' work. The Community Rubric assesses student work using four classifications of learning: No Evidence, Emerging, Competent, and Mastering.

Problems with the Data

In one case, a different section of the same course was substituted for the section originally selected. The instructor classification remained the same, but the new class was a day class instead of an evening section.

Several instructors either did not participate or did not provide data in time for the assessment. The assessment team did not receive data from 11 classes out of the 35 selected as the sample. In particular, minimal data was received for QSR 5 with only 2 of the 10 selected classes providing pre-assessment and post-assessment data, and one providing only post assessment data. Also of note is that neither of the clustered classes selected for the sample provided data. Other than QSR 5 and clustered classes, the sample seems to remain representative of QSR courses across campus.

Problems with the Analysis

Initially the assessment team wanted to compare the gains of individual students. Unfortunately, we were unable to match pre assessment scores with post assessment scores of a significant number of students. Contributing factors include student attendance on the assessment day and confusion within the team and participating instructors regarding the confidentiality of student work. Thus the analysis is based on the proportion of students scoring in each level on the pre assessment and the post assessment.

With some assignments, team members had difficulty distinguishing between Competent and Mastering, particularly where the assessment consisted of a single problem. The tendency would be to award the mastering score over the competency score.

Results

The following graphs summarize the data collected by the assessment team.

The first graph shows the combined pre assessment and post assessment scores of all students. Over all classes included in the study, there is a very positive shift towards mastery, with approximately 67.6% of students achieving competent or better on the post assessment. This is based on the scores of 456 students taking the pre assessment and 436 students completing the post assessment.

Overall Total
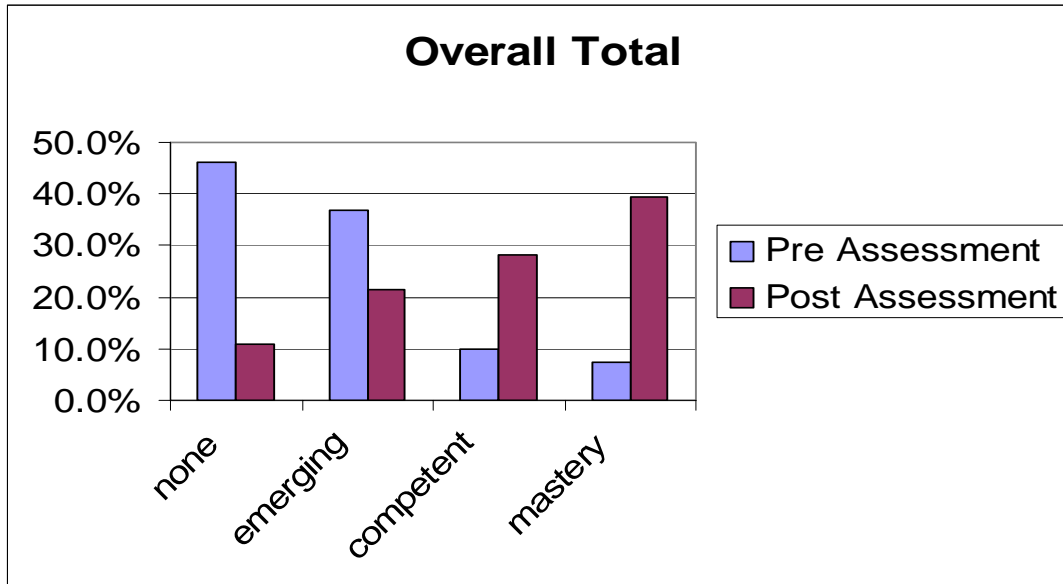
The second graph looks at the QSR Competency 1: *Evaluate and interpret quantitative and symbolic reasoning information/data.* Again we see an overall shift towards mastery, with 51.8% of students reaching competent or mastery on the post assessment. The pre assessment is based on 123 student scores and the post assessment is based on 114 student scores.

