Colorado Northwestern Community College

Assessment of Student Learning Bi-Annual Report

Fall 2007-Spring 2009

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Introduction

The purpose of this report is to ensure that Colorado Northwestern Community College (CNCC, the College) is reporting the results of academic assessment to all stakeholders associated with this institution. During Academic Years 2007-2009, the college continued to implement and improve the assessment of student learning process it first initiated in the Fall of 2001. Following publication of the three annual reports, the Assessment Committee decided to create reports bi-annually rather than annually. The first bi-annual report was published in 2008 following the approval of the college's assessment program by the Higher Learning Commission of the North Central Association of Colleges and Schools visiting team. This 2010 report continues to focus on efforts to sustain and improve student learning and instruction at CNCC.

Assessment Mission

To improve student learning at CNCC through continuous, comprehensive, meaningful assessment of student academic achievement.

Assessment Goals

1. Assess student academic achievement at the classroom, program, and institutional level to improve learning.
   a. Continue to develop and improve measurable competencies for all courses, programs, and degrees.
   b. Continue the collection and evaluation of assessment data. (Refer to the Assessment calendar.)
2. Sustain and promote a manageable assessment plan based on institutional values.
   a. Continue to provide assessment training opportunities for faculty, staff, and administration.
   b. Foster an institution-wide culture of assessment.
3. Develop and maintain a centralized data collection, analysis, and reporting process.
   a. Support assessment efforts through institutional research office.
   b. Create and maintain assessment web link with participation from each department/program.
   c. Publish assessment results internally and for the local community.
4. Ensure CNCC assessment results impact institutional planning and budgeting.

2007-2008 and 2008-2009 Assessment of Student Learning

The Assessment Committee continues to meet monthly throughout each academic year. Membership has increased to try to include faculty representation from each academic and vocational program, and the Deans of Instruction from each campus.Faculty progressed in refining their academic assessment methods and tools.

Much of the work of the committee during the past two years has been dedicated to addressing the following challenges from the previous report:

1. **Assessment training of new faculty :** The committee realized that new faculty needed some training in our assessment program. So during the Fall Convocation time has been set aside for this. The committee members either help with assessment training or offer assistance to returning faculty. Committee members also offer assessment training support to faculty throughout the year. This support has helped tremendously with the compliance and the quality of the submitted assessments.
2. **To combine and simplify the current assessment forms:** The committee received feedback from faculty about the complexity of filling out and filling forms, so we combined and simplified them. Feedback has been positive since then.
3. **Encourage various college programs and departments to establishing program goals and ways to assess these goals:** The committee recognized that we were successfully assessing institution wide goals and classroom goals, however, we wanted to see program/department goals. This remains a current goal for the committee. Most of the CTE programs have completed this and the General Education Departments are working on theirs.
4. **Modified the reporting of the TER results:** The other major change the committee brought about was a change in the method in which the Test of Everyday Reasoning (TER) was being utilized. The test was being given to all incoming freshmen and graduating sophomores and the results were compared to each other. The committee recognized that the results from this comparison were not valid in that different cohort groups were being compared to each other. The college's goal is to see if our students show growth in critical thinking during their time here at CNCC. In order to accomplish this using the TER the committee decided to submit incoming & outgoing answer sheets from the same cohort, therefore, validating the results.

The Test of Everyday Reasoning (TER)

The Assessment Committee chose critical thinking skills as one of the two general education competencies that all students graduating from CNCC should possess. The TER assesses non-subject-specific critical thinking skills and is given upon entry into the college and upon completion of a degree or certificate program. The intent of the TER is not to compare our student's incoming and exiting scores with other institutions, but to measure the amount of personal growth in critical thinking skills gained during a degree or certificate program.

Beginning in AY 2005, the TER was administered to all incoming freshman and outgoing sophomores. Upon recommendations of the AY 2006-2007 Assessment Report each individual taking the TER was identified with their student ID number beginning in AY 2008. Longitudinal data is now being collected by directly linking the scores of students completing a certificate or degree with their incoming scores. This allows a direct analysis of student's changes in critical thinking skills during their educational experience at CNCC.

No data is available for AY 2008 due to the lack of graduating students that began degree or certificate programs in that year. The incoming freshmen of AY 2008 were instead expected to complete in AY 2009 and at that time take their exiting TER for comparison.

In AY 2009 47 exiting students took the TER. Of those students 20 students had a matching incoming TER score.

Results of TER for AY 2009
The majority (75%) of exiting students improved their overall critical thinking scores. Of those the average total score increased by 5.22 points or by 26.7%. The overall trimmed mean total score increased by 21.5%. Figure 1 shows the average percentile change in each category of the TER.

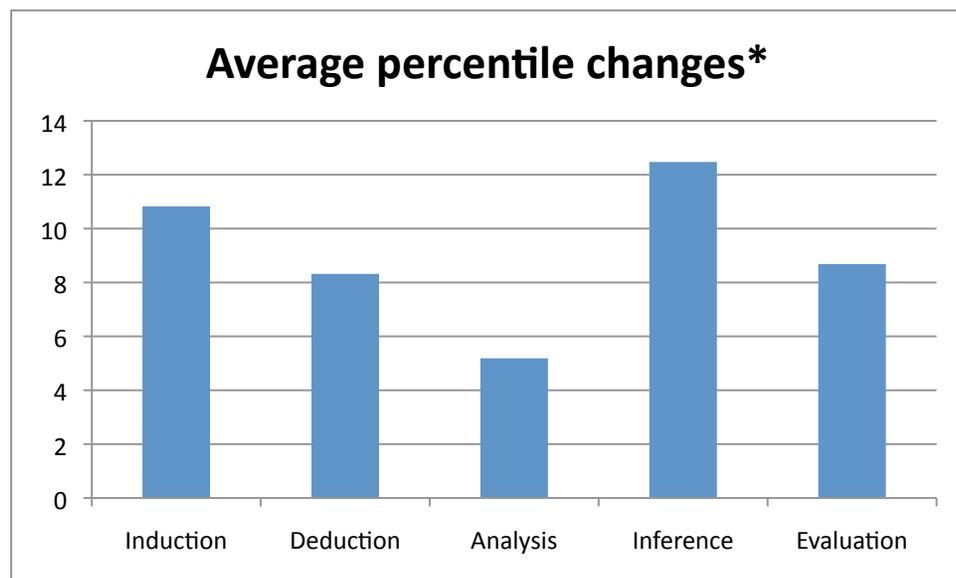## Average percentile changes*

| Category | Value |

Figure 1: Average changes in percentile performance between entrance and exit of the students in the five categories of critical thinking tested by the TER.

