

# ASSESSMENT GRANT CLOSING REPORT FOR “IU TEST”

**PI: Raman Adaikkalavan, Computer Science and Informatics, IU South Bend**

a. *What were the results of your assessment project?*

IU Test<sup>1</sup> is a web based tool that allows students to take tests online. This project was started as an undergraduate coursework and internship during spring 2009, and is still ongoing. Currently, the system provides the following functionalities.

- Faculty can create question banks.
- Students enrolled in official courses and sections can take tests online.
- Faculty can create private courses/sections (e.g., for placement exams) and tests in those sections, and allow students to take the tests.
- Questions with answer choices (multiple-choice and True/False) are graded automatically. Other types of questions (short, medium, and essay) have to be graded manually. Students can view their returned tests online.
- The system login has been integrated with IU CAS login.
- Test statistics<sup>2</sup> are generated automatically.
  - *Test Summary*: Shown in Figure 1. This option displays percentile for all students, and percentage, rank, and total score for each student.
  - *Detailed Item Analysis (MC/TF)*: Shown in Figure 2. This displays basic statistics for the entire test. For each multiple-choice and True/False question it displays difficulty index, discriminating index, and point biserial.
  - *Standard Item Analysis (MC/TF)*: Shown in Figure 3. This displays basic statistics for the entire test. It also displays the answers choices selected by students for each question.
  - *Standard Item Analysis (Short/Medium/Essay Questions)*: Shown in Figure 4. This displays high, low, mean, and median for each short/medium/essay question. These questions have to be graded manually.
  - *Score Distribution*: Shown in Figure 5. This option displays the number of students in a particular score range.

Using the assessment grant we were able to develop features and functionalities to generate statistics and provide grading functionalities.

b. *How will these results be used to improve your program’s assessment of student learning outcomes, (i.e. changes in educational goals, changes in assessment techniques, increases in participation of stakeholders or changes in record-keeping and communication?)*

The system can be used by departments and faculty to conduct pre/post tests and collect data and analyze them. The system generates standard and detailed item analysis and other overall test statistics. The test results and

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<sup>1</sup> Project URL: <http://www.cs.iusb.edu/~raman/IUTest/>

<sup>2</sup> We would like to thank Prof. Yi Cheng, Mathematics, for her valuable input.

statistics collected overtime can be used as a direct measurement of student learning, and can be used for longitudinal study and analysis.

c. Will the work started with this assessment project be continued, if so, how?

Yes. This project was started in spring 2009 and is currently ready for limited release. We are currently adding more features and functionalities to make it more usable, and we are in the process of extensive testing. The PI will be using the system for simple quizzes in one of his courses in fall 2010. The PI is working on proposals to secure more funding for the project.

d. How are the results of your assessment project being shared with department faculty, students, IUSB faculty and other appropriate groups?

The PI had already conducted two demonstrations to the Computer Science department faculty. Some of the faculty have shown interest in using the system starting spring 2011 or as soon as it is available. First, the PI will work with Computer Science faculty to put the system to use. Once the initial evaluation period is completed, the system will be released to other departments.

