Tablets in the flipped classroom

Joseph Ross, Ph.D.

rossbiology.com
@rossbiology
tabletpedagogy.blogspot.com
Acknowledgments
How does the university fit into the age of information?
Bold faculty identity

• Curate information
• Make it relevant to our students
My Fall 2014 DISCOVERe Class

BIOL 102 (majors genetics)

Tablet

Traditional

Identical content
Obstacles to Student Success

Nonattendance  Time & Scheduling
Bridging Obstacles to Student Success

Select Capabilities

• PDF presentation and annotation
• Digital whiteboard
• Lecture capture

With tablets, *lecture capture* isn't about extra faculty effort. It is about more widely distributing an existing resource to give students more tools they can use to help themselves succeed.
DISCOVERe helps faculty provide resources for student success

• I posted to YouTube:
  – pre-lecture videos
  – in-class lectures
  – exam review sessions

• Both sections had access

BIOL 102 DISCOVERe, Fall 2014
YouTube Analytics

• Are my students watching? How much?
• What content are they struggling to understand?
• Does instructor-recorded content improve outcomes?
YouTube Analytics

Joseph Ross
Created: Aug 16, 2014 • Videos: 79 • Lifetime views: 5,989

Last 365 days (Jan 18, 2014 – Jan 17, 2015)

Performance

- Views: 5,989
- Estimated Minutes Watched: 54,639
"I could review the lectures (recorded) more and could stop/pause if I had a problem and looked [sic] it up in the textbook"
### Summary

<table>
<thead>
<tr>
<th>DISCOVERe students</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional-format students</td>
<td>55</td>
</tr>
<tr>
<td>Instructor-created videos</td>
<td>~80</td>
</tr>
<tr>
<td>Video views</td>
<td>~6,000</td>
</tr>
<tr>
<td>Minutes of video viewed</td>
<td>~55,000</td>
</tr>
<tr>
<td>Value of formative assessment data</td>
<td>priceless</td>
</tr>
</tbody>
</table>

"Having the lectures on YouTube greatly impacted how I learn. I retained the material better since I'm a visual learner"
✓ Nonattendance
✓ Exam review sessions that not all students can attend
✓ Repetitive questions during office hours

"I listened to your presentations on the way to school"
Did the videos help the students?

BIOL 102 F'14: How much did the following contribute to your success in the course? Reading the textbook

![Bar chart showing the percentage of respondents for different levels of help in reading the textbook. The bars are labeled as 'None at all', 'Helped somewhat', and 'Greatly helped me.' The chart compares 'Traditional' and 'DISCOVERe' methods.]

- Traditional: None at all = 0.1, Helped somewhat = 0.3, Greatly helped me = 0.2
- DISCOVERe: None at all = 0.1, Helped somewhat = 0.3, Greatly helped me = 0.4
Did the videos help the students?

BIOL 102 F'14: How much did the following contribute to your success in the course? Watching recorded lectures

<table>
<thead>
<tr>
<th>% of respondents</th>
<th>Traditional</th>
<th>DISCOVERe</th>
</tr>
</thead>
<tbody>
<tr>
<td>None at all</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td>Helped somewhat</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Greatly helped me</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Did the videos help the students?

Final Grade Distribution

<table>
<thead>
<tr>
<th>Grade</th>
<th>F'14 Tablet</th>
<th>F'14 Trad</th>
<th>F'13 Trad</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>70%</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td>B</td>
<td>20%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>C</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>D</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>F</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Future Opportunities

- Creating more pre-lecture video content
- Curating online resources
- Producing an e-textbook for my course

- Bringing digital office hours to the masses:
- Evangelism (e.g. Cal Poly San Luis Obispo in Feb.)

Assigned time investment?
Evangelism

tabletpedagogy.blogspot.com

Sunday, January 18, 2015

Belonging in the classroom

or perhaps “Belonging, in the classroom”

As I mentioned in my last post (continuing a thread of non-tablet-specific pedagogy), one focus we have at Fresno State is ensuring that every individual knows that they belong and that they have our support: we’re here to make sure everybody has the tools they need to succeed. We are combating several forces, among which are self-doubt and imposter syndrome. Today, I suggest two approaches to improving the student sense of belonging from day one in the classroom.

To help students, I feel like one of the more important steps to take is to break down walls