Assessment of General Education Learning Outcomes at a Community College

Assessment Institute – October 31st, 2023

Eric Wiesenauer, Casey Armour, Mark Balawender, Carla Murphy

Presentation Learning Outcomes

Describe assessment best practice at Delta College

Summarize results from assessing outcomes

Discuss improvements made at Delta College

Brainstorm solutions to assessment problems
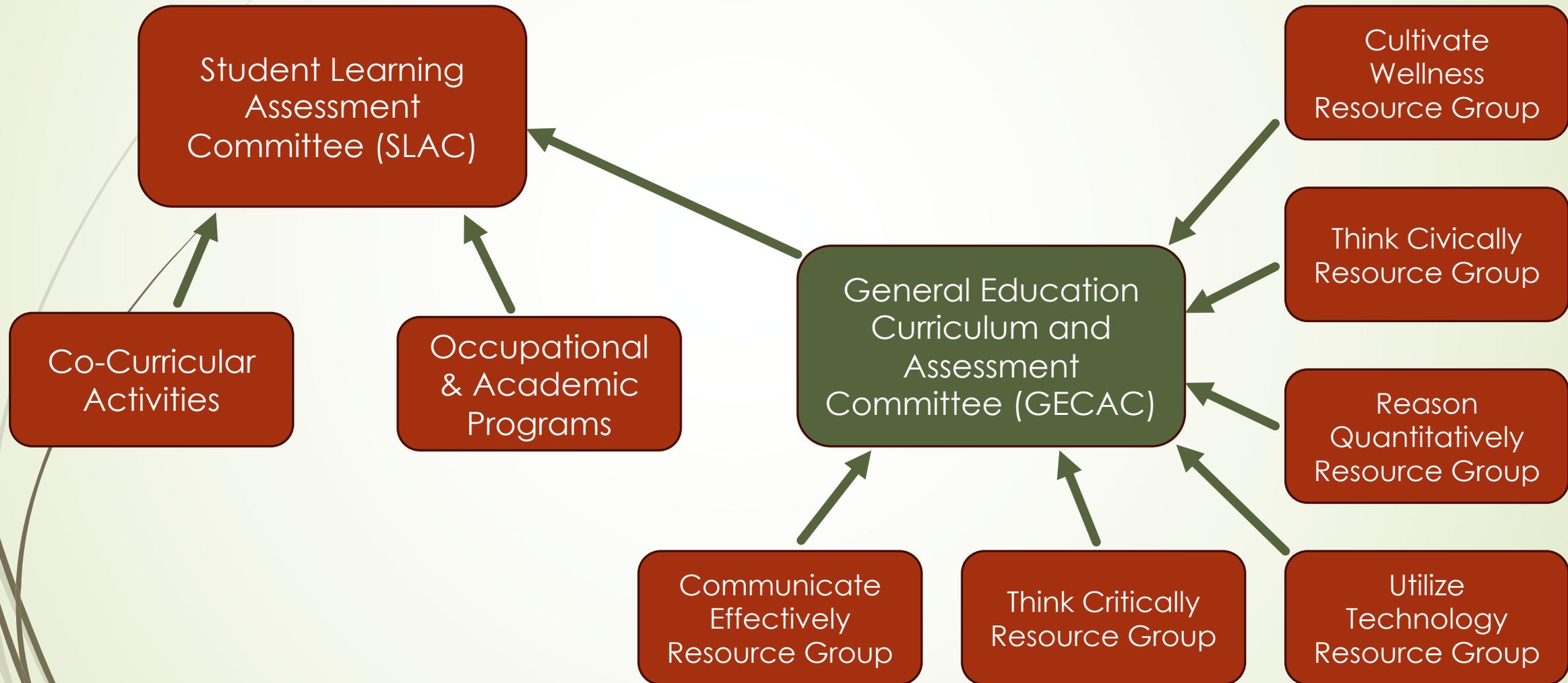
Assessment at Delta College