QSR 1
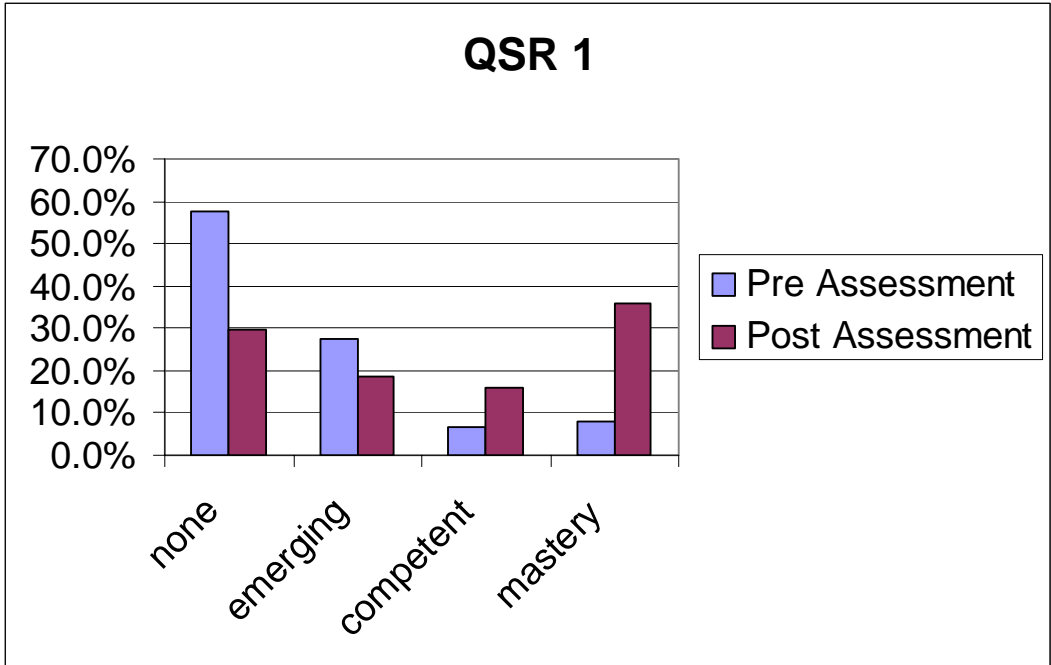
Our next graph shows the improvement in the QSR Competency 2: *Recognize which quantitative or symbolic reasoning methods are appropriate for solving a given problem and correctly implement those methods.* We see strong improvement with 70.2% of students reaching competent or mastery level. The pre assessment is based on 118 student scores and the post assessment is based on 114 student scores.

