



A free, open-source early warning tool for students at risk of failing assessment



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Background

Undergraduates are especially likely to drop out in year 1 of an undergraduate degree programme. Risk factors predicting drop out can be identified in advance.

The development of tools to identify risk factors at the start of a course can allow for interventions to help students and reduce drop out rates. To date, no free software options address this. Our tool, "Transit," provides a solution.



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Methods

Edinburgh maths, medicine and veterinary science undergraduates were scored for at risk traits ($n = 466$).

The measures were: formative assessment marks, absences, VLE usage, administrative task completion, quizzes, welcome events and basic clinical skills.

A weighted average of the variables produced an engagement score. Lower scores indicated higher risks. Those at risk were invited to a workshop. Engagement scores were correlated with summative marks.



Results

Low engagement scores correlated with poorer summative marks (r s around .4).

Transit identified those with the highest levels of risk. In medicine, the least at risk scored 11 marks (out of 100) better than those most at risk. Four of the five candidates who went on to fail the first assessment diet in medicine were identified as being in the highest risk category – before they sat the assessment.

Information was collected four weeks before summative assessment, allowing for early interventions.

How you can use Transit

Transit was developed in the software package "R." Materials are free to use and documentation is provided.

Use the QR code at the top or this link for more info:
<http://sefce.net/en-gb/page/transit>

We are actively looking for partners to develop and test Transit. Please contact david.hope@ed.ac.uk if interested.

Conclusions

Free, open source tools can be used to assist students transitioning to university.

The fact that we can identify at risk students so soon should be carefully considered when devising pastoral and academic support plans.

Take home messages

This tool allows for early interventions based on easily available data. It may be worth considering what indicators are available in your context that could be used in this way.

References

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- Pell, G., Boursicot, K., & Roberts, T. (2009). The trouble with resits. *Assessment & Evaluation in Higher Education*, 34(2), 243-251. doi: 10.1080/02602930801955994
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ADDITIONAL INFORMATION

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