AY2009--Analysis of these scores indicates that students are showing improvements in all areas of critical thinking.   The most growth was shown in their ability to use inference to answer questions. The least improvement was in student's ability to use analysis to answer questions, followed by deductive reasoning.

*Three sets of scores have been excluded as the integrity of the answers was questioned due to the significant drop in each categorical score, indicating that the student did not attempt to work the problems on the exiting test.

Recommendation:

In the previous assessment report deductive reasoning and inference were noted as the areas needing most attention by our faculty. Now this current report implies that the training provided to faculty did impact student performance in a positive manner, at least with inference reasoning. Deductive skills were again shown to have only weak improvement for exiting students. In this report analysis and deductive reasoning were shown to have the least improvement between entering and exiting the college.   Analysis showed the weakest improvement in exiting students. This indicates that faculty training on how to include deductive and analytical skills is needed in the upcoming academic year.

With only twenty matched tests and, three that required disqualification, these results do not represent a large enough or random sample of CNCC students completing in AY 2009. Steps need to be taken to 1) Ensure a large enough (~70) sample size that includes members from all programs and 2) attempt to increase student's motivation to take the test seriously, (since the results form one student indicated random filling in of answers). Despite these challenges it is felt that the results warrant additional training for faculty to facilitate student growth in critical thinking skills.

The Assessment Committee would like to find other institutions that are directly measuring changes in critical thinking skills by individual students so we can then compare our results to others.

Student In-Class Evaluation Survey Data 2007-2009

The student In-Class Evaluation was adopted as the source of information regarding student's satisfaction with instruction for the college as a whole. This instrument is given to all students in each course that they take at CNCC near the end of the term, or at the completion of the course. In AY 2009 the evaluation instrument was converted to an electronic version that students fill out on a computer, rather than the previous paper and pencil version. The assessment committee saw this as necessary to increase availability of distinct sets of data for different groups (instructors, program directors, deans, assessment committee) that can eliminate sensitive information where appropriate.

The Student in-Class Evaluation of Instruction surveys for 2007-2009 show strong satisfaction with the quality of instruction at CNCC with 87-97% of respondents rating course quality and instruction at good or above. Students had high attendance rates (96% good or above) and felt a sense of accomplishment by the end of the course (91-95% agree or above). Consistent and increasingly strong presence of assessment within the classroom across disciplines and departments is evident by high rates of response indicating each instructor presented assessment criteria (92-94% agree and above) and students understood how the assessment strategies where integrated into the course (94-96% agree or above).

Additional information from the survey showed that our median student age is 18-22, and the majority of students are enrolled part-time.

Summary of results

- The overall quality of the course content was: Excellent (4), Very Good (3), Good(2), Fair(1), Poor(0) –link to graph

	Average Score	Percent responding good or above	Responses
Previous report	*3.11*	*93*	*1147*
AY 2008	3.11	97	689
AY 2009	2.89	88	2490

- The instructor's overall teaching was: Excellent (4), Very Good (3), Good(2), Fair(1), Poor(0) –link to graph

	Average Score	Percent responding good or above	Responses
Previous report	*3.03*	*87.7*	*1147*
AY 2008	3.12	94	688
AY 2009	2.93	87	2490

- The methods being used for evaluating my work (such as tests, projects, etc.) are understandable: Strongly Agree(4), Agree(3), Neutral(2), Disagree(1), Strongly Disagree(0) –link to graph

	Average Score	Percent responding good or above	Responses
Previous report	*3.34*	*84.5*	*1147*
AY 2008	3.44	96	697
AY 2009	3.35	94	2477

- At the end of this course, I feel a sense of accomplishment: Perfect(4), very good(3), good(2), fair(1), poor(0) –link to graph

	Average Score	Percent responding good or above	Responses
Previous report	*3.30*	*81.5*	*1147*
AY 2008	3.34	95	697
AY 2009	3.23	91	2474

- The instructor defined and explained the goals of the course and assessment strategies to achieve these goals: Strongly Agree(4), Agree(3), Neutral(2), Disagree(1), Strongly Disagree(0) –link to graph

	Average Score	Percent responding good or above	Responses
Previous report	*3.59*	*91.3*	*1147*
AY 2008	3.61	94	697
AY 2009	3.58	92	2477

- My attendance in this class is: Perfect(4), very good(3), good(2), fair(1), poor(0)

	Average Score	Percent responding good or above	Responses
Previous report	*3.35*	*96*	*1147*
AY 2008	3.18	96	697
AY 2009	no data*		

- My age is: <18(4), 18-22(3), 23-27(2), 28-32(1), >32(0)

	Average Score	Percent responding 18-22	Responses
Previous report	*2.44*	*60*	*1147*
AY 2008	2.56	70	697
AY 2009	2.56	76	2490

- If Fall or Spring term, I am enrolled for: >12cr (3), <12cr (2), summer >9cr (1), summer <9cr (0)

	Average Score	Percent responding < full time	Responses
Previous report	*2.1*	*80*	*1147*
AY 2008	2.02	89	697
AY 2009	2.06	94	2490

- Class Standing: Freshman(4), Sophomore(3), PT/Continuing(2)

	Average Score	Responses
Previous report	*3.43*	*1147*
AY 2008	3.53	697
AY 2009	3.55	2490

Recommendation:

Despite good overall responses a near 10% drop in students responding good or better regarding overall quality of courses and their instruction is of concern. The assessment committee suggests that this could be due to students feeling more able to be honest when typing and submitting online, rather than hand writing responses for analysis. Because of the drop each department will receive a break out of their own data to help them gauge if satisfaction within their program has declined.