QSR 2
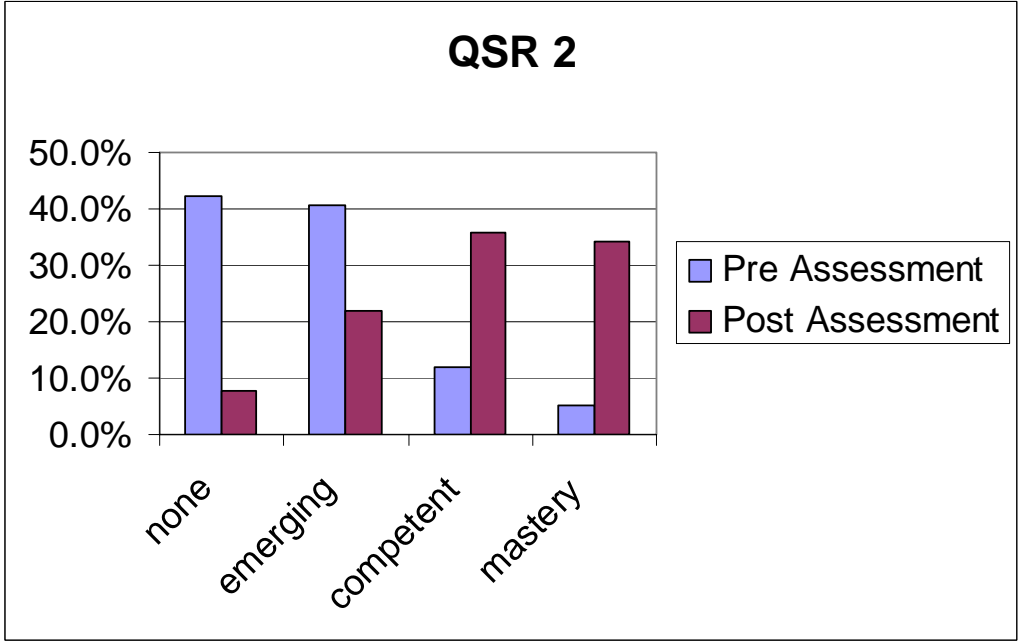
The next graph is of the QSR Competency 4: *Translate data into various formats such as symbolic language, equations, graphs and formulas.* In this case 69.4% of students achieved competent or mastery level. The pre assessment is based on 164 student scores and the post assessment is based on 157 student scores.
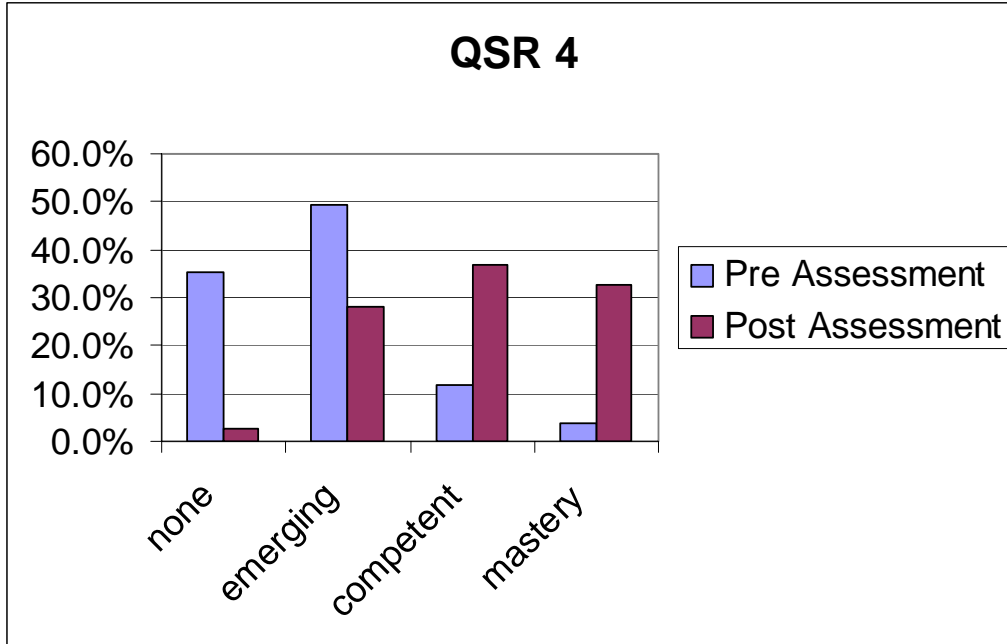
Our final competency graph is of QSR Competency 5: *Implement calculator/computer technology to solve problems.* A total of 92.2% of students were able to reach competent or mastery levels. The pre assessment is based on 51 student scores and the post assessment is based on 51 student scores.

