H/02/25/02

The University of Edinburgh

Meeting of Senate Learning and Teaching Committee
to be held at 2.00pm on Wednesday 14 November 2018
in the Cuillin Room, Charles Stewart House

A G E N D A

1.	**Welcome and Apologies**	
2.	**Minutes of the Meeting held on 18 September 2018**	LTC 18/19 2 A
3.	**Matters Arising**	
4.	**Convener's Communications**	
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5.2	Proposal to Review the University Common Marking Schemes	LTC 18/19 2 C
5.3	Development of Community: 5.3.1 Student Experience Action Plan Update 5.3.2 Investigating the Potential Impact of the Peer Assisted Learning Scheme (PALS) at the University of Edinburgh	 Verbal Update LTC 18/19 2 D
5.4	Student Employment Matters	LTC 18/19 2 E
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5.6	Thematic Review 2017/18 - Mature Students and Student Parents and Carers – Remitted Recommendations	LTC 18/19 2 G
6.	**For Approval**	
6.1	National Student Survey (NSS) 2019: Bank and Institutional Questions	LTC 18/19 2 H CLOSED
7.	**For Information and Noting**	
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7.2	Lecture Recording Programme Update	LTC 18/19 2 I
7.3	Report from the Knowledge Strategy Committee (12 October 2018)	LTC 18/19 2 J
7.4	*University of Edinburgh Learning and Teaching Conference: 19 June 2019, John MacIntyre Conference Centre, Pollock Halls. Please save the date.*	
8.	**Any Other Business**	

Date of next meeting: 23 January 2019, Board Room, Chancellor's Building, Little France

Draft minutes – for approval at meeting to be held on 14 November 2018

Minutes of the Meeting of the Senatus Learning and Teaching Committee (LTC) held at 2pm on Wednesday 18 September 2018 in the Research Suite, Main Library, George Square

1. Attendance

Present:

Ms Megan Brown	Edinburgh University Students' Association, Academic Engagement Co-ordinator (Ex officio)
Ms Rebecca Gaukroger	Director of Student Recruitment and Admissions (Ex officio)
Professor Iain Gordon	Head of School of Mathematics (Co-opted member)
Ms Shelagh Green	Director for Careers and Employability (Ex officio)
Dr Sarah Henderson	Acting Director for Postgraduate Taught (CMVM)
Ms Melissa Highton	Director of Learning, Teaching and Web Services Division (Ex officio)
Professor Charlie Jeffery (Convener)	Senior Vice-Principal
Dr Velda McCune	Deputy Director, Institute for Academic Development (Director's nominee) (Ex officio)
Ms Diva Mukherji	Vice President (Education), Edinburgh University Students' Association (Ex officio)
Professor Graeme Reid	Dean of Learning and Teaching (CSE)
Dr Sabine Rolle	Dean of Undergraduate Studies (CAHSS)
Professor Mike Shipston	Dean of Biomedical Sciences (Co-opted member)
Professor Neil Turner	Director of Undergraduate Teaching and Learning, (CMVM)
Mrs Philippa Ward (Secretary)	Academic Services
Mr Tom Ward	University Secretary's Nominee, Director of Academic Services (Ex officio)

Apologies:

Professor Rowena Arshad	Head of Moray House School of Education (Co-opted member)
Professor Sian Bayne	Director of Centre for Research in Digital Education (Co-opted member)
Ms Nichola Kett	Academic Governance Representative, Academic Services
Professor Judy Hardy	Director of Teaching, School of Physics and Astronomy (CSE)
Professor Tina Harrison	Assistant Principal (Academic Standards and Quality Assurance)
Professor Neil Mulholland	Dean of Postgraduate Studies (CAHSS)

In attendance:

Ms Rachel Hosker	Archives Manager and Deputy Head of Special

	Collections, Centre for Research Collections
Dr Lisa Kendall	Head of Academic and Student Administration (CAHSS)
Ms Angela Laurins	IS Library and Collections
Mr Andy Shanks	Director of Student Wellbeing

2. Visit to Centre or Research Collections

Ms Rachel Hosker, Archives Manager and Deputy Head of Special Collections, delivered a brief presentation and led a tour of some of the University's collections for the Committee. Members considered ways in which the collections might be used to enhance teaching, with a particular focus on diversifying the curriculum.

3. Minutes of the previous meeting

The minutes of the meeting held on 23 May 2018 were approved.

4. Matters Arising

4.1 Lecture Recording Policy

Members were reminded that the Committee had approved the Policy at the May 2018 meeting. The University Executive had also approved the Policy, but it had not yet been endorsed by the HR Combined Joint Consultative Negotiation Committee (CJCNC). It was hoped that CJCNC support would be offered in due course; however the University would implement the Policy without CJCNC endorsement if necessary in order to ensure that there was clarity across the University around lecture recording.

5. For Discussion

5.1 Analysis of Student Survey Results

The Committee considered the results of the National Student Survey (NSS) 2018, Postgraduate Taught Experience Survey (PTES) 2018, and Course Enhancement Questionnaires (CEQs) 2017-18.

The Convener noted that the results were a cause for concern, presenting a reputational challenge externally and a morale challenge internally. Culture change across the institution was essential, and a programme of action to bring this about was emerging from a series of meetings. Once finalised, this would be taken to the University Executive, Court and Senate for approval. Improving communication between staff and students was thought to be key to addressing the issues raised by the surveys.

Members discussed the potential to gain greater insight by separating PTES results for online and on-campus provision. The matter would be referred to the Student Surveys Unit.

Action: Secretary to discuss separating the online and on-campus PTES results with the Student Surveys Unit.

The Committee also discussed the importance of:

- rewarding excellent teaching, whilst tackling underperformance;

- recognising that the University as a whole was responsible for the issues raised by the surveys, not just Schools;
- engaging those students who were currently disengaged;
- and ensuring that the focus on the student experience was maintained as pressures around the Research Excellence Framework (REF) 2021 increased.

5.2 Teaching and Academic Careers Project – Draft Principles

Members were advised that the University Executive had established a task group to consider ways in which teaching excellence might best be recognised. The task group had developed a set of draft guiding principles, which, once agreed, would be used to examine the University's policies and procedures to see where there was room for improvement, particularly in the area of policy implementation.

Members discussed the draft principles and made the following observations:

- There would be value in clarifying that the principles applied to all categories of staff involved in teaching, not just academic staff.
- The potential for a Teaching Fellow to progress to Professorial level should be made explicit within the principles.
- There would be benefit in including a principle around workload.
- *'What kind of University do we want to be?'* - the fourth bullet should make clear that academic leaders should be given sufficient time for their managerial duties.
- Some concern was expressed about the use of 'teaching and / or research' in the principles, it being felt that staff should be involved in both. It was noted that the question of whether or not the University should be aiming to expand its cohort of teaching-only staff would need to be considered.

5.3 Student Support

5.3.1 Proposal for Review of Student Support

The Committee acknowledged that there was variation in the implementation of the Personal Tutor system across the University, and that this inconsistency needed to be addressed. The system would therefore be reviewed alongside work being undertaken by the Service Excellence Programme on student support. Current thinking was that the review would aim to identify any changes to be made by the end of 2019, and to implement these in September 2020. Members noted that:

- the University was aiming to develop a system of support that met the needs of a diverse student body, and there was unlikely to be a 'one-size-fits-all' solution;
- the number of students, and therefore the tutee to Personal Tutor ratio, was the main problem within the College of Arts, Humanities and Social Sciences;
- the review should take into account the role that Library and Information Services' staff play in student support;
- learning analytics have a role to play in identifying those students potentially requiring additional support.

5.3.2 Personal Tutor System Annual Update 2017-18

The update had been generated from the work of the Senate Quality Assurance Committee (SQAC) Personal Tutor System Oversight Group. It identified ways in which the Personal Tutor System might be improved in the shorter term. The following observations were made by members:

- a number of Personal Tutors had gaps in their training and were not aware of all of the resources available to assist them in their roles.
- current annual review processes did not encourage reflection on the personal tutoring experience.
- recruitment processes should assess an applicant's ability to perform the research, teaching and student support-related aspects of the role.

5.4 University Learning and Teaching Strategy

5.4.1 Update on Progress Against the University Learning and Teaching Strategy Implementation Plan

The paper outlined action being taken at institutional level to drive forward the Learning and Teaching Strategy's priorities. It did not include information about action being taken at College and School levels, and it was noted that linkage across levels could be a challenge, particularly given the number of different strategies (eg. the Strategic Plan, Learning and Teaching Strategy, Widening Participation Strategy) areas were being asked to consider. Members were broadly happy with the direction of travel outlined in the paper, but were keen to develop a more joined up, University-wide approach.

5.4.2 Review of School Annual Plans 2018-19

Members were advised that the quality of the learning and teaching-related content of School Annual Plans was improving with time. Many Schools were now providing detailed information about a range of learning and teaching-related themes in their Plans, and there was recognition that culture change in this area was required. However, variation across Schools persisted and, as with the previous item, members were keen for a more joined-up and consistent approach to planning to be adopted.

5.5 Student Mental Health Strategy Implementation - Update

The paper was presented by the Director of Student Wellbeing, who highlighted the following points:

- The Student Mental Health Strategy was approved by LTC in January 2017 and a group was now meeting quarterly to drive forward its implementation.
- There was more demand than ever for mental health support, reduced stigma, and increased awareness of the services offered by the University in this area.
- As a result, resources for mental health support were being increased year on year.
- The University had adopted the Stepped Care Model of mental health support, and was considering a range of developments to meet the increased demand for support including:
    - recruiting more counsellors
    - offering more online resources
    - developing more group programmes

- developing a wellbeing centre in Bristo Square to bring all relevant University services together.
- focusing on proactive wellbeing services as well as support for those with mental health issues.
- looking at ways of ensuring that all areas of the University campus were resourced.
- looking at ways in which communication with the NHS might be improved
- working more closely with the Students' Association on peer mental health models
- considering ways in which training for School and Professional Services' staff might be improved.

5.6 Edinburgh University Students' Association

5.6.1 Students' Association Priorities 2018/19

The Students' Association Vice-President (Education) introduced the paper, noting that her priority for the year would be to facilitate better conversations between staff and students about diversifying the curriculum, creating inclusive teaching environments, and developing alternative pedagogies.

5.6.2 Student Partnership Agreement – Implementation Plan 2017-18: Update and Proposed Themes for 2018-18

The Committee was advised that, for continuity, the 2017/18 themes would be retained in 2018/19. All 17 of the SPA projects funded in 2017/18 had had a positive impact, and project funding would also be available in 2018/19.

An event to share learning from the 2017/18 projects would be held on 9 October 2018, and a small booklet had been produced to highlight themes and showcase some of the projects.

5.7 Introduction of a Resource Lists Framework

The paper was presented by Angela Laurins, IS Library and Collections, who noted that the Resource Lists service was now supporting 1700 lists, with representation across all Schools. However, this still represented only 30% of all taught courses. An Acquisitions Audit Report had recommended mandatory use of the Resource Lists service across the University. However, in preference to a mandate, the service was seeking LTC support for the introduction of a Resource Lists Framework as a route to increasing adoption of the service.

Members discussed:

- the potential benefits for the student experience of adopting a consistent approach to the use of Resource Lists;
- the impact on Course Organisers of producing Resource Lists;
- whether the availability of Resource Lists might discourage students from making full use of the Library and reading widely;
- the interaction between Resource Lists and the provision of prioritised reading lists as part of mainstreamed learning adjustments;

- the importance of adopting an approach that captured the diversity across Subject Areas, including the possibility of some Subject Areas providing nil returns combined with statements that a different pedagogy was used by the Subject which did not require a Resource List;
- the need to consider the relationship between Resource Lists and information provided via the DRPS to ensure that Course Organisers were not being asked to produce information twice (Service Excellence would have a role to play in this);
- the importance of compliance with Competitions and Markets Authority (CMA) guidelines on consumer protection law.

It was agreed that the Resource Lists service would undertake further consultation and report back to the November meeting of LTC.

Actions:
1) Resource Lists Service to undertake further consultation and to report back to the November 2018 meeting of LTC.
2) Angela Laurins to discuss CMA guidelines on consumer protection law with Director of Academic Services.

5.8 Annual Review of Effectiveness of Senate Committees

Members noted the outcomes of the review and discussed:

- the timing of meetings, noting that, for those on multiple Committees, having a number of meetings falling in the same week was problematic;
- the late arrival of papers, making review and prioritisation difficult;
- the length of papers, noting that Committee members were keen to reduce the length of papers, whilst ensuring that they were sufficiently detailed to allow informed decisions to be made.

6. For Information and Noting

6.1 Senate Committee Input into 2019-22 Planning Round

Members noted that at this stage, they were being asked to highlight key priorities and identify areas of work that may have significant resource implications. The Committee agreed that work around employability should be a priority, and discussed the possibility of the University being more ambitious in its planning. The importance of IS and Library spend reflecting learning and teaching priorities was highlighted.

It was agreed that the Director of Academic Services would do further work on the paper once the outcome of the September meeting of the University Executive was known.

Action: Director of Academic Services to do further work on the planning paper once the outcome of the September meeting of the University Executive was known.

6.2 Reports

Reports from the following groups were noted:

6.2.1 Assessment and Feedback Enhancement Group
6.2.2 University-Wide Courses Task Group – Consultation Responses
6.2.3 Service Excellence, Student Administration and Support
6.2.4 Learning and Teaching Policy Group
6.2.5 Knowledge Strategy Committee

6.3 Guidance for Committee Members 2018/19

The Committee's terms of reference, members' guidance and agreed priorities for 2018/19 were noted.

Philippa Ward
Academic Services
25 September 2018

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 B

The University of Edinburgh

Senate Learning and Teaching Committee

14 November 2018

Research into undergraduate non-continuation

Executive Summary

Non-continuation statistics for undergraduate students at UK and Scottish universities are coming under increasing scrutiny. An initial analysis of non-continuation data (data regarding students who do not return to study after year one of their undergraduate programme of study) considered at the Committee's 24 January 2018 meeting suggested that the University's non-continuation rates are less positive than our comparators, and that within the University there is significant variation in retention rates for different student groups and between different Colleges and Schools. The Committee concluded that the University should undertake more detailed analysis of the data to assist the University to understand its patterns of retention and non-continuation.

Prompted by this discussion, Academic Services and Governance and Strategic Planning (GASP) have undertaken two related projects regarding non-continuation data:

1. A statistical modelling analysis exercise supported by Enhancement Themes funding and conducted by two interns (Warwick Wainwright and Filip Margetiny), working closely with Jim Galbraith in GASP.

2. Analysis of Schools' insights into the reasons for patterns of non-continuation among students on their programmes.

Annex A contains the report of the statistical modelling analysis – it includes an Executive Summary (p4-5) and conclusions (p30-31), as well as more detailed and technical sections. Jim Galbraith (Senior Strategic Planner, Governance and Strategic Plan) will introduce this paper.

Annex B (p34 to 40) contains the report of the analysis of Schools' insights. Tom Ward (Director of Academic Services) will introduce this paper.

How does this align with the University / Committee's strategic plans and priorities?

This aligns with the Strategic Objective of Leadership in Learning.

Action requested

The Committee is invited to discuss the findings of these two research projects and to:

- Identify any actions that the University may need to consider in response;

- Comment on the specific recommendations set out in Annex B (the report into the analysis of Schools' insights);

- Identify any areas in which the University should consider follow-up research or analysis.