Continued support for professional development of faculty on instructional assessment is validated by the high and improving understanding of assessment criteria. New faculty during AY 2008 and 2009 performed well as did our returning staff.

In the conversion of the evaluation instrument into the electronic form via input from Deans, Faculty, and the Assessment Committee three questions that the assessment committee gathered data on have been omitted: The instructor's overall teaching was, My attendance in this class is, At the end of this course, and I feel a sense of accomplishment... The Assessment Committee needs to address this loss of data to determine if these questions are truly important to our goals of assessing student learning, if the data can be retrieved using other questions, or if the omission is satisfactory.

The electronic form of the evaluation was determined to be much easier to administer, and to gather relevant data from. Therefore; despite a desire noted in the previous assessment report to move to a more informal evaluation of student satisfaction with instruction the assessment committee determined that the electronic student in-class evaluation instrument was the most likely the best means of gathering this data for two main reasons: 1) All classes are required to participate so participation by students should be high compared to an additional out of class survey. 2) With the hiring of a staff Institutional Research position CNCC now has the ability to pull this data without the assessment committee being required to see sensitive information about instructors.

Program/Department Reports

The departmental summaries for AY2009 are included in this document, however, the budgetary implications that are a direct result of these summary reports was deleted inadvertently during the simplifying of the forms. It is the Committee's belief that assessment should drive the budgetary process in some way, and that is why the committee will add this sub-heading back onto the departmental reports.

During AY2009, department heads completed their planning and reporting on a combined form, which simplified the reporting process. The following academic programs/departments at Colorado Northwestern Community College submitted annual reports for AY2009.

- Arts, Humanities & Sciences
- Automotive & Diesel Technology
- Aviation Technology
- Business
- Civil Engineering Technology
- Cosmetology
- Dental Hygiene
- Developmental Studies
- GIS & Natural Resources
- Horse Training & Management
- Humanities/Social Sciences
- Industrial Electrician
- Math and Sciences
- Nursing
- Powerplant Technology

The following programs were discontinued in AY2009 due to low enrollment:
- Construction Technologies
- Web Design

The AY2009 annual department reports focused on specific numerical measures of student achievement, summarizing the quantitative plans and results of each class being assessed. Based on the department heads' reaction to the shortened, combined planning/reporting form, the Assessment Committee decided to simplify and combine the instructors' planning and reporting forms, beginning in January 2008. With more simplified assessment forms, the Committee anticipates a more knowledgeable and comprehensive "culture of assessment" at Colorado Northwestern Community College.

Budget Implications

As we progress through our assessment process, the college recognizes that the assessment of instruction has monetary implications that, in turn, drive institutional planning and budgeting. For this reason, the Committee has stressed the importance to the department chairs of identifying and documenting the need for changes in departmental budgets. However, the Assessment Committee recognizes that CNCC has no process in place for identifying or documenting a connection between assessment results, program goals, and budgetary needs, thus making it difficult to measure whether or not assessment results drive budget considerations. Beginning AY11, a budgetary component will be added to assessment goal worksheets, allowing program directors and faculty to identify budget implications. In addition, program directors will submit to the Dean of Instruction yearly program goals and as part of their Comprehensive Program Development Plans. Specific budget implications for both assessment goals and program goals will now be documented and included in budget proposals submitted to senior administration. Beginning AY11, the Assessment Committee will have an avenue through which a clear link can be established between assessment goals, program goals, and budget awards.

While it is difficult at this time to definitively determine if budgetary decisions for AY08 were a result of assessment data from AY07, or likewise for AY 08 and 09, budget requests from program directors and awards made by senior administration certainly indicate that CNCC supports the continual improvement of instruction. For example, in AY09:

- $30,000 was awarded to purchase state-of-the-art patient chairs for Dental Hygiene, providing students with the most advanced technology in the industry.
- $19,350 was awarded to purchase upgraded equipment for the National Park Service Academy including fire equipment, an alcohol intoxilizer, and an AED unit.
- $2052 was awarded to upgrade microscopes and incubator in our science labs.
- $2000 was awarded to purchase pen panels for our Horsemanship program, providing an adequate training area.
- $2400 was awarded to purchase drafting equipment for civil engineering students.
- $10,000 was awarded to purchase software licenses for multiple disciplines to provide students with up-to-date technology.

Including budgetary considerations in both assessment goals and program goals will allow CNCC to focus budgetary discussions, make decisions based on documented need, and eliminate unnecessary instructional expenses. In our current climate of budget constraints, this will become increasingly important.

Conclusion

A great deal of work has been accomplished by this committee. During the next two years the goals of this committee are:

1. To complete the establishment of program-level assessments that contain skills and/or knowledge peculiar to each specific program or department by adding one program-specific goal to the two institutional goals already assessed. The Committee feels that completion of this goal will ready CNCC for its next NCA self-review cycle.
2. Bring the web-page up to date

Analysis and evaluation of the data collected over the past year has helped us to identify the following strengths and challenges in our assessment program.