Overview of Delta College

- Community college in Mid-Michigan serving approximately 7,000 students each semester from primarily Bay, Midland, and Saginaw counties

- Six General Education Learning Outcomes (GELOs), each assessed in courses found in all degrees

- Two faculty led assessment committees:
  - SLAC – Student Learning Assessment Committee (Programs)
  - GECAC – General Education Curriculum and Assessment Committee
    - Faculty resource groups for each GELO

- Assessment Office:
  - Dean of Transfer Programs and Online Learning, SLAC Chair, GECAC Chair, and Administrative Office Professional

General Education Curriculum and Assessment Committee (GECAC)

- Oversees college-wide assessment of the six GELOs

- Representatives from all five academic divisions, counseling, and Associate Dean

- Support from the Assessment Office

- Work in partnership with the resource groups for each GELO

Assessment Problems at Delta College Prior to 2016

- **Too many outcomes**
  - 38 outcomes in 12 categories

- **Assessment timeline too long**

- **Inconsistent scoring**
  - No common rubric

- **Collecting only numerical data**

- **Lack of faculty participation**

What do you think are some best practices for assessment of student learning?

- Number of outcomes
- Timeline for assessment
- Whom to assess
- Collection method
- Type of artifacts
- Type of rubric
- Changes made

Gen Ed Assessment Best Practices

- Have 4 to 8 student learning outcomes

- Assess all outcomes in a 3 to 5-year cycle

- Attempt to assess students near the end of the program

- Collect quantitative and qualitative data

- Use course embedded assignments

- Evaluate student work against a standard rubric

- Make changes to improve student learning and assessment processes = Closing the loop!

How We Do Gen Ed Assessment At Delta

- Reduced to 6 outcomes and assess one outcome per semester (3-year cycle)

- Identify all students that meet assessment criteria
  - Enrolled in classes that have an M (Mastery) for the outcome
  - Having more than 45 credit hours

- Ask faculty to score and provide comments for each student identified using course embedded assignments

- Assessment Office randomly selects a subsample of 150 students to have artifacts sent in for scoring by the Resource Group and GECAC

- Resource Group:
  - Scores the samples of student work and compares with instructor scores for reliability
  - Prepares assessment report for the assessment database
  - Makes recommendations for professional development to improve student learning

General Education Learning Outcomes

Gen Ed Outcome	Description of Outcome
Think Critically	Produce a defensible conclusion or solution using critical or creative thinking.
Communicate Effectively	Communicate effectively in oral, written, or symbolic expression.
Think Civically	Demonstrate an understanding of diverse societies, ranging from local to global, in order to engage effectively in civic life.
Cultivate Wellness	Demonstrate an understanding of wellness principles to promote physical and personal health.
Utilize Technology Effectively	Solve a problem or accomplish a task using technology.
Reason Quantitatively	Use quantitative information or analyze data within context to arrive at meaningful results.

Assessment Rubric and Goals

Level X: Dropped	Level 0: No Evidence	Level 1: Emerging	Level 2: Developing	Level 3: Mastery
Student dropped before submission	Assignment not submitted	Does not meet expectations: has major errors, omissions, or inappropriate expressions	Meets minimal expectations: has minor errors, omissions, or inappropriate expressions	Shows proficiency in demonstrating the outcome

- Cycle 1 (2017-2019): 70% of students will score at a 2 or 3 by their instructors
- Cycle 2 (2020-2022): 80% of students will score at a 2 or 3 by their instructors
- Cycle 3 (2023-2026): Will be discussed at the November GECAC meeting

Assessment Cycles

Cycle 1 (2017-2019)	Cycle 2 (2020-2022)
Winter 2017 – **Think Civically** – **Cultivate Wellness** **Winter 2018** – **Reason Quantitatively** – **Utilize Technology Effectively** **Winter 2019** – **Think Critically** – **Communicate Effectively**	**Winter 2020 – Think Civically (3 yrs)** **Fall 2020 – Cultivate Wellness (3.5 yrs)** **Winter 2021 – Reason Quantitatively (3 yrs)** **Fall 2021 – Utilize Technology (3.5 yrs)** **Winter 2022 – Think Critically (3 yrs)** **Fall 2022 – Communicate Effectively (3.5 yrs)** **Winter 2023 – End of cycle reflection**

