Automated student engagement analytics: a short cut to transition monitoring?.

S.J.Tucker

School of Medical Sciences, College of Life Sciences and Medicine, University of Aberdeen

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School of Medical Sciences

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 s*tudent risk of* failure or leaving without satisfactory outcome.

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

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 course as a means of more effective, less laborious student monitoring.

Blackboard Retention Centre

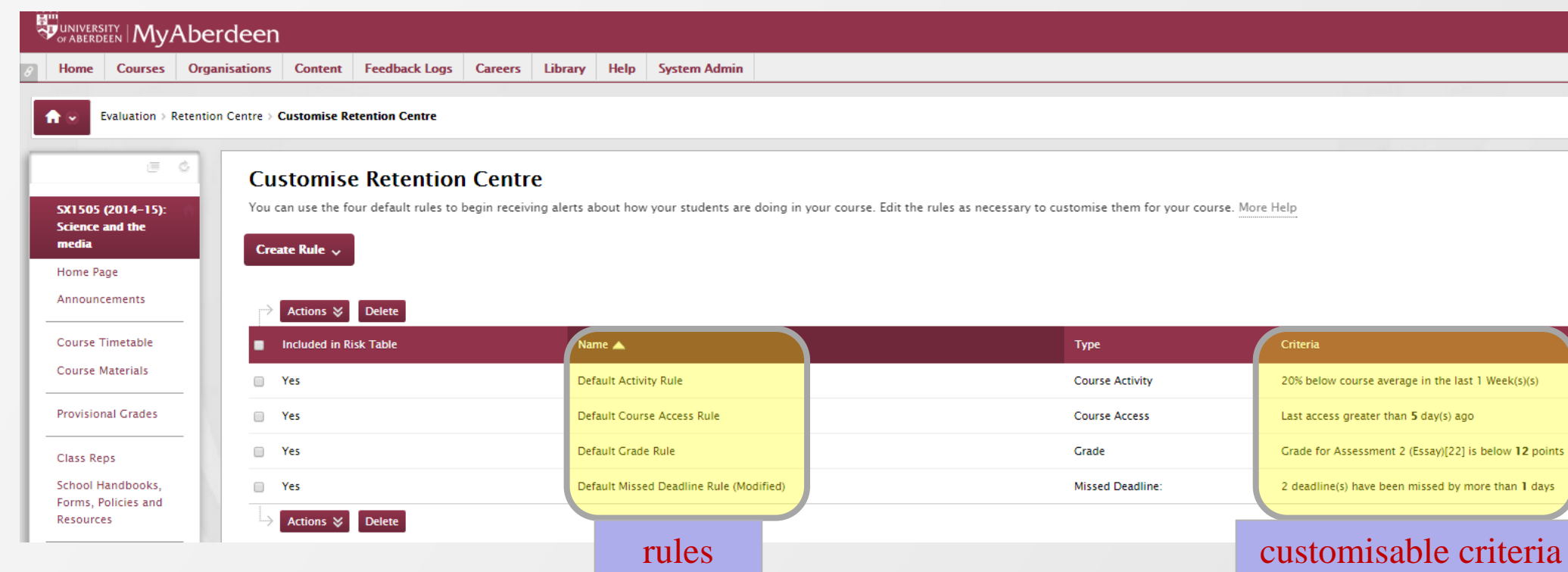- Course level monitoring device, which is customisable according to 4 *rules*:

Fig1:Blackboard Retention Centre course monitoring screen

- Identifies disengaged students permitting *targeted early intervention.*
- Fully customisable mining of data and level of automation:
  - 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:

Rule	Consequences	No. of students monitored
No VLE access in 5 days	Added to watch list, automated email sent	23
No submission for assessed exercises	Added to watch list, personal email sent	9
Marks below 2.2 level (50%)	Personal feedback email sent	13
Marks above 80%	Well done email sent	59

