

Distractor Efficacy, Difficulty and Discrimination Index of MCQ in Anatomy Formative Assessment: A Descriptive Analysis

Pushpalatha K¹, Sunil Kumar D², Manjunatha B³, Deepa Bhat⁴

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Abstract

Background: Anatomy is the foundation stone of medical education, and assessing anatomy competency is essential. Assessment tools should fulfill objectivity, reliability, validity, and test higher cognitive skills. Assessment is a very significant component of education. To correctly judge the knowledge and skill of learners, assessment should be valid and should judge the appropriate levels of cognition. A large portion of the curriculum is assessed in a short period of time, requiring less effort from the student. However, it takes a lot of effort and time for the examiner to make high quality MCQs. Properly constructed multiple-choice questions assess higher-order cognitive processing of Bloom's taxonomy, such as interpretation, synthesis, and application of knowledge, instead of just testing recall of isolated facts

Methods: Hundred MCQ's from internal examinations of anatomy papers were analyzed for difficulty index, discrimination index (DI), and distractor efficiency (DE).

Results: In the present study, out of 100 MCQs, 19 were difficult, 60 were acceptable, and 21 were easy. 25 items did not discriminate against high achievers versus low achievers, 37 were acceptable, and 38 were highly discriminatory. There was a low positive correlation between the Difficulty Index and the Discrimination Index in tests two and three. However, there was a negligible correlation in tests one, four, and five.

Conclusion: Item analysis of the MCQs performed after the assessment provides insight into test item reliability and validity. In addition, it indicates how difficult or easy the questions were.

Keywords: Thermal burns; Feracrylum.

Author's Affiliation: ¹Professor, Department of Anatomy, ²Professor & Head, Department of Community Medicine, ³Professor, Department of Forensic Medicine, JSS Medical College, JSSAHER, Mysuru, Karnataka 570015, India.

Corresponding Author: Pushpalatha K, Professor, Department of Anatomy, JSS Medical College, JSSAHER, Mysuru, Karnataka 570015, India.

E-mail: pushpalathak@jssuni.edu.in

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INTRODUCTION

Anatomy is the foundation of the medical sciences, and students need to attain core anatomical competencies for a strong basis for clinical correlation and professional practice.¹ Assessment is an essential component of teaching and learning. It is imperative to assess competence attained, so understanding the subject is a vital step towards performing and mastering the