Exploring the use of labcasts to support associate lecturers

Conference or Workshop Item

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eSTEEm Conference 2020
Exploring the use of labcasts to support associate lecturers

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School of Physical Sciences
Research context

- Live web broadcasts known as labcasts and fieldcasts.
- Integrate video streaming and synchronous chat messaging.
- Audience polling widgets allow bi-directional questions and answers.
Research question and design

• In what ways can a labcast support module tuition strategy and promote a ‘sense of community’ across the ALs and module team?

• SXPS288 ‘Remote experiments in physics and space’
  • 155 students; 10 ALs
  • 6/10 ALs participated
  • Remote attendance of live labcast
  • Pre/post questionnaires
  • Focus Groups with ALs
  • Interviews with module team
Tutor brief labcast
Interactivity

Labcast Analytics

<table>
<thead>
<tr>
<th>Unique Users in Live Event</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 ALs</td>
<td></td>
</tr>
<tr>
<td>2 Presenters</td>
<td></td>
</tr>
<tr>
<td>3 Audio/Visual Team</td>
<td></td>
</tr>
<tr>
<td>2 Moderators</td>
<td></td>
</tr>
<tr>
<td>1 Research observer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interactive Users</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total chat messages</td>
<td>78</td>
</tr>
</tbody>
</table>

To what extent was the labcast useful in understanding the gas cell experiment?

- Not at all useful: 0%
- Slightly useful: 25%
- Moderately useful: 25%
- Very useful: 13%
- Extremely useful: 38%
Quantitative results

Pre-survey

Q7 & Q8. About knowledge of the Planetary science: Mars atmosphere block

8. To what extent do you think attending the labcast will be useful in enhancing your knowledge and conception of the gas cell experiment?

7. To what extent do you think attending the labcast will be useful in enhancing your knowledge and conception of the planetary science project?

Post-survey

Q4 & Q5. Understanding of the Planetary science: Mars atmosphere block

5. Overall, to what extent was the labcast useful in understanding the gas cell experiment?

4. Overall, to what extent was the labcast useful in understanding of the planetary science project?
Quantitative results

Pre-survey

Q10. About the impact on student learning

10. To what extent do you think attending the labcast will help you develop skills which are useful to your teaching?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Post-survey

Q7. About the impact on student learning

7. To what extent do you think you can apply the information presented to your teaching of this topic?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>A great deal</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
Quantitative results

Pre-survey

Q11. About a sense of community

11. The tutor briefing labcast is designed to be interactive and build a sense of community between the module team and the ALs. To what extent is this important to you?

- Not at all important
- Slightly important
- Moderately important
- Very important
- Extremely important

Post-survey

Q10. About a sense of community

10. The tutor briefing labcast was designed to be interactive and build a sense of community between the module team and the ALs. Please indicate the extent you feel this was achieved.

- Not at all
- Very little
- Somewhat
- Quite a bit
- A great deal
## Qualitative comments

<table>
<thead>
<tr>
<th>Themes</th>
<th>What do you expect to gain from the labcast?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informative</td>
<td>“An overview of the Mars atmosphere project, an introduction to the gas cell experiment. I expect to be able to see the apparatus” (RESP01)</td>
</tr>
<tr>
<td>Confidence</td>
<td>“I hope that it will make things clearer and also speed things up for when I try the experiment. All these lead into being able to give more confident tutorials in the next two weeks” (RESP04)</td>
</tr>
<tr>
<td>Community</td>
<td>“It's nicer to &quot;meet&quot; colleagues in real time than watch a recording”. (RESP02)</td>
</tr>
<tr>
<td>Student support</td>
<td>“To learn how to use the equipment so I can better support students” (RESP05)</td>
</tr>
</tbody>
</table>
### Qualitative comments

<table>
<thead>
<tr>
<th>How did your experience with the labcast align with your expectations? (post-survey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I did find the student Labcast more detailed and therefore more useful” (RESP05)</td>
</tr>
<tr>
<td>“I had been expecting that it would be distinctively different from the student version, with more inside information for us on the analysis which the students would need to undertake, expected results and possible pitfalls”. (RESP02)</td>
</tr>
<tr>
<td>“It was less useful than I'd expected, there was no material presented that required the presenters to be in a lab”. (RESP04)</td>
</tr>
<tr>
<td>“Not quite as useful as I'd hoped”. (RESP03)</td>
</tr>
<tr>
<td>“It aligned well. I expected to get an overview of the experiment, to see it in action and to see what the interface looked like” (RESP01)</td>
</tr>
</tbody>
</table>
Conclusions and future work

- Results show that ALs generally found the labcast useful in understanding the student project and experiment.
- Post survey comments revealed experience of the labcast didn’t align with prior expectations.
- Run focus groups to further explore issues from questionnaires.
- Reflect on how students ‘did the science’. AL experience of marking related TMA.
- Interview module team and presenters on labcast purpose and strategies.
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