QSR 5
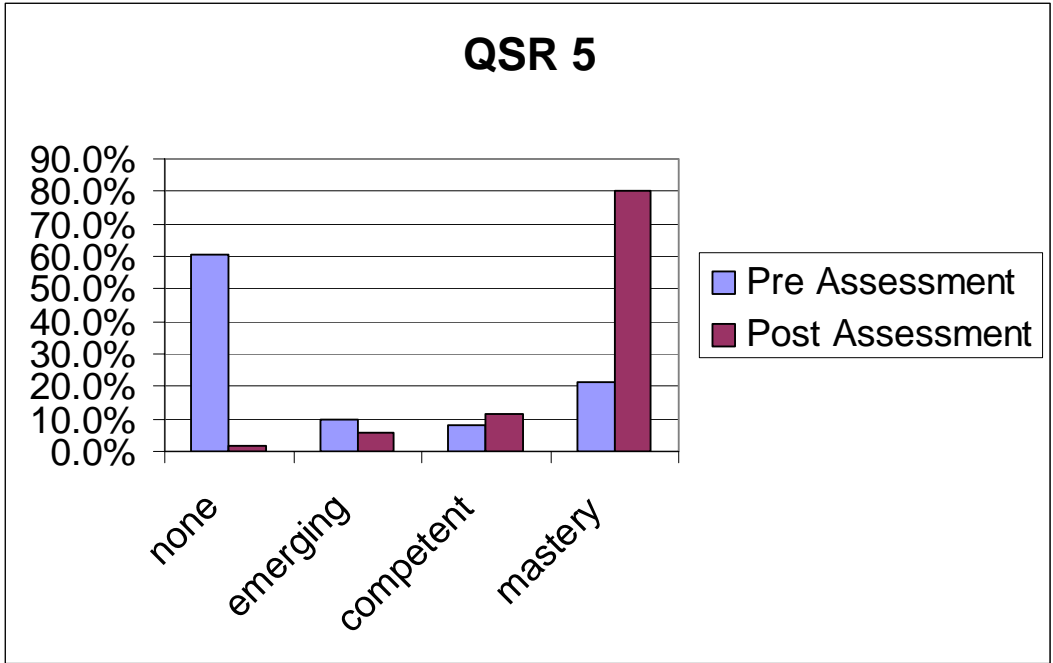
The overall analysis shows that progress is being made on all outcomes. However, there is room for improvement. QSR 1 in particular had some low numbers. Two classes in the sample showed improvement, but not nearly as dramatic as the other classes or outcomes, as illustrated by the following graphs.

B A 220

Math 97
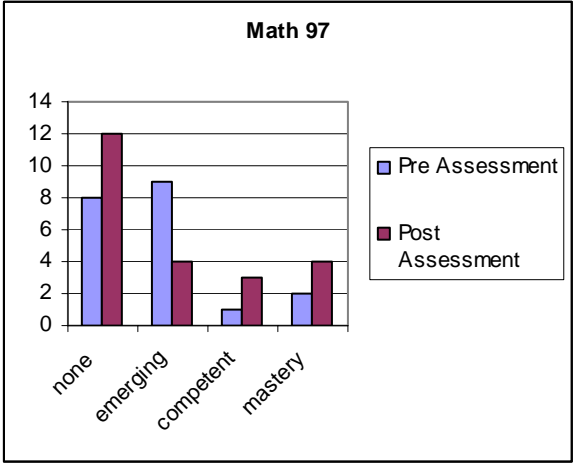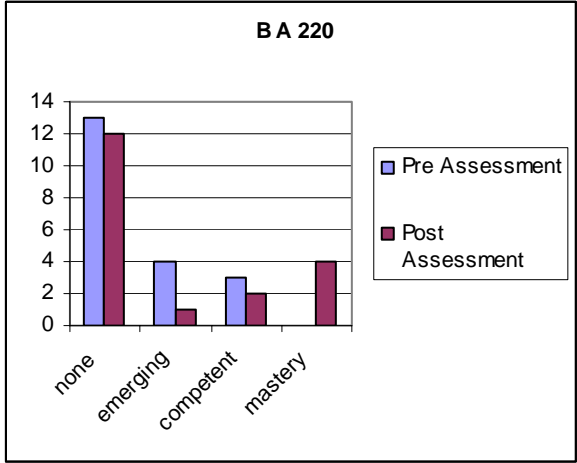
In contrast, QSR 4 included two classes containing a fair number of students who were already competent with the outcome, as displayed in the graphs below.

