

How to Use Item Analysis

Item analysis provides statistics on overall test performance and individual test questions. This data helps you recognize questions that might be poor discriminators of student performance. You can use this information to improve questions for future test administrations or to adjust credit on current attempts.

Roles with grading privileges (such as instructors, graders, and teaching assistants) access item analysis in three locations within the assessment workflow. It is available in the contextual menu for a:

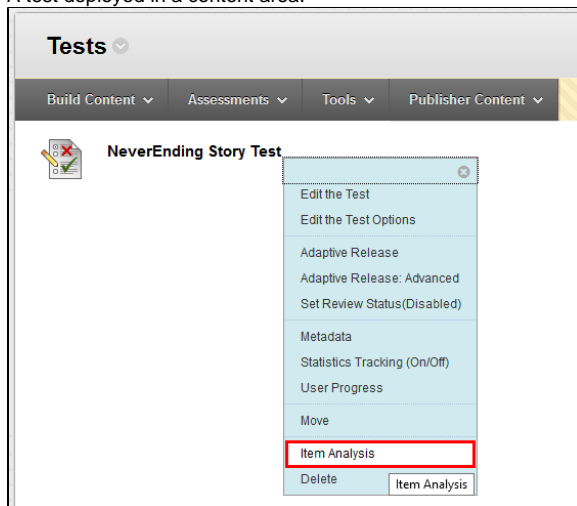
- Test deployed in a content area.
- Deployed test listed on the Tests page.
- Grade Center column.

For best results, run item analyses on single-attempt tests after all attempts have been submitted and all manually graded questions are scored. Interpret the item analysis data carefully and with the awareness that the statistics are influenced by the number of test attempts, the type of students taking the test, and chance errors.

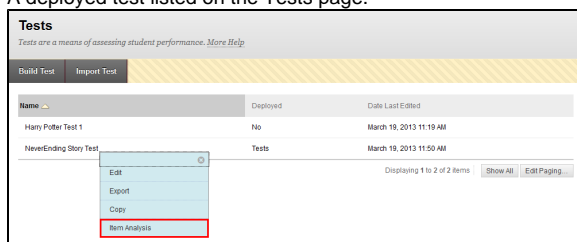
Step-by-step guide

You can run item analyses on tests that include single or multiple attempts, question sets, random blocks, auto-graded question types, and questions that need manual grading. For tests with manually graded questions that have not yet been assigned scores, statistics are generated only for the scored questions. After you manually grade questions, run the item analysis again. Statistics for the manually graded questions are generated and the test summary statistics are updated.

1. Go to one of the following locations to access item analysis:
 - A test deployed in a content area.



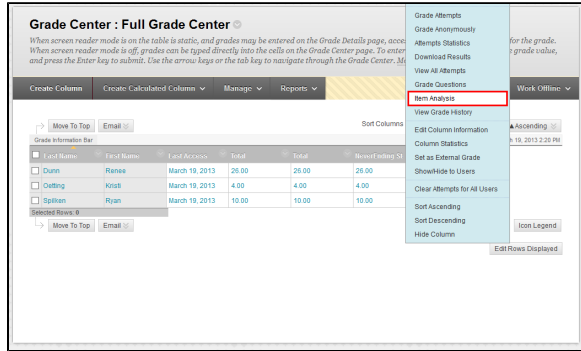
- A deployed test listed on the Tests page.



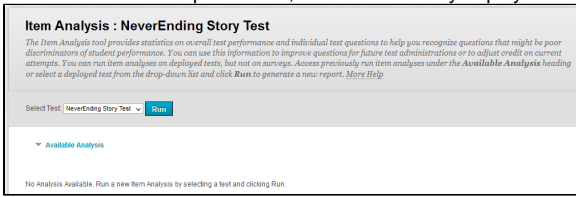
Related articles:

- [How to Self-Enroll in the Graduate College Thesis Course](#)
- [How to Work with the Course Menu](#)
- [How to Use the Class Dashboard to Request Blackboard Courses](#)
- [How to Create a Grade Center Column](#)
- [How to Download and Install the Mediasite Desktop Recorder](#)

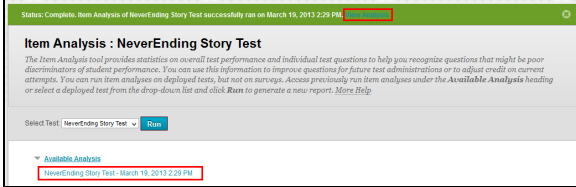
- A Grade Center column for a test.



