

General Education—Quantitative Reasoning Improvement Plan Spring 2022

During the 2020-2021 academic year, the Learning Assessment Committee and the General Education–Quantitative Reasoning Work Group assessed the general education outcome “use quantitative analytical skills to interpret and evaluate problems.” While the results of the [Spring 2018 Community College Survey of Student Engagement \(CCSSE\)](#) and the [Harper Follow Up Survey](#) revealed that many students believe that they learned to use quantitative skills to evaluate problems, results of the assessment show a need for improving students’ capabilities with quantitative reasoning in the classroom, including many equity gaps across different demographics of students.

After reviewing feedback gathered in fall 2021, as well as the results of the fall 2021 “Improving General Education Outcomes at Harper” faculty survey, the Work Group developed the following Quantitative Reasoning Improvement Plan.

The Improvement Plan is designed to help faculty members improve quantitative reasoning skills among Harper students through embedded class exercises and other enhancements in pedagogy. In particular, the plan focuses on use of quantitative reasoning concepts across the College, not exclusively in math and science courses. The Improvement Plan is also designed to increase student awareness of quantitative reasoning issues and resources.

The Learning Assessment Committee, General Education-Quantitative Reasoning Work Group, and Outcomes Assessment Office will work jointly to implement this plan throughout the 2022-2023 academic year. These groups will partner with the Academy for Teaching Excellence for faculty development initiatives, as well as other campus stakeholders in an effort to improve students’ quantitative reasoning skills.

A. Faculty Resources

- Collect faculty examples of best practices for teaching quantitative reasoning in the classroom. These examples will help guide faculty on different ways to incorporate this outcome in a variety of courses besides just math and science courses. These examples should include real-world scenarios, to ensure that students understand how this outcome is important and relevant in life.

B. Professional Development

- Develop a quantitative reasoning focus for the 2022-2023 Learning Assessment Community of Practice, with particular emphasis on the scholarship of teaching and learning quantitative reasoning as a skill and disposition.
- Incorporate a professional development opportunity at the 14th Annual Assessment Conference and Share Fair. This may include faculty presenting on best practices and/or discussing ways to reduce equity gaps related to quantitative reasoning.
- Explore the interest and feasibility of offering one or more General Education Courses (GECs) or less formal workshops in 2022-2023. GECs workshops might:
 - Provide guidance on best practices on teaching quantitative reasoning, discuss different types of research

Next Steps: A follow-up General Education assessment of this outcome will be conducted in FY2024.

Questions? Contact Deann Surdo in the Outcomes Assessment Office at dsurdo@harpercollege.edu.