B A 110

Chem 150
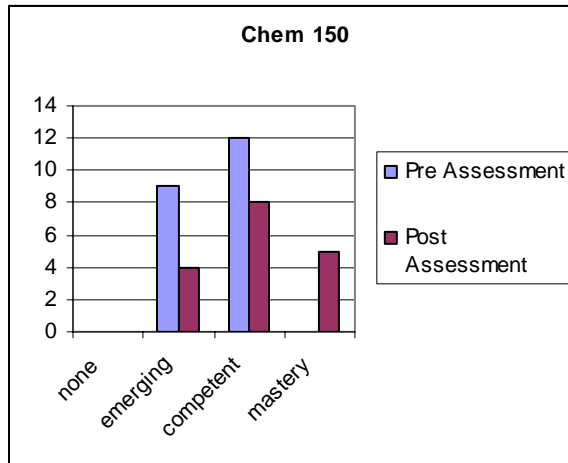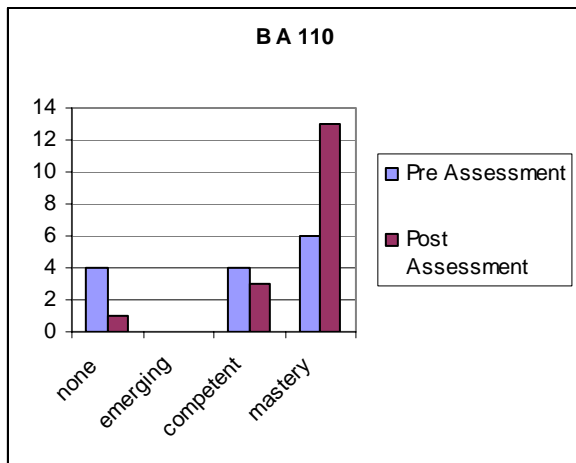
The success with QSR 4 was not universal. In the class below we see positive growth, but few students are achieving competent or mastery levels.

Biol 100
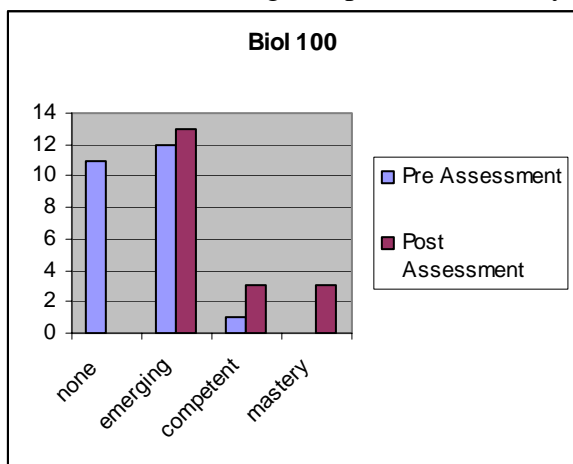
Full-Time and Adjunct Faculty

Our next comparison is of full-time and adjunct instructors. According to enrollment records, a representative sample would contain 40% adjunct instructors. Having collected the data we have found that 37.5% of the classes from which we collected data were taught by adjunct faculty.

The first pair of graphs shows the pre assessment and post assessment scores. Again we see the shift towards competency in the classes of both full-time and adjunct instructors.

