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Ungrading case studies: mastery-based grading and journals/reflections in several math courses

Assessments have always been an important part of course design in higher education and K12 education. Most math courses rely heavily, if not solely, on summative assessments. Students often miss the point of assessments [?] and rank grading as the main purpose of assessments. In this proposal, we will discuss two case studies that offer alternatives to communicate with students about their learning.

The first case study is an undergraduate course which has 22 learning objectives (LO) in total. Throughout the course, each LO is tested at least 3 times, giving students 2nd and 3rd chances to demonstrate their mastery. For each weekly task, as long as a student shows enough effort, they get full credit (1/1). For test questions, they receive Talbert's [?] E/M/R/N score, coupled with comments.

Second case study of ungraded mathematics activities aims building connections and communication. By setting course-level objectives independently of grades and providing a small incentive for completion, students' perception of them is changed. Instead of diagnosing themselves as right or wrong, students focus on making improvements. Such activities also boost learning and reduce anxiety [?]. For this reason, students completed math journals each week or ungraded components of their assignments.

Mastery-based grading promotes growth mindset and offers students space and time to make mistakes, and progress. It is a more equitable form of assessment for students from different socioeconomic, racial, ethnic, or geographic backgrounds.