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Effectiveness and Results of Paper Based versus Web Based Student Course Assessments

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Effectiveness and Results of Paper Based versus Web Based Student Course Assessments

Dr. Juliana Lancaster
Director of Institutional Effectiveness

Dr. Michael Furick
School of Business
Clicker test

I am a:

1. Female 0%
2. Male 0%
3. Other 0%
Introducing GGC

- The 35th member of the USG system
- Opened in 2006 (120 students)
- First graduation June 28, 2008 (18 students)
- Enrollment now 3000 students (5500 fall10)
- Accredited by SACS in June 2009
Introducing GGC

- Four schools: Business, Liberal Arts, Science & Technology, Education

- GGC offers majors in:
  - Biology
  - Exercise Science
  - Information Technology
  - Business Administration
  - Criminal Justice/Criminology
  - Education
  - English
  - Political Science
  - Mathematics
  - History
  - Psychology
Importance of Student Course Evaluations on Faculty

- **Formative Assessment:**
  - improve and shape the quality of teaching

- **Summative Assessment:**
  - overall performance, personnel decisions

- **Programmatic Assessment:**
  - Evaluate courses and degree program
Teaching effectiveness has had high interest since 1920

2000 major studies over last 60 years

No Child Left Behind = focus on teaching effectiveness

Colleges focused on formative (teaching quality) and summative (personnel) decisions
Many data sources available

Source of Data
- Student ratings
- Peer ratings
- Self evaluation
- Video of teaching
- Student interviews
- Alumni rating
- Employer rating
- Administrator rating
- Teaching scholarship
- Teaching awards
- Learning outcomes
- Teaching portfolio

Historically student ratings have been probably the most influential
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 75%</td>
<td>0%</td>
</tr>
<tr>
<td>50% to 74%</td>
<td>0%</td>
</tr>
<tr>
<td>25% to 49%</td>
<td>0%</td>
</tr>
<tr>
<td>Less than 24%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Student ratings influenced by many factors

- Class size of 35 to 100 receives lower ratings
  - Feldman, 1984

- High student workload produces lower ratings
  - Greenwald & Gillmore, 1997

- High student interest in subject produces higher ratings
  - Centra, 2003

- Professor reputation out of class correlates with ratings
  - Griffin, 2002

- Amount learned may be a factor
  - Marsh, 1990

- Match between student learning style and course teaching style
  - McKeachie, 1990
Does a web survey introduce additional factors over a paper survey?

<table>
<thead>
<tr>
<th>Paper</th>
<th>Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution in class: Passive system for student</td>
<td></td>
</tr>
<tr>
<td>Requires short time window to complete data collection</td>
<td></td>
</tr>
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<td>Familiar to faculty and students</td>
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</tr>
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<td>Requires extensive time and cost to prepare and process</td>
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<td>Results returned to faculty within weeks</td>
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</table>
Does a web survey introduce additional factors over a paper survey?

<table>
<thead>
<tr>
<th>Paper</th>
<th>Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution in class: Passive system for student</td>
<td>Delivery via email or portal link: Requires active participation by student</td>
</tr>
<tr>
<td>Requires short time window to complete data collection</td>
<td>Requires longer time window to complete data collection</td>
</tr>
<tr>
<td>Familiar to faculty and students</td>
<td>Unfamiliar to faculty and students</td>
</tr>
<tr>
<td>Requires extensive time and cost to prepare and process</td>
<td>Reduces time and cost to prepare and process</td>
</tr>
<tr>
<td>Results returned to faculty within weeks</td>
<td>Results returned to faculty within days</td>
</tr>
</tbody>
</table>
Does your institution use a paper based or web based student evaluation system?

1. Paper 0%
2. Web– computerized 0%
3. Mixed– paper and web 0%
4. Other 0%
Questions for today
Effect of GGC’s recent change
Is Web really better…..or worse?

- Did overall response rates change?
  - Student response rate – paper vs. web

- Did profile of respondents change?
  - Are the students responding to web surveys different from overall population?

