CAC GEO II: Critical Thinking and Analytical Reasoning
GEO Status Report Spring 2011

Executive Summary

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GEO Pilot Background:

The General Education Outcome (GEO) Critical Thinking and Analytical Reasoning Subcommittee was formally activated Fall 2010. Subcommittee members drafted a GEO Critical Thinking and Analytical Reasoning Rubric Spring 2011 and identified three courses for GEO pilots Fall 2011:

1. **EGR102** Introduction to Engineering in which three GEOs will be assessed: **Critical Thinking, Science, and Technological Literacy**;
2. **COM206** Public Speaking in which two GEOs will be assessed: **Critical Thinking, Oral Communication/Speaking**, and
3. **CPD101** Orientation to Student Development in which three GEOs will be assessed: **Critical Thinking, Oral Communication/Speaking, and Individual and Social Responsibility**.

By assessing multiple GEOs in appropriate courses, CAC's Student Learning Outcomes (SLOs) may more effectively be assessed and widespread improvements made based on GEO data analysis which impact a variety of disciplines.

Since this GEO area encompasses a broad range of disciplines, many discipline areas were considered for conducting the first GEO pilots. To inform the course selection, the Subcommittee reviewed CAC statistical data generated from the Institutional Effectiveness office, i.e. The Central Arizona College (CAC) Student Services/Non Academic Student Learning Assessment plan employs the Center for Academic Success (CAS) Student Learning Assessment software system. Considerable overlap between the GEOs and the CAS Student Learning Assessment Objectives exist:

CAS Student Learning Outcomes (SLOs)

1a. Understanding knowledge from a range of disciplines,
1b. Connecting knowledge to other knowledge, ideas, and experiences,
1c. Constructing Knowledge, and
1d. Relating Knowledge to Daily Life;

2a. Critical Thinking,
2b. Reflective Thinking,
2c. Effective Reasoning, and
2d. Creativity.

These CAS SLOs closely align to CAC GEO **Critical Thinking and Analytical Reasoning Objectives** and GEO Outcomes. CAS SLOs

3a. Realistic Self-appraisal, Self-understanding, and Self-Respect,
3b. Identify Development,
3c. Commitment to Ethics and Integrity, and
3d. Spiritual Awareness;

4a. Meaningful Relationships,
4b. Interdependence,
4c. Collaboration, and
4d. Effective Leadership;

5a. Understanding and Appreciation of Cultural and Human Differences,
5b. Social Responsibility,
5c. Global Perspective, and
5d. Sense of Civic Responsibility;

6a. Pursuing Goals,
6b. Communicating Effectively (GEO Communication),
6c. Technological Competence (GEO Information/Technological Literacy),
6d. Managing Personal Affairs,
6e. Managing Career Development,
6f. Demonstrating Professionalism,
6g. Maintaining Health and Wellness, and
6h. Living a Purposeful and Satisfying Life.

Data Collection Process:
The GEO Pilot process will closely follow one of the existing CAC GEO pilots to include:
1. Review of the course measurable student learning outcomes (MSLOs) in the approved Curriculum,
2. Map the course MSLOs to the GEOs using the new CAC GEO Course Map,
3. Map the Degree to the GEOs (the AAEE Degree has been mapped to the GEOs using the new GEO Degree Map. In fact, the AAEE Degree Map served as CAC's GEO Degree Mapping Pilot 2009-2011; The Early Childhood GEO Degree Map needs to be completed.),
4. Match the course and program MSLOs to the GEO Individual and Social Responsibility SLOs,
5. Refine the GEO CAC Institutional Rubric to align with the MLOs,
6. Create the assessment instrument,
7. Define the student sample (census/all followed up by a random sampling of the assessments collected to represent the student population; at least 30 samples from more than one section),
8. Create and define the implementation process steps,
9. Implement the assessment and collect the completed assessments (determine if the GEO assessment was required of all students, completed during class time/proctored, taken by individual students as closed book, counted as extra credit or toward the course grade, and if a pre-test with the same assessment was administered with feedback from the faculty to individual/groups of students prior to the implementation of the actual GEO assessment pilot to gather GEO data.)

10. Gather the team of faculty evaluators to calibrate assessment practices and scoring,
11. Score the samples,
12. Generate the date report,
13. Analyze the results,
14. Write a report which includes reflections on the results, specific improvements to target improved student learning, revise the rubric and assessment instrument based on the findings, and plan the next GEO assessment pilot.

This GEO plan represents the culmination of a concerted effort by the Subcommittee members and the chair, Sue Warner.

Student Sample:
No GEO pilot conducted during academic year 2010-2011.

Assessment:
No GEO pilot conducted during academic year 2010-2011.

Results:
No GEO pilot conducted during academic year 2010-2011.

Next Steps Based on Results:
The two courses confirmed for implementation of the GEO Pilot Fall 2011 are **EGR102 and COM206.** The GEO Institutional Rubric Task Force chair, Valerie Jensen, will lead the COM206 GEO Pilot. Clark Vangilder, Student Learning Outcomes Assessment (SLOA) Committee member, a GEO Subcommittee Sub-Chair of Science and is currently the chair of the GEO Math/Science Subcommittee, and Engineering faculty, will lead the EGR102 GEO Pilot. This represents greater interdepartmental collaboration and demonstrates a cultural change at Central Arizona College. We are becoming a Learning College which values Student Learning Assessment and using the SLO data results to support and improve teaching and learning.