Impact of the Supplemental Instruction Sessions that are Promoted as Exam Review Sessions on Final Grades, 2011-2012

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Abstract
Attendance patterns for Supplemental Instruction (SI) sessions shows that attendance typically increases the closer the session is to an exam. Some sessions directly before exams are promoted as “exam reviews.” Results of this assessment show that attending only SI sessions designed as exam reviews will result in significantly higher final grades than not attending SI; however, the greatest influence on final grades results from attending both exam review sessions and regular sessions.

Executive Summary

Purpose
The purpose of this assessment is to determine the influence of exam review SI sessions on final grades.

Methodology
Our data entry process enables us to record characteristics of specific types of SI sessions, which enables us to compare different types of SI participation within four groups based on:

- Not participating in SI sessions.
- Participating in only exam review sessions for a course.
- Participating in only regularly scheduled SI sessions for a course.
- Participating in both regular sessions and exam review sessions for a course.

Please note that all SI sessions are structured as exam review/preparation, much like any individual study session (reading, note-taking, problem-solving, etc) includes activities that prepare students for exams; however, some SI sessions are specifically promoted as exam reviews, which typically cover a broader range of content shortly before the exam date.

This assessment proceeded by producing a comparison of final grades, based on the various participation groups and level of SI attendance. These statistics appear in Tables 1 and 2. Using independent samples t-tests, we compared the final grades of each participation group.

Findings
Table 1 shows the final grade frequencies based on the participation groups. Also, based on comparing the mean final grades of each group, we found:

- SI participation of any type results in statistically significant higher final grades than non-participation ($p<.001$ for all three comparisons of participant groups to non-participants).
- Participation in both types of SI sessions results in significantly higher final grades than
  - participants of regular sessions only ($p<.001$), and
  - participants of exam review sessions only ($p<.001$).
- There is no significant difference in final grades between the group of students who attend regular sessions and the group of students who attend exam reviews only.

Discussion and Recommendations
Based on the findings, we again reinforce the value of attending SI sessions of any type; however, the results significantly reinforce that students should attend regular and exam review sessions if both types fit students’ availability.

Results may vary for specific courses. Hence, once longitudinal data are tracked, we recommend repeating the assessment for each course using multiple semesters worth of data. Since grading varies greatly from course to course (and sometimes varies from section to section within the same course) the results of an assessment on individual courses may be worthwhile to pursue. Our hypothesis is that

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Impact of Exam Reviews, 2011-2012
Iowa State University
regular SI session attendance is of higher value than exam review session attendance for courses with higher expectations for content to be learned and/or higher orders of learning expectations on assignments and exams.

**TABLE 1: Participant Group Comparison, based on Final Grade Categories**

<table>
<thead>
<tr>
<th></th>
<th>All SI Participants (N=7886)</th>
<th>SI Participants in Both Types of Sessions (N=2774)</th>
<th>SI Participants in Regular Sessions Only (N=2131)</th>
<th>SI Participants in Exam Reviews Only (N=2961)</th>
<th>Non-Participants (N=20492)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Combined A, B, C</td>
<td>6129 77.7</td>
<td>2287 82.4</td>
<td>1560 73.2</td>
<td>2276 76.9</td>
<td>13755 67.1</td>
</tr>
<tr>
<td>Combined C, D, F, Drop</td>
<td>1757 22.3</td>
<td>487 17.6</td>
<td>571 26.8</td>
<td>685 23.1</td>
<td>6737 32.9</td>
</tr>
<tr>
<td>Mean Final Course Grade</td>
<td>2.64</td>
<td>2.77</td>
<td>2.54</td>
<td>2.58</td>
<td>2.40</td>
</tr>
</tbody>
</table>

*Note: Audits, transfer credits, incompletes, and pass/not pass grades are not included in the analyses.*

**TABLE 2: Participant Group Comparison, based on Level of Participation and Mean Final Grade**

<table>
<thead>
<tr>
<th></th>
<th>All SI Participants</th>
<th>SI Participants in Both Types of Sessions</th>
<th>SI Participants in Regular Sessions Only</th>
<th>SI Participants in Exam Reviews Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean N</td>
<td>Mean N</td>
<td>Mean N</td>
<td>Mean N</td>
</tr>
<tr>
<td>Attended 1 SI Session</td>
<td>2.52 1393</td>
<td>2.45 18</td>
<td>2.56 1045</td>
<td>2.42 327</td>
</tr>
<tr>
<td>Attended 2-5 Sessions</td>
<td>2.57 3965</td>
<td>2.64 976</td>
<td>2.50 767</td>
<td>2.57 2214</td>
</tr>
<tr>
<td>Attended 6-9 Sessions</td>
<td>2.73 1200</td>
<td>2.71 798</td>
<td>2.57 125</td>
<td>2.87 274</td>
</tr>
<tr>
<td>Attended 10 or more Sessions</td>
<td>2.95 970</td>
<td>2.96 895</td>
<td>2.79 53</td>
<td>2.74 17</td>
</tr>
<tr>
<td>Overall Mean Final Course Grade</td>
<td>2.64 7886</td>
<td>2.77 2687</td>
<td>2.54 1990</td>
<td>2.58 2832</td>
</tr>
</tbody>
</table>

*Note: Drops, audits, transfer credits, incompletes, and pass/not pass grades are not included in calculation of means.*