How will any action agreed be implemented and communicated?

Academic Services will inform Schools of the outcomes of this research, into which they contributed.

If LTC agrees that the University should consider any action in response, it would be necessary to identify any necessary implementation and communication steps.

Resource / Risk / Compliance

1. **Resource implications (including staffing)**

If the University decides that the issues raised require additional systematic investigation, additional resources would be required to carry out quantitative and qualitative investigations. These would need to be costed.

2. **Risk assessment**

Poor performance in non-continuation and retention metrics is a risk to the University's reputation, increasing as these measures gain more publicity. As these measures gain more profile, it will be an increasing risk to the University's reputation if we do not develop a better understanding of which groups of students are at higher risk of withdrawing and of any underlying reasons.

3. **Equality and Diversity**

The paper explores evidence of different patterns of non-continuation rates for students with different protected characteristics.

4. **Freedom of information**

Open

Key words
Retention, non-continuation, widening participation

Originator of the paper

Filip Margetiny (PhD candidate at the Usher Institute of Population Health Sciences and Informatics)
Warwick Wainwright (PhD candidate at the School of Geosciences and Scotland's Rural College)
Jim Galbraith (Senior Strategic Planner, Governance and Strategic Planning)

LTC: 14.11.18
H/02/25/02

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Tom Ward (Director of Academic Services)
6 November 2018.

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Annex A

Determination of factors impacting student retention rates and course marks at the University of Edinburgh

A report for the University of Edinburgh Senate Learning and Teaching Committee

November 2018

Warwick Wainwright[1]; Filip Margetiny[2] and Jim Galbraith[3]

Executive Summary

This study investigates patterns of retention amongst University of Edinburgh undergraduate students, inspired by the HESA (Higher Education Statistics Agency) 'non-continuation' Performance Indicator. General UK-wide interest in this topic reflects concerns about the student experience of our undergraduates, fears that under-represented groups or those from disadvantaged backgrounds are more likely to not continue, and the increased cost of higher education where significant numbers of students do not continue with their studies.

Prompted by an initial discussion at the University of Edinburgh's Senate Learning and Teaching Committee on available data in spring 2018, and in partnership with Academic Services, Governance and Strategic Planning oversaw the work of two PhD interns who performed exploratory work, data manipulation, sample choice and regression modelling.

The analysis examines the University's 'STUDMI' database, which includes information about 'students' (a single instance of study by a single person), their outcomes, course marks and various socio-economic and other factors. In this project we concentrated on the non-continuation of undergraduate students during years 1 and 2 of their studies, as this is the most common non-continuing group.

The initial sample includes only students who entered their studies between years 2013/4 and 2016/7, to ensure consistency across the range of relevant information available on the STUDMI database. Three cohorts were pulled from the dataset, based on their domicile on entry; Scottish, rest of UK (RUK) and global (including Scottish, RUK, EU and Overseas students). A logistic regression (LR) analysis was applied to the data.

Although the study initially focused on descriptive analysis, regression analysis was introduced as a more powerful statistical analytical framing of the data that could provide greater insight into student and University specific variables impacting retention rates.

The conclusions from the analysis are:

- **Several variables relating to disadvantage were explored, including independent v state school, first in family, SIMD and bursaries.**
    - **Students from private schools were generally less likely to non-continue.** This variable has the largest influence on non-continuation for RUK students, though other variables have a bigger influence for Scots undergraduates.
    - **Identifying as 'first in family' was a significant predictive factor of continuation** for all three groups; Scottish, global and to a lesser extent RUK.

[1] PhD candidate at the University of Edinburgh School of Geosciences and Scotland's Rural College
[2] PhD candidate at University of Edinburgh Usher Institute of Population Health Sciences and Informatics
[3] Senior Strategic Planner at the Governance and Strategic Planning department

  - **Amongst Scotland domiciled students, being a bursary holder (including access bursaries) was a significant predictor of a *lower* (more favourable) non-continuation rate.** For RUK students, bursary holder status was not a significant predictor.
  - **SIMD (Scottish Index of Multiple Deprivation) quintiles 1, 2 and 3 (most deprived) are more likely to non-continue** when compared to quintiles 4 and 5 (least deprived).
  - **Higher socio-economic indicators for Scotland domiciled and RUK students are clearly correlated with higher average course marks and retention rates**
- **Several individual-specific factors – age, gender, ethnicity and disability - were less powerful predictors of non-continuation than other variables -** contrary to notions often promoted in the widening participation literature concerning student retention.
- **Non-continuation rates, and average course marks vary by ethnic group but the statistical significance of this is low.** Students identifying as Asian or White were most likely to non-continue, but regression analysis did not identify ethnicity as statistically significant at RUK or Scotland level. In our global regression analysis, with fewer other variables available, White ethnicity was identified as having some statistical significance of predicting higher non-continuation rates, but less so than Scotland domicile or being 'first in family'.
- **Among disability categories, students identified as 'Learning disability' showed lower than average non-continuation rates and those who identified as 'Mental Health' had higher than average rates.** Individual categories of disability may warrant further analysis, using additional cohorts of students to increase the sample size.
- **For Scots and RUK, UoE School was not usually a notable predictive factor in non-continuation.** However, where all domiciles are taken into account School was more frequently amongst the influential factors. This reflects that there are more demographic variables to draw upon in the analysis for Scots and RUK.
- **Further areas for exploration could include:**
  - As particular socio-economic factors appear to influence non-continuation rates (and course marks), are there any new appropriate ways in which the University can welcome and support students from those backgrounds, for example mentoring or 'buddying' schemes?
  - Although self-reported, being 'first in family' (more precisely, aiming to be the first in your family to get a degree or HE qualification), appears to be a significant predictor of non-continuation and may warrant further thought about strategies to assist.
  - Disability as a whole was not a significant predictor of non-continuation however there are individual disabilities the significance of which might be masked by lower student numbers and this could warrant further analysis.
  - High non-continuation amongst students arriving via the 'SWAP' wider access programme merits further investigation. For instance are such students in need of financial assistance (those without bursaries are far less likely to continue), more flexible study patterns, guidance on subject choice, assistance with travel costs, etc.
  - Improving the 'fit' of the regression analysis by adding other variables.
  - Regression analysis could potentially be repeated using the student's qualification entry profile as a factor in the analysis. This was not possible to do in the scope of

this study as there is no existing summary statistic that quantifies the prior qualifications which gained each student entry. To do so comprehensively, for all students, would be particularly challenging but if possible would add a significant dimension to the analysis.

- Performing additional statistical analysis through the application of principal component analysis (PCA) could be used to efficiently identify the principal components within a group of variables that most explain non-continuation in the student sample. PCA is a variable reduction method that works to re-project variables based on their variance, suggesting which principal components account for most variation in the data.

1. Introduction

Interest in university retention rates arises from a number of sources, including growing concerns that under-represented groups or those from disadvantaged backgrounds are more likely to not continue[4]. Moreover, there are elevated public and individual costs (financial and otherwise) associated with university education when the proportion of students exiting university prematurely without a degree certificate is higher. Use of metrics relating to non-continuation is also increasingly common in external frameworks used to give accountability for institutions such as the Teaching Excellence Framework[5] and SFC Outcome agreements[6].

The Higher Education Statistics Agency (HESA) publish various annual 'PIs' (Performance Indicators). The 'non-continuation' PI is defined as the proportion of students not active in HE (studying at any Higher Education provider) the session *after* their entry session (students who have already left with a HE award are counted as 'continuing'). The University of Edinburgh's (UoE) proportion of 'non-continuing' students is small (consistently less than 5%) and generally lower than the UK or Scottish higher education sector average but not as low as the Russell Group average (Figure 1). Additionally, HESA calculate a benchmark to accompany the PI, showing the sector average for similarly profiled cohorts. UoE's non-continuation statistic is consistently higher than the benchmark, suggesting there is a need to further explore the drivers of non-continuation and measures that could be employed to reduce non-continuation.

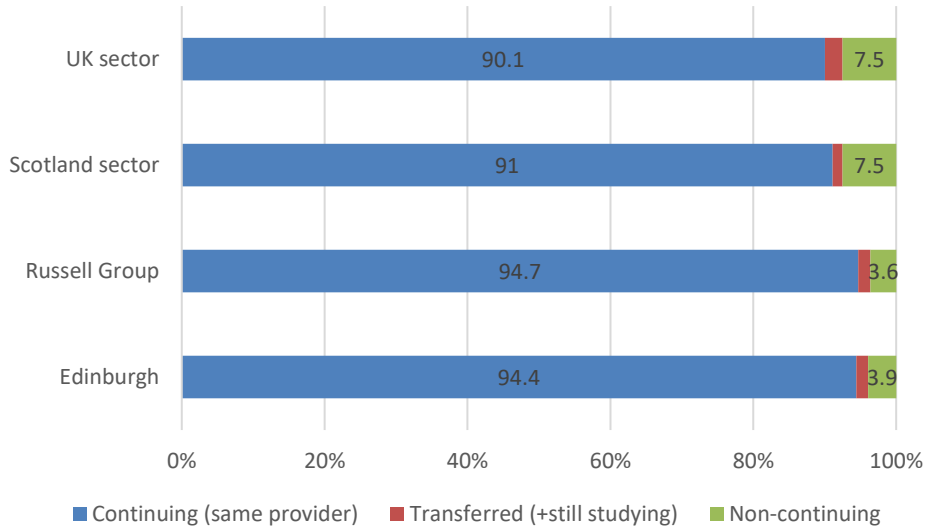


Figure 1: Higher education statistics agency (HESA) performance indicator for non-continuation of students in the 2015/16 cohort.

[4] M. Bonfieni and M. McGovern (2011). Degree outcomes of different student groups at the University of Edinburgh.

[5] Department for Education (2017) Teaching Excellence and Student Outcomes Specification https://www.gov.uk/government/publications/teaching-excellence-and-student-outcomes-framework-specification

[6] Scottish Funding Council (2017) University Outcome Agreement Guidance 2018-19 http://www.sfc.ac.uk/publications-statistics/guidance/guidance-2017/SFCGD202017.aspx

This report therefore seeks to explore the drivers causing students to non-continue through examination of the UoE's Student Management Information tool (STUDMI). The former contains information on every student at the university, including multiple demographic and socio-economic variables. Through analysis of this data, the report aims to identify key factors that may be significantly influencing retention rates at the UoE through descriptive statistics and a more advanced logistic regression (LR) analysis. The latter is a statistical modelling approach usually employed to model two binary outcomes (i.e. 0 or 1), such as pass/fail or in this instance 'continuing' or 'non-continuing' university. The outcome is modelled as a binary response variable "N", which takes a value of 1 if a student is labelled as non-continuing and a value of 0 if the student continued in their studies by the time snapshot was taken, or if they finished with a certificate. For purpose of easy data visualisation, in figures we utilise a variable called "Percent N" (or "%N") – i.e. the percentage of non-continuation students in the sample.

Some of the students who 'continue' in this sense (i.e. into a second year of study) will non- continue later on, or exit later years with a certificate or diploma rather than a degree. This report focuses on the entry year and following year element of non-continuation (HESA-style) because it is the stage at which most non-continuation occurs and by focusing on the first and second years, recent patterns can be analysed.

HESA are able to identify students who have left to transfer to other institutions *and* who are actively studying the year after they entered UoE. Internal data cannot identify these students which raises the non-continuing statistic but the proportion who do so is reasonably consistent according to HESA (around 1%).

The report is structured as follows. Section two provides a brief overview of work exploring factors affecting student retention. Section three provides an overview of the methodological approach taken in this report, including the LR analysis. Section four outlines descriptive analysis for UoE student retention and students marks, based on examination of the STUDMI database. Section five provides results from the LR analysis while section six offers conclusions and recommendations.

2. Review: Factors driving differences in retention rates

Previous work by Forbes and Wickens (2005)[7] has shown the students' decision of changing or continuing studies is partially explained by the level of social integration that students achieve at university. Additionally, the association between the student-teacher relationship and non-continuation is demonstrated in the academic literature, which suggests good relations increase student retention (see Lessard, Fortin, Joly, Royer, & Blaya, 2004)[8]. Other work has shown the variables related to non-continuation include personal and socio-economic factors such as social origin, socioeconomic status, family disruption (Fortin, Marcotte, Potvin, Royer, & Joly, 2006)[9]. Work by Araque et al. (2009)[10] focusing on student retention rates in Spain suggests as students average mark increases by one point, so the odds of retention are more than doubled. They also show the likelihood of students dropping out varies depending on the course studied.

More recently, work by Bonfieni and McGovern (2011)[11] focusing on retention rates at the University of Edinburgh showed differences in degree outcomes associated with socio-economic and demographic groupings. Differences emerged across the three University colleges and between different domiciled student groupings. Additional differences in degree outcomes were found for students of different ages and gender in addition to the previous schooling background of students (i.e. private vs state school).

While previous work has explored factors impacting non-continuation across students in different locations, none (to date) has constructed models to predict student retention rates based on a refined set of socio-economic and demographic criteria. We suggest this is an important limitation for universities seeking to minimise non-continuation by awareness of the additional support that some student demographics may require. This report seeks to address this gap through two contributions:

1. The evaluation of additional demographic and socio-economic attributes impacting student retention and marks at the UoE by focusing on a cohort consisting of students who entered from 2013 to 2016.
2. The application of a LR model to determine statistically significant variables affecting student retention at UoE including assessment of the predictive capability of the model to predict non-continuation through a testing dataset.

[7] A. Forbes, E. Wickens. A good social live helps students to stay the course. Times High Education Supplement, 1676 (2005), pp. 58-63

[8] A. Lessard, L. Fortin, J. Joly, É. Royer, C. Blaya. Students at-risk for dropping out of school: Are there gender differences among personal, family and school factors? Journal of At-Risk Issues, 10 (2) (2004), pp. 91-127.

[9] L. Fortin, D. Marcotte, P. Potvin, E. Royer, J. Joly. Typology of student at risk of dropping out of school: Description by personal, family and school factors European Journal of Psychology of Education, 21 (4) (2006), pp. 363-380.

[10] Araque, Francisco, Concepción Roldán, and Alberto Salguero. "Factors influencing university drop out rates." Computers & Education 53.3 (2009): 563-574.

[11] M. Bonfieni and M. McGovern (2011). Degree outcomes of different student groups at the University of Edinburgh.

3. Methodological overview

3.1. Sample data, variables and descriptive analysis

Initially, we queried the STUDMI database to identify a cohort that would be used in the analysis. The sample frame was taken from multiple snapshots of students covering 1st to 2nd year students (or up to '3rd year students' if they entered by direct entry to 2nd year of the degree programme). The filter resulted in a sample frame of 25,660 students spanning entry from 2013/14 to 2016/17. See Box 1 for an overview of the sample frame.

Box 1: Defining the sample frame

The snapshot in time used for defining the sample frame is always *the end of the session after* the cohort in question entered. That is the case for both HESA and local UoE calculations. At that point in time, the majority of the students in the sample have just finished year 2 of their programme, having entered year 1 of their programme the previous session, in the conventional way.