- Used to identify engaged *AND* disengaged students - permitted more targeted, earlier interventions
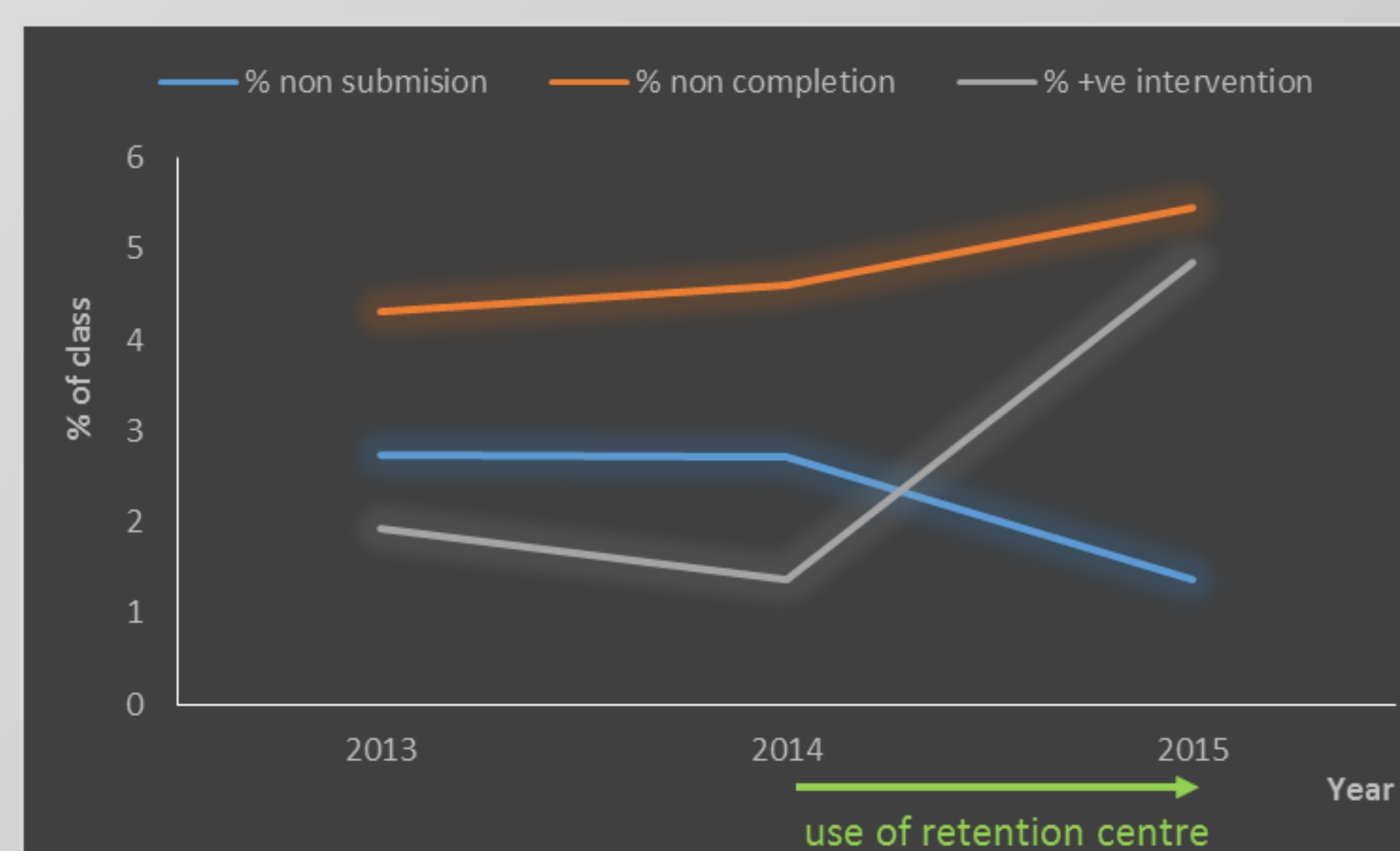
Pilot success:

Fig2:Key indicators suggest Blackboard Retention Centre has a positive impact on student engagement and success

- Fewer non-submissions, greater number of positive interventions helping students to get back on track

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:

Rule	Consequences	No. of students monitored
No VLE access in 3 days	Added to watch list, automated email sent	12
No submission for assessed exercises	Added to watch list, personal email sent	18
More than one assessed exercise missed	Meeting requested automatically	6
Fail marks for assessments	Meeting requested automatically	9
Marks below 2.2 level (50%)	Feedback meeting requested	16
Marks above 80%	Well done email sent	54