Part-Time Faculty

Full-Time Faculty
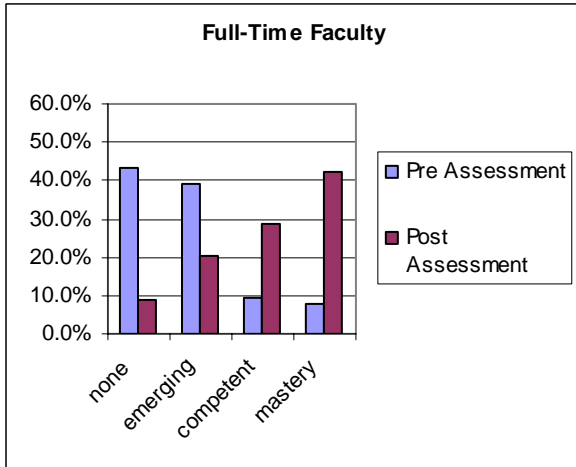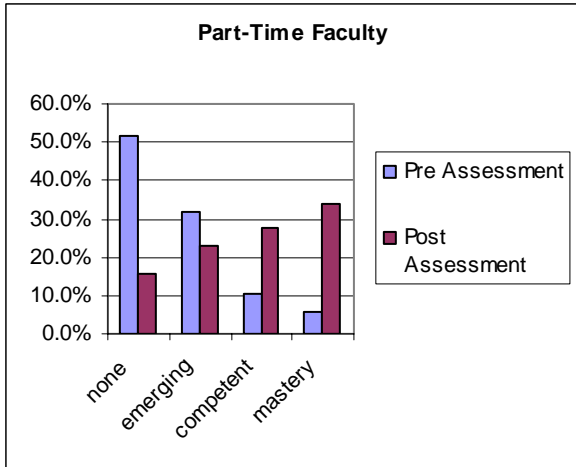
We also provide graphs showing the pre assessment and post assessment scores of students 70.9% of students in classes taught by full-time instructors reached competent or mastery. 61.9% of students in classes taught by adjunct instructors reached competent or mastery. It appears to a small degree that students in classes taught by full-time instructors achieve mastery at a higher rate.
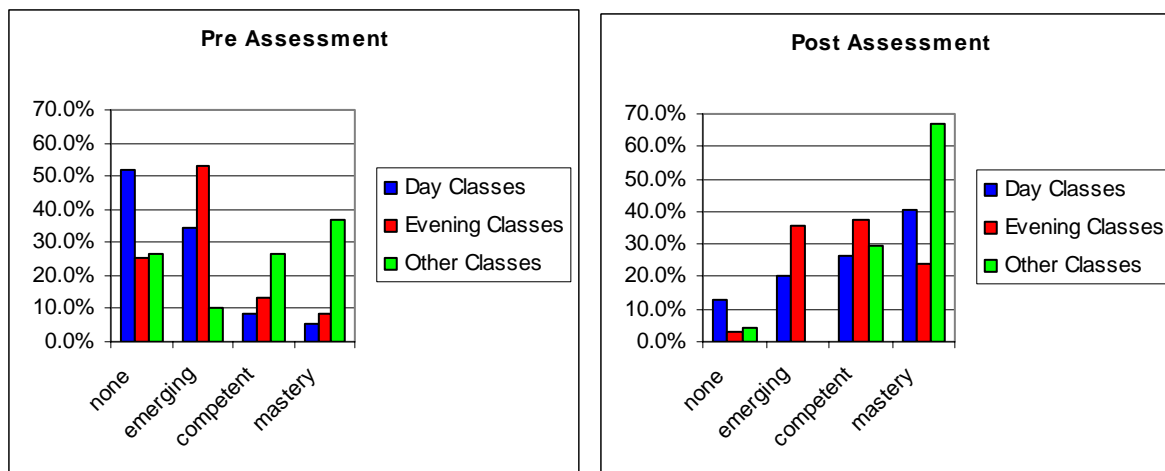

Pre Assessment

Post Assessment
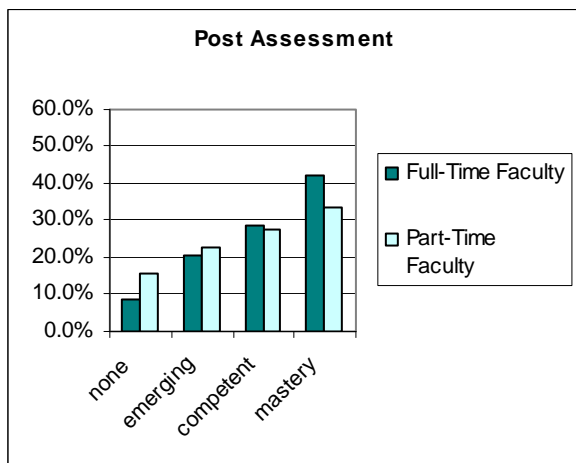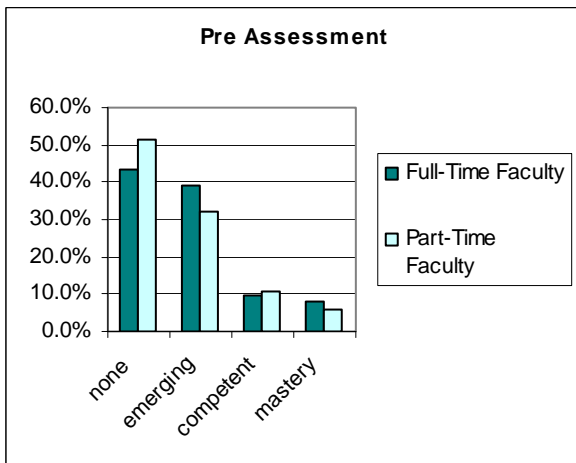
Day Classes and Evening Classes