To maximise the sample size we include the minority of students who originally started their studies in year two of programme ('direct entry' or on some occasions 'transfers' from other institutions). We do not include students who started on year three of their programme or later (transferring from other institutions) as their experience and patterns would be substantially different to the norm. Incidentally the sample frame can be quite different in terms of *progression* as distinct from continuation:

- entered year 1, progressed to year 2

- entered year 1, still in year 1 (repeat, partial repeat, exam only, interrupted)

- entered year 2, progressed to year 3

As formerly noted, HESA produce an annual statistic expressing the proportion of entrants non-continuing the session after they entered. HESA calculate this for every institution and also calculate a benchmark for each institution based on the pattern that might be expected given the profile of their entrants. We used filters to query the STUDMI database to define a sample of students associated with non-continuation that mirrors the HESA methodology but with some exceptions (outlined in Appendix 1). One modification was to include additional students in our assessment (early withdrawal students leaving prior to 1st December in their entry session) that we suggest are of interest from a University perspective. This is because whilst their reasons for leaving are more likely to be 'personal' than related to academic progress, they will have interacted with the institution in a variety of contexts and any demographic patterns that can be identified may be of interest.

An initial review of literature and discussions with staff at UoE identified multiple variables that were of interest concerning student retention patterns[12]. These were subsequently used to query the sample frame. A summary of the variables used for both descriptive statistics and the LR model is provided in Appendix 2. Descriptive analysis of the data (both visual and tabular) was undertaken in the University's Business Intelligence Suite and Microsoft Excel 2016.

3.2. Logistic regression (LR) modelling

Non-continuation happens to individuals but the University is interested in looking for patterns amongst those individuals, to better understand and support students to succeed. A LR model was used to determine statistically significant variables that may explain student retention patterns, or rather factors affecting non-continuation. LR is a statistical modelling approach used to measure a binary response (i.e. 0 or 1) to a range of explanatory variables[13]. The model describes the relationship between the dependant variable (non-continuation) and a set of explanatory variables (e.g. university specific factors, whether the student was first in family to attend university, student socio-economic background, etc.). The advantage of the model is that the dependant variable can take only two values, effectively replicating the binary outcome of a student either 'continuing' or 'non-continuing' university. The predicted values can be interpreted as a probability of particular outcomes rather than the outcomes themselves. The LR model is a special case of the generalized linear model and is calculated by the following[14]:

$$p(x) = \frac{1}{(1 + e^{-(\beta 0 + \beta 1 x)})}$$

The terms can be defined as the following:

$p(x)$ is the probability that the dependent variable equals a case, given some linear combination of the explanatory variables. The value of the linear regression expression can vary from negative to positive infinity and yet, after transformation, the resulting expression for the probability ranges between 0 and 1.

$\beta 0$ is the intercept from the linear regression equation (the value of the criterion when the predictor is equal to zero).

β_{1x} is the regression coefficient multiplied by some value of the predictor.

e denotes the exponential function.

[12] Within this report where we have examined data by University of Edinburgh "School" we have included MVM Deaneries under this shorthand definition because they have 'ownership' of programmes and their students within the University's 'STUDMI' data.

[13] Menard, S. (2001). Applied logistic regression analysis, 2nd edition. Sage publication.

[14] Park, H.A. (2013). An introduction to logistic regression: from basic concepts to interpretation with particular attention to nursing domain. J Korean Acad Nurs (43) 156-154.

In this work, multiple LR models were formulated based on different student input datasets queried from the sample frame in STUDMI. The models were constructed to explore whether the significant explanatory variables used for deriving non-continuation probabilities vary between different domiciled student groups. An overview of these datasets and models is provided in Table 1. A matrix of the different variables used in the various models is provided in Appendix 3. Note, in statistics, there are two types of variables: numerical (countable) variables and non-numerical (categorical) variables. This analysis uses both.

Table 1: Datasets used for the three different logistic regression (LR) models

Dataset and corresponding model	Description
Scottish students	A dataset containing Scottish only students with modelled variables that are appropriate for Scottish only students (e.g. the Scottish Index of Multiple Deprivation).
Rest of UK (RUK) students	A dataset containing students from England, Wales and Northern Ireland with modelled variables that are appropriate for RUK students (e.g. widening participation bursary for RUK students).
Global (all) students	A dataset containing all students in the sample frame from UoE, subject to complete student records for each of the defined regression variables.

Initially, the data sets were partitioned into a 'training' and 'testing' sub-sets of the initial data frame (75% training, 25% testing). The data partition was created using a stratified random sample of the data so the LR model can be "trained" to predict the probability of non-continuation of a student, relative to some string of explanatory variables. The testing data-set is later used to test the predictive capacity of the model to predict for non-continuation across the sample of students.

The LR model reports the coefficients and statistical significance of the explanatory variables. This is important because it provides insights as to what specific variables are significant and their relationship with non-continuation (i.e. either a reduced or increased likelihood of N). Additionally, to test the statistical significance of the different model parameters we run an analysis of variance (ANOVA) on the model to analyse the table of deviance. The difference between the null deviance and the residual deviance shows how our model is doing against the null model (a model with only the intercept). The wider this gap, the better – i.e. the more our parameters are contributing to explaining non-continuation. The ANOVA uses a chi-square statistic which is one way to show a relationship between two categorical variables. The chi-squared statistic is a single number that tells you how much difference exists between your observed counts and the counts you would expect if there were no relationship at all in the population[15].

In the steps above, we evaluated the fitting of the model. Additionally, we would like to see how well the model is able to predict non-continuation on a new set of data (the test data). A Receiver Operator Characteristic (ROC) curve is a typical performance measure that illustrates the diagnostic ability for a binary classifier model (our LR model). The ROC is a curve generated by plotting the true positive rate (TPR) against the false positive rate (FPR) of the model prediction at various threshold settings. Accuracy is measured by the area under the ROC curve (AUC). An area of one represents a perfect test while an area of 0.5 represents a poor test (i.e. estimation no better than chance). A model with an AUC figure greater than 0.8 can be considered good at estimating non-continuation[16].

[15] See http://www.statisticshowto.com/probability-and-statistics/chi-square/ for a detailed overview of the chi square test.

[16] See http://gim.unmc.edu/dxtests/roc3.htm for broader discussion of ROC and AUC.

3.3. Rounding and GDPR compliance

In order to avoid revealing identity and/or private information about the students, all data has been processed in agreement with Government Statistical Service guidance, and was collected, stored and processed in accordance with General Data Protection Regulation.

For purposes of tables in this report, rounding has been used to ensure that the data cannot be used to identify individual students. Rounding involves adjusting the real numbers to a certain base: in this report, we use rounding to a base of 5, which means that all of the numbers in the report are adjusted up or down to a nearest multiple of 5. Special care has been taken to avoid use of any percentage values that break down within a group smaller than 25, both for the purpose of statistical significance and personal data protection. A value of 0~ is used where the reported number is below 5.

For purpose of calculating percentages, unrounded values were used. Percentages themselves are rounded to 0.1.

4. Descriptive analysis

4.1. Factors impacting student retention and marks

A range of descriptive statistics were calculated to report differences in student retention in relation to certain variables. While the differences are not necessarily statistically significant there is value in exploring the relative differences between different socio-economic and university specific variables.

4.1.1 Gender

Our analysis indicates that there are is no difference in non-continuation rate over the analysed period as a whole (Figure 2), i.e. aggregating students who entered 2013/14 to 2016/17, even when accounting for other variables (see logistic regression analysis in 5). It is notable that the two entry sessions prior to this show a distinctly higher '%N' amongst males compared to females (7.5% vs 4.6% in 2011/12; and 7.0% vs 4.7% in 2012/13). This is also the case for those who entered in 2014/15 (7.2% vs 4.9%). However it is also notable that more recently, '%N' for males entering in 2013/14 and 2016/17 is slightly *lower* than for females and the difference is minimal in 2015/16. By aggregating the four recent cohorts, we can show that gender, in isolation, is not so strongly related to non-continuation as was found in earlier studies.

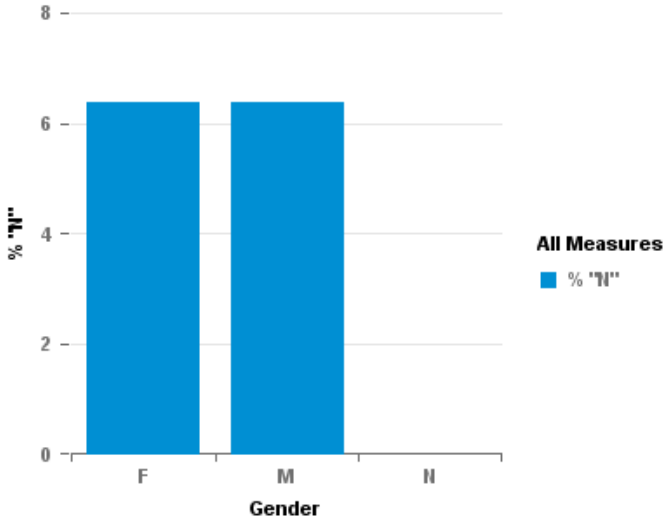


Figure 2: Student retention relative to gender

Table 2: Student admissions by gender, and percentage N for each

Gender	Student count	% "N"
F	12910	6.4
M	8675	6.4
N	10	

4.1.2 Age

For age, our descriptive analysis suggests students aged 25 or over are generally more likely to non-continue (Figure 3) than the other age groups. When interpreting this it should be noted that the vast majority of that age group are Scotland domiciled and **the non-continuation rate amongst Scotland domiciled students is generally higher; overall, 9% compared to 4% for EU students and 5% for RUK and overseas students.** Further, there is a significant difference between the non-continuation rate for Scots '25 or over' who applied via the SWAP programme (see 4.1.8), whose rate is 18.6%, and those who did not come via that programme, whose rate is 10.9%.

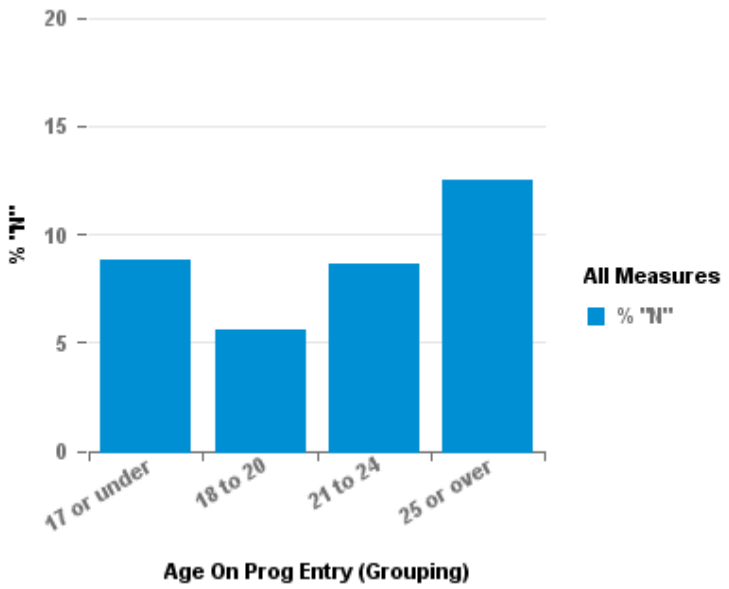


Figure 3: Student retention relative to age on study program entry

Table 3: Admissions grouped by age

Age On Prog Entry (Grouping)	Student count	% "N"	% "N" Scotland domiciled only
17 or under	2680	8.8	9.8
18 to 20	17290	5.6	8.4
21 to 24	955	8.6	9.6
25 or over	670	12.5	14.2

4.1.3 Socio-economic deprivation

The Scottish Index of Multiple Deprivation quintiles (WP-SIMD Quintile) provide a measure of deprivation rank[17] for each student's home address for each of the 6,505 postcode-based datazones

[17] Based on a basket of different measures recorded against home postcodes such as educational outcomes, average income, transportation links, etc.

in Scotland[18]. Quintile 1 represents the most deprived 20% of postcodes in Scotland whilst quintile 5 represents the least deprived. This method of socio-economic deprivation analysis was only performed for the Scots group. The analysis suggests students in the upper two SIMD quintile spectrum (i.e. those from the least deprived 40% of areas, who constitute the majority of the Scots student body) are less likely to non-continue. A smaller number of students enter from lower SIMD quintiles (Figure 5[19]) which may influence the variability of results.

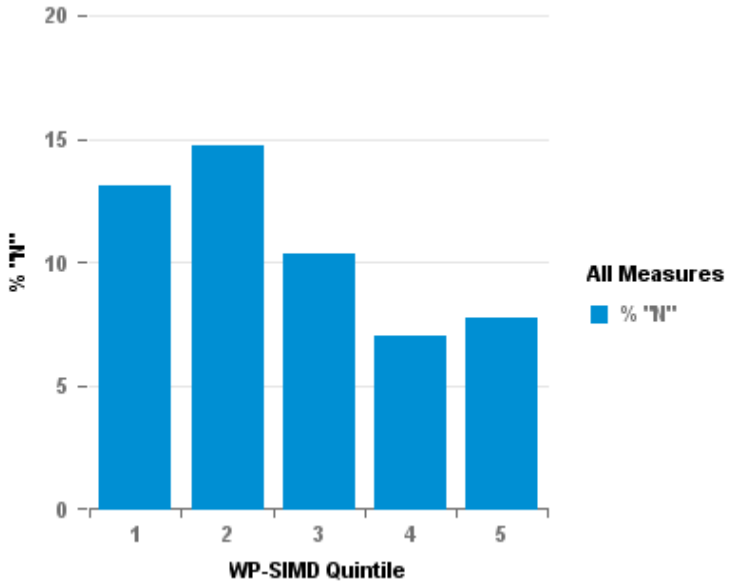


Figure 4: Student retention relative to SIMD Quintile.

[18] Scottish Government (2013). Guidance on the definition of SIMD quintiles.

[19] A small number of entrants each year cannot be assigned an SIMD quintile because their postcode is too new to appear on the Scottish Government's SIMD lookup tool, which is refreshed periodically. They have been excluded from figures 4 and 5.

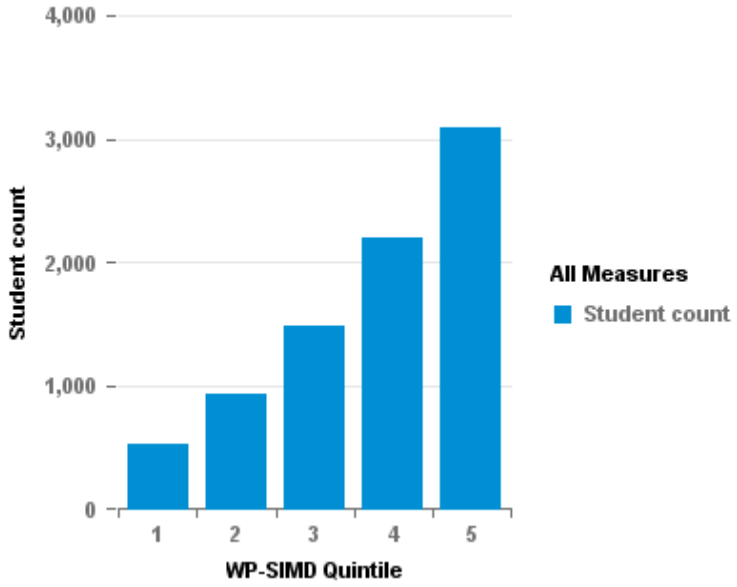


Figure 5: Student admission relative to SIMD Quintile.

