Program-Level Assessment Report

Program: Statistics  Year: 2015-16

The purpose of this form is for reporting program assessments and program improvement activities. It is expected that every program outcome/competency be measured and reported at least every five years. Some programs, with Dean’s approval, will not assess any program goals a given year in lieu of a major improvement project involving all program faculty.

A1. What program outcomes/competencies were assessed? Report on each assessment separately.
Students gain working knowledge of exactness and precision.

A2. Which courses/students were assessed?
STAT 100, STAT 150, STAT 200, STAT 250

A3. Approximately how many students were assessed? 300, half from STAT 100

A4. Which faculty members did the assessing?
al all FT and PT program faculty on the main campus

A5. What were the results?
A series of six questions were asked of all students on midterms in the four courses mentioned above relating to concepts of exactness and precision, followed by one question comparing the two concepts. The percent who gave complete or almost complete solutions for each question are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Exact1</th>
<th>Exact2</th>
<th>Exact3</th>
<th>Prec1</th>
<th>Prec2</th>
<th>Prec3</th>
<th>Comp</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>45%</td>
<td>72%</td>
<td>38%</td>
<td>77%</td>
<td>19%</td>
<td>35%</td>
<td>52%</td>
<td>152</td>
</tr>
<tr>
<td>150</td>
<td>48%</td>
<td>71%</td>
<td>41%</td>
<td>92%</td>
<td>20%</td>
<td>42%</td>
<td>80%</td>
<td>45</td>
</tr>
<tr>
<td>200</td>
<td>60%</td>
<td>69%</td>
<td>51%</td>
<td>88%</td>
<td>65%</td>
<td>72%</td>
<td>82%</td>
<td>58</td>
</tr>
<tr>
<td>250</td>
<td>95%</td>
<td>91%</td>
<td>85%</td>
<td>91%</td>
<td>85%</td>
<td>89%</td>
<td>94%</td>
<td>50</td>
</tr>
</tbody>
</table>

A6. What was learned from the assessment? Is change being considered? Explain (if attached to multiple outcomes explain what was learned about each outcome separately).
Although the last semester students in STAT 250 did well, we were surprised that before that course so many did not understand the concepts related to exactness. In a department e-discussion it was determined that a greater focus will be placed on exactness in STAT 150 and STAT 170 during a student’s second semester of the program.

Precision results were as expected so no changes will result.

A7. If the program could have institutional support including funds, personnel, or other resources, to improve learning and teaching, based on your assessment results, what would be asked for? Why?
We are currently considering a software tool to use with introductory students which would require computer lab space on some course days, or permanent placement in a computer lab.

If the program is currently involved in or recently completed significant changes, complete the following four questions.

B1. What improvement activity or project is ongoing or recently completed?
Last year the department revised curriculum in STAT 150, 170, 180, 220, 240 to better align with the Illinois Statistical Standards for Undergraduates.
B2. Why was this activity chosen? To what program outcomes/competencies did it relate?
The project was taken on (1) due to poor previous results in students understanding of complex probability and (2) statewide standards revision.

B3. What is/was the timeline for this activity, by semester or year?
We revised the curriculum in 2014-15, and implemented those changes this year 2015-16.

B4. For recently completed activities describe the result, including student assessment results.
Next year we will again be assessing the program’s probability outcome. This year, in those four courses the average student evaluation improved which indirectly shows the curriculum change was implemented successfully.

C1. Program Assessment Report Prepared by: L.D. Instructor
C2. Date: 4/15/2016