Assessment Timeline

Cycle 3 Schedule	Year 1		Year 2		Year 3		Year 4	
	Fall 2023	Winter 2024	Fall 2024	Winter 2025	Fall 2025	Winter 2026	Fall 2026	Winter 2027
Cultivate Wellness	Data Collection	Analysis/ Reporting	Implement Changes			Plan Assessment	Data Collection	Analysis/ Reporting
Think Civically	Plan Assessment	Data Collection	Analysis/ Reporting	Implement Changes			Plan Assessment	Data Collection
Reason Quantitatively		Plan Assessment	Data Collection	Analysis/ Reporting	Implement Changes			Plan Assessment
Utilize Technology Effectively			Plan Assessment	Data Collection	Analysis/ Reporting	Implement Changes		
Think Critically				Plan Assessment	Data Collection	Analysis/ Reporting	Implement Changes	
Communicate Effectively					Plan Assessment	Data Collection	Analysis/ Reporting	Implement Changes

Data & Results Summary

Assessment Artifacts

Collect assignments that faculty are already using in their courses

Assignments vary between classes, sections, and instructors

Score based on assessment rubric, not assignment rubric

General Education Learning Outcome	Activity	Assessment
Reason Quantitatively	**Diet Analysis** (Fitness and Wellness)	Students will collect calorie and nutrient information on all foods consumed for three days. They will determine if their diet is in acceptable ranges and what they can do to improve.
Reason Quantitatively	**Obesity Problem** (College Algebra)	Students determine the best algebraic model to represent obesity data for Americans and then construct that model. They will use their model to estimate values not included in the data set.