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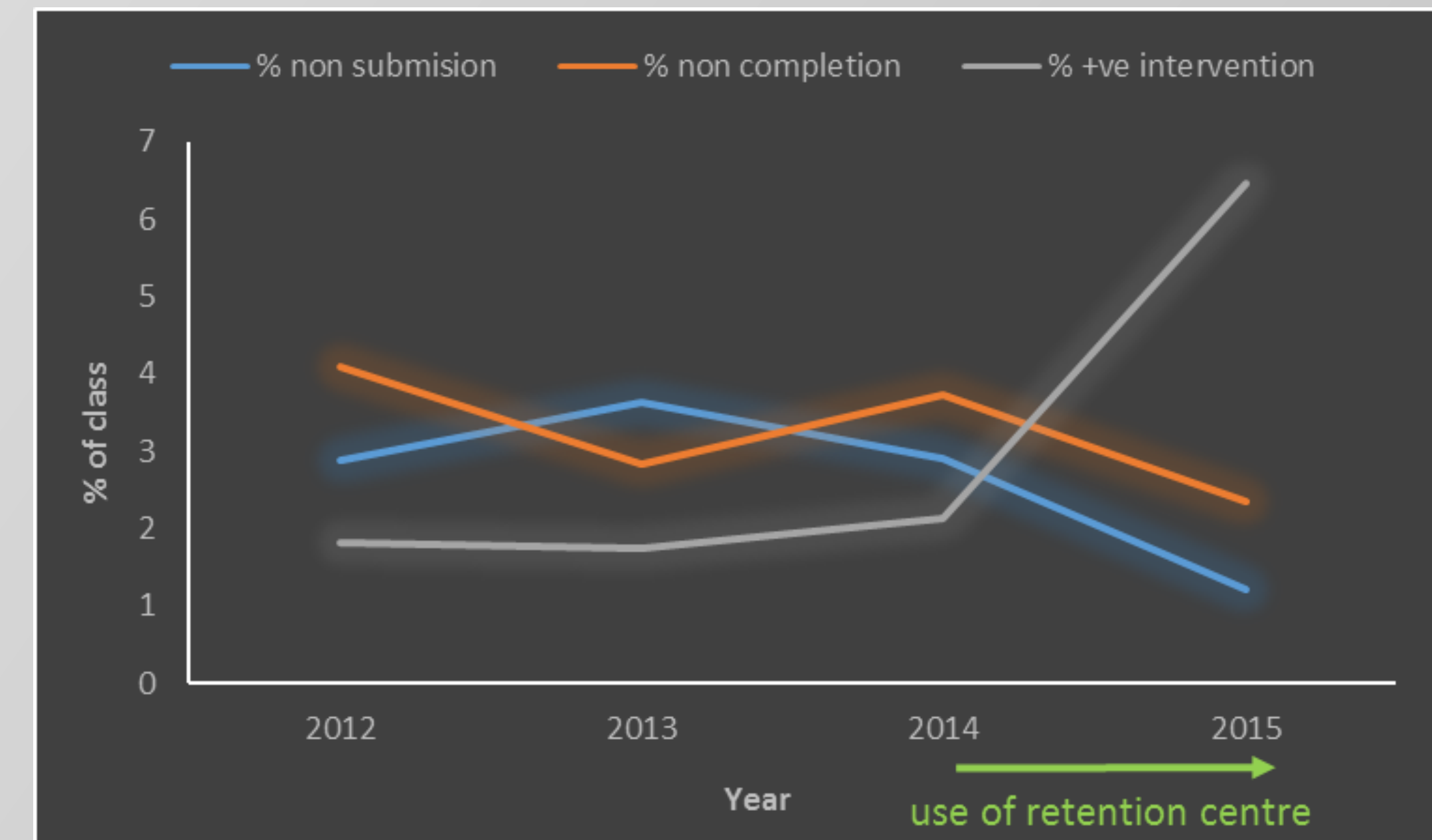
Pilot success:

Fig3:Key indicators suggest Blackboard Retention Centre has a positive impact on student engagement and success

- Fewer non-submissions and non-completing students
- Marked increase in interventions that have helped re-engage students

Conclusion

- 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

- 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.

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