The final comparison of the project is to look at how the time of day that the class is offered affects learning. According to enrollment records, approximately 66% of classes are offered in the day. The data gathered by the assessment team included seventeen day classes (70.8% of the sample) five evening classes and two distance education classes. The two distance education classes were both offered in the same department and were both taught by the same instructor. The graphs below show a comparison of the pre assessment and post assessment scores of the three different time periods.

Day Classes

Evening Classes

Other Classes (Distance)
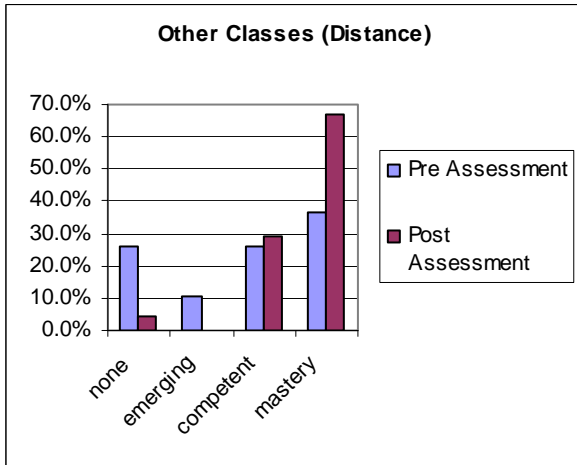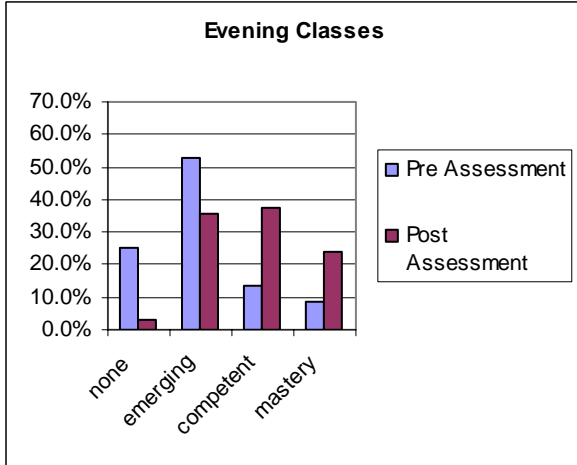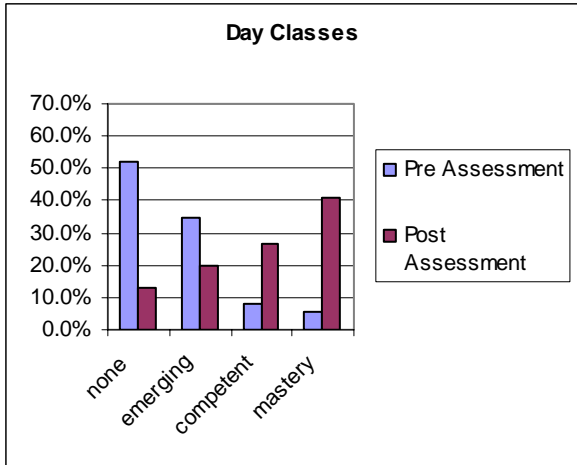
Again, there is a strong move towards mastery, with 67.0% of day students, 61.2% of evening students, and 95.9% of distance education students reaching competent or mastery levels. There does appear to be very different post assessment scores at the mastery level between the various time offerings. The distance education students do an amazing job, but they also start with a larger proportion of students already at the competent or mastery level. The night students show improvement, but not nearly as strong as what we see in the other two groups.