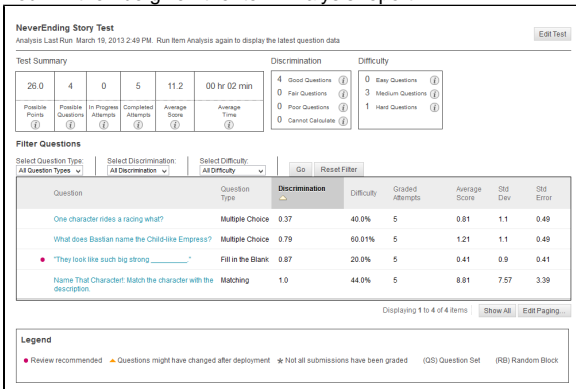
2. Access the test's contextual menu.
3. Select **Item Analysis**.
4. In the Select Test drop-down list, select a test. Only deployed tests are listed.



5. Click **Run**.
6. View the item analysis by clicking the new report's link under the Available Analysis heading or by clicking **View Analysis** in the status receipt at the top of the page.



7. You will then be given the Item Analysis report



8. **Edit Test** provides access to the Test Canvas.

The screenshot shows the 'NeverEnding Story Test' interface. At the top right, there is an 'Edit Test' button highlighted with a red box. Below the title, there is a 'Test Summary' section with a table of statistics and a 'Filter Questions' section with a table of question details.

Possible Points	Possible Questions	In Progress Attempts	Completed Attempts	Average Score	Average Time
26.0	4	0	5	11.2	00 hr 02 min

Question	Question Type	Discrimination	Difficulty	Graded Attempts	Average Score	Std Dev	Std Error
One character rides a racing what?	Multiple Choice	0.37	40.0%	5	0.81	1.1	0.49
What does Bastian name the Child-like Empress?	Multiple Choice	0.79	60.01%	5	1.21	1.1	0.49
* They look like such big strong _____.	Fill in the Blank	0.87	20.0%	5	0.41	0.9	0.41
Name That Character! Match the character with the description.	Matching	1.0	44.0%	5	8.81	7.57	3.39

9. The **Test Summary** provides statistics on the test, including:

The screenshot shows the 'NeverEnding Story Test' interface. The 'Test Summary' section is highlighted with a red box. It contains a table of statistics and a 'Filter Questions' section with a table of question details.

Possible Points	Possible Questions	In Progress Attempts	Completed Attempts	Average Score	Average Time
26.0	4	0	5	11.2	00 hr 02 min

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- **Possible Points:** The total number of points for the test.
- **Possible Questions:** The total number of questions in the test.
- **In Progress Attempts:** The number of students currently taking the test that have not yet submitted it.
- **Completed Attempts:** The number of submitted tests.
- **Average Score:** Scores denoted with an * indicate that some attempts are not graded and that the average score might change after all attempts are graded. The score displayed here is the average score reported for the test in the Grade Center.
- **Average Time:** The average completion time for all submitted attempts.
- **Discrimination:** This area shows the number of questions that fall into the Good (greater than 0.3), Fair (between 0.1 and 0.3), and Poor (less than 0.1) categories. A discrimination value is listed as Cannot Calculate when the question's difficulty is 100% or when all students receive the same score on a question. Questions with discrimination values in the Good and Fair categories are better at differentiating between students with higher and lower levels of knowledge. Questions in the Poor category are recommended for review.

The screenshot shows the 'NeverEnding Story Test' interface. The 'Discrimination' column in the 'Filter Questions' table is highlighted with a red box. The table shows the discrimination values for each question.

