Computerized Adaptive Testing

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The purpose of educational testing is to identify the ability level of students. The most traditional and popular testing model is a linear test, in which all students are presented with the same fixed set of items. In linear tests, there exists a risk that some students get bored by easy questions, while other students get stressed by questions that are too difficult for them. The Computerized Adaptive Testing (CAT) is a computerized testing model that has an added advantage of psychometrics: after administration of each item, an estimate of student ability is updated, based on this estimate, the next most appropriate item is presented. As a result, the CAT can often estimate ability with the same precision using a lower number of items when compared to a linear test.