- Did ratings change in a consistent way?
  - Are evaluation ratings obtained via web surveys affected by changes in the percent or type of students responding?
# Shifting Delivery at GGC

<table>
<thead>
<tr>
<th>Semester</th>
<th>Modality</th>
<th>Distribution of Student Access Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2007</td>
<td>Paper</td>
<td>In-class</td>
</tr>
<tr>
<td>Spring 2008</td>
<td>On-line</td>
<td>Passwords in class</td>
</tr>
<tr>
<td>Summer 2008–</td>
<td>On-line</td>
<td>Password via email</td>
</tr>
<tr>
<td>Summer 2009</td>
<td>On-line</td>
<td>Password via email</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>On-line</td>
<td>Direct links to portal</td>
</tr>
</tbody>
</table>
Study Design

- Compared
  - Fall 2007 (paper),
  - Spring 2009 (web with email delivery)
  - Fall 2009 (web with portal delivery)

- Sampled only faculty at GGC continuously there since Fall 2007 (N=78)

- Used only items unchanged on evaluation instrument (N=11)
Questions

Did overall response rates change?

Did profile of respondents change?

Did ratings change in a consistent way?
**Did overall response rates change?**

<table>
<thead>
<tr>
<th></th>
<th>Response Rate</th>
<th>% Class sections with response &lt; 15%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2007</td>
<td>77.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Spring 2009</td>
<td>38.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>48.8%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

- Response rates for web based semesters are lower than for paper based semester.
What is typical response rate of your student evaluations?
Institutions using Paper only please

1. 75% to 100%   0%
2. 50% to 74%     0%
3. 25% to 49%     0%
4. Less than 24%  0%
5. Varies widely by class  0%
What is typical response rate of your student evaluations?
Institutions using online/web or a mix please

1. 75% to 100% 0%
2. 50% to 74% 0%
3. 25% to 49% 0%
4. Less than 24% 0%
5. Varies widely by class 0%
Questions

Did overall response rates change?

Did profile of respondents change?

Did ratings change in a consistent way?
Figure 1: Paper survey response rate of 78% samples most of distribution
Figure 2: Online surveys could be missing the silent majority
Figure 3: Online surveys could be sampling the tails of distribution.
Did profile of respondents change?

- Examined grade expectation as reported by student.

- Overall pattern is highly similar, suggesting web did not attract more unhappy students.
Did profile of respondents change?

Expected grade by semester looks similar for paper vs. web
Questions

Did overall response rates change?

Did profile of respondents change?

Did ratings change in a consistent way?
Did ratings change in a consistent way?
Overall faculty ratings varied but mostly upward.
Did ratings change in a consistent way?

- Ratings a steady upward trend for 78 long term faculty.

- For 10 of 11 items, Fall 09 mean ratings (web) were significantly higher than Fall 07 (paper).

- For one item, ratings lower Spring 09 term but rose in Fall 09
  - Item: Personalized attention from teacher
  - Mean class size increase; 12.7 to 21 students per faculty
Why did ratings go up?

- Could be shift from paper to web surveys

- Could be teachers actually getting better
  - 2 more years teaching experience

- Could be data fluctuations from small sample size
  - 650 students (fall07)
  - 1300 students (fall09)
Discussion

- Shifting from paper to online evaluations did reduce response rates
  - 77.4% (paper) to 38.3% & 45.4% (web)
  - Unlikely that online will move much higher

- The reduction is uniformly spread across grade expectation and across rating categories

- Overall, our mean teacher evaluations have risen
  - 3.47 paper (fall07) to 3.62 online (fall09)

- Next step: Replicate study with both paper and online surveys in Spring 2011
Some U.S. colleges are making student evaluation of teachers available on their websites.

Pros
- Eliminates rumor/student grape vine
- Continuous quality improvement

Cons
- Available to students only or also public?
- This is a personal performance review item
Does your institution make teacher evaluations publicly available?

1. Yes
2. No
3. Other

0% 0% 0%
Should teacher evaluations be publically available?

1. Heck NO 0%
2. No 0%
3. It depends 0%
4. Yes 0%
5. Absolutely Yes 0%
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Thanks for coming