

Allowing Students to Retain MCQ tests as part of remediations: does it affect item performance on subsequent test administrations?

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Abstract

Purpose:

The purpose was to examine the effect on test bank integrity of allowing students to retain multiple choice question (MCQ) examinations to complete remediations.

Methods:

MCQ items from 6 end-of-unit examinations utilized in the didactic curriculum for the Chatham University P.A. class of 2005 (N=43) were categorized as either “old” or “new.” “Old” items were those utilized during the previous year. “New” items were unique or substantively changed from the previous year. Scores on the old vs. new items were analyzed utilizing a one-sided paired t-test for positive differences (better performance on old items than on new items). Cuzick’s test for trend was utilized to determine if differences in performance between old and new items increased as students progressed from Unit 1 to Unit 6.

Results:

Significant differences were found between old and new questions on Units 1, 5, and 6 MCQ examinations ($p = 0.000, 0.029, \text{ and } 0.017$, respectively). Cuzick’s test for trend was significant ($p = 0.017$), indicating that the difference in performance on old vs. new questions increased over the 6 Units.

Conclusions:

On 3 of the 6 end of unit examinations, students did better on old questions than new questions. One possible explanation is that some students obtained previous examinations from upperclassmen. Another is that the new questions were more difficult than the old questions. One unusual finding is that the difference in performance on old and new items on the Unit 1 exam was similar to those on the Units 5 and 6 exams. Units 2, 3 and 4 show no significant differences. If the differences are the result of cheating, it does not appear to occur throughout all units. When re-using test items, it is important to monitor performance on old vs. new items to look for trends which might indicate cheating.

Questions for Discussion

- **Effect of allowing students access to MCQ tests**
- **Role of Pass/Fail in motivation to cheat**
- **Remediation scores, rather than test scores, as grading criteria**
- **Effect of Group Study in PA Education**
- **Is cheating ubiquitous?**