A Proposal for Valuing Student Grasp and Knowledge of "Must Know" (essential content) versus "Nice to Know" (non-essential content) Embedded in a Pre-clinical Basic Science Examination

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BACKGROUND

Most courses include content the faculty would consider as "Must Know" (essential) information embedded within other topics and material generally considered to be "Nice to Know" (important but not essential). These distinctions are typically reflected in specific course objectives.

We propose here a method for assigning greater value to exam questions dealing with "Must Know" content on a multiple choice (MCQ) examination when determining whether a student receives a passing or failing score on an examination.

METHODS

Begin by developing a balanced (blueprinted), objective driven examination comprised of 50 MCQ-type questions, 10 of which focus directly on information judged to be essential, meaning that all students are expected to understand this content and be able to answer these questions correctly.
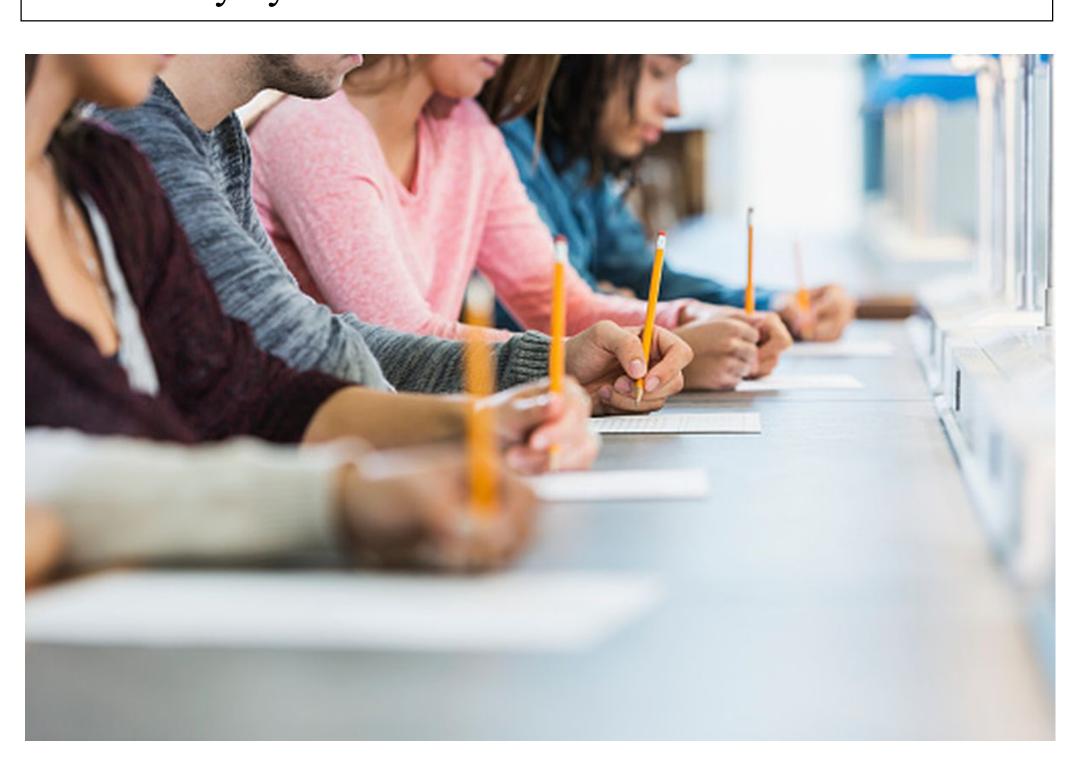
Next, write 40 additional questions that address stated course objectives but deal with information judged to be important but not absolutely essential in determining student success or failure. Scatter the 10 "Must Know" questions among the 40 "Nice to Know" questions on the examination.

SCORING & GRADING

Determine performance on the 10 "Must Know" questions. Students who answer all 10 questions correctly are considered to have earned a passing score and are assigned a baseline score of 70%. Next determine performance on the 40 "Nice to Know" questions as a percentage of the remaining 30% and add this number to the earned 70% points from the "Must Know" questions.

For example, student A answered all 10 "Must Know" questions correctly and only 20/40 "Nice to Know" questions. This student earns a grade of 85%, (70% plus 1/2 of 30% or 15%). Students who fail to answer all 10 "Must Know" questions correctly fail the examination and do not have their performance on the "Nice to Know" questions scored. These students are provided with feedback regarding their performance and are given an opportunity to remediate their deficiency by some mechanism at a later date.

DISCUSSION

Questions included on an examination are understood to represent a sample of the material students are expected to be familiar with for that particular exam. The more questions there are on an exam the greater the sample will reflect the whole of the material taught. Among the chief responsibilities of the faculty developing the exam are the need to ensure that the exam tasks reflect the stated learning objectives of the course and that the questions address a fair cross section of the testable material. An additional goal might be to identify on the exam content that all students "Must Know" because of its particular and undisputed importance. Distinct from that content, other questions, addressed in the objectives, must be included that might be of lesser importance. Correct responses on all the questions dealing with the material represented by the "Must Know" questions can be used to determine an acceptable from an unacceptable level of knowledge, while familiarity with "Nice to Know" content might be used assign different passing grades (i.e., A, B, C or D).

The approach described here fulfils both purposes. Identifying a subset of questions as representing "Must Know" content and requiring students to answer all those questions correctly in order to receive a passing score, indicates that the content reflected in these questions is of essential importance in the context of the course. The course objectives for this content should be highlighted in the course syllabus as representing "Must Know" material and the method for valuing these questions fully explained. Students who answer all of these questions correctly earn a passing score. Performance on the remaining questions, considered as "Nice to Know" content can then be used as a basis for adding percentage points to the 70% already earned to arrive at a total score for the exam. Clearly, the questions designated as "Must Know" will be judged to be "High Stakes" questions by the students, and the content of the questions will receive special attention when preparing for the exam.

CONCLUSION

When using this approach care must be taken to ensure that the topics defined as "Must Know" topics are indeed "Must Know". The distinction between these and "Nice to Know" must be made clear to the learners at the beginning of the course. Care must also be taken to ensure that the number of questions used is not too small or too large to unfairly increase the likelihood of students failing the examination.

While this approach may not be appropriate for all types of examinations, this approach does allow the faculty to lay emphasis on material that is especially important in a particular discipline.