Return Rates

Scores Returned vs. Requested

% Scores Returned

Learning Outcome: TCv, CW, UTE, RQ, CE, TCr
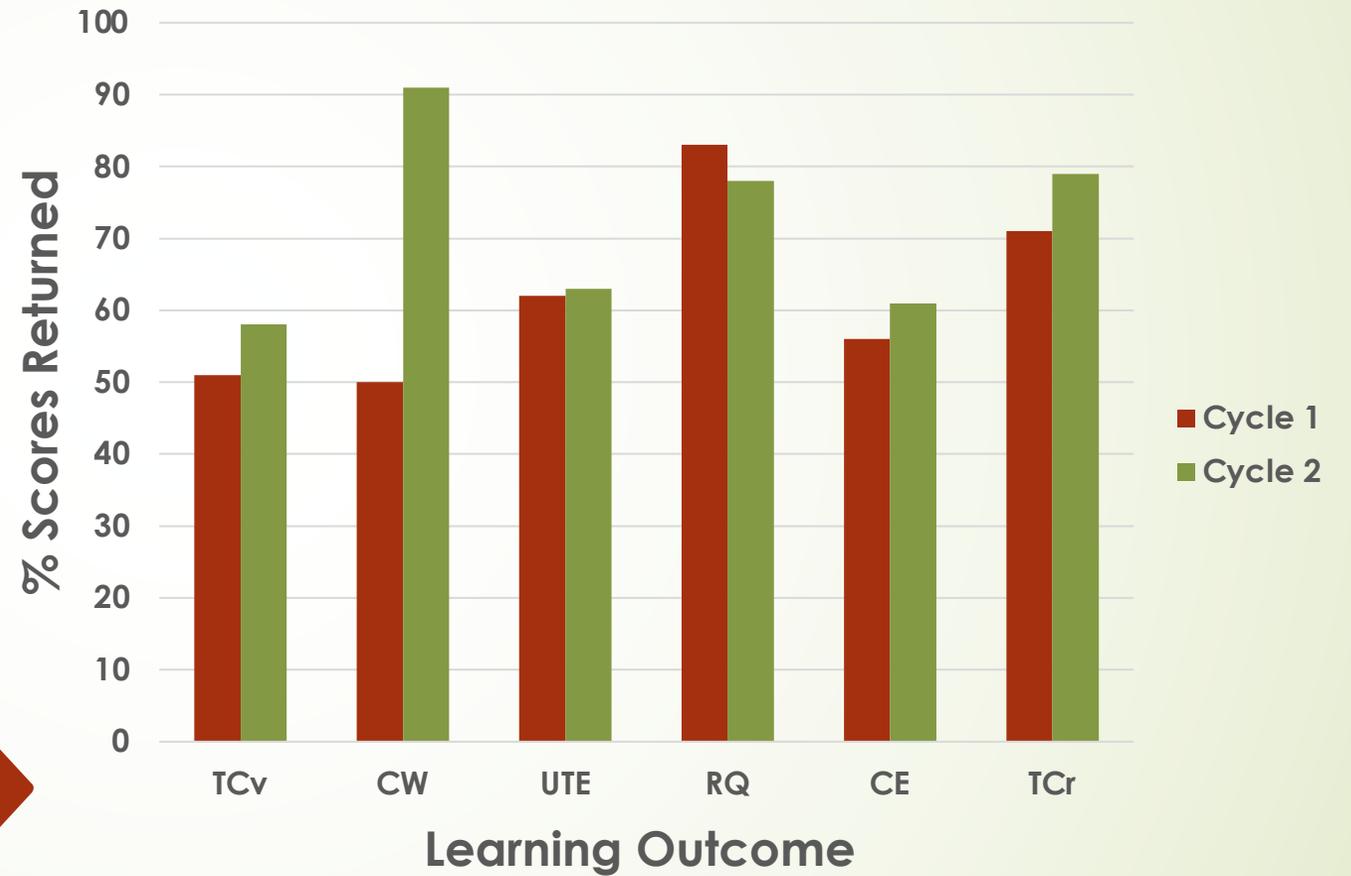
Cycle 1, Cycle 2

Quantitative Data Summary

Outcome	Cycle 1 (70% goal)		Cycle 2 (80% goal)		Total		Change in %
	N	% at 2 or 3	N	% at 2 or 3	N	% at 2 or 3	
Think Civically	217	83%	354	92%	571	89%	+9%
Cultivate Wellness	246	88%	338	88%	584	88%	0%
Utilize Technology	398	78%	712	90%	1110	85%	+12%
Reason Quantitatively	941	76%	654	80%	1595	77%	+4%
Communicate Effectively	580	87%	499	87%	1079	87%	0%
Think Critically	1014	82%	685	80%	1699	81%	-2%

