ILO/GELO Assessment Dialogue

Data collection: Fall 2021

Discussion: Spring 2022

**Representatives**: MATH, BIOL, ENGI/PHYS, EART/ENVI/GEOL/GEOG, CHEM

**ILO/GELO**: Analyze, evaluate, and synthesize information

**Reflection:**

Students demonstrated strengths in verbal communication and questioning each other about observations. Critical thinking in Earth Science and discussions on research in Biology were above average. Entry level math students were good at evaluating, but still challenged by analysis and synthesis. Introductory physics students did well with lecture material and on problems that were similar to samples given. Overall, students can reproduce what is demonstrated.

Because of placement, instructors are spending more time on evaluation. Students are starting with less foundation. Students had difficulty expending information beyond the lecture to further application. When students are not making connections to real life experiences, not recognizing useful knowledge, they are not retaining it. In Physics, Math, and Chemistry, few were carrying understanding past a few weeks. Students seemed to rely too much on lecture, not reading, and not watching videos fully. They needed to be shown math repeatedly. Solving for fractions and very basic math for students in higher level classes proved difficult for students. They had trouble analyzing material for statistics and writing up answers.

Students struggle to understand homework or resist doing work outside of class time. Students exhibited weaknesses in study habits, time management, motivation, and commitment. Many are working too much, with misconceptions about school/work balance. Some were doing other activities while attending class virtually. Students experienced childcare issues and family obligations that interfered with their success.

Suggested action plans:

* Student cohorts within the classroom helps. They motivate each other.
* Connecting math to tangible materials more often.
* Support for cross-discipline demonstrations so students see a variety of applications.
* Workshops or assignments for students about study skills and ways of learning are needed.
* More MESA training courses (Escala).
* More Diversity, Equity, Inclusion discussion opportunities.
* More support for Communities of Practice that target classroom practices.
* Consider requiring a class on being a college student. Students used to get these study skills etc. in development English and Math classes that we cannot require or offer now.
* More training for instructors on engagement. Instructors are getting better with announcements and reminders about due dates, using multiple approaches to reach students, and specific instructions and links to get started.
* Explore peer support models.
* Functional computers in instructor offices in the science building.
* Funding for Math Center embedded tutors.
* Ability to use iPads in the classroom.
* Computer pixies should work in every classroom.
* Supplemental Instruction funding is needed.
* Funding for field trips to help students make real-world connections and field notebooks would support student success.
* The Geology map room is being used for storage. Turn 1841 into a usable lab.
* Geophysical equipment (support for pursuing a NSF grant to purchase).
* Support for area-specific (Exploration Pathway) student orientations.
* Connect students to a specific tutor.
* Encourage faculty to intervene earlier for all students using Early Alert.
* Can we connect Starfish to texting or an app like Remind that works without cell phone number sharing?