

QUESTIONS VETTING AND ITS EFFECTS ON EXAMINATION
SCORES, PASS-FAIL OUTCOME, COGNITIVE LEVELS, ITEM
DIFFICULTY AND DISCRIMINATION INDICES, AMONG 3RD
YEAR MEDICAL STUDENTS, SCHOOL OF MEDICAL
SCIENCES, UNIVERSITI SAINS MALAYSIA.

By

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ABSTRACT

QUESTIONS VETTING AND ITS EFFECTS ON EXAMINATION SCORES, PASS-FAIL OUTCOME, COGNITIVE LEVELS, ITEM DIFFICULTY AND DISCRIMINATION INDICES, AMONG 3RD YEAR MEDICAL STUDENTS, SCHOOL OF MEDICAL SCIENCES, UNIVERSITI SAINS MALAYSIA.

Introduction: Question vetting is considered an important process to ensure validity, reliability, and other quality indicators of assessment tools. Faculty members invest substantial amount of time and effort into the question vetting process. However, there is lack of scientific evidence showing its effectiveness and to which level the vetting process must be undertaken.

Objectives: This study aimed to provide scientific evidence regarding the effects of question vetting process on student performance by looking at certain parameters which were examination scores, pass-fail outcomes, difficulty and discrimination indices, and cognitive levels between vetted and non-vetted questions. Eventually, to come up with practical recommendations on the question vetting process based on the results obtained.

Methodology: A parallel randomized control trial was conducted on the third year medical students in School of Medical Sciences (SMS), Universiti Sains Malaysia (USM). They were divided into two equal groups (i.e. control and experimental). A mock examination was used twice (time I and time II). At time I, non-vetted questions were administered to both study groups (i.e. experimental and control) as a baseline measurement. At time II, vetted questions were administered to the experimental group, while the same non-vetted questions were administered to the control group.

Results: Out of 203 students, 160 students (78.8%) participated in the 1st mock examination (Time I). Out of 160 students, 129 (80.6%) participated in the 2nd mock examination (Time II). Data from the 129 students were selected for analysis in which 65 students (50.4%) were in the control group and 64 students (49.6%) were in the experimental group. Statistical analysis showed that there were no significant differences ($p > 0.05$) of mean examination scores, pass-fail outcomes, difficulty and discrimination indices between or within the control and experimental groups at both mock examinations. Similarly, perception of students in both study groups was not significantly different.

Conclusion: This study suggested that the questions vetting process was not associated with examination performance, psychometric properties of questions as well as students' perception regarding the questions regardless of the types of assessment tool. Despite of these discouraging findings, we believe that the question vetting process is still an important activity to ensure test items are developed to the highest quality and standard. Further studies need to be done to clarify the findings of our study.