

Fall 2018
Core Curriculum Assessment Report

of

Values

from the

Mathematics

Core Curricular Area



submitted by

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on behalf of the

Mathematics

Core Area Assessment Committee

Methods

How was student work (artifacts) collected for assessment?

Teachers of College Algebra and QMR were provided with a problem to administer to their students. Our goal in designing/administering this problem was to gain insight on the Education Goals of

Values 1 – LO 2 Understand the duty to be accurate and precise with data.

Values 3 – LO 1 Analyze real world implications and develop mathematical models that aid in the understanding of current global issues.

We did not attempt to assess

Values 1 – LO 1 Take responsibility for completing assignments in an honest and ethical manner, working on their own when required, and acknowledging resources when used.

We feel that Values 1 LO 1 is basically the University's code of conduct for a student enrolled at UALR. We feel it is not an assessment Learning Outcome that should be assessed in Mathematics. Other than giving our students proctored exams (which we do), we feel there is no reasonable way to assess honesty and ethical behavior outside the classroom.

The assessment problem contained 4 multiple choice questions.

Each teacher graded the assignment and completed a data table listing the results of the assessment.

What type of artifacts were collected?

The assessment problem contained 4 multiple choice questions. It was given as an extra credit type problem completed by each student present the day of administration.

Online students completed this assignment in Blackboard.

How were the artifacts sampled for assessment?

Assessment data was collected on ALL artifacts completed.

How were the artifacts scored?

Each instructor scored the artifacts for their students on a scale of 4-0. Once the artifacts were graded, instructors were required to fill out an “assessment data sheet” that would be turned in to Melissa Hardeman. Explicit instructions were given on how the student results on this 4 question multiple choice assignment were to be recorded on the data collection sheet.

How was reliability in scoring determined and ensured?

Since the artifact was made up of 4 multiple choice questions and all teachers used the same grading scheme to award scores of 4-0, there was no issue with scoring reliability.

Reflection

In what areas are students doing well?

Values 1 – LO 2 Understand the duty to be accurate and precise with data.

The overall percentage (all modalities and courses) of students who scored Advanced or Proficient on this part of the assessment problem was 93.3%. If our assessment problem were perfectly designed, then this would be an AWESOME result; however, upon inspection of the assessment problem, there probably should have been more “distractors” included in the answer selection list.

Values 3 – LO 1 Analyze real world implications and develop mathematical models that aid in the understanding of current global issues.

Overall Advanced and Proficient = 64.2%

Concurrent Advanced and Proficient = 78.7%

F2F Advanced and Proficient = 55.3%

Online Advanced and Proficient = 63.9%

College Algebra (UALR) Advanced and Proficient = 58%

QMR Advanced and Proficient = 59%

Concurrent modality had the highest percentage of Advanced and Proficient scores over all other courses and modalities. This is no surprise since concurrent courses usually outperform our students.

Online Modalities of College Algebra (1302) and QMR (1321) performed better than F2F modalities.

1302 online = 63%

1302 F2F = 55%

1321 online = 65%

1321 F2F = 52%

What areas need attention to improve student outcomes?

Clearly, we need to improve our curriculum with respect to mathematical modeling in the real world. Faculty will be informed of these assessment results and encouraged to do more

mathematical modeling demonstrations in class AND to allow students the opportunity to practice mathematical modeling with teacher guidance.

Continuous Improvement

What changes in the curricular area and/or courses will be made to improve student learning?

Since we do a lot of real world problem solving in the QMR course, I was surprised that the percentages were not higher than the College Algebra course. Anyway, plans are to form a committee of College Algebra and QMR teachers who will be in charge of creating a problem bank of mathematical modeling type problems that are appropriate for these freshman level courses. This problem bank will be distributed to all faculty, especially the teaching assistants, to be used as a teaching resource for the course.

What changes in the curricular area and/or courses will be made in the assessment process (i.e. different artifacts, common assignments, different time in the semester to collect artifacts, etc.)?

Carefully craft our assessment problems so the results obtained directly reflect the Education Goal/Objective we wish to assess.

Feedback

What changes are recommended for Core assessment?

Review and update Educational Goals for each curricular area. Review and update courses included in the core. Take out Values 1 LO 1 for mathematics.

Can we take the spring 2019 semester off and restart the assessment process in Fall 2019? :)

JK

Comments

Other comments?

END OF REPORT