Strengths

- Colorado Northwestern has maintained two general education outcomes, critical thinking and communication, as priorities. The faculty have been given training and access to numerous resources in order to enhance their success in assessing these two outcomes. These two outcomes continue to be measured across all programs, general education as well as vocational.
- Each semester every academic program/department continue to analyze and/or modify:
  - student learning outcomes
  - measures to assess outcomes
  - ways assessment data will be collected.
- Strong, viable assessment effort by faculty and administration.
- There is a central location for departmenal and institutional assessment data, forms, and general information. All of this information is accessible through the assessment web page linked via CNCC home.
- During both fall and spring semesters, each academic program/department continues to identify broad strengths, weaknesses, and strategies for improvement.
- The committee has published on the assessment website the general education matrix which lists all departments and the classes taught, and identifies the objectives being used in these classes to target the two educational goals defined by the college as major priorities.
- The planning forms for departments have been revamped again to be more efficient, and less complicated to complete.
- The membership of the Assessment Committee is more broadly inclusive with representation from most programs/departments.

Challenges

- The assessment web pages need to be more inclusive to incorporate departmental or program pages, and must be updated regularly to reflect the current condition of assessment at CNCC.
- We need to continue to rotate committee leadership roles and responsibilities within this committee
- The formal assessment information must be used to affect institutional change at a budgetary as well as instructional level.
- College-wide assessment of general education is progressing, but more work remains to be done in the assessment of communication skills institution-wide.

- Additional adjunct faculty participation in the assessment process needs to occur.
- Assessment of skills needs to be linked to the assessment of goals for the programs or departments. Each assessment should show a close relation with the program goals.
- Procure funds/budget to help in assessment training for new faculty
- Course assessments, program goals, and college goals need a more clearly stated connection

Strategies to Address Challenges

- A small committee (1 or 2 persons) will be chosen to update the Assessment web pages at least once per semester.
- The Committee will ask department heads to show a tie-in to assessment on budget requests by including a section on the assessment form (C/D) to show budgetary implications.
- The Committee needs to continue to investigate ways to assess and report communication skills at the institutional level
- The Committee will continue to work with administration as well as faculty chairs, on how we can improve assessment efforts at the adjunct level. Specifically adding assessment training with adjunct faculty training
- Departments/programs will be need to assess and report on their specific departmental goal
- Continue to train full-time faculty on assessment and assessment reporting as early in the fall semester as feasible and request funds for outside training opportunities.
- Coordinate with the deans to determine a rotation schedule for assessment committee chairs
- Funding needs to increase to cover the cost of accuplacer testing which is increasing due to the write placer exam

Colorado Northwestern Community College

Departmental Assessment of Student Learning
(Forms C & D)

| Department or program | **Aviation Technology** | Year | **2008/2009** |

Program Goal: Students to pass FAA Written Knowledge Test on first attempt with an 80%aggregate pass rate.

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Fall 2008 Evaluate critical thinking in all areas of meteorology, navigation, flight planning, and application and understanding of Federal Aviation Regulations.	AVT 101 – Private Pilot Ground AVT 105 – Aviation Meteorology	FAA Written Knowledge Test scores administered in-house through our LaserGrade testing Center	Scores of at least 80% passing on the first attempt	AVT 101 - **83%** AVT 105 - **100%**	Same curriculum and training aid that have been used for the past two decades.	Will bring in Computer based training to augment currents curriculum. The goals were met, but at a very high cost in time, energy, and efficiency.
Spring 2009 Evaluate critical thinking in all areas of meteorology, navigation, flight planning, and application and understanding of Federal Aviation Regulations.	AVT 111 – Instrument Pilot Ground AVT 211 – Fundamentals of Instruction	FAA Written Knowledge Test scores administered in-house through our LaserGrade testing Center	Scores of at least 80% passing on the first attempt	AVT 111 – 80% AVT 240 – 84%	Same curriculum and training aid that have been used for the past two decades.	Will bring in Computer based training to augment currents curriculum. The goals were met, but at a very high cost in time, energy, and efficiency.

Colorado Northwestern Community College

Departmental Assessment of Student Learning
(Forms C & D)

Department or program	**Cosmetology**	Year	**2008-2009**

Program Goal: 1. To equip students with skills necessary for creative problem solving, critical thinking, and analysis of values. 2. To equip students with the communication skills necessary for effective listening, speaking, reading, and writing.

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
Student will summarize, analyze and evaluate hairstyles, haircuts, haircolor, and permanent waving through their portfolio project.	Cosmetology	Classification essay Critique photos Complete portfolio	85% of students will show ability of 75% or higher			
Student will produce a portfolio by finding and communicating with people in public, photographing them, and provide an explanation.	Cosmetology	Classification essay Complete portfolio with photos and journal entries	80% of students will show ability of 75% or better.			

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Colorado Northwestern Community College
Assessment Plan

Department or program   **Dental Hygiene**   Year   **2008-2009**

Program Goal: 4A.   Graduating students will perform at or above the national average on their national and regional licensing exams.

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete in the fall)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Graduating students will perform at or above the national average on their national licensing exams.	All program courses	National Board Results	Students will perform at or above the national average in 8-10 catagories	The school average in each subject/catego ry was at or above the national average	This is the first class of twenty-seven student to all pass this written exam on the first attempt.	Continue to have cumulative exams in core subjects, adding dental materials as one of them.
Graduating students will perform at or above the national average on their regional licensing exams.	All program courses	CRDTS/ADEX Hygiene Examination Results	Students will perform at or above the national average in 8-10 catagories	All students passed CRDTS with scores above the national average in all catagories	One student had to retake this exam, but completed the retake successfully	None at this time

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Colorado Northwestern Community College

Departmental Assessment of Student Learning
(Forms C & D)

| Department or program | Developmental Studies | Year | 2008-09 |

Program Goal: The Developmental Studies Program at Colorado Northwestern Community College provides students with the academic instruction, preparation, and support to facilitate their educational, workplace, and personal goals.