4.1.4 Socio-economic indicator

While no unbiased / complete socio-economic marker is available for students from Overseas or EU, the parameter of socio-economic indicator, which details parental occupation might be used as a proxy to indicate the socio-economic status of the individual. Unfortunately this parameter is only reliable for RUK and Scots students, and therefore the statistics provided below are a summary statistic of these two groups. It should be noted that students 'self-declare' this information when they enter, or choose not to complete it. There is a clear correlation identified with higher average marks and better retention rate exhibited by students who belong to groups identifying as higher on the socio-economic indicator. This correlation is statistically significant, as supported by the regression analysis (see chapter 5).

Table 4: Student retention and average mark relative to socio-economic indicator (UK students only)

Socio-economic Indicator (2002 on)	Student count	Average Course Mark	% "N"
Higher managerial and professional occupations	5285	60.9	4.8
Intermediate occupations	1305	57.4	8.1
Lower managerial and professional occupations	3900	58.3	6.9
Lower supervisory and technical occupations	375	55.6	12.3
Not classified	2540	57.3	8.3
Routine occupations	410	53.1	15.0
Semi-routine occupations	935	55.4	9.3

Small employers and own account workers	835	57.1	8.0

4.1.5 Disability

Our analysis suggests students with 'no disability' were generally more likely to achieve a higher average course mark than most student disability categories (Table 5). Similarly, students in most disability categories are more likely to non-continue than those declaring no disability, with the exception of those who categorise as 'learning difficulty' students: these were in fact *less* likely to non-continue than students with no disability.

The distinct outcome for students declaring 'learning difficulty', the largest group declaring, may obscure the real impact of certain disabilities in our regression analysis looking at significance (see chapter 5), as interpretation is complicated by small sample sizes.

Table 5: Student retention and average mark relative to disability

Disability	Student count	Average Course Mark	% "N"
Autistic disorder	70	54.5	8.5
Blind/partial sight	20	62.1	
Deaf/partial hearing	30	60.3	
Learning difficulty	1290	58.5	4.0
Mental health	450	53.2	10.8
Multiple disabilities	60	49.8	9.7
No disability	19185	59.9	6.3
Other disability	140	56.8	12.4
Unseen disability	310	56.4	8.5
Wheelchair/mobility	40	56.5	7.9

4.1.6 Ethnicity

The study also explored whether there was a relationship between non-continuation and ethnicity. In general, it seems that the ethnicity identified might influence average mark and student retention, but this effect could not be reasonably distinguished from geographic and socio-economic factors as our regression analysis demonstrated (see chapter 5). Students identifying as Chinese were most likely to achieve higher average course mark over the period of their study and were least likely to non-continue with regards to the rest of the population. Students identifying as Asian or White were most likely to non-continue, though the difference in non-continuation rate was not statistically significant for any ethnicity other than White (see logistic regression in 5.).

Table 6: Student retention and average mark relative to ethnicity (all domiciles)

Ethnicity	Student count	Average Course Mark	% "N"
Arab	110	56.1	5.4
Asian	1050	58.4	6.1
Black	205	56.2	3.9
Chinese	1200	61.8	3.1
Information refused	1205	60.7	5.0
Mixed	960	60.1	5.0

White	16855	59.4	6.8

4.1.7 Educational background

Student educational background (i.e. previous school type) has been shown to influence student course marks in previous work analysing the relationship between school type and academic performance[20]. There is, understandably, insufficient and incomplete information about the category of institution attended by Overseas and EU students (hence the large 'unknown' population in table 7 below).

In the STUDMI (and HESA) data, 'private' or fee paying schools are categorised and described as 'independent schools'. The HESA approach is to aggregate all other groups into 'state', including grammar schools and academies. Note that whilst some Scottish secondary schools are called a 'high school' and others an 'academy', in this context the label 'academy' is being used to identify state funded English schools under the academy system i.e. not under local authority control.

Our analysis (Table 7) suggests students from comprehensive schools and tertiary colleges are more likely to achieve lower average course marks over their first and second years of study while academy and grammar school students were likely to perform better. Likewise, for retention, students from tertiary colleges and comprehensive schools were more likely to non-continue while academy, independent and grammar school students were much less likely to non-continue.

Table 7: Student retention and average mark relative to previous institution type attended (all domiciles)

Previous inst type	Student count	Average Course Mark	% "N"
Academy	1335	62.7	4.4
Comprehensive School	6380	56.7	9.1
Grammar School	500	62.8	4.0
Independent School	5050	60.1	3.8
Sixth Form College	790	59.5	7.2
Specialist Colleges	100	55.9	8.0
Tertiary College	1065	53.3	11.4
Unknown or N/A	6370	62.1	5.3

4.1.8 UoE School

The descriptive analysis also reveals within the University a variation in student retention across the different Schools that form the three Colleges (Table 8). The School of Biological Sciences and the

[20] Kumwenda, B; Cleland, J; Walker, K; Lee, A; Greatrix, R. (2017). The relationship between school type and academic performance at medical school: a national, multi-cohort study. BMJ Journals.

Moray House School of Education, together with the School of Divinity and School of Clinical Sciences (BSc Oral Health Sciences programme) had the highest levels of non-continuation although the latter two Schools have lower population sizes which may affect the results. There are differences but Schools often have different demographics from each other amongst their students; our regression analysis (see section 5) is a response to this. For example, Moray House School of Education has a high proportion of Scots students; that School was not identified as a factor in the 'global' regression analysis but Scotland domicile was (see chapter 5).

Table 8: Student admission and retention grouped by school

School Name (College of Science and Engineering)	Student count	% "N"
School of Biological Sciences	1090	8.6
School of Chemistry	525	4.4
School of Engineering	1450	6.3
School of Geosciences	985	6.6
School of Informatics	785	7.1
School of Mathematics	585	7.7
School of Physics and Astronomy	650	6.3

School Name (College of Arts, Humanities and Social Sciences)	Student count	% "N"
AHSS Corp / Centre for Open Learning	90	3.4
Business School	1050	5.1
Edinburgh College of Art	2170	5.1
Moray House School of Education	1280	9.1
School of Divinity	320	9.3
School of Economics	890	4.5
School of Health in Social Science	170	5.9
School of History, Classics and Archaeology	1490	6.8
School of Law	1020	7.5
School of Literatures, Languages and Cultures	1990	7
School of Philosophy, Psychology and Language Sciences	1525	7.1
School of Social and Political Science	1400	6.5

School Name (College of Medicine and Veterinary Medicine)	Student count	% "N"
College of Medicine and Veterinary Medicine	215	1.9
Edinburgh Medical School	620	1.3
Royal (Dick) School of Veterinary Studies	645	4.3
School of Biomedical Sciences	610	6.1
School of Clinical Sciences	40	13.5

4.1.8 Widening participation programmes

The University in student recruitment processes recognises multiple widening participation access programmes that aim to increase the number of students attending university from disadvantaged backgrounds or academically underperforming schools[21]. 'Access' is a programme for adults returning to education who wish to progress to study on an undergraduate degree within the College of Arts, Humanities and Social Sciences at the UoE. 'SHEP', the Schools for Higher Education Programme, is a Scotland wide programme to increase progression to Higher Education from schools with traditionally low rates. Forming part of SHEP, the Lothians Equal Access Programme for Schools (LEAPS) promotes higher education amongst young people whose school careers have been affected by adverse economic or social circumstances or who come from communities with little or no experience of higher education. The Scottish Wider Access Programme (SWAP) is an alternative route for adult learners to get into University or College, if they have few or no formal qualifications and have been out of full-time education for some years.

Figure 6 suggests retention rates across these programmes are highest in 'Access' and lowest in 'SWAP'. It is filtered for Scotland domiciled students only as RUK and other students are not addressed by these programmes. This data however needs to be interpreted carefully, as these students tend to hail from disadvantaged backgrounds, and especially in the case of older students of Access and SWAP, might have various other commitments (family, work or health). The high non-continuation rate (of 18.2%) for SWAP students influences the high non-continuation rate (of 12.5%) for all students aged 25 or over on programme entry (see 4.1.2).

Drilling in to the data, it would appear that SWAP entrants aged 25 or over on entry who receive a bursary non-continue at a rate of 12.5%, whereas those who do *not* receive a bursary have a non-continuation rate of 24%. This may merit further investigation, for instance are such students in need of more financial support, flexible study patterns, guidance on subject choice, assistance with travel, etc. All programmes with exception of Access have markedly higher non-continuation rates than that of the rest of the Scotland domiciled University population (which is 7.6%). It should be noted that SWAP and especially Access represent smaller cohorts than LEAPS or SHEP.

[21] See https://www.ed.ac.uk/studying/undergraduate/applying/selection/contextual-admissions for more information

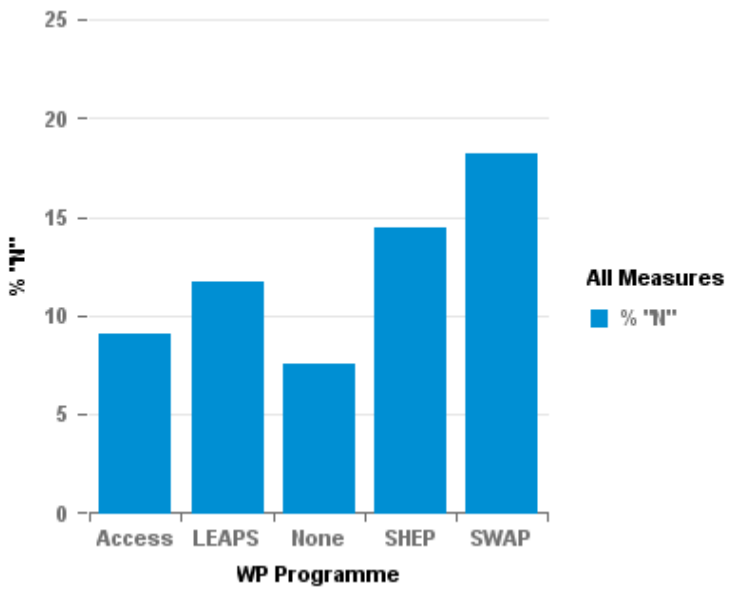


Figure 6: Scotland domiciled enrolment via widening participation (WP) access programmes and student non-continuation

4.1.10 First in family

The 'First in family' indicator is a self-reported binary variable containing information about whether the individual is, or more precisely aims to be first in family with a University degree or other Higher Education qualification. This information is held for all students (regardless of domicile) unless they choose not to complete it. As highlighted both by Figure 7 and a logistic regression analysis in section 5, students who are first in family have significantly higher rates of non-continuation than students in families where at least one member has completed a Higher Education degree or other HE qualification.

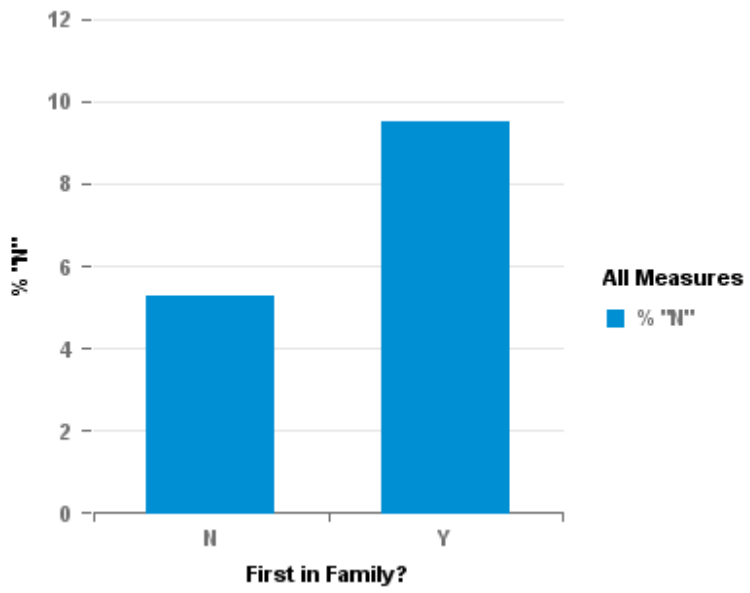


Figure 7: Student retention relative to 'First in family' factor

5. Logistic regression analysis

The Logistic Regression (LR) provides insights as to what specific variables (UoE School, first in family, etc) are significant and their relationship with non-continuation (i.e. either a reduced or increased likelihood of non-continuing). Key concepts are:

- Coefficient – a value demonstrating how much the variable *in isolation* changes student odds of non-continuing (and in which direction).
- Significance – is there a statistically significant difference between the observed value and what we would expect to occur for the wider population.
- SE - Standard Error – the smaller this is, the more confidence that the results aren't affected by random 'noise'.

5.1. Global model (all students)

The LR models were used to estimate the probabilities of non-continuation for students in our sample. The explanatory variables used to predict non-continuation vary across the three different models of which the 'global' model was one (see Appendix 2 for a matrix of the variables used and their descriptions). The sample size in the Global model was 21,585 students after the data had been cleaned prior to analysis. Overall, 6.4% of students in our sample were categorised as 'non-continuation'. The results of the LR model are presented in Table 9.

The coefficients show the direction and strength of the relationship between the explanatory variable and the dependant variable (non-continuation) while the significance suggests the statistical strength of the association. The standard error (SE) is a measure of dispersion of the sample means around the population mean (the lower this value, the better). The variables reported in table 9 are those which are statistically significant ($P < 0.05$).

A *negative* coefficient for Edinburgh Medical School suggests that all other variables being equal, students studying here are statistically *less* likely to non-continue than the wider population of students. The response variable (i.e. continuation or non-continuation) coefficient can be interpreted as log odds, suggesting being enrolled in the Edinburgh Medical School reduces the odds of non-continuation by -1.23.

Conversely, all the other variables reported in table 9 feature positive coefficients suggesting these factors *increase* the likelihood of non-continuation. For instance, being the first in family to attend university increases the log odds of non-continuation by 0.51. Of all university schools, being a student at the Deanery of Clinical Sciences increases the log odds of non-continuation the most (by 1.44), although this relationship was less statistically significant than for some other Schools (due to this deanery having less than 40 students entering during the observed time period). For the non-school variables, being a Scottish domiciled student increased the log odds of non-continuation the most (by 0.88) *and* was highly statistically significant (denoted by ***). Additionally, students identifying as of 'white' ethnicity and domiciled overseas were also more likely to non-continue (albeit with a lesser association).

Medical School students were much less likely to non-continue ('odds' of -1.14) but within the student population as a whole the predictive power (**) of being a Medical School student was less than if you were 'first in family' (***).

Table 9: Logistic regression analysis results for significant variables in the global model.

Variable	Coefficient	SE	Significance
Intercept	-4.05	0.24	***
Deanery of Clinical Sciences	1.44	0.58	*
Edinburgh Medical School	-1.23	0.44	**
School of Biological Sciences	0.73	0.21	***
School of Divinity	0.86	0.27	**
School of Geosciences	0.46	0.22	*
School of History, Classics and Archaeology	0.51	0.20	*
School of Informatics	0.71	0.23	**
School of Literatures, Languages and Cultures	0.53	0.19	**
School of Mathematics	0.80	0.24	***
School of Philosophy, Psychology and Language Sciences	0.56	0.20	**
School of Social and Political Science	0.40	0.21	*
Ethnicity White	0.34	0.11	**
First In Family (Y)	0.51	0.07	***
Domicile Overseas Student	0.46	0.16	**
Domicile Scotland Student	0.88	0.14	***

Note, SE = standard error. For significance, *** = P < 0.001; ** = P < 0.01; * = P < 0.05

The results of the ANOVA are presented in Table 10. This examines the extent to which *other* unknown variables or relationships (which we don't have data for) might explain non-continuation. The difference between the null deviance and the residual deviance shows how well the model is performing against the null model (a model with only the intercept). The table shows the drop in deviance when adding each variable one at a time. Adding domicile, school, first in family and ethnicity significantly reduces the residual deviance. The other variables are not statistically significant. Of these parameters Domicile (95.96) and School (93.78) reduce the residual deviance the most (i.e. are most important at explaining non-continuation).