Quantitative Data Summary

Summary of Scores at 2 or 3
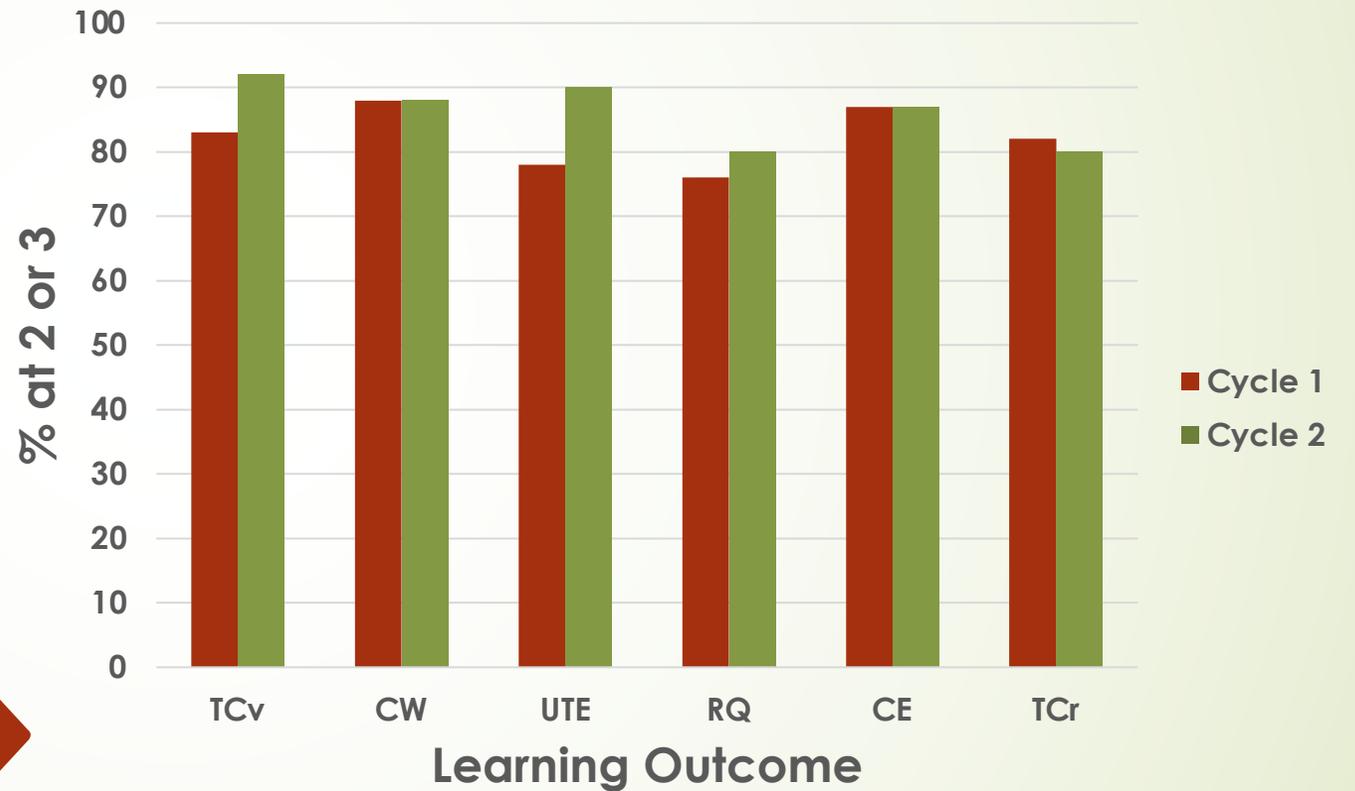
Quantitative Data Results

- In cycle 1 (2017 – 2019), all outcomes met or exceeded the goal of 70% of students scoring at the 2 or 3 level.

- In cycle 2 (2020 – 2022), all outcomes met or exceeded the goal of 80% of students scoring at the 2 or 3 level.

- Over the two cycles, a total of 6,638 scores were received and assessed (3,396 and 3,242).

- Three outcomes showed an increase, two held steady, and one slightly decreased.

Qualitative Comments

- Most comments reflect the student's performance on the outcome.

- Some instructors refer to the student's performance in the class or on the assignment in general.

- Reasons for large differences between instructor and resource group scores:

  - Student cheated or plagiarized.

  - Instructor based the score on overall assignment rather than the outcome.

  - Assignment did not assess the outcome.

Communicate Effectively – Fall 2022

Demographic Breakdown

Demographic	White	Black	Hispanic	Multi	Unknown	Non-Resident	American Asian	Graduate (as of 5/23)	Non-Graduate	Total
n	367	32	42	24	30	1	3	204	295	499
% 2 & 3	89.6%	78.1%	81.0%	79.2%	73.3%	100.0%	100.0%	91.2%	83.7%	86.8%
Significant?	Significant				Significant			Significant	Significant	

Demographic	0-19	20-24	25-29	30-44	45 & OVER	M	F	Pell	No Pell	Total
n	24	215	87	143	30	144	355	204	295	499
% 2 & 3	83.3%	89.3%	88.5%	83.9%	80.0%	85.4%	87.3%	85.3%	87.8%	86.8%
Significant?										

