

13 Three-Stage MCQ Quiz For First Years

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Full Title: Three-stage MCQ quiz for first years (using moodle & either Zoom or IT room)

Summary of Teaching & Learning Context

Subject domain - BSc Nutrition & Health Science & BSc Physical Activity & Health Science (Year 1) (n= ~60)

Brief rationale for why you use this learning approach

Previously delivered as summative assessment in paper format – students did not get their assessment results for a number of weeks which was unsatisfactory. Introduced a two-stage “practice test” online to improve test scores and to provide immediate marks and feedback in the form of correct answers through Moodle. Then further developed a three-stage assessment so students rerun the test again after collaborative work with the group.

Brief rationale for why you use this learning approach

Forms part of summative assessment of a 5 credit module (Sem 1)

Implementing the Strategy

Steps you take to organise it and the process involved

Activity can be delivered as either summative or formative assessment; encompassing peer-learning and team work. The activity can be carried out either online using a VLE platform (enabled with breakout rooms) or as an in-person activity (students must have access to VLE to access quiz).

Stage 1

Students complete an MCQ quiz (individually) provided through VLE. In order that students do not collaborate at this stage, the order of presentation of the quiz questions (and multiple choice answers to each question) are shuffled so effectively, that each student is completing a different quiz. This can be done in a variety of settings (IT room or online using Zoom to facilitate sharing the quiz password on quiz day).

Stage 2

Students are randomly allocated to groups (of 3); (in-person or online). The group complete the same quiz again; also provided through the VLE. This time the quiz questions and answers revealed to everyone are in the same order, to facilitate collaboration.

Stage 3

Students repeat stage 1 quiz (individually) provided through VLE. This time questions and answers will be shuffled again so they do not resemble the stage 1 quiz.

To avoid students collaborating, the order of presentation of the quiz questions (and answers) are shuffled for the third attempt.

Practical hints or advice here for colleagues about organising the learning strategy

ALL 3 quizzes are timed; with stage 2 having slightly longer time allowed to facilitate discussion and debate about the quiz answers.

Your Observations/Reflections

The overall impact on student engagement: As a summative assessment, it is very effective as it incorporates assessment as learning. The questions can be adjusted to the level of complexity required.

Benefits: (for students)

- Students are motivated to prepare because (i) they need to contribute to the team and (ii) Stage 1 is worth a large proportion of marks
- Students do not get to choose the group they are in
- Bonus points are given to the group who achieve the highest improved mark (top 3 improvers receive a bonus % mark to encourage collaboration)
- Students learn from others in this 3- stage activity whereby they work alone (stages 1 & 3) and then complete the same task with a group (stage 2)

Student reaction to the learning strategy

To assess the effectiveness of this approach, quiz scores are compared between stages 1 and 2. In my experience, students' scores generally increase between Stage 1 & 2. To assess individual student understanding, a stage 3 is added such that stage 1 is repeated again, by each student individually. This tests what they have learned from the group work.

Change in scores between stage 1 and 3 indicates individual improvement; final student scores are weighted as follows so that Stage 1 is still allocated a significant proportion of marks (to motivate preparation in advance of assessment day).

	Stage 1	Stage 2	Stage 3
% of total marks	65%	15% (weighted by improvement of each student from stage 1 to 2)	20%

Any obstacles/challenges experienced

When conducted as a formative assessment, the challenge is to get students to attend.

Advice for overcoming some of the challenges

- Explanation to students that formative assessment will assist towards summative assessment.
- The moodle quiz function can be enabled to provide correct answers immediately after the final Stage 3 quiz and students will be provided with Stage 3 mark immediately.
- An explanation of the reason underpinning the "correct" and "incorrect" answers can be integrated into the moodle quiz.

Benefits (for staff)

- Moodle quiz function is very effective method of delivering an MCQ quiz and marks are automatically collated, so feedback to students can be provided more quickly than paper quiz. Final marks are calculated automatically.
- Ultimately, the final mark is significantly weighted by the individual score achieved at stage 1.

The screenshot shows a Moodle course page for 'AL_SNUTR_8_1 - NUTR 06002 - 18312 - L01'. The page features a sidebar with navigation options like Participants, Badges, Competencies, Grades, and General. The main content area displays a list of activities:

- A "MOCK" exam on Zoom from 11:00 - 12:15 on Friday, 26th Nov. A note states: "To participate in this 'Mock' exam effectively, you will need to be able to have access to both Zoom and moodle at the same time (this is possible with a laptop). If you only have a phone and NO laptop, this will be possible but a bit awkward....."
- A survey titled "Now that we are near the completion of the module please let us know what you thought of it?". It notes "Responses are anonymous".
- A link to a Zoom classroom: "Click HERE for the link to the Zoom classroom". A note says: "You should use your AIT email address to set up a Zoom account. The password for the quiz will be provided in the Zoom class".
- Two quizzes: "QUIZ 1 (by yourself)" and "QUIZ 2 (with a group)". Both are marked as "Hidden from students". A note for QUIZ 1 says: "You have 25 minutes to complete this quiz."