LEARNING FROM MY ABCs: ASSESSMENTS BASED ON CONTRIBUTIONS FROM STUDENTS

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Motivation: Student Engagement in Assessments

- One way to engage students is to utilize student-generated questions (SGQs) and/or tests (SGTs) in our assessments.
- These are questions that students write before, during, or after engaging in content.
- SGQ/Ts are ideal for quick content review, identifying core concepts from content, and timely feedback before misconceptions can be formed.
- SGQ/Ts promote critical and creating thinking, communication, deeper elaboration of the content, and active participation in assessments.

Question: Are there any limitations or negative consequences on students' learning when using these practices?

ABCs: Assessments Based on Contributions from students

A different way to foster student engagement in assessments is to build assessments based on the contributions from students (i.e., by not only using student-generated questions).

Case studies:

1. STAT 332 (Spring 2023)
2. STAT 202 (Fall 2023)

Case Studies Information

STAT 332 (Spring 2023)

- *Sampling and Experimental Design*
- 147 students
- Typically STAT/MATH majors
- Sole instructor
- ABC:
  - Course Survey Questions, 1%
  - Online Discussion Forum, 3%

STAT 202 (Fall 2023)

- *Introductory Statistics for Scientists*
- 374 students
- Non–STAT/MATH majors
- Sole instructor
- ABC:
  - Survey, 1%
  - Assignment, 6%

STAT 332 ASSESSMENT

1st Case Study

Assessment Process:

1. Students created and submitted course survey questions via Crowdmark.
    - Two survey questions related to the course by reading through the syllabus.
    - Indicate type of questions (e.g., multiple choice, true/false, short answer, etc.) and include solutions.
    - Students were **purposefully not told** the reason behind submitting these questions.
2. Questions from 1. were selected to create a questionnaire via Learn Surveys.
    - Nine questions in total (3 MC, 3 TF, 3 SA).
    - Little to no questions edited.
    - Questions placed in (somewhat) random order in the questionnaire.

Assessment Process:

3. Students asked to fill out questionnaire from 2. and write a short reflective summary critiquing it via Learn Discussions.
   - Questionnaire was not anonymous (names needed for mark).
   - Prompting discussion questions:
     - Is this a good or bad questionnaire?
     - Are the questions clear and concise?
     - Are there any issues with the questionnaire?
     - What change(s) would you make to the questionnaire to improve it? Why?
   - Discussions completed in groups of 10 where students must post first.
   - Discussions graded using a Learn Rubric.

STAT 202 ASSESSMENT

2nd Case Study

Assessment Process:

1. Students answered survey questions via MS Forms.
   - MC/SA questions written by instructor (22 in total).
   - Questions included: height, shoe size, favourite number, coffee drinking habits, favourite genre of movies, anxiety about the course, number of eggs in their fridge, etc.
   - Survey was not anonymous (names needed for mark), but students could skip questions that they did not feel comfortable answering.
   - Students were **purposefully told** the reason behind answering these questions (i.e., that their de-identified responses may be used in future classes/assessments). Option to discuss any concerns with instructor or to remove their data from the dataset.
2. Answers from 1. created the dataset used for their Assignment 1.
   - Content included: bar vs pie chart, summary statistics, histograms, whether a random sample was a "good" representation of the population, correlation, linear regression.

Takeaways

- Less time to create assessments.
  - Assessment preparation depends on receiving student contributions.
- Clear directions and expectations are crucial.
  - Both case studies have multiple components to them that could potentially confuse students.
- Consent is essential.
  - Students need an option to remove their data/questions without consequences.
- Students appreciated critiquing/analyzing their own contributions in their assessments (mentioned anecdotally).
  - Although not mentioned in course perception surveys (either as a positive or a negative).

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What practices do YOU employ in your courses to engage students with their assessments?