Automated student engagement analytics: a short cut to transition monitoring?
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The retention issue

- Student retention is an increasingly important comparative metric in HE
- Retention figures are often used as a means of indexing student satisfaction and the overall student experience.
- However, aside from fuelling comparative league tables, student attrition has significant impact at various levels:
  - student finances
  - student/class morale
  - departmental/institutional finances
  - departmental/institutional reputation
- Overall, failure to retain students has far reaching consequences to students, departments, institutions and the sector.
- It represents a waste of time, effort, opportunity and money for all stakeholders.

The retention challenge

- Retaining students is a key aspect of academic responsibility, and is fraught with complexity on account of:
  - increasing class sizes
  - diverse student body
  - breadth of curricular choice
  - variety of “at risk” groups e.g. mature students, home students
  - various non-traditional entrance routes e.g. FE articulation, direct entry
- Keeping track of student progress and engagement is complex and logistically challenging.
- Careful monitoring of engagement is valuable for predicting student risk of failure or leaving without satisfactory outcome.

An automated answer?

- A recent update of the Blackboard virtual learning environment (VLE) at the University of Aberdeen has added Retention Centre functionality.
- This was piloted across a variety of Medical Science courses as a means of more effective, less laborious student monitoring.

Blackboard Retention Centre

- Course level monitoring device, which is customisable according to 4 rules:
  - creation of watch lists
  - editable automated emails to students
  - can also recognise student success
  - email update reports to coordinator or selected teaching staff as required
- Makes best use of collected monitoring data
- Easy and intuitive to set-up and manage

Pilot course 1: Large cross disciplinary level 1 course

Science and the media:

- 1st year course, open to all students, continuous assessment only.
- Attracts ~200 students

Retention centre strategy:

<table>
<thead>
<tr>
<th>Role</th>
<th>Consequences</th>
<th>No. of students monitored</th>
</tr>
</thead>
<tbody>
<tr>
<td>No VLE access in 3 days</td>
<td>Added to watch list, automated email sent</td>
<td>25</td>
</tr>
<tr>
<td>No submission for assessed exercises</td>
<td>Added to watch list, personal email sent</td>
<td>9</td>
</tr>
<tr>
<td>Marks below 2.2 level (50%)</td>
<td>Personal feedback email sent</td>
<td>13</td>
</tr>
<tr>
<td>Marks above 80%</td>
<td>Well done email sent</td>
<td>59</td>
</tr>
</tbody>
</table>

- Used to identify engaged AND disengaged students - permitted more targeted, earlier interventions

Pilot success:

- Conundrum! Most current monitoring strategies are manual, time consuming and laborious processes.

Pilot course 2: Core level 2 Physiology course

Physiology of human organ systems:

- 2nd year core discipline course, continuous assessment (4 exercises) and final exam.
- ~130 students

Retention centre strategy:

- Greater range of rules applied with escalated interventions due to course
- Shows reinforcement of high achievers AND identification of at risk students

Pilot success:

- Study suggests the Blackboard Retention Centre was effective across these courses
- The capacity to tailor rules is crucial and was used effectively in this study
- Automation saved time and effort vs manual monitoring ➔ more time for interventions
- Recognising successful students creates positive sense of belonging

Conclusion

- Overall this tool was extremely useful in providing effective, hands-free monitoring. It also possesses sufficient flexibility to make it a broadly applicable, time saving strategy.