Question	Question Type	Discrimination	Difficulty	Graded Attempts	Average Score	Std Dev	Std Error
One character rides a racing what?	Multiple Choice	0.37	40.0%	5	0.81	1.1	0.49
What does Bastian name the Child-like Empress?	Multiple Choice	0.79	60.01%	5	1.21	1.1	0.49
* They look like such big strong _____.	Fill in the Blank	0.87	20.0%	5	0.41	0.9	0.41
Name That Character! Match the character with the description.	Matching	1.0	44.0%	5	8.81	7.57	3.39

- **Difficulty:** This area shows the number of questions that fall into the Easy (greater than 80%), Medium (between 30% and 80%) and Hard (less than 30%) categories. Difficulty is the percentage of students who answered the question correctly. Questions in the Easy or Hard categories are recommended for review and are indicated with a red circle.

NeverEnding Story Test
 Analysis Last Run: March 19, 2013 2:49 PM. Run Item Analysis again to display the latest question data. [Edit Test](#)

Test Summary

25.0	4	0	5	11.2	00 hr 02 min	4 Good Questions	0 Easy Questions
Possible Points	Possible Questions	In Progress Attempts	Completed Attempts	Average Score	Average Time	0 Fair Questions	3 Medium Questions
						0 Poor Questions	1 Hard Questions
						0 Cannot Calculate	

Filter Questions

Select Question Type: All Question Types | Select Discrimination: All Discrimination | Select Difficulty: All Difficulty | [Go](#) | [Reset Filter](#)

Question	Question Type	Discrimination	Difficulty	Graded Attempts	Average Score	Std Dev	Std Error
One character rides a racing what?	Multiple Choice	0.37	40.0%	5	0.81	1.1	0.49
What does Basban name the Child-like Empress?	Multiple Choice	0.79	60.01%	5	1.21	1.1	0.49
• They look like such big strong _____.	Fill in the Blank	0.87	20.0%	5	0.41	0.9	0.41
Name That Character! Match the character with the description.	Matching	1.0	44.0%	5	8.81	7.57	3.39

Displaying 1 to 4 of 4 items | [Show All](#) | [Edit Paging](#)

Legend

- Review recommended
- Questions might have changed after deployment
- Not all submissions have been graded
- (QS) Question Set
- (RB) Random Block

Only graded attempts are used in item analysis calculations. If there are attempts in progress, those attempts are ignored until they are submitted and you run the item analysis report again.

10. You can also view statistics on an individual question by clicking on the link to that question.

NeverEnding Story Test
 Analysis Last Run: March 19, 2013 2:49 PM. Run Item Analysis again to display the latest question data. [Edit Test](#)

Test Summary

25.0	4	0	5	11.2	00 hr 02 min	4 Good Questions	0 Easy Questions
Possible Points	Possible Questions	In Progress Attempts	Completed Attempts	Average Score	Average Time	0 Fair Questions	3 Medium Questions
						0 Poor Questions	1 Hard Questions
						0 Cannot Calculate	

Filter Questions

Select Question Type: All Question Types | Select Discrimination: All Discrimination | Select Difficulty: All Difficulty | [Go](#) | [Reset Filter](#)

Question	Question Type	Discrimination	Difficulty	Graded Attempts	Average Score	Std Dev	Std Error
One character rides a racing what?	Multiple Choice	0.37	40.0%	5	0.81	1.1	0.49
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11. You will then be taken to the Question Details page with statistics for that particular question.

Question Details: Fill in the Blank
 The Question Details page displays item analysis statistics for student performance on individual test questions. [More Help](#)

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NeverEnding Story Test
 Analysis Last Run: March 19, 2013 2:49 PM. [Edit Test](#)

0.87	20.0%	5	0.41	0.9	0.41	0
Discrimination Index	Difficulty Index	Graded Attempts	Average Score	Std Dev	Std Error	Skipped

Fill in the Blank:

Question:

• They look like such big strong _____.

Answer Options:

Evaluation Method	Correct Answer	Case Sensitivity
Exact Match	hand	
Exact Match	hands	

Correct: 1 (20.01%) | Incorrect: 4 (80.01%) (Skipped: 0 (0.0%))

For questions or comments, contact the Computer Services Help Desk
HelpDesk@MissouriState.edu
 417-836-5891