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
Critical Thinking: Students will summarize, analyze, and/or evaluate textual material.	REA 090.101	Exam over multi-paragraph readings	90% of students will correctly identify at least 70% of the primary traits (stated or implied main ideas; support details; organizational text patterns; author's purpose and tone) in a multi-paragraph writing selection.	~REA 060: 100% of the completers correctly identified the primary traits at 90 % or better. ~REA 090: 100% of the completers correctly identified the primary traits at 94.6 % or better.		
	ENG 090.301	Research paper	90% of students will show adequate ability (70%) or better in purpose/thesis, organization, development, and usage.	~Purpose/thesis: 78% showed adequate ability or better. ~Organization: 100% showed adequate ability or better. ~Development: 94% showed adequate ability or better. ~Usage: 94% showed adequate ability or better.		

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
	ENG 060.101	Paragraph w/single stance	90% of students will clearly establish a consistent stance w/3 or more support points logically justifying it, as demonstrated by achieving a 3 or 4 on the 4 pt rubric.	24 students of 28 earned a 3 or 4 on the rubric.		
Program Goal: Students completing developmental courses will be successful in college entry courses.	ENG 090 MAT 090	IR—student grades in next higher required ENG or MAT courses.	75% of ENG 090 or MAT 090 graduates will pass the next program-required ENG or MAT course with a C or higher.	Rangely Campus 200920 67 ENG 090 Students 33 went on to ENG121 (49%) 7 received an A…21.3% 7 received a B…..21.3% 12 received a C….36.4% 2 received a D…….6.0% 3 received an F……9.0% 2 withdrew...............6.0% 83.8% of the students who took ENG090 in Fall 2008 at the Rangely Campus and progressed into ENG121 in Spring 2009 successfully passed the course with a C or higher grade.	Rangely Campus 200920 One student dropped, but that was due to the fact that he needed to be in 090 this semester.	

Colorado Northwestern Community College
Departmental Assessment of Student Learning
(Forms C & D)

Department or program   **GIS/PRO/Natural resources**   **Year**   **2008-2009**

Program Goal: Critical thinking

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Increased critical thinking and problem-solving proficiency -- a Colorado Northwestern assessment goal	PHY 105	Pretest and posttest questions regarding thinking physics.	Students are expected to see a 30% increase in problem-solving abilities based upon results from the thinking physics exams	Students saw a 30% reduction in problem-solving skills.	Staggered enrollment lead to problems doing a paired t-test and conducting the exam on the date of the final was probably inappropriate	Conduct the posttest at some other time in an impromptu fashion.
Increase in problem-solving ability using GPS technology	GIS 131	Scores on exams covering topics revolving around GPS units that become increasingly complex as the course progresses.	Students are expected to remain proficient as the complexity of the equipment increases. For example, entry-level students could not operate Topcon geo-positional systems.	Student scores on exams actually increased as did the complexity of the equipment.	Apparently students are gaining the critical thinking skills necessary to assemble complex electronic systems.	Continue to and curriculum into the subcentimeter top con curriculum.

Colorado Northwestern Community College

Departmental Assessment of Student Learning
(Forms C & D)

Department or program	Horsemanship & Horse Management	Year	2008-2009

Program Goal: 100% of graduating students in this program will continue their education at a 4 year college or obtain work in this vocation.

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
Learner will be able to successfully move cattle over difficult terrain	AGP 160: Ranch Horsemanship Skills I	Clinical Evaluation	100% will successfully move cattle	0% of the students could move cattle effectively		New teaching assignments and restructuring of the classes

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Colorado Northwestern Community College

Departmental Assessment of Student Learning
(Forms C & D)

Department or program	Humanities/Social Sciences	**Year**	2008 - 2009

Program Goal: Critical Thinking (#1) and Effective Communication Skills (#2)

PLANNING (Form C - Complete in the fall)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
English Comp I and II Students will be evaluated on their knowledge of grammar, including their ability to identify and correct common sentence problems such as fragments, comma splices, run-on's, pronoun-antecedent and subject-verb agreement, etc.	ENG 121, 122	Students will take a grammar 'pretest' early in the semester when they register for the online component of ENG121. This same test will be given approximately midway through the semester after class lectures and exercises, and homework assignments on grammar have been given. Critical thinking skill are addressed in that students will be asked to analyze sentences to see if errors are present and, if so, correct those errors. To include the following for the pretest and actual test: Lowest grade: Highest grade: Mean grade: Median grade: Standard deviation: Number of students who took the assessment: The data will also include any change expressed as a percentage from pretest to actual test.		Assignment statistics for ENG 121 sections 101 & 102 are shown below. For section 101, the mean score increased from 42.81 to 61.31, or 43%. For section 102, the mean score increased from 50.93 to 67.31, or 32%. All other categories showed similar improvement. **Course: 101 Pretest** **Assignment: Assessment, Grammar** Number of students taken:14 Lowest grade:11.67 Highest grade:66.67 Mean grade:42.81 Median grade:43.33 **Course: 101 Retest** **Assignment: Test—Grammar** Number of students taken:13 Lowest grade:41.67 Highest grade:78.33 Mean grade:61.31 Median grade:63.33 Standard deviation:10.50 **Course: 102** **Assignment: Assessment, Grammar** Number of students taken:18 Lowest grade:26.67 Highest grade:76.67 Mean grade:50.93 Median grade:53.33 Standard deviation:12.77 **Course: 102 Retest** **Assignment: Test—Grammar** Number of students taken:13 Lowest grade:38.33 Highest grade:85.00 Mean grade:67.31 Median grade:70.00 Standard deviation:13.20		a) **Strengths:** "Learning" as such is not being measured here; this assessment rubric is more the measure of student competencies in selected areas of communication, specifically essay writing. As such, this rubric does reveal general competency is being achieved in my ENG 121 classes. A score of 70-79 would indicate "average" competencies, and that students were adequately prepared to move on to the next level of composition. A score of 80 - 89 would indicate "good" competencies; as such, I believe the 80 average is an accurate measure of student competencies. b) **Challenges:** c) **Other observations:** c) The data indicates that strengths and weaknesses seem to vary from individual to individual—i.e.: there are no general patterns that can be observed, such as "students seem to be unable to write effective conclusions." However, the data does indicate that there is a correspondence between good grammar/editing skills (the last 3 categories assessed) and good structural/organizational skills (the first 4 categories assessed). d) **Strategies to maintain strengths:** Continue using this rubric. e) **Strategies to address challenges:** **Report Summary** Do your assessment results require any special assistance or a change in financial resources? No.

