Practical examples of using different levels of Bloom’s taxonomy on a sample of multiple choice questions chosen from biomechanics & Kinesiology exams

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Abstract: Multiple choice questions (MCQs) exams are considered the gold standard to assess the knowledge acquisition; however, there is escalating debate regarding the effectiveness of using MCQs to test higher levels of thinking like analysis, evaluation and synthesis. Academics need to have a percentage of questions that covers all levels and dimensions. In addition, using the action verbs belongs to every level according to new Bloom’s taxonomy will help in designing robust exams. The objectives are to 1) clarify the difference between old and new Bloom’s taxonomy to promote using higher level of thinking by academics; 2) clarify the limitations associated with using MCQs exams as classroom assessment techniques; and 3) share some practical examples of MCQs with increasing cognitive complexity, used within the biomechanics and kinesiology course. The methodology emphasized on reviewing literature belongs to old and new Bloom’s taxonomy in addition to the limitations inherited to using MCQs for testing academic achievements. Also, discussing number of questions that were already used within the biomechanics and kinesiology course taught at undergraduate programme. It can be concluded that practical examples of MCQs from biomechanics and kinesiology courses can be used as a framework for designing MCQs exams.

Keywords: Test blueprinting, critical thinking, reasoning, competence, content analysis.


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