Pre Assessment / **Post Assessment**

Recommendations - Campus Wide Assessment of Quantitative and Symbolic Reasoning

Relatively few courses claim to teach and assess Competency 3 (estimation) and Competency 6 (proof). Those classes that do are primarily in Drafting Technology, Geographic Information Systems, Philosophy and Physics. The assessment team recommends revising course content and assessment items so a wider selection of classes exposed students to these competencies.

Revise Competency 2. Competency 2 requires that students be able to choose an appropriate problem solving method and then correctly implement that method. All of the embedded assignments in this study focused on correctly implementing a given method. Students were not evaluated on their ability to choose an appropriate problem solving method. Either the competency needs to be revised or better assessments should be used in future studies.

Improve success rate for Competency 1. Competency 1 requires that students are able to evaluate and interpret quantitative and symbolic information. Of the four competencies the assessment team examined, this one showed the least improvement. The campus should focus on improving the teaching of this outcome.

Create training opportunities for evening and adjunct faculty. Students in evening classes did not show as strong an improvement when compared to students taking classes during the day. To some extent this discrepancy also existed between full-time and adjunct faculty. This may be due to a lack of knowledge about the campus wide outcomes and/or a lack of training in teaching techniques.

Increase communication between faculty groups. Adjunct faculty and night faculty may not be aware of the Campus Wide Outcomes and the assessment expectations listed in the LOTS database. Sharing syllabi, classroom activities, assessment tools, and providing mentoring are all potential alternatives to the ideal face to face .

Some courses have a QSR outcome, but no math prerequisite often displayed significant growth although only a minority of students reached the "competent" or "mastery" level. In such cases

the assessment team suggests that divisions evaluate the wisdom of claiming a QSR outcome without determining a minimum mathematical skill level needed by students upon entry to the class. If the QSR skills are essential to the class, then a quantitative skills prerequisite may be beneficial. If such a math prerequisite would violate the nature or intent of the class, then requiring a QSR outcome might be too much to ask of the students. These decisions should be made by individual divisions on a course-by-course basis, but this committee suggests that these questions should be considered.

Recommendations for following studies.

Check degree requirements with the campus wide outcomes. Are all students completing a degree being exposed to enough courses that teach the campus wide outcomes? Can a student carefully choose classes and avoid the QSR competencies?

Use appropriate assessments. Assessments tended to be on the skill, and not the thinking process. For example: QSR 2 says students should be able to recognize which methods are appropriate for solving a given problem and correctly implement those methods. We found that most assignments that we examined measured how well a student was able to implement the method. It was very difficult to assess whether or not the student had a choice of methods, and thus able to which method to use. A portfolio assessment would probably be more appropriate for this type of assessment, but we did not have sufficient time to implement such an evaluation.

This assessment team was unable to complete the campus wide assessment by June 1, since we started winter quarter. An ideal timeline would be to identify the sample by the middle of fall quarter. Notify the selected instructors three or four weeks prior to the end of fall quarter that he/she was selected for the sample. This should give the instructor adequate time to select an assessment. The assessment could take place winter quarter, leaving most of spring to write the report.

A big challenge is to get participation from the instructors. The assessment team did not get data from a third of the classes selected for the sample. Follow-up communication with the selected instructors could have improved our results. Many of the following suggestions revolve around improving communication between the assessment team and instructors.

Give instructors more time to choose the assessment, but make them commit to an assignment early. Several instructors kept talking about the assessment that he/she could do, but never did give the assessment.

Give instructors clear guidelines for pre-and post assessment deliverables, e.g., the assignment, graded student work of the pre assessment and post assessment.

Remind instructors to use the same students for pre and post assessments. Faculty must give the pre assessment and the post assessments to the same class section.

Document the assessment process of the QSR committee every meeting, some sort of meeting notes to break down the final written project.

Appendix:

Samples of all assessments used.

Samples of student work, at each competency level in the community rubric.