The model makes better predictions when variables marked (*** or **) are brought in to play; others do have an effect but a comparatively small one. They may overlap.

Table 10: Table of deviance for the global logistic regression model

Parameter	Df	Deviance	Residual deviance	Significance
NULL			17268	
Gender	2	1.53	17266	
School	26	93.78	17240	***
Ethnicity	2	20.88	17238	***
Disability	1	0.49	17237	
First in family	1	83.74	17236	***
Domicile	3	95.96	17233	***

Note, Df = degrees of freedom; For significance, *** = P < 0.001; ** = P < 0.01; * = P < 0.05

In order to determine the reliability of the model for predicting non-continuation, a testing dataset was used (see Section 3.2). The ROC curve and associated AUC are typical performance measures that can be reported to show the predictive ability of the model. Recall, the larger the AUC value, the better the model at predicting non-continuation across the student sample. The ROC curve is plotted in Figure 9 with a corresponding AUC of 0.621, suggesting the model is a poor predictor of non-continuation (note a value of greater than 0.8 suggests a 'good' model fit). This suggests other significant factors, not included in our model, are important at explaining non-continuation in our student sample. Examples may include the socio-economic background of students, academic performance of siblings, etc.

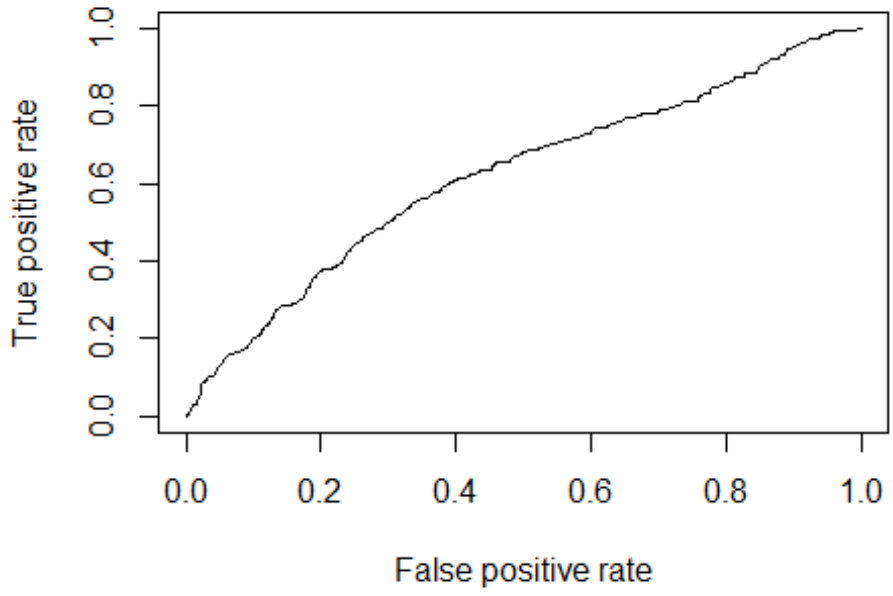


Figure 9: The receiver operator characteristic (ROC) curve for the global logistic regression model. Note an AUC value of 0.5 is a straight diagonal line.

5.2. RUK model (rest of UK students)

The sample size in the RUK model was 7,276 students after the data had been cleaned prior to analysis. Overall, 4.5% of students in our sample were categorised as 'non-continuation'. Table 11 reports statistically significant results from the LR model. A negative coefficient for the Edinburgh Medical School and Royal (Dick) School of Veterinary Studies suggests students studying here are log odds -2.41 and -1.76 respectively less likely to non-continue (note these differences are less statistically significant than for some other variables). Similarly, students previously studying at an independent school were log odds -0.46 less likely to non-continue.

Conversely, positive coefficient values for students previously studying at an art design and per art school, comprehensive schools, sixth form college and tertiary college are more likely to non-continue. The highest log odds were for students previously studying at an art design and per art school (2.46) and least for students who were first in family to attend university (0.22). 'First in family' and having attended a comprehensive school are the most statistically significant variables (**), apart from having attended an art/design school (***) which has a large SE (Standard Error) because it is based on a small number of students.

Medical School students were much less likely to non-continue ('odds' of -2.41) as were Veterinary students ('odds' of -1.76) but within the student population as a whole the predictive power (*) of being a student in those Schools was less than if you were 'first in family' (**) or previously attended a comprehensive school (**).

Table 11: Logistic regression analysis results for significant variables in the rest of UK student's (RUK) model.

Variable	Coefficient	SE	Significance
Intercept	-3.06	0.43	***
Edinburgh Medical School	-2.41	1.06	*
Royal (Dick) School of Veterinary Studies	-1.76	0.79	*
First in family	0.22	0.16	**
Previous institution type - art design and per art	2.46	0.65	***
Previous institution type - comprehensive School	0.59	0.22	**
Previous institution type - independent School	-0.46	0.20	*
Previous institution type - sixth form college	0.50	0.23	*
Previous institution type - tertiary college	0.75	0.32	*

Note, SE = standard error. For significance, *** = P < 0.001; ** = P < 0.01; * = P < 0.05

The results of the ANOVA are presented in Table 12. Adding school, first in family and previous institution type significantly reduces the residual deviance with the highest reduction in deviance occurring for previous institution type (57.15), suggesting this parameter contributes most to explaining non-continuation in our sample). It is also highly statistically significant. First in family resulted in the lowest reduction to residual deviance (7.47), suggesting the strength of this effect is less. The other variables are not statistically significant. Surprisingly, low performing school and socio-economic indicator were not statistically significant, suggesting these parameters are not important factors (in the model) for predicting non-continuation. However, the overall drop in

deviance from 5820 to 5769 equally suggests there are likely to be many other factors not included in the model that explain non-continuation.

The model makes better predictions when variables marked (*** or **) are brought in to play; others do have an effect but a comparatively small one. They may overlap.

Table 12*:* Table of deviance for the rest of UK student's (RUK) logistic regression model.

Parameter	Df	Deviance	Residual deviance	Significance
NULL			5820	
Gender	2	4.34	5818	
School	24	48.41	5794	**
Ethnicity	2	3.69	5792	
Disability	1	0.16	5791	
First in family	1	7.47	5790	**
Previous institution type	12	57.15	5778	***
Socio-economic indicator	7	4.68	5771	
Bursary recipient	1	2.73	5770	
Low performing school	1	0.41	5769	

Note, Df = degrees of freedom; For significance, *** = P < 0.001; ** = P < 0.01; * = P < 0.05

The ROC curve is plotted in Figure 10 with a corresponding AUC of 0.612, suggesting this model is also a poor predictor of non-continuation; providing a similar fit to the Global model outlined in Section 5.1. This is unlikely to be a factor of sample size alone (although the proportion of non-continuation students in the sample is indeed low) and may be explained by other factors not captured in our model needed to explain non-continuation in the student sample.

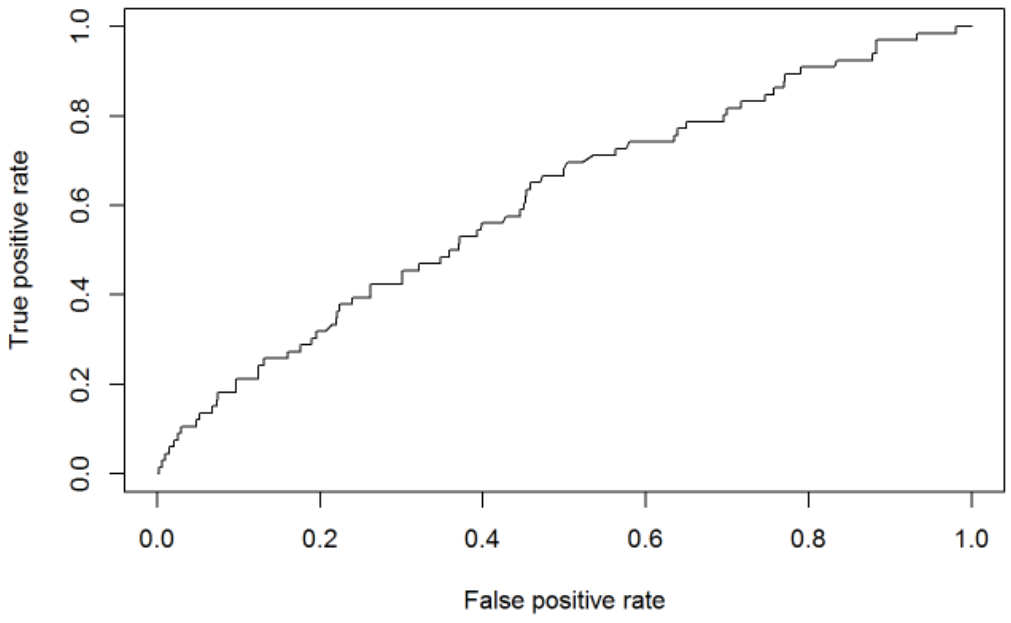


Figure 10: The receiver operator characteristic (ROC) curve for the rest of UK student's (RUK) logistic regression model. Note an AUC value of 0.5 is a straight diagonal line.

5.3. Scottish model (Scottish students only)

The sample size in the Scottish students' model was 8,281 students (after data cleaning). Overall, 9.0% of students in the sample were categorised as 'non-continuation' – considerably higher than in the two preceding models. In Table 13 the results from the LR model are reported for Scottish students. Negative coefficient estimates were obtained for students attending the Edinburgh Medical School and, additionally, students in receipt of a widening participation bursary and students from SIMD quintiles 4 and 5[22] (the least deprived postcodes in Scotland) were *less* likely to non-continue. Being a bursary recipient was a highly statistically significant (***) relationship.

The log odds for non-continuation were most reduced for students from the Edinburgh Medical School (-1.14) compared SIMD quintile 5 (-0.38). Conversely, all other variables had positive coefficients associated suggesting these factors increased the probability of non-continuation. The log odds for non-continuation were highest for School of Informatics (0.80) and least for first in family (0.32).

Multiple socio-economic indicator variables were shown to significantly increase the probability of non-continuation. These include students whose parents are engaged in routine occupations (***), lower managerial and professional occupations (**); lower supervisory and technical occupations (**); and to a lesser degree, small employers and own account workers (*).

Medical School students were much less likely to non-continue ('odds' of -1.14) but within the student population as a whole the predictive power (*) of being a Medical School student was less than if you were 'first in family' (**), received a bursary (***) or identified with a socio-economic background of 'routine occupations' (***). Although we know that older students are more likely to non-continue, the regression analysis suggests that other factors have a greater predictive power.

Table 13: Logistic regression analysis results for significant variables in the Scottish student's model.

Variable	Coefficient	SE	Significance
Edinburgh Medical School	-1.14	0.55	*
School of Biological Sciences	0.59	0.27	*
School of Informatics	0.80	0.32	*
First in family [Y]	0.32	0.10	**
Socio-economic indicator [Lower managerial and professional occupations]	0.41	0.13	**
Socio-economic indicator [Lower supervisory and technical occupations]	0.65	0.24	**
Socio-economic indicator [Routine occupations]	0.78	0.21	***
Socio-economic indicator [Small employers and own account workers]	0.44	0.21	*
Bursary recipient [Y]	-0.40	0.11	***
SIMD [4]	-0.54	0.19	**

[22] For technical reasons SIMD quintiles were given labels A-E in the model rather than 1-5. Labelled 1-5 here for consistency and ease of use.

SIMD [5] (least deprived 20% postcodes in Scotland)	-0.38	0.18	*

Note, SE = standard error. For significance, *** = P < 0.001; ** = P < 0.01; * = P < 0.05

The Scottish Index of Multiple Deprivation quintiles (SIMD) provides a measure of deprivation rank for student's home address for each of the 6,505 postcode-based datazones in Scotland.

The results of the ANOVA are presented in Table 14. Several variables reduce the deviance noticeably, each reducing the possibility that other explanatory variables we don't have data for would explain non-continuation. Adding School, first in family, previous institution type, socio-economic indicator, bursary recipient and SIMD quintile significantly reduces the residual deviance in the model. Including School in the model resulted in the greatest reduction to residual deviance while the bursary recipient parameter resulted in the smallest reduction to deviance (i.e. was less important at predicting non-continuation in our sample). Surprisingly, low performing school was not significant although socio-economic indicator is (this differs from the RUK model where socio-economic indicator was non-significant). This suggests the parameters perform differently for each model and associated sample frame. This may be because the reliability of the input data varies depending on the domiciled student group modelled, or that demographic trends are different across the sample populations.

The model makes better predictions when variables marked (*** or **) are brought in to play; others do have an effect but a comparatively small one. They may overlap.

Table 14: Table of deviance for the Scottish student's logistic regression model.

Parameter	Df	Deviance	Residual deviance	Significance
NULL			3948.5	
Gender	2	1.06	3947.4	
School	24	62.90	3884.5	***
Ethnicity	2	2.30	3882.2	
Disability	1	0.41	3881.8	
First in family	1	34.15	3847.7	***
Previous institution type	8	29.62	3818	***
Socio-economic indicator	7	21.87	3796.2	**
Bursary recipient	1	7.67	3788.5	**
Low performing school	1	2.23	3786.3	
SIMD quintile	4	29.56	3756.7	***

Note, Df = degrees of freedom; For significance, *** = P < 0.001; ** = P < 0.01; * = P < 0.05

The ROC curve is plotted in Figure 11 with a corresponding AUC of 0.67, suggesting the model is still a poor predictor of non-continuation but a better relative fit than the two preceding models (Global and RUK). This is perhaps partially explained by the addition of new parameters (e.g. SIMD)

employed to explain non-continuation. At the same time, the input data may be more reliable for Scottish students so parameter estimates are more accurate.

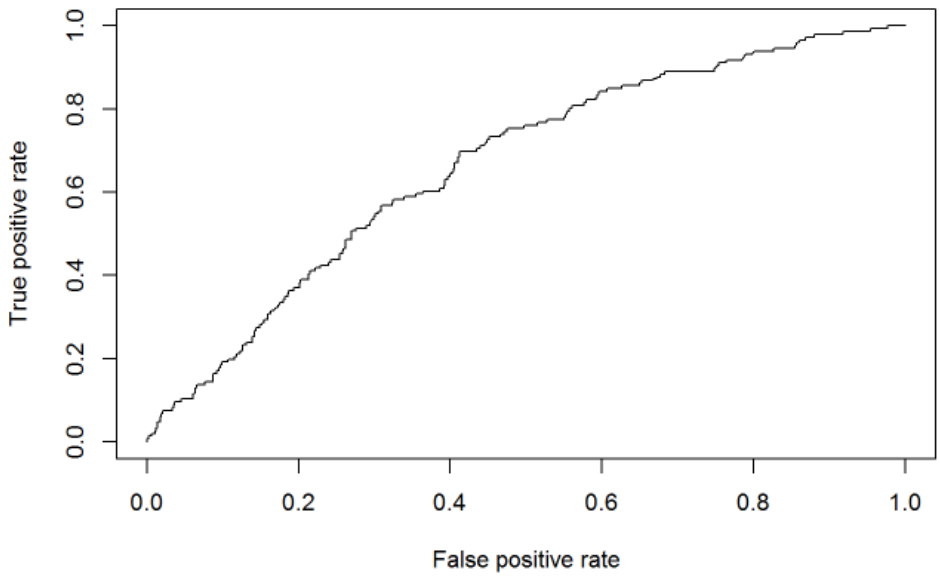


Figure 11: The receiver operator characteristic (ROC) curve for the Scottish logistic regression model. Note an AUC value of 0.5 is a straight diagonal line.