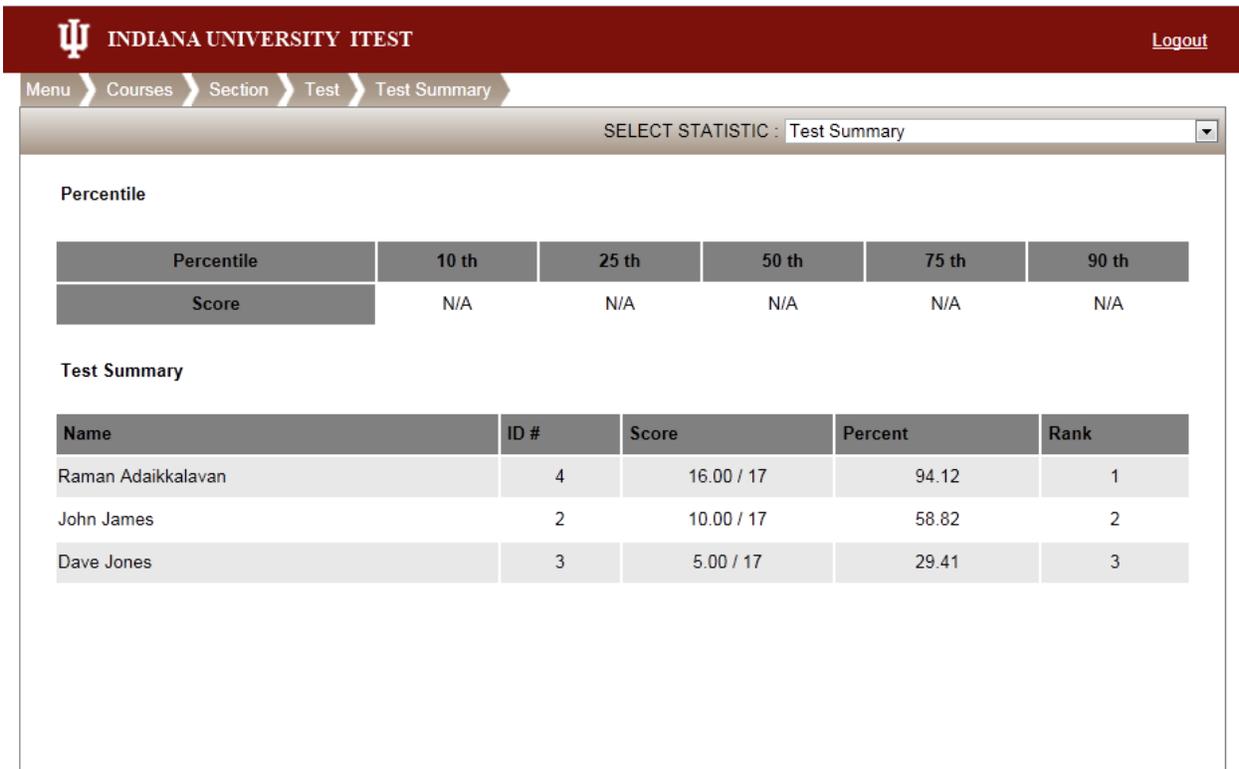


FIGURE 1. TEST SUMMARY

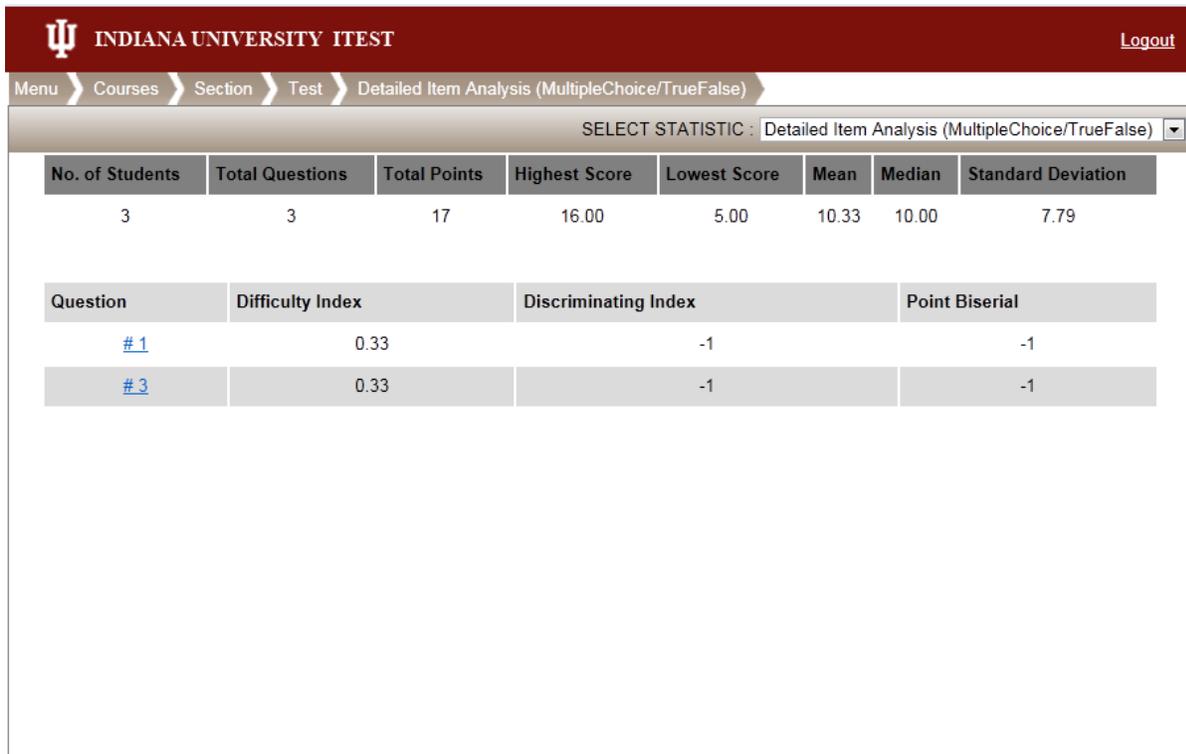


FIGURE 2. DETAILED ITEM ANALYSIS (MC/TF)

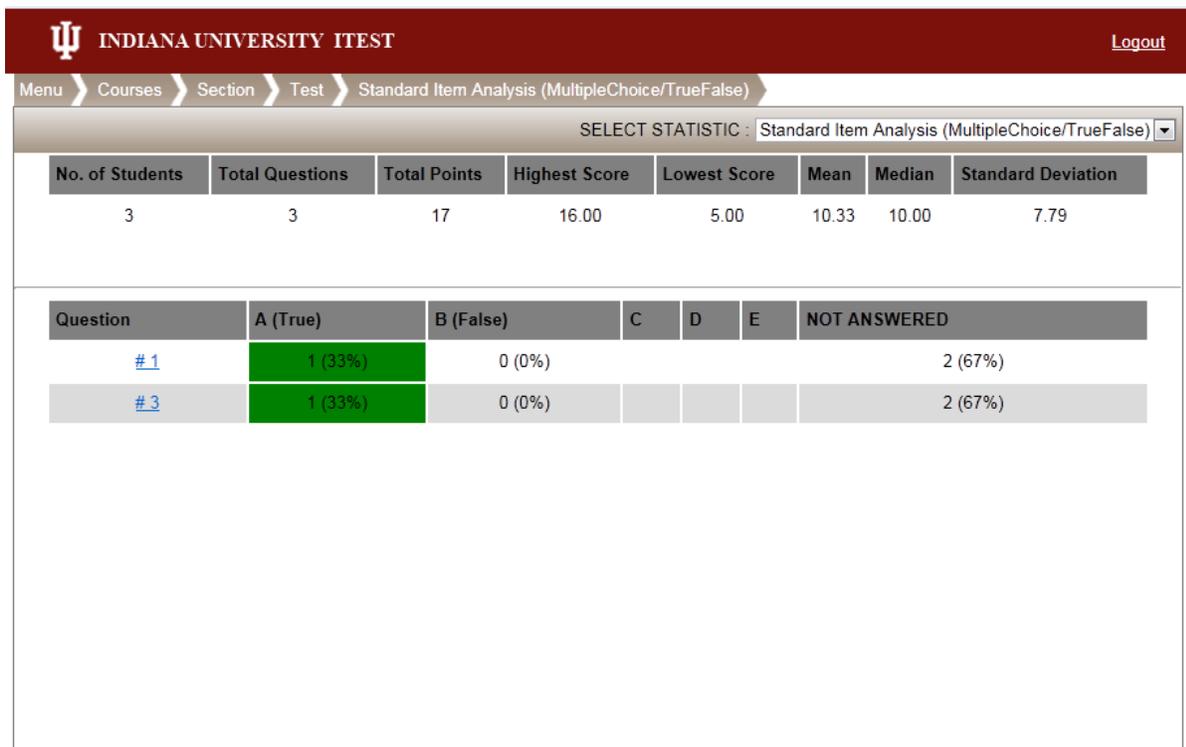


FIGURE 3. STANDARD ITEM ANALYSIS (MC/TF)

SELECT STATISTIC : Standard Item Analysis (Short/Medium/Essay)

Question	Max Points	High	Low	Mean	Median	Standard Deviation
<a href="#">#2</a>	6	5.00	0.00	3.33	5.00	5.56

FIGURE 4. STANDARD ITEM ANALYSIS (SHORT/MEDIUM/ESSAY QUESTIONS)

SELECT STATISTIC : Score Distribution

Range	Count
0-10%	0
10-20%	0
20-30%	1
30-40%	0
40-50%	0
50-60%	1
60-70%	0
70-80%	0
80-90%	0
90-100%	1

FIGURE 5. SCORE DISTRIBUTION