ACDS workshop, Sydney, 5 February 2016

First-year challenges

Michael Jennings, Deb King (Melb), Adam Bridgeman (Syd), Liz Johnson (Deakin)
Today’s talk is brought to you by ...

... the ACDS

... on a project funded by the Australian Government’s Office for Learning and Teaching and the ACDS.
BSc enrolment numbers

- 2005 to 2014 – approximately 40% increase
  - B Advanced Science
  - B Mathematics
Challenges

• Large numbers
• Diverse cohorts
• Background knowledge – prerequisites
What have we done at UQ?

- *GetSet* diagnostic test – UQ & OLT grants
Aims of GetSet

• Is NOT to tell students how much they don’t know / forgotten

• Is to gauge current mathematical / science understanding

• Is to tell students what maths/science is used in their courses so they can choose the appropriate courses – feedback matrix

• Is to identify at-risk students
What maths is in your course(s)?

• What do you want to know?
  – Procedural vs conceptual understanding.
• With what do you think students struggle?
• When are you going to do the test?
• Post-test? End of first-year test? Major test?
• What are you going to do with the info from the test?

Extra bonuses!

- Cross-disciplinary connections
- Curriculum reviews
- Knowledge of high school syllabi
GetSet for Science OLT grant

- Led by UQ, involving Melbourne, Sydney and Deakin
- https://getset.science.uq.edu.au
  (GUEST ACCESS AVAILABLE – Semester 2, 2015)
- 19 maths/statistics questions
  - All MCQ
  - Can’t remember & never seen before options
## BSc students’ feedback
Semester 1, 2015

<table>
<thead>
<tr>
<th>Did you find this quiz useful?</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, it gave me an insight into the knowledge that I need for 1st year</td>
<td>60%</td>
</tr>
<tr>
<td>Yes, it flagged some things that I have forgotten and need to review</td>
<td>79%</td>
</tr>
<tr>
<td>Yes, I feel that this is the beginning of my journey of studying science at UQ</td>
<td>30%</td>
</tr>
<tr>
<td>Yes, it made me feel that my needs are being assessed</td>
<td>25%</td>
</tr>
<tr>
<td>No, it achieved none of the above</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I'm glad I did this quiz because now ...</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I'm not glad that I did completed the quiz</td>
<td>8%</td>
</tr>
<tr>
<td>I have a better idea of what I know and what I don't know</td>
<td>73%</td>
</tr>
<tr>
<td>I feel more confident</td>
<td>24%</td>
</tr>
<tr>
<td>I have a better understanding of first year knowledge expectations</td>
<td>58%</td>
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</tbody>
</table>
BSc students’ feedback
Semester 1, 2015

As a result of this quiz, I will
- Revise my high school notes: 70%
- Find a relevant text book: 30%
- Ask someone who knows for help: 24%
- Do nothing because I did well: 12%
- Do nothing because I will pick it up during semester: 12%

I disliked doing the quiz because
- N/A - I didn't dislike it: 41%
- It was stressful: 8%
- It didn't help: 4%
- I forgot a lot of what I knew during the holidays: 44%
- It scared me: 16%
- I was still in a holiday mode: 37%
- It was time consuming and boring: 6%

- I'm curious about how my score on this quiz compares to others.
- While taking this quiz, I worked as hard as I could.
- I gave this quiz my full attention
GetSet - https://getset2.uqcloud.net/

Core questions AND options

CORE

Option 1
Option 2
Option 3
Options

- Maths
- Chemistry
- Physics
- Maths/Physics
- Chemistry/Physics
- Biology
- Biomed
- I haven’t decided
Challenges of GetSet?

You need:

• TIME
• Question design
• $$

http://getsetforsuccess.org.au/
https://getset.science.uq.edu.au
Acknowledgements

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The feedback matrix was designed by A/Prof Lydia Kavanagh (Faculty of Engineering, Architecture and Information Technology), Dr Liza O’Moore (School of Civil Engineering).
References

