

Assessing General Education Outcomes

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Starting about 8 years ago, ACC began thinking of formally assessing our General Education outcomes.

1. Possess sufficient literacy skills in writing, reading, speaking, and listening to communicate effectively above the 12th grade level.
2. Understand numerical data and their implications for daily living.
3. Possess consciousness of our society.
4. Think and analyze at a critical level.
5. Appreciate multi-cultural, multi-ethnic contributions to our country.
6. Understand our technological society.
7. Possess basic skills in the use of computers.

We formed subcommittees to work on each of these.

The challenge in math was to define specific appropriate outcomes that were being met by any of the courses approved as meeting the General Ed requirement. By looking at those from other colleges and discussion among ourselves, we agreed upon four types of outcomes. The math courses approved to meet the General Ed requirement included almost all the college-level math courses except for the higher-level courses which had, as prerequisite, some lower-level course which did meet the General Ed requirements. We had some concerns about whether all of these were met in each of the courses.

1. Identify relevant data (numerical information in mathematical or other contexts) by . .
2. Select or develop models (organized representation of numerical information, e.g., equation, table, graph) appropriate to the problem which represent the data by . . .
3. Obtain and describe results by . . .
4. Draw inferences from data by . . .

More details on the following slides ..

(Even more details about the rubric for grading, etc. on the website for this talk.)

1. Identify relevant data (numerical information in mathematical or other contexts) by
 - a. extracting appropriate data from a problem containing extraneous data
 - and/or
 - b. identifying appropriate data in a word problem.

2. Select or develop models (organized representation of numerical information, e.g., equation, table, graph) appropriate to the problem which represent the data by
 - a. arranging the data into a table or spreadsheet

and / or
 - b. creating pictorial representations (bar graphs, or pie charts, or rectangular coordinate graphs, etc.) with or without technological assistance and / or
 - c. selecting or setting up an equation or formula.

3. Obtain and describe results by

a. obtaining correct mathematical results, with or without technological assistance,

and

b. ascribing correct units and measures to results which may or may not include writing an appropriate sentence interpreting the result.

4. Draw inferences from data by

- a. describing a trend indicated in a chart or graph, and making predictions based on that trend and / or or
- b. describing the important features of data presented in a table or spreadsheet, and making predictions based on that trend and / or
- c. describing the important features of an equation or formula, and making predictions based on those features and / or
- d. making reasonable estimates when given problems involving quantities in and organized or disorganized form and / or
- e. drawing qualitative conclusions about the original situation based on the quantitative results that were obtained.

We did not quite get to the point of collecting papers with student work on them before the charge of the committee was changed to include assessing the core curriculum.

This included, obviously, ensuring that the materials were of an appropriately high level to meet the standards for the particular course as well as meet the requirements for General Education.

Difficulty and confusion ensued.

Should we be assessing math general knowledge in math courses or in other places where students use math, such as in other courses required for a degree?

How will we assess critical thinking?

What should we do about computer literacy? Require every student to take a computer course?

We weren't able to come to clear agreement on the best approach, partly because it wasn't clear what THECB and SACS wanted assessed involving general education and the Core Curriculum, and whether they considered those close enough to the same thing to assess together.

Our conclusion (several years later.) Use the Educational Testing Service's MAPPS test – given to a sample of all our more advanced students (with 45+ hours or so.)

Probably we will also use ICT (Information and Communication Technology) Literacy Assessment.

<http://www.ets.org/>

This removes the assessment from being tied to particular courses, which seems appropriate for General Education requirements.