Determining the pass mark and making retrospective changes: Guidelines from the Examination Board

One of the Examination Board's statutory duties is to check the quality of examinations and assessment. The degree programme is also assessed on this as part of its accreditation. The guidelines can be found in VU Amsterdam's Quality Assurance Handbook (https://vunet.login.vu.nl/_layouts/SharePoint.Tridion.WebParts/download.aspx?cid=tcm%3a164-405671-16), and in the faculty's Quality Assurance Plan for Assessment. *https://vunet.login.vu.nl/actual/pages/News%2fnewsdetail.aspx?cid=tcm%3a164-302894-16*
All examinations are expected to be reliable and valid, to be peer-reviewed and, in relation to open questions, to have a peer-reviewed answer model.

The documents mentioned above also address the scoring of examinations, but the question of what to do if the pass mark that has been set turns out to produce an unexpectedly high or low pass rate is not discussed. For this reason, the Examination Board has drawn up additional guidelines for the action to be taken in such situations.

1. When and how do you determine the pass mark (boundary between pass/fail)?
    a. Set the pass mark *in advance*. It is customary to do this on the basis of the rule that students should demonstrate that they have acquired 55% of the material to achieve a 5.5 grade. This applies both to examinations with open questions and to examinations based on multiple-choice questions. (In the latter case, a correction is applied due to the possibility of guessing the correct answers.) There are also other methods of setting a pass mark, which may also be valid in certain cases. However, an examiner who chooses to adopt a different method should be able to account for that decision.

2. Should a correction be applied for the possibility of guessing in multiple-choice tests?
    a. Yes. The pass mark is corrected to account for the possibility of guessing the correct answers, by adding 55% to the number of questions which may on average have been guessed correctly. This is expressed in the following formula:
    ((n/a) + .55 (n-(n/a))), whereby a is the number of alternatives given and n is the number of questions.
    This document includes an Excel file with which the pass mark can be easily determined with different numbers of questions and different numbers of alternative answers.

3. What to do (and what not to do) if the results show that an unexpectedly high proportion of students have passed the exam?
    a. Do *not* adjust the scoring in order to obtain an acceptable pass rate without an additional analysis of the examination.
    b. Check whether misconduct or foul play could have been involved. Could (some) students have seen the questions
    before the test?
    c. Were example papers used in error?
    d. Did the examination include questions to which students may have known the answers for some other reason?
    e. Were (some) questions too easy in retrospect, because they could also have been answered correctly by someone without the relevant knowledge of the material? Always check the questions with high p-values at this point.If necessary, remove the relevant

question from the examination and perform another analysis. Also remove the question from the pool of examination questions. A very high p-value does not necessarily mean that the question was poor. It is true that such questions are not particularly useful in tests, but they can be useful in determining basic knowledge.

f. If there are suspicions of misconduct or foul play, the use of example questions or other questions that the students would have known for other reasons,
(see points b to d), contact the Examination Board.

4. What should you do (and not do) if the results show that an unexpectedly high proportion of students have passed the exam?
   a. Do *not* adjust the scoring in order to obtain an acceptable pass rate without an additional analysis of the examination.
   b. Do *not* simply remove the poorly designed (low p-value) questions, especially if they relate important aspects of the material and differentiate between students with higher and lower marks (good remaining-item correlation).
   c. Check whether the answer key was correct. In particular, check items with a low p-value and/or
   a negative item-rest correlation. Correct the key if necessary and carry out a re-analysis.
   d. Check whether some items included a distractor that in retrospect should also be counted as correct.
   In particular, check items with a low or negative remaining-item correlation. If necessary, reclassify more than one alternative as correct for the relevant item and carry out a re-analysis.
   e. Check whether some items were based on knowledge that was not part of the material to be examined.
   In particular, check items with a low p-value and a low remaining-item correlation. Remove the item if necessary and carry out a re-analysis.
   f. Check whether some items could not have reasonably been answered correctly, for example because the intended correct answer was not (completely) correct, or because the distractors were actually no less correct than the intended correct answer, or because the material was not taught adequately. In particular, check items with a low p-value and a low remaining-item correlation. Remove the item if necessary and carry out a re-analysis.
   g. Listen to feedback on the examination from students. They may be able to help you identify one or more of the points outlined above.
   h. Check whether the teaching may have been inadequate (on certain points), and draw lessons from this for the next time.