PLANNING (Form C - Complete in the fall)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
Students will be able to recognize ethical dilemmas and apply ethical theory.	PHI 112, Ethics	Students will select one of five films that they will view at strategic points during the semester. Assuming 20 students per section, each film will be viewed by a group of 4 students. Each group will then give a class presentation using a DVD/TV set up. Each group's presentation will be assessed by fellow students and the instructor. 8 areas will be evaluated, 2 apply directly to critical thinking skills, 5 to communication skills, 1 category is a generic "overall impression." 50 points are possible. A sliding scale with 5 options ranging from "Poor" (0 points) to Excellent (5 or 10 points, depending on the weight given the category.) In terms of critical thinking, the 2 categories being evaluated are 1) Appropriate Scene Selection/ Explanation (worth 5 points), and 2) Tie-in of Scenes with Ethical Theory (worth 10 points). Results will be reported as a class average (including instructor's score) for each of the 2 categories for each film, and as an overall class average.	15 points possible; 15 = Excellent, 11 = Good, 8 = Average. Small class this year so only 4 groups gave presentations rather than the usual 5. Groups evaluated in 2 categories related to critical thinking. Average score was 11.5 out of 15, or 77%. 11 points (4 + 7) possible if the ran the table on "Good." Low group score was 11, high was 13.4, so groups were pretty consistent across the table. Groups scored 80% when it came to "Appropriate Scene Selection," 75% when it came to Tie-in of Scenes With Ethical Theory." These percentages are much closer together than in past years. Last year, for instance, the percentages were 83% and 62% respectively. I really cannot explain this difference, but perhaps a smaller, tighter-knit class produced less objective student critiques. Student scores in previous years were much closer to my scores than this year. This year, I was consistently the most critical and gave the lowest scores.	a) **Strengths:** The rubric provides good feedback for the presenters; moreover, it makes the class pay more attention to the presentations, and to think more critically about what they are being shown and told than if they were not required to fill out the rubric. Students took the rubric seriously as the "written comments" section revealed. Comments were thoughtful and perceptive. I summarized both written and scaled comments for the students in handout form which I gave them at the class session following a presentation, and we discussed the results. Presentations toward the end of the semester tended to be a bit more polished as each group learned from the successes and failures of previous groups. b) **Challenges:** This "rubric" was developed originally as a means of providing students some categorized but general feedback for their presentations rather than as an assessment tool for critical thinking and communication skills. These 2 categories have been "imposed" on the "rubric." Consequently, there may be some overlap or blurred data such as with the results reported above in that what exactly is being measured: critical thinking or communication is unclear. The rubric could be "re-categorized" to be more distinct in what it assesses. c) **Other observations:** I think I need to clarify that student scoring of rubrics do not directly factor into my grading of student presentations. Rather, these rubrics are designed to provide peer feedback. I think some of the "niceties" of scoring this year stem from this misconception on the part of my students. d) **Strategies to maintain strengths:** Keep present rubric e) **Strategies to address challenges:** Clarify in syllabus and on the rubric that the rubric is designed to provide peer feedback and is not a part of the instructor's grade assessment.		a) **Strengths:** Communication categories are thorough, ranging from how a group discussed and decided to divvy up responsibilities, etc. before they presented to the class (Group Dynamics) to Speech-type skills (Enunciation, etc.). b) **Challenges:** none noted in terms of the assessment itself. c) **Other observations:** d) **Strategies to maintain strengths:** Keep rubric as presently formulated for Communication. e) **Strategies to address challenges:** It would probably be a good idea next spring to show the class a typical evaluation form from this semester to make them aware of typical weaknesses in group presentations, and (to some extent) work on these skills in class. Actually, this strategy was one I forgot to do this year, but the idea is still good. I have made a note of it on my syllabus. Also, as previously noted, make sure students understand that there scores do not directly impact my grade for a presentation.

PLANNING (Form C - Complete in the fall)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
Student Outcome #2: CNCC students will be able to communicate effectively Students will be able to recognize ethical dilemmas and apply ethical theory. PHI 112, Ethics	PHI 112, Ethics	Students will select one of five films that they will view at strategic points during the semester. Assuming 20 students per section, each film will be viewed by a group of 4 students. Each group will then give a class presentation using a DVD/TV set up. Each group's presentation will be assessed by fellow students and the instructor. 8 areas will be evaluated, 2 apply directly to critical thinking skills, 5 to communication skills, 1 category is a generic "overall impression." 50 points are possible. A sliding scale with 5 options ranging from "Poor" (0 points) to Excellent (5 or 10 points, depending on the weight given the category.) In terms of Communication, the 5 categories being evaluated are 1) Integration of Narration With Film (5 points), Effective Use of Film to Generate Class Discussion (5 points), Group Dynamics/Organization/Preparation (10 points), Technical Competency (5 points), Enunciation/Dress/Eye Contact/Delivery (5 points). Overall Impression is worth 5 points. Results will be reported as a class average (including instructor's score) for each of the 5 categories for each film, and as an overall class average for the 5 categories.	30 possible points; 30 = Excellent, 23 = Good, 17 = Average. 5 groups evaluated in 5 categories related to communication skills. Class average was 22.9, so just slightly below "good." Low group score was 21.1, High was 25.6. Breakdown by categories very consistent by group. Consistent high score was in "Technical Competency," essentially working the remote, at 90% (80% last year). From there percentages were 79% for "Integration of Narration w/Film" (80 % last year), 77% for "Enunciation/Dress/Eye contact/Delivery" (78% last year), 62% for "Group Dynamics/Organization/Preparation" (76% last year), and 79% for "Questions for Class Discussion" (76% last year). I do not believe that this class gave as consistently good presentations as did last year. Some of this is reflected in the 62% score for Group Dynamics and Prep. These groups just weren't as well prepared as last year's. Perhaps the smaller groups contributed to this.			