Demographic	AA	AAA	AS	AAS	AFA	AGS	ABS	Total
n	31	19	25	82	4	30	29	220
% 2 & 3	90.3%	89.5%	92.0%	96.3%	75.0%	80.0%	96.6%	91.8%
Significant?						Significant		

Think Critically – Winter 2022

Demographic Breakdown

Demo	White	Black	Hispanic	Multi	Unknown	Non-Resident	American Asian	American Native	Graduate (as of 5/23)	Non-Graduate	Total
n	535	40	50	26	27	2	3	2	368	317	685
% 2 & 3	81.1%	72.5%	78.0%	84.6%	77.8%	100.0%	66.7%	50.0%	85.6%	74.1%	80.3%
Significant?									Significant	Significant	

Demo	0-19	20-24	25-29	30-44	45 & OVER	M	F	Pell	No Pell	Total
n	61	325	103	163	33	226	459	275	410	685
% 2 & 3	82.0%	77.5%	81.6%	82.8%	87.9%	77.9%	81.5%	81.5%	79.5%	80.3%
Significant?										

Demo	AA	AAA	AS	AAS	AFA	AGS	ABS	Total
n	57	26	51	118	14	76	63	405
% 2 & 3	80.7%	92.3%	80.4%	93.2%	85.7%	81.6%	85.7%	86.2%
Significant?								

Demographic Data Results
(Statistical significance based on 2-Proportion Z-Test with $n \geq 5$ and $\alpha = 0.05$)

Communicate Effectively

- Graduates performed significantly better than non-graduates.

- White students performed significantly higher than all other ethnicities while those with unknown ethnicity performed significantly lower.

- Black, multi-ethnic, and unknown ethnic students scored below the 80% goal.

- Associates in General Studies students performed significantly lower than all other graduates.

Think Critically

- Graduates performed significantly better than non-graduates.

- Black, Hispanic, unknown ethnic, non-graduate, 20–24-year-olds, male, and non-Pell students scored below the 80% goal.

Improvements made

Improvements Resulting from Gen Ed Assessment – Closing the Loop!

- Student Learning – Faculty make changes to courses based upon assessment.

- Assessment Process – GECAC is constantly looking for ways to make the process of collecting, analyzing, and reporting data more efficient, consistent, and useful.

- College-Wide Curriculum and Policy – GECAC reviews the transfer degrees (AA, AS, and AGS) on an annual basis (new this year).

- Assessment and curriculum are currently disjoint. Can we bridge the two?

Changes to Improve Student Learning (Data)
-one response per section-

Actions Taken Cycle 2 (No data for Think Civically)	Cultivate Wellness (N=61)	Reason Quant (N=157)	Utilize Tech Effect (N=161)	Think Critically (N=190)	Comm Effect (N=175)
Continue to Monitor	12	48	60	51	69
Change Assignment	2	11	2	6	1
Update Course Content	2	3	3	4	2
Adjust Rubric	0	4	3	5	4
Change Materials Provided	1	0	2	2	0
Update Outcomes	0	0	0	0	1

Changes to Improve Student Learning (Narrative)

- **Introduction to Psychology assesses Think Critically.**
- **One faculty wrote the following:**

  "Not only do I want students to develop a basic understanding of the field of psychology, but I also want to help them develop critical thinking skills. As a result, my assessments in the course have shifted from focusing on content knowledge to application of critical thinking, from multiple choice tests to essays."

- **College Algebra assesses Reason Quantitatively.**
- **One faculty wrote the following:**

  "I now designate one class period to teaching both Linear and Quadratic Regression together, working through examples of each type of regression in class. I have prepared a worksheet with real-world examples of each type of data to supplement the homework in the text. I then give an in-class quiz to the students on this material rather than including it on a larger test."

Brainstorm solutions

Thank You!

- Thank you for attending our session on General Education assessment!

- This work is vital to our accreditation through the Higher Learning Commission.

- For more information, please contact:
  - assessment@delta.edu
  - ericwiesenauer@delta.edu