6. Conclusions and recommendations

Students from private (i.e. non-state) schools were generally less likely to non-continue. Students studying at comprehensive schools and tertiary colleges were more likely to non-continue. These differences were shown to be amongst the most influential of the variables in the RUK regression analysis model. In the Scottish regression analysis model other variables had a bigger impact, for instance the socio-economic group the student identified with, and SIMD.

Several individual-specific factors did not influence non-continuation patterns as we might imagine. Age, gender, ethnicity and disability were all lower significance explanatory variables for modelling non-continuation; other factors appeared to be more powerful predictors. This finding is contrary to notions often promoted in the widening participation literature concerning student retention.

Age *per se* is not identified as a powerful predictor in the regression analysis, because other socio-economic factors appear to have more influence. However a notable subset of the student population is Scotland domiciled student who enter aged 25 or over, who are much more likely to non-continue than other age groups. Particularly likely to non-continue are those students who: arrive via the 'SWAP' wider access programme for adult learners who have been out of education for a while; *and* who do not qualify for a bursary. This merits further investigation, for instance are such students in need of short term financial assistance, more flexible study patterns, guidance on subject choice, assistance with travel, etc.

Non-continuation rates, and average course marks vary by ethnic group but the statistical significance of this is low. Students identifying as Asian or White were most likely to non-continue, but regression analysis did not identify ethnicity as statistically significant at RUK or Scotland level. In our global regression analysis, with fewer other indicators in play, White ethnicity was identified as having some statistical significance of predicting higher non-continuation rates, but less so than Scotland domicile or identifying as 'first in family'.

The regression analysis for Scots and RUKs suggests that the UoE School was not usually a notable predictive factor in non-continuation; demographic factors were more effective predictors of non-continuation and where Schools were identified, their influence was generally less. At the global level, Schools were more frequently amongst the influential factors, reflecting a lower number of demographic variables to draw upon in the analysis.

Disability categories showed lower than average non-continuation rates for those who identified "Learning disability" and higher than average rates amongst those who identified "Mental Health". So whilst disability as a whole may not be as significant a predictor as expected, individual categories of disability may warrant further analysis, using additional cohorts of students to increase the sample size (see 4.1.4)

Students who reported they were 'first in family' in Higher Education - first to get a Higher Education qualification if successful – were more likely to non-continue and this was identified as a significant predictor in the regression analysis for all three groups; Scottish, global and to a lesser extent RUK.

Amongst RUK students, being a bursary holder (including access bursaries) was not a significant predictor of non-continuation in the regression analysis; other factors were more significant. We

may speculate that the same group of students *might* have had a higher non-continuation rate had they not received the bursary.

Amongst Scotland domiciled students, being a bursary holder (including access bursaries) was a significant predictor of a *lower* (more favourable) non-continuation rate in the regression analysis.

Regression analysis could potentially be repeated using the student's qualification entry profile as a factor in the analysis. It is a complex task to define and calculate a summary statistic that quantifies the prior qualifications which gained each student entry. To do so comprehensively, for all students, would be particularly challenging. However if such a variable were created on a reliable basis for a large enough number of students, it would add a significant dimension to the analysis.

Possible recommendations:

- As particular socio-economic factors appear to influence non-continuation rates (and course marks), are there any new appropriate ways in which the University can welcome and support students from those backgrounds, for example mentoring or 'buddying' schemes?

- Although self-reported, being 'first in family' (more precisely, aiming to be the first in your family to get a degree or HE qualification), appears to be a significant predictor of non-continuation and may warrant further thought about strategies to assist.

- The regression analysis could be repeated in future years to benefit from larger sample sizes. It currently uses 4 cohorts so if repeated in 2 years' time it would have 6 cohorts; 50% more data to work with.

- If a summary variable were available to identify the entry qualification level of the student, this would likely enhance the regression analysis, but it is not a straightforward variable to derive especially beyond 'A' levels and Highers.

- Disability as a whole was not a significant predictor of non-continuation however there are individual disabilities the significance of which might be masked by lower student numbers and this could warrant further analysis.

- High non-continuation amongst students arriving via the 'SWAP' wider access programme merits further investigation. For instance are such students in need of financial assistance (those without bursaries are far less likely to continue), more flexible study patterns, guidance on subject choice, assistance with travel costs, etc.

- Performing additional statistical analysis could further refine the regression analysis model through a narrowing down of the variables to focus on, especially if there are more variables to choose from at the start as suggested above. Applying a principal component analysis (PCA) could be used to efficiently identify the principal components within a group of variables that most explain non-continuation in the student sample.

Appendices

Appendix 1: Defining the student population

The HESA Performance Indicator definition excludes students who matriculated and then left prior to 1 December in their entry session. This appears to be based on the view that such early withdrawal is unlikely to be attributable to the institution. We have chosen to incorporate these 'early withdrawal' students as we believe that such patterns are of interest. The HESA statistic shows the percentage not in Higher Education during the session after they entered their programme here. Note this does not examine whether they have progressed or not, it is purely about remaining in HE study. Crudely, it can be expressed as:

$$q / z$$

Where *q* is the entrants who were still active in HE (until at least 1 December the session *after* they entered) and *Z* is all entrants, defined as those who made it to at least 1 December in their entry session. HESA, with access to all institutions data, are able to count as 'continuing' those who transferred to another institution. Unfortunately, we do not have complete data for this; withdrawing students do not necessarily tell us they intend to take up studies elsewhere, and we don't know whether they were still studying beyond 1 December the following year. Typically (referring to past HESA data) 1% of our entrants will be studying at another institution the following session.

The vast majority of reasons recorded for withdrawal are "Personal Reasons (including dropped out)" or "Other Reason", hence the reason given for withdrawal was not felt to be a useful dimension for analysis. In this report we look at 'non-continuation', adopting the terminology used by HESA for their Performance Indicator. There are multiple reasons why a student may be 'non-continuing' and whilst in aggregate 'non-continuing' can be used as a useful measure for analysis, it should not be over-simplified as a 'drop-out' rate.

The less common reasons given for withdrawal include "Serious health reasons (avoid NSS/Finance contact)", "Caring Responsibilities", and "Maternity".

A minority of non-continuing students are interrupted for the whole of the year after their entry year, and a minority of this minority return to their studies in later years.

A small number of students are repeating 'exam only' the year after they entered, i.e. they must repeat assessments in order to progress and have chosen to resit without repeat attending the course in question.

Appendix 2: Definition of variables used in descriptive statistics and the logistic regression models

Matrix of variables used in the different logistic regression models

Object title in STUDMI	Description	Scottish only model	RUK student model	Global model (all students)
First in family	Do parents/guardians have an HE level qualification	Y	Y	Y
Socio-economic indicator (2002 on)	Based on parental occupation.	Y	Y	
WP-Access programme	Whether the student was from a 'LEAPS' or 'SWAP' school, or "Access". See the following three lines.	Y		
LEAPS	*Lothian Equal Access Partnership for Schools.*	Y		
SWAP	*Scottish Wider Access Partnership*	Y		
"Access"	*Formal access arrangement with FE College.*	Y		
WP-SIMD Quintile	Scottish Index of Multiple Deprivation.	Y		
WP-Low Performing School	Average exam results at the school they attended previously are below average for UK schools.	Y	Y	
WP-Accom Bursary Recipient?	Additional support to encourage applicants / students who might have been put off by accommodation costs.	Y		
WP-RUK Bursary Recipient?	Means tested bursary. Variable amount depending on family income levels.		Y	
WP-Access Bursary Recipient?	Bursary for those in significant financial need. Existed before but expanded for 2012/13.	Y	Y	
WP-Care leaver (verified)*	Students who have previously been taken into care at some point, looked after by Local Authority etc			
WP-SHEP	Schools for Higher Education Programme. A subset of Low Performing Schools.	Y		
Prev Inst Type	Categorisation of the previous institution attended, per HESA and UCAS rules.	Y	Y	
Gender		Y	Y	Y
Disability (grouped)		Y	Y	Y
Ethnicity (grouped)		Y	Y	Y
Age on prog entry (grouped)		Y	Y	Y
C/L School Desc of Programme	University of Edinburgh School	Y	Y	Y
Entry Year of Prog	=1 for most students, =2 for around 5% of all entrants			

*very small numbers

Annex B

Report into analysis of Schools' insights into the reasons for patterns of non-continuation among students on their undergraduate programmes

To complement the statistical modelling analysis exercise regarding UG non-continuation data, during summer 2018 Academic Services and Governance and Strategic Planning (GASP) carried out an analysis of Schools' insights into the reasons for patterns of non-continuation among students on their programmes. This analysis focused on School level in particular in order to provide insights into possible reasons for variation in non-continuation rates between Schools.

This report sets out the approach to this analysis, and the main findings.

1 Approach

GASP produced a summary of non-continuation rates from year one of programme for each School covering the period 2011-12 to 2015-16 (for technical reasons, data was not yet available for 2016-17). These reports set out:

- The number and proportion of students in the School non-continuing from their entry programme of study, presented by year and five-year average, and broken down by fee status;

- Comparator data at College and University level;

- Additional data at University level setting out five-year averages for non-continuation rates, broken down by Scottish Index of Multiple Deprivation (SIMD) quintile (Scottish-domiciled students only), school type (Scottish and RUK domiciled only), gender, and ethnicity (this additional analysis was not provided at School levels since populations were too small).

An anonymised example of a School-level report is attached.

Schools were encouraged to review the data (applying caution when interpreting patterns in the context of relatively small populations) and to comment on:

- The most common reasons for undergraduate students in the School not continuing from year one;

- Whether particular categories of students are particularly likely not to continue from year one;

- In the event that non-continuation rates for the School differ substantially (either up or down) from the University average, the most likely explanations for this; and

- Any steps the School has taken, or is planning, with a view to improving non-continuation rates.

While the data related only to non-continuation from year one, we encouraged Schools to also comment on any patterns of non-continuation that they were aware of from subsequent years.

2 Technical definitions

For this analysis, the technical definition of non-continuation was as follows:

- The number and proportion of students who 'do not continue' from their entry session into the following session (looking only at students who are undergraduate, full-time, first degree students on entry), with numbers rounded to the nearest 5 for data protection reasons;

- Students who are non-continuing include: students who withdraw without a qualification either after 1 December in their entry session or before 1 December in the following session year; students who interrupt their studies during this period; students who are exam only in the year following their entry;

- Students who withdrew prior to 1 December in their entry session were excluded from the report.

This technical definition was designed to follow as closely as possible the methodology used by HESA for their 'non-continuation' Performance Indicator (PI). This PI is used by the Scottish Funding Council in outcome agreements, and by the Office for Students in the Teaching Excellence Framework. We are not able to completely replicate that calculation, as the HESA PI counts students who withdrew, but remained in HE at another institution the following year as continuing, and we do not have access to that data. However we know from the HESA PIs published in recent years that typically 1% of our UK entrants transfer; 1% can be used as a rule of thumb.

3 EUCLID records regarding reasons for non-continuation

On EUCLID, a single reason is recorded to describe the reason for withdrawal. Some reasons eg financial reasons, may be under-reported if multiple factors contributed but only one can be recorded. 'Unknown', 'other' and 'personal' reasons dominate; together with 'written off after lapse of time' these represent almost two thirds of the records. The table below summarises the distribution of withdrawal reasons recorded for five entry cohorts' combined non-continuing.

Personal Reasons (including dropped out)	35.3%
Other Reason	16.0%
Transferred to another institution	11.4%
Acad Failure/Left in bad standing/not progress	9.1%
Written off after lapse of time	6.9%

Non-attendance or non-engagement	6.2%
Unknown Reason	5.1%
Other health reasons (NSS/Finance may contact)	2.0%
Gone into Employment	1.9%
Returning to new programme of study	1.8%
Serious health reasons (avoid NSS/Finance contact)	1.3%
Financial Reasons (other than in debt)	1.1%
Required to discontinue	0.9%
Caring Responsibilities	0.4%
Death	0.2%
Debt Reasons - Exclusion *(i.e. unpaid debt to the University)*	0.2%
Academic Study	0.1%
Health/Medical Reasons	0.1%
	100.0%

Some reasons are identified on the University's withdrawal request form, others are triggered by administrative process. The number 'transferred' may be understated as other students who withdraw may later take up studies at another institutions, although it is also possible that some students who do give this reason may not actually continue their studies at the new institution.

'Returning to a new programme of study' refers to a student who intends to start again (from 'scratch') on a different programme of study, without carrying any credits from the programme they first started. That is distinct from most students who transfer to a different programme, who are not recorded as withdrawals (even if changing Schools or Colleges).

4 Overview of Schools' responses

4.1 Response rate

Sixteen out of twenty-two Schools / Deaneries responded to this request for comments, of which nine were from the College of Arts, Humanities and Social Sciences, six from the College of Science and Engineering, and one from the College of Medicine and Veterinary Medicine.

4.2 Limitations to Schools' evidence base

Schools' responses were based on three types of evidence:

- Interpretation of the reports provided by GASP;
- EUCLID data regarding the reasons for students' withdrawing; and
- Staff perceptions regarding students' reasons for non-continuation.

Some Schools highlighted some constraints to this evidence:

- Difficulties in interpreting the School-level data due to the low number of students non-continuing;

- Limitations to the EUCLID data - in particular, that some of the categories are too broad, and that the 'Personal' category is commonly used as a proxy for other reasons; and

- Staff knowledge of students' reasons for non-continuation can either be anecdotal or so specific to an individual case that it is difficult to generalise.

5 Key points from Schools' responses

5.1 Reasons for non-continuation

The most common reasons for undergraduate students not continuing from year one highlighted by Schools (as opposed to those formally recorded in EUCLID) were:

- Change in academic plans / wrong choice (sometimes compounded by curriculum and procedural constraints to transferring to a different programme within the University):
    - Transfer to another institution (five Schools)
    - Transfer to another University of Edinburgh degree programme following an interruption of studies (one School)

- Insufficient preparation for Mathematics requirements of programme, particularly with reference to absence of Advanced Higher or Further Mathematics (cited by five Schools in CSE, but only mentioned by one School in another College)

- Financial reasons (five Schools)

- Health reasons, including mental health (three School)

- Personal reasons such as homesickness, family circumstances (three Schools)

Other less common reasons included:

- Academic failure (with the exception of difficulties associated with Mathematics) – though mixed views re how common a reason this is (two Schools)

- Visa issues (one School)

- Taking up employment, for example in fields in which students' skills are highly valued without a degree (one School)

This feedback suggests that not only is the data held in EUCLID limited in some specific respects, but also that it may be systematically understating some reasons for non-continuation (eg financial reasons, changes in academic plans, and

academic difficulties are more frequently cited by Schools than the EUCLUD data suggests).

