

DATA TYPE APPLICATIONS

Type Of Data	Description	Application for Test Item Improvements	Example
<p>Difficulty Index-Item Analysis</p> <p><i>Measures the proportion of students who answered a question correctly.</i></p>	<p>High values (close to 1) suggest an easy question; low values (close to 0) suggest a difficult one.</p>	<p>Adjust the difficulty of overly easy or challenging questions. Based on the learning objectives, revise questions to match the intended difficulty level of the objectives.</p>	<p>If 90% of students correctly answered a question intended to be challenging, consider rewriting the question or increasing its complexity by adding more nuanced answer choices.</p>
<p>Discrimination Index-Item Analysis</p> <p><i>Measures the proportion of students who answered a question correctly.</i></p>	<p>Values of 0.40 and above indicate very good discrimination, 0.30-0.39 indicate good discrimination, 0.20-0.29 indicate fair discrimination, and below 0.20 indicate poor discrimination.</p>	<p>Revise or remove questions with low discrimination values to ensure they accurately assess the intended knowledge or skills.</p>	<p>A question with a discrimination index of 0.1 poorly distinguishes between students who understand the material and those who do not. Revising the question for clarity or alignment with learning objectives could improve its effectiveness.</p>
<p>Average Scores and Score Distribution</p> <p><i>Provides the overall average scores for the quiz and how scores are spread across students.</i></p>	<p>A tight spread with high scores might indicate the quiz is too easy.</p>	<p>Balance the quiz by varying question types and difficulties to better differentiate student understanding.</p>	<p>If most students score above 85%, consider adding questions that require higher-order thinking skills, such as application or analysis, to ensure the quiz adequately challenges all students.</p>
<p>Time Spent on Questions</p> <p><i>Shows the average time students spend on each question.</i></p>	<p>Questions with significantly higher times might be confusing or overly complex.</p>	<p>Revisit questions that take longer than expected to answer. Simplify wording, provide additional context, or adjust difficulty to match learning goals.</p>	<p>If students spend an average of 3 minutes on a single multiple-choice question while most others take 30 seconds, it could indicate a problem with clarity or relevance. Simplify the question or break it into two simpler questions.</p>
<p>Attempts And Completion Rates</p> <p><i>Tracks how many times students attempt the quiz and their completion rates.</i></p>	<p>Multiple attempts with slight improvement might indicate unclear questions or content gaps.</p>	<p>Provide more formative feedback or revise questions to better align with instructional content. Consider allowing students to review incorrect answers with explanations to promote understanding.</p>	<p>If 30% of students require multiple attempts and show slight improvement, consider revising the quiz to include hints, additional resources, or detailed feedback after each attempt to enhance learning and understanding.</p>