Increasing Student Evaluation of Teaching (SET) Response Rates Through Reminders

Laura Woodward, Hamid Siddiqui
Wayne State University is a public research university (RUVH) located in Detroit’s Midtown District, the city's Cultural Center & Historic District.
Outline

- Introduction
- Method
- Results
- Threats to Validity
- Conclusion
- Future Work
Introduction

- Student evaluation of teaching is important.
  - Distinguishes teaching progress for tenure and promotion.
  - Helps to reward good teaching practices.
  - Student comments help suggest relevant changes to teaching approaches in a formative way.

- Online SET is a new method to collect evaluation data.
  - Online SET offers a reduction in class time, processing time, and costs.
  - However, low response rates are the main concern. (Nulty, 2008).
  - Data quality can be improved by increasing response rates. (Nulty, 2008; Bennett, & Nair, 2009)
Suggestions from the literature

- Increase time which the assessment is available.
- Ask instructors to encourage students to participate or use incentives.
- Send students selective reminders.

(Nulty, 2008; Bennett, & Nair, 2009; Nulty, 2008, 303-304)
Theoretical Framework

- **Effect size** (Glass, McGaw, & Smith, 1981)
  - For a small effect, you need more responses to increase your likelihood of finding the relationship.

- **Sample size** (Neyman, 1934; Krejcie & Morgan; 1970, Dillman, 2000)
  - Certain sample sizes are needed to generate results which are representative of the population.

- **Application of these formulas to the SET literature** (Nulty, 2008).
  - Recommendations of certain rules of thumb to determine if a SET score is valid based upon sample size.
Guide to required response rates to avoid bias

Nulty, 2008

<table>
<thead>
<tr>
<th>Total no. of students on the course</th>
<th>Required no. of respondents</th>
<th>Response rate required (%)</th>
<th>Required no. of respondents</th>
<th>Response rate required (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>7</td>
<td>75%</td>
<td>10</td>
<td>100%</td>
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<tr>
<td>20</td>
<td>12</td>
<td>58</td>
<td>19</td>
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<td>40</td>
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<td>200</td>
<td>23</td>
<td>12</td>
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<td>77</td>
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<td>250</td>
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<td>10</td>
<td>183</td>
<td>73</td>
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<td>300</td>
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<td>750</td>
<td>25</td>
<td>3</td>
<td>358</td>
<td>48</td>
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<tr>
<td>1000</td>
<td>26</td>
<td>3</td>
<td>406</td>
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</tr>
<tr>
<td>2000</td>
<td>26</td>
<td>1</td>
<td>599</td>
<td>25</td>
</tr>
</tbody>
</table>

If all students enrolled are surveyed, or if a random selection of these are surveyed, random sampling is still not achieved in practice because those who respond are not a random selection. Indeed, those who respond are systematically different from those who do not, and that those who...
Method

**Independent variable**
- Use of a reminder
  - Number of reminders ranged from 0 to 1

**Dependent variable**
- Response rates

T Tests were used to calculate significance.
Comparison of Paper Versus Online

- **Response rates**
  - Lower for online evaluation of teaching compared to paper.
  - Higher as students progress in their academic program.

<table>
<thead>
<tr>
<th></th>
<th>Paper based Enrollment</th>
<th>Paper based Responses</th>
<th>Percent Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>44,615</td>
<td>30,343</td>
<td>68.0%</td>
</tr>
<tr>
<td><strong>Lower Level</strong></td>
<td>28,121</td>
<td>18,045</td>
<td>64.2%</td>
</tr>
<tr>
<td><strong>Upper Level</strong></td>
<td>6,799</td>
<td>4502</td>
<td>66.2%</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td>9,695</td>
<td>7796</td>
<td>80.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Online Enrollment</th>
<th>Online Responses</th>
<th>Percent Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>14,239</td>
<td>3,212</td>
<td>22.6%</td>
</tr>
<tr>
<td><strong>Lower Level</strong></td>
<td>4,085</td>
<td>642</td>
<td>15.7%</td>
</tr>
<tr>
<td><strong>Upper Level</strong></td>
<td>477</td>
<td>130</td>
<td>27.3%</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td>5,115</td>
<td>1,668</td>
<td>32.6%</td>
</tr>
</tbody>
</table>

**Effects of Level in College and Evaluation Method on Response Rates**

- **All**
  - Paper: 68.0%
  - Online: 22.6%
- **Lower Level**
  - Paper: 64.2%
  - Online: 15.7%
- **Upper Level**
  - Paper: 66.2%
  - Online: 27.3%
- **Graduate**
  - Paper: 80.4%
  - Online: 32.6%
Results

- Response rates were measured after one email, and later after one reminder for the same evaluation.
- A paired-samples t-test compared the response rate in the reminder and no reminder conditions.
- Response rates increased significantly with reminders.

![Bar chart showing effects of one reminder on response rates]

\[ t(18) = 10.3, \ p<.001. \]
Results

- Reminder (M=16.97, SD=19.6)
- No reminder (M=11.9, SD=16.1) conditions.
- $t(28) = -4.0$, $p<.001$.
- N=29 sections
- N=2329 student participants

Without the confounding effect of end of review period, results still suggest that response rates increase significantly if a reminder is used, although it is a smaller effect.
Discussion

- In evaluation, cost constraints can sometimes result in low sample sizes.
- However, by utilizing good design principles, costs can be kept low, while minimum sample sizes are maintained.
Threats to Validity

- Some students are taking more than one class that has been evaluated online
  - Receives reminder for other courses
- The sample was not as big as it is suggest by Nulty 2008
Conclusion

- The number of reminder should not be more than intended
- The reminder for evaluation increases the response rate
Future Work

- Future research can investigate the usefulness of multiple reminders over time.
- For student registered in multiple courses, we will send one email to eliminate the negative effect of overwhelming emails.


Literature


Thank you for attending!

hsiddiq@wayne.edu
laurawoodward@wayne.edu