5.1 Characteristics

Where Schools commented on the categories particularly likely not to continue, they tended to highlight the following:

- Scottish domicile (may be associated with socio-economic background)
- Lower socio-economic background (eg bottom SIMD quintile)

For the most part, Schools appeared to be simply reflecting back the statistical data in the GASP reports. However, several Schools indicated that this aligned with their own perceptions of the student categories most likely to be at risk of non-continuation.

5.3 Explanations for Schools' non-continuation rates differing substantially (either up or down) from the University average

Relatively few Schools responded directly to this question. Of those who did, explanations from Schools for higher than average non-continuation rates included:

- Mathematics requirements in year one (various Schools, particularly in CSE); and
- Profiles of students admitted to their programmes (eg admissions cycles in which lower offer thresholds led to lower average entry qualifications, or patterns of certain Schools having higher proportions of students from widening participation backgrounds). (Two Schools)

Explanations for lower than average non-continuation rates included:

- Effective School student support arrangements (including academic and personal support for students in crisis) (one School)
- Curriculum structures that enable students to change degree programme if they are not successful in or do not enjoy the programme that they entered, by allowing them space to take a second subject in depth in years one and two (one School).

5.4 Steps to improve non-continuation rates

Areas in which Schools have or are planning to take action to improve continuation rates include:

- Strengthening student support, particularly for specific categories of students more likely to non-continue (eg WP students, overseas student), for example specialised Personal Tutor support, and specific peer support arrangements) (five Schools);
- Changing admissions arrangements to ensure entrants have appropriate academic knowledge and skills with particular reference to Mathematics (two Schools);
- Strengthening induction and transition support, with a particular focus on study skills support and cultural dimensions (two Schools);
- Additional support for Mathematics skills - pre-arrival testing for Mathematics; dedicated workshops for students struggling with Mathematics; increased use of computerised assessment to facilitate more formative assessment in early years; introducing new year one Mathematics courses (two Schools);

- Curriculum reform – eg increasing the flexibility for students to transfer between degree programmes, introducing new year one Mathematics courses (three Schools);

- Developing a sense of community eg work with student societies (one School);

- Exploring the use of exit interviews for non-continuing students to develop a better understanding of reasons for non-continuation (one School).

6 Conclusions and recommendations

While a relatively small proportion of the University's undergraduate students do not continue after their year of programme, it is clear that some Schools are already aware of patterns of higher non-continuation on their programmes for student from specific groups or backgrounds, and are taking steps to ensure all their students have a good chance of continuation. This exercise will have increased awareness across other Schools regarding the need to reflect on patterns of non-continuation and of the types of action that they could take in order to enhance continuation rates.

The insights from Schools are based on an evidence base that should be treated with some caution (either because there were difficulties in interpreting the statistical dataset or staff insights were based on individual observations rather than systematic analysis), and some of the points highlighted above were made by relatively small numbers of Schools (and therefore cannot necessarily be generalised). However, while accepting these reasons for caution, it nonetheless seems reasonable to take the report's findings into account when developing institutional policy as well as School practice.

The following recommendations may assist the University in enhancing its understanding of non-continuation rates and in maximising its students' chance of continuing from year one:

- In some of the smaller Schools, the low student populations mean that it is difficult to identify trends and patterns even at School level, and even in the bigger Schools it is likely that analysis at subject or programme level, or by particular student characteristics, would not be statistically robust. Recommendation: statistical analysis of non-continuation rates should focus primarily at institutional or College level.

- The University's current approach to recording students' reasons for withdrawal (including for non-continuation) is not assisting the University to understand the reasons for its patterns of non-continuation. Recommendation: As part of the Academic Lifecycle strand of the Service Excellence Programme, the University should replace the current set of categories with a more granular set of categories (including, potentially, a free-text field) that would provide more useful data, and allow multiple reasons to be recorded.

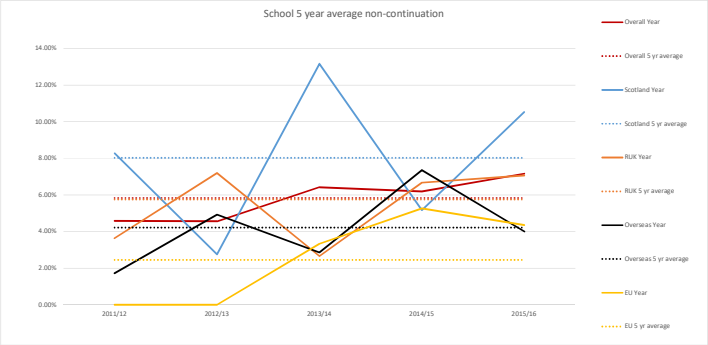
- This analysis has highlighted some positive steps that Schools are taking to enhance continuation rates. Recommendation: Academic Services should liaise with Colleges to agree an approach to sharing these practices, for example via the Directors of Teaching network.

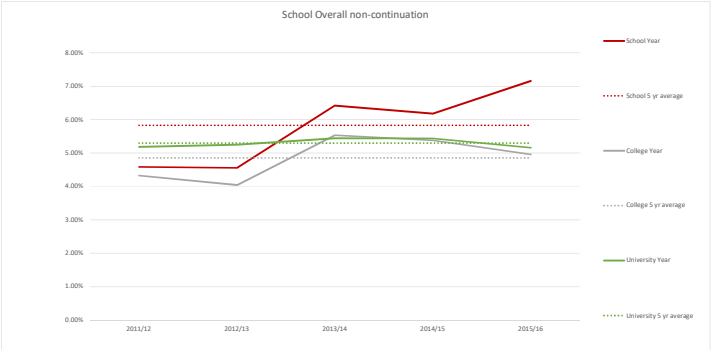
- The exercise highlighted that some of the reasons for non-continuation relate to the University's UG curriculum structures, in particular: mismatches between the year one Mathematical curriculum in some Schools and the mathematical knowledge and skills of some categories of incoming students; constraints regarding students' ability to change degree programme. While further investigation would be required regarding the extent to which these curriculum factors are a factor regarding student non-continuation, the University is recommended to take account of the issue if (as currently proposed) the University undertakes a curriculum reform.

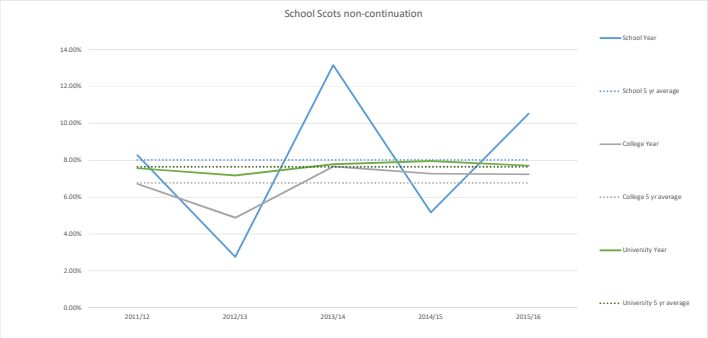
- The exercise highlighted student support as a key way that Schools are trying to improve non-continuation rates. Recommendation: the University's planned review of the delivery of advice and support to students should give particular attention to ensuring that future student support arrangements will support good continuation rates.

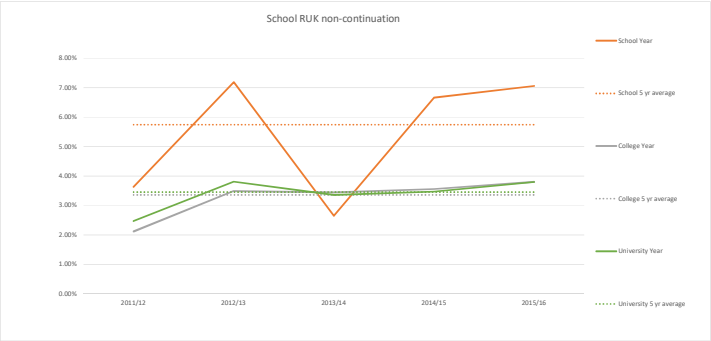
- The responses by some Schools, and the statistical analysis, indicate correlations between disadvantage and non-continuation. Recommendation: the implementation of the Widening Participation Strategy should take into account the conclusions in developing support for disadvantaged students.

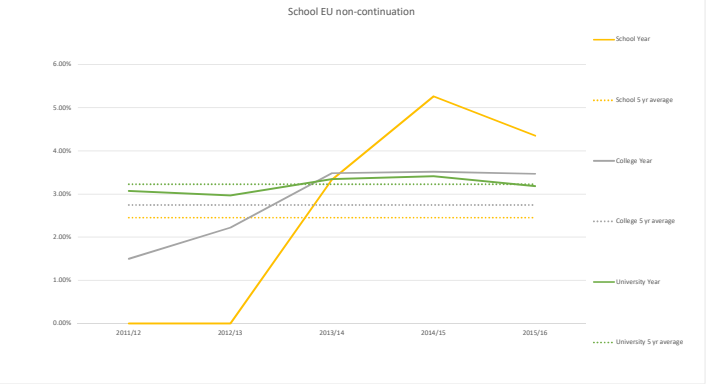
School non-continuation rates
Entrants 2011-12 to 2015-16

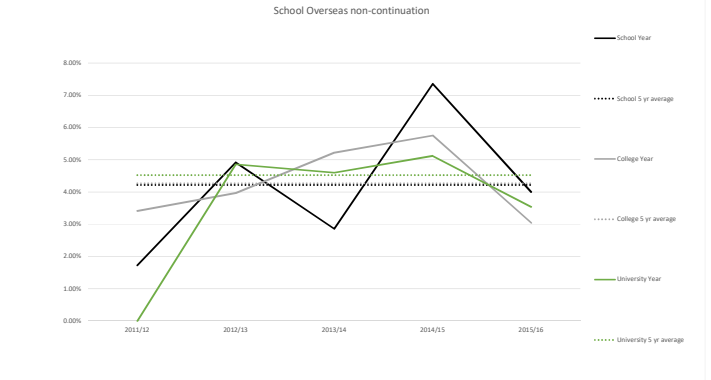












Technical non-continuation definitions

This report identifies the number and proportion of students who 'do not continue' from their entry year into the following year of study. It looks only at students who are undergraduate, full-time, first degree students on entry. Numbers are roundd to the nearest 5 for data protection reasons.

Students who are non-continuing include:

- students who withdraw without a qualification either after 1 December in their entry session or before 1 December in the following session year;
- students who interrupt their studies during this period
- students who are exam only in the year following their entry.

Students who withdrew prior to 1 December in their entry session are excluded from the report.

The reasons for these groups being included is to follow as closely as possible the methodology used by HESA for their 'non-continuation' Performance Indicator (PI). This is used by the Scottish Funding Council in outcome agreements, and by the Office for Students in the Teaching Excellence Framework.

We are not able to completely replicate that calculation, as the HESA PI counts students who withdrew, but remained in HE at another institution the following year as continuing, and we do not have access to that data. However we know from the HESA PIs published in recent years that typically 1% of our UK entrants transfer; 1% can be used as a rule of thumb.

School level figures (rounded to nearest five)

		Number non-continuing	Total entrants	% non-continuing	% leaving with a Cert or DipHE
2011-12	Overall	15	350	4.58%	0.57%
	Scotland	10	135	8.27%	0.8%
	RUK	5	110	3.64%	0.0%
	EU	0	50	0.00%	2.1%
	Overseas	0	60	1.72%	0.0%
2012-13	Overall	15	350	4.56%	1.1%
	Scotland	5	110	2.75%	0.9%
	RUK	10	140	7.19%	0.0%
	EU	0	40	0.00%	2.4%
	Overseas	5	60	4.92%	3.3%
2013-14	Overall	20	325	6.42%	2.4%
	Scotland	15	115	13.16%	1.8%
	RUK	5	115	2.65%	1.8%
	EU	0	30	3.33%	3.3%
	Overseas	0	70	2.86%	4.3%
2014-15	Overall	25	370	6.18%	1.9%
	Scotland	5	115	5.17%	2.6%
	RUK	10	150	6.67%	0.7%
	EU	0	40	5.26%	2.6%
	Overseas	5	70	7.35%	2.9%
2015-16	Overall	30	420	7.16%	1.4%
	Scotland	10	115	10.53%	1.8%
	RUK	15	185	7.07%	1.1%
	EU	0	45	4.35%	2.2%
	Overseas	5	75	4.00%	1.3%
5 yr average	Overall	105	1820	5.83%	1.5%
	Scotland	45	585	8.02%	1.5%
	RUK	40	695	5.75%	0.7%
	EU	5	205	2.45%	2.5%
	Overseas	15	330	4.22%	2.4%

College level figures (rounded to nearest five)

		Number non-continuing	Total entrants	% non-continuing	% leaving with a Cert or DipHE
2011-12	Overall	130	3025	4.33%	1.78%
	Scotland	90	1325	6.71%	1.13%
	RUK	20	850	2.12%	1.18%
	EU	5	265	1.50%	3.37%
	Overseas	20	585	3.41%	3.41%
2012-13	Overall	130	3215	4.04%	1.12%
	Scotland	60	1230	4.88%	0.81%
	RUK	40	1200	3.49%	0.83%
	EU	5	180	2.22%	3.33%
	Overseas	25	605	3.97%	1.65%
2013-14	Overall	175	3145	5.54%	1.75%
	Scotland	100	1305	7.66%	1.76%
	RUK	35	1045	3.45%	1.25%
	EU	5	200	3.48%	1.99%
	Overseas	30	595	5.22%	2.53%
2014-15	Overall	175	3270	5.38%	1.99%
	Scotland	90	1240	7.27%	1.94%
	RUK	45	1205	3.56%	1.74%
	EU	5	200	3.52%	2.51%
	Overseas	35	625	5.75%	2.40%
2015-16	Overall	170	3430	4.96%	2.57%
	Scotland	95	1310	7.24%	1.75%
	RUK	50	1285	3.81%	1.01%
	EU	5	175	3.47%	4.62%
	Overseas	20	655	3.04%	6.70%
5 yr average	Overall	780	16085	4.86%	1.85%
	Scotland	435	6410	6.77%	1.48%
	RUK	190	5585	3.36%	1.20%
	EU	30	1020	2.75%	3.14%
	Overseas	130	3070	4.27%	3.39%

University level figures (rounded to nearest five)

		Number non-continuing	Total entrants	% non-continuing	% leaving with a Cert or DipHE
2011-12	Overall	245	4690	5.2%	1.5%
	Scotland	155	2035	7.6%	0.9%
	RUK	30	1170	2.5%	1.1%
	EU	15	520	3.1%	2.9%
	Overseas	45	960	4.6%	2.2%
2012-13	Overall	265	5065	5.3%	1.2%
	Scotland	140	1980	7.2%	1.2%
	RUK	65	1680	3.8%	0.8%
	EU	15	440	3.0%	2.5%
	Overseas	45	970	4.9%	1.4%
2013-14	Overall	285	5240	5.4%	1.5%
	Scotland	170	2195	7.8%	1.4%
	RUK	50	1515	3.4%	1.2%
	EU	20	570	3.3%	1.8%
	Overseas	45	955	4.6%	2.2%
2014-15	Overall	290	5370	5.4%	1.6%
	Scotland	155	1960	8.0%	1.6%
	RUK	65	1810	3.5%	1.4%
	EU	20	545	3.5%	1.8%
	Overseas	55	1055	5.1%	1.7%
2015-16	Overall	290	5580	5.2%	2.0%
	Scotland	160	2090	7.7%	1.4%
	RUK	75	1920	3.8%	0.7%
	EU	15	470	3.2%	2.3%
	Overseas	40	1100	3.5%	5.0%
5 yr average	Overall	1375	25940	5.3%	1.6%
	Scotland	785	10260	7.6%	1.3%
	RUK	280	8095	3.5%	1.0%
	EU	80	2540	3.2%	2.2%
	Overseas	230	5040	4.5%	2.6%

5 year university averages

UK overall		5.79%
Scotland overall		7.64%
SIMD Quintile	1 (MD20)	11.97%
	2	11.64%
	3	8.46%
	4	6.29%
	5	6.77%
Scotland State/Independent School	State	7.95%
	Independent	3.43%
	N/A or unknown	8.20%
RUK overall		3.43%
RUK State/Independent School	State	3.84%
	Independent	2.21%
	N/A or unknown	5.29%
Ethnicity	BME	5.07%
	White	6.59%
Gender	Female	5.24%
	Male	6.62%

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

The University of Edinburgh
Learning and Teaching Committee
14 November 2018

Proposal to Review the University Common Marking Schemes

Executive Summary

The University currently has 5 common marking schemes. A previous informal working group recommended harmonization to a single numerical scale. The Assessment and Feedback Enhancement Group supports revisiting this work recognising the increasing research evidence emerging since then and potential impact streamlining and clarification could have for assessment and feedback and the student experience more broadly.

How does this align with the University / Committee's strategic plans and priorities?

Maps to strategic objective: Leadership in Learning

Action requested

The committee is invited to:

- Discuss the issues raised by the paper;
- Identify a preferred way forward out of the five options set out in the paper.

How will any action agreed be implemented and communicated?

Academic Services will liaise with the Assistant Principal (Assessment and Feedback) to determine an appropriate approach to implementation and communication, the specifics of which will depend which option the committee prefers.

Resource / Risk / Compliance

1. **Resource implications (including staffing)**

The paper highlights some potential resource implications associated with each of the proposed ways forward. It will be necessary to undertake more detailed work to scope and estimate resource implications for the preferred model.

2. **Risk assessment**

The paper identifies some risks associated with some of the options. A more systematic analysis of risks would be needed as part of any project which would involve a substantive change to the University's Common Mark Schemes.

3. Equality and Diversity

It will be necessary to undertake an Equality Impact Assessment if the University as part of any project which would involve a substantive change to the University's Common Mark Schemes.

4. Freedom of information

Paper is open

Key words: Assessment, feedback, student experience

Originator of the paper

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Proposal to Review the University Common Marking Schemes

Background and Context

Regulation 35 of the current Taught Assessment Regulations links to the 5 Common Marking Schemes (CMS) below. The CMS are 'reporting scales' used for expressing final course results - individual components of assessment can be assessed using alternate (marking) scales appropriate to the assessment in question e.g. descriptive rubrics. The use of these different scales is supported by the current Assessment and Progression Tools (APT) system, which is used to report marks to students.

CMS1: Undergraduate degree assessment (except BVM&S and MBChB)
CMS2: Bachelor of Veterinary Medicine and Surgery (BVM&S)
CMS3: Bachelor of Medicine and Bachelor of Surgery (MBChB)
CMS4: Postgraduate Assessment Mark
CMS5*: Edinburgh College of Art Degree Programmes which use the Assessment Grade Scheme (ECA degree programmes which do not use the Assessment Grade Scheme use CMS1 and CMS4)

* Note ECA are currently discussing the future of CMS5

In 2015, an informal working group convened by Dr John Lowrey made the following interim recommendations – (that):

1. All CMSs are harmonised to the same numerical scale so there is a correlation between grade mark and classification.
2. Grade descriptors are re-visited and a common set of descriptors applies to all.
3. More detailed descriptors relevant to level and school/subject area need to be provided at a programme level but that the University should provide guidance centrally on this to ensure consistency.
4. Simplify the Common Marking Scheme to reduce the number of fail grades (two or three but see 5 below).
5. Rationalise overall to a 15 point scale with three points on each grade A – E. This has the potential benefit of harmonising with a GPA system.

No actions have yet emanated from these recommendations.

Why Revisit This Now?

1. Assessment and Feedback Enhancement Group (AFEG) at its February 2018 meeting, debated "The Future of Examinations at the University of Edinburgh" including, "The common marking scheme: fit for purpose?". It was agreed by those present at this, and at subsequent AFEG meetings, that there was significant interest across the colleges in revisiting both the common marking schemes and the associated descriptors.
2. The CAHSS College QA committee, in response to a number of our Schools expressing dissatisfaction with the current situation has recently been asked to

review the CMS again.

3. Quality Assurance: The University as a whole continues to perform poorly in surveys such as NSS and PTES. Related to this, work has been going on in local contexts to address the ELIR recommendations below. A rationalisation of the CMS would provide further opportunity to revisit institutional level grade descriptors.

> Recommendation 94. There would be value in the University reviewing the information provided to students about marking schemes, building on good practice developed within some schools of expanding the descriptors of grade schemes and considering the possible benefit of developing grade descriptors at institutional level.
>
> Recommendation 104. There would be benefit in the University reviewing the information provided to students on the grade descriptors for the common marking schemes in use and to consider this as part of the wider area for development around implementing feedback policy in a clear and consistent manner across the University.

4. Research Evidence:
    a. Shorter marking scales: Research evidence suggests that shorter marking scales are more valid and reliable in the context of qualitatively judged assessments (Yorke, 2010) and longer, numerical scales can mask marker inconsistencies (Bloxham et al, 2016, Sambell, 2016). Advantages include: Easier for staff to describe/articulate marking bands via grade descriptors or marking criteria (Handley and Read, 2017); Encourages students to focus on feedback rather than marks (Black & William, 1998) and engage with marking criteria (Bell et al, 2013, Carless, 2015); Focuses assessment decisions on the overall quality of student work as measured against the learning outcomes, rather than on an accumulation of marks. In addition, it is often recognised that students tend to score more highly in more 'numerate' disciplines, such as mathematics and engineering, compared with social sciences disciplines (Yorke et al, 2000).
    b. Links to course and programme design: Assessment and course design principles such as constructive alignment (Biggs and Tang (2011), authentic assessment (Sambell et al, 2013) and assessment for and as learning Earl (2013) are recognised as important. They have a positive relationship with the array of complex achievements and attributes our graduates are expected to attain through full engagement with their programmes of study. This should be reflected in assessment regimes that move beyond the illusion of precise measurement towards assessments that promote learning while fit for purpose in terms of whether or not learning outcomes have been reached (eg Medland, 2016). These approaches are already being used in programmatic assessment in medical education (Van der Vleuten et al., 2017)

5. Sector level conversations: In the context of current debates about grade inflation, there is increased interest (eg from UUK) in institutions taking more consistent approaches to degree classification algorithms. The QAA and Universities UK are currently working on standard sectoral descriptors of each degree class with the

relevant publication due later this year.

6. Curriculum reform: Should we in the medium term be looking at wider curriculum reform as an option, then this work would be highly relevant in that context also to ensure any new curriculum is aligned to a fit for purpose marking scheme.

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Related Projects

In relation to CMS4 (postgraduate), following discussion of a broader range of issues regarding PGT assessment and progression in 2017-18, the Senate Curriculum and Student Progression Committee (CSPC) recently (September 2018) discussed Masters degree pass marks and progression hurdles between the taught and research component of the most common type of taught Master's degree. Three potential models were presented:

Model A – Moving the Pass Mark at Master's level from 50 to 40 following a recalibration of the marking scheme
Model B – The Pass mark for courses at Master's level becomes 50, with 40-49 no longer being deemed as a pass, even for the award of PG Certificate or Diploma (this is more in line with the sector)
Model C – Retaining the current pass marks whilst removing the progression hurdle.

CSPC have held off further discussions on this review pending LTCs view on whether any of the proposals set out below are supported as a way forward.

Benchmarking (see Appendix 1 and 2)

Of 13 institutions included, the majority (9) had a single mark scheme, with 0-100 scales being the most common.

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Proposals for Discussion

Action	Advantages(s)	Disadvantage(s)	Next steps if proposal supported
Explore moving to a single final numerical CMS as recommended by the 2015 working group	Acknowledges previous work and conclusions. Brings us more in line with the sector. Allows an opportunity to refresh and clarify processes with students	Time and resource required to develop, consult and implement. Initial feedback from other institutions suggests that this would be a major project with implications for student systems and challenges in managing the process of transition. Added complexity of needing to also address the issues that CSPC has been considering in relation to pass marks and progression hurdles	Further benchmarking of other institutions (including visits to / from institutions that recently moved to equivalent systems, in order to understand the academic regulatory and systems change involved) Scoping work regarding a proposed project Engagement with students to understand whether they would support the proposed model

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Explore moving to a system of 2 correlated CMS – One for highly objective/ analytical work e.g. highly structured marking schemes, MCQs. One for assessments where a more holistic judgement is appropriate	Acknowledges the fundamental difference in these forms of assessment.	Operating two schemes could be confusing for students who take courses using different schemes, and could also lead to confusing transcripts in which course outcomes are expressed on different scales Were the University to diverge from more typical practice in the sector, it would make collaborative programmes with other institutions more difficult to manage, and could make it more difficult to justify the University's practices in a political context in which there increased interest in related practices (eg patterns of degree classification).	Engagement with Schools to understand whether, in principle, they would support the proposed approach (could include piloting any proposed approach for some courses in a particular School) Take account of the latest position regarding the sector conversations regarding degree classification algorithms / descriptors etc. Return to LTC to seek approval to proceed with the project.
Maintain the status quo but encourage schools to do more work clarifying to students how individual assessment marks will ultimately be converted to the final common marking scheme	Limited resource required	Doesn't address the heterogenous practice across University and inconsistency in student experience.	A&FEG to encourage further School-level work and to facilitate sharing of good practices e.g. CAHSS work on rubrics as a means of mitigating the issues with the current CMS.
Rationalise number of CMS by aligning CMS2 and CMS3 with CMS1	Limited resource required outwith CMVM	Time and resource required to develop, consult and implement within CMVM	Invite CMVM to prepare formal proposals for CSPC to consider

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Address issues regarding pass marks and progression hurdles within CMS4, without more fundamental changes to CMS4 or CMS1	Potential to address the issues that CSPC has highlighted	Would require significant change, particularly during a period of transition. Would need to assess extent of system changes required.	Remit to CSPC to progress these issues.

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Appendix 1

Marking Schemes – Russell Group, Scottish, and Rest of World

Institution	Multiple Mark Scheme	Types	Comments/Links
Newcastle	No	0-100	Pass marks differ dependent on level
Bristol	Yes (2)	Generic marking criteria (0-20 or 0-100) for levels 4-7, assessment at level 8 to be managed by School that owns associated programme	http://www.bristol.ac.uk/academic-quality/assessment/regulations-and-code-of-practice-for-taught-programmes/marking-criteria/ Level 4-7 is equivalent to SCQF Level 7-11. Level 8 is equivalent to SCQF Level 12. Marks on 0-20 mark scale must be translated to 0-100 scale for progression and classification purposes.
Nottingham	No	0-100	40% pass mark at Undergraduate level, with a 70% and upwards first class category. The pass mark at PGT level is 50%. - https://www.nottingham.ac.uk/academicservices/qualitymanual/assessmentandawards/marking-and-grading.aspx
Leeds	No	0-100 (a 20-90 scale had previously been used in addition to the 0-100 scale but this was phased out from 2018/19) MBChB and BChD do not use this scale	http://students.leeds.ac.uk/info/10121/marking_results_and_resits/821/marking_scale 20-90 Scale used for basis for degree classification, and all 0-100 grades are converted to it. MBChB and BChD are awarded 'in line with the requirements of national and professional practice'. Most medicine courses are pass/fail only, with one project that students undertake over years 4 and 5 which is marked using a 0-100 scale, as per the Director of Medical Education Programmes at Leeds.
Birmingham	No	0-100	Pass marks differ dependent on level

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			M (Masters level), **D** (Doctoral Level) – 50. **C** (Certificate Level/UG Yr 1), **I** (Intermediate Level/UG Yr 2), **H** (Honours Level/UG Yr3/4) – 40. Medicine and Dentistry use pass mark of 50.
Dundee	No	Alphanumeric 23 point scale	https://www.dundee.ac.uk/registry/exams/assessmentscales/
Southampton	Yes	0-100,	Pass marks differ between UG and PG. Medical assessments have a bespoke mark scheme which ultimately leads to a percentage score. A percentage score will be achieved using a 0-100 scale.
Melbourne	No	0-100	https://policy.unimelb.edu.au/MPF1326#section-4.18 applies to all coursework degrees and subjects and assessment in UG and PG award and non-award courses and subjects. H1 (1st Class Honours) = 80-100%, H2A (Second Class Honours Division A) = 75-79%, H2B (Second Class Honours Division B) = 70-74%, H3 (Third Class Honours) = 65-69%, P (Pass) = 50-64%, N (Fail) = 0-49%
Auckland	No	0-100, with 11 pass grades (A+ - Conceded pass), 4 fail grades (D+ - Fail)	https://www.calendar.auckland.ac.nz/en/genregs/examination.html pass mark is 50 or over. A+ = 90-100%, A = 85-89%, A- = 80-84%, B+ = 75-79%, B= 70-74%, B- = 65-69%, C+= 60-64%, C= 55-59%, C- = 50-54%, D+ = 45-49%, D= 40-44%, D- = 0-39%. Also possible to obtain 'Pass' (ungraded pass) and a 'Conceded Pass'.
Aberdeen	No	Common Grading (Alpha Numeric) 23 point scale	0-22, A1 correlates to 22, A2 to 21, A3 to 20. B1-B3 = 17 to 15. C1-C3 = 14-12, D1-D3 = 11-9, E1-E3 = 8-6, F1-F3 = 5-3, G1-G3 = 2-0.
Glasgow	Yes (2)	Two assessment schedules (A/B)	Schedule A – A-H, 23 point scale (A1-H), Schedule B – 8 grades (A-H)
Sheffield	Yes	0-100, Medicine (5 point grading scale)	

Cardiff	No	0-100	

Appendix 2– Examples of mark schemes

Newcastle
UG Examination Conventions:

F. Return of Marks

27. The mark for each module on an Honours degree programme shall be returned to the board of examiners, and disclosed to students, using one of the established University Common Scales below, either the Degree Classification (DC) Scale or the one applicable to modules not used for degree classification:

	Summary description applicable to *level 7* Degree Classification (DC) Modules	**Summary description applicable to Degree Classification (DC) Modules *below level 7***	**Summary description applicable to modules *not used for degree classification***
0-39	Fail	Fail	Failing
40–49	Fail	Third Class	Basic
50–59	Second Class, Second Division	Second Class, Second Division	Good
60–69	Second Class, First Division	Second Class, First Division	Very Good
70-100	First Class	First Class	Excellent

PGT Examination Conventions

F. Return of Marks

27. The mark for each module on a Master's degree programme, postgraduate diploma or postgraduate certificate must be returned to the board of examiners and disclosed to students using the University Common Scale for the return of marks below:

	Marking scale applicable to *level 7* modules and master's programmes	**Marking scale applicable to modules *below level 7***	**Marking scale applicable to postgraduate certificate and diploma programmes**
0-39	Fail	Fail	Fail
40–49	Fail	Pass	Fail
50–59	Pass	Pass	Pass
60–69	Pass with Merit	Pass with Merit	Pass
70