PLANNING (Form C - Complete in the fall)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
PSY 101 Apply critical thinking to solve problems	PSY 101	Students will be instructed and assessed on the identification of independent and dependent variables in research in PSY 101	By the end of the semester, 80% of students will understand the concept as measured by scores on multiple-choice questions.	Goal was met: 80% of students identified independent and dependent variables correctly as measured. a) **Strengths:** Process seems to be working. b) **Challenges:**	a) **Strengths:** Some students do master the concept; cooperative learning was helpful for some b) **Challenges:** Some students are still not learning the concept.	Use of cooperative learning to assist those students who do not master the concept as quickly as the other students
Student Outcome #2: CNCC students will be able to communicate effectively. **Program/Department Objective for Effective Communication** (copy from Form A)**:** Develop oral communication skills		Students will give three presentations. The first presentation is a "self-portrait" requiring the use of PowerPoint or similar software. The other two are on assigned topics, requiring a presentation aid and Internet research. Students will also submit two four-alternative, multiple-choice questions based on their presentations. Presentation evaluations will be on five criteria: use of visual aids, clearness and accuracy, professionalism, research and questions. 75% will score C or above on the presentations. **DATA:** 79% of the students scored C or above. The results were: Topic Presentation #1 Topic Presentation #2 PSY 101-sec. 101 81% (C or above) 91% (C or above) PSY 101-sec. 102 86%(C or above) 57%(C or above)* (note – low average due to failure to complete assignment and small class size	At the end of the semester, students will be asked to evaluate their progress in public speaking throughout the semester At least three-fourths of students will improve their speaking skills.	c) **Other observations:** Keep question grade out of overall grade for presentations. d) **Strategies to maintain strengths:** Continue the use of present system. e) **Strategies to address challenges:** Meet with students individually to help with presentations.	c) **Other observations:** d) **Strategies to maintain strengths:** Continue group work. e) **Strategies to address challenges:** More individual work on the concepts. . 75% will express that they improved in their public speaking skills. **DATA:** 86% said they improved "some" and 14% say they improved "a lot,"	Some difficulty projecting onto the screen effectively. New projector will help. Monitor students' efforts more closely to ensure they are focusing on problems in organization or development of ideas.
English 122 (goal 1 – critical thinking through analysis of research papers) 80% of students will achieve 8 out of 10, as a minimum, on effective organizational and developmental skills on their research papers. They will be able to evaluate these factors successfully in other's work as well.	ENG 122		A rubric will be used to quantify final data from research papers. 80% of students will be successful.	90% of students were successful in these categories and also effectively evaluated others' work.	Students were given prior feedback on organization and development of the first draft of their papers.	

Colorado Northwestern Community College
Departmental Assessment of Student Learning
(Forms C & D)

Department or program	**Math and Science**	Year	**2008-2009**

Program Goal: To equip students with skills necessary for creative problem solving, critical thinking, and analysis of values.

To equip students with the communication skills (both written and symbolic) necessary for effective listening, speaking, reading, and writing.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Critical thinking	MAT 120	Grading homework after every class	Grades will relate to overall performance	At least 235 points made an A/B final grade. Those students that scored below 210 points received a C final grade.	Allowed for constant assessment and feedback for students	Continue with assessment strategy
creative problem solving, critical thinking, and communication skills	MAT 090	Pre and post testing of algebra skills	Increase in algebra skills	Pre-test average: 31% Post-test average: 77%	Similar improvement despite higher accuplacer scores	Maintain smaller class sizes if possible. Stricter policy on attendance, worksheets, homework and showing work. All of these are mandatory for improved student performance. Practice makes perfect. Review material and remove some topics that are less central to learning the core abilities.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	Corresponding courses	Assessment Information Source	Expected Results	Actual Results	Relevant Information	New Strategies/Adjustments
Students will be able to think critically and communicate effectively	BIO 204	Capstone report on the identification of unknown bacteria, measured using rubric.	Improvement in rationale and interpretation due to changes made last year	Students showed lower ability to utilize appropriate scientific language in a report. Also general written communication skills were below the average of the last few years (avg 83% compared to 96% of previous years). More than half the class failed (below 80%) for appropriate use of scientific language. Rationalization of choices made during identification was much better than last year (avg 74% compared to 61%) with 50% of students passing (80% or above). This indicates an improvement over previous years due to modification of critical thinking questions. Interpretation of results was down but similar to years past with 7/18 passing but 63% avg. Appropriate conclusions were approximately steady with previous years with 2 students failing.		Include small report on midterm ID. Emphasize in lecture and review answers after they turn in labs. Continue use of new lab manual investigate turnitin.com to prevent plagiarism

Colorado Northwestern Community College
Departmental Assessment of Student Learning
(Forms C & D)

Department or program   **Nursing**   **Year**   **2007-2008**

Program Goal: The Nursing Program at Colorado Northwestern Community College is committed to providing nursing students with a quality nursing education which will enable them to achieve their educational, workplace, and personal goals.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Critical Thinking: Students will summarize, analyze, and/or evaluate textual material.	NUR109; NUR112; NUR106; NUR150' NUR206; NUR212; NUR211; NUR216; NUR230	Written papers Oral presentations	100% of students will show adequate ability (77%) or better.	93.0% of students showed adequate ability (77%) or higher.	Reading and following directions still is somewhat of a problem.	Grade rubrics are in place. Clear, concise directions are in place. Time line is long enough. Will try again.
Communication Skills: Students will show purpose and organization in developing ideas using complete sentences.	NUR109; NUR112; NUR106; NUR150; NUR206; NUR212; NUR211; NUR216; NUR230	Written papers Oral presentations Written care plans	100% of students will show adequate ability (77%) or higher.	100% of students showed adequate ability (77%) or higher.	The students were able to do this well, but it took them a long time.	Will begin presenting care plans and client documentation earlier in the semester.

Colorado Northwestern Community College
Departmental Assessment of Student Learning
(Forms C & D)

Department or program   Automotive Technology   **Year**   2008-2009

Program Goal: 70% of students will be able to analyze and articulate to resolve a problem associated with a brake system

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Communication Skills	ASE110	Lecture and theory followed by review quizzes and chapter test.	All students should be able to pass chapter test with over a score of 70.	All students did pass with at least a score of 70.	All students also passed the section finals test.	Use of Technician's work book to affirm what the student has learned.
Critical Thinking Skills.	ASE 110	Students get to apply the knowledge they have gained by demonstrating their competencies.	All students need to be able to complete a brake job on both drum and disc systems.	All students did participate in several types of brake jobs.	All students turned drums and rotors on a brake lathe at an advisory board member's shop.	Hope to have our own brake lathe soon. Each student should get the opportunity to complete a brake job by themselves.

Colorado Northwestern Community College
Departmental Assessment of Student Learning
(Forms C & D)

Department or program	**Business**		Year	**2008-2009**

Program Goal: The Business Department provides quality academic programs designed to provide the student with the opportunity to develop an understanding which leads to responsible professional careers in business fields.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Communication Skills: By the end of the semester, students will be able to communicate by listening effectively, speaking, reading and writing at a level of at least 70% or higher.	ACC 211	Writing an effective memo	75% of all students will receive a acceptable or above average grade on their writing assignment in the areas of memo construction, grammar, and sentence completion.	In Acct 211, the average grade was 85% in the construction of memos. Proper formatting, grammar and sentence completion was demonstrated correctly. The memo clarified the needed information for the client's line of credit.	The students wrote well and received 85% for the composition of the memos.	Incorporate the use of more technology.
Critical Thinking: By the end of the semester, students will be able to demonstrate the skills necessary for problem solving, critical thinking, and analysis of values at a level of at least 70% or higher.	BUS 115	In-class summary of an essay from research information.	75% of students will receive a passing grade or above average grade in the areas of answering an essay question and analyze the information in determining the facts.	Students presented information with the facts backed up from information found on the company's website. At least 89% of the students received an 85% or better on their essay.	89% of the students received an 85% or better on their essay.	Incorporate the use of more technology.

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Colorado Northwestern Community College
Assessment Plan

Department or program **Power Plant Technology Program**   Year   **2007-2008**

Program Goal: The Power Plant Technology Program at CNCC provides students with the academic instruction, preparation, and support to facilitate their educational, work-place, and personal goals.

PLANNING (Form C - Complete in the fall)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Critical Thinking: Students will summarize, analyze, and /or evaluate textual material.	ENT 250	Group project, and group discussion Written essay	Students will show adequate ability (70%) or better	70% of students above aboveavg. ability 305 adequate	Instructor provided to much help with	Include more analysis and summary skills.

Colorado Northwestern Community College
Departmental Assessment of Student Learning
(Forms C & D)

| Department or program | Civil Engineering Technology | Year | 08/09 |

Program Goal: _____

Note: At the end of each year, submit a copy of the completed form to the Assessment Committee. Report any planning and budgeting implications of your assessment results to your dean and Assessment Committee so these can be incorporated into the annual report on assessment of student learning.

PLANNING (Form C - Complete at the start of each semester)				REPORTING (Form D - Complete before summer)		
Learning Outcomes Upon completion of the program:	**Corresponding courses**	**Assessment Information Source**	**Expected Results**	**Actual Results**	**Relevant Information**	**New Strategies/Adjustments**
Critical Thinking: Learners learn to take limited information and develop hypothesis. These hypothesis are tested and conclusions drawn. Learner skills are evaluated in ENT 210	ENT 210	Reports are evaluated using a rubric that specifies three areas: 1) Introduction 2) Conclusion 3) Research. Each is graded on a scale of 0 to 10.	Class average of 21 of the available 30 points.	Average points were 13 out of 30. This very small class had the score skewed by the poor performance of one student. The average without that student was 20 out of 30.	Students did poorly in critical thinking even without the skewed average. This confirms the need to reinforce these skills with other classes in the curriculum.	Future classes will require more reports with more class time spent on developing critical thinking skills. Ensure classes late in the curriculum have the needed structure to provide the further development of these skills
Communication Skills: Learners will begin to develop graphic communication skills	EGG 101	Graphs will be evaluated using a rubric that specifies three objectives: (1) Accuracy; (2) Neatness; (3) Clarity. The rubric will rate performance in each area as poor, acceptable, or excellent.	Class average of 80% on the selected assignments.	Only one assignment was completed, but the students performed well on it, 95 pts.	Students in a drafting class had no problem producing high quality graphs and demonstrated good understanding what the graph was communicating.	Other classes in the program will provide reinforcement of these skills and further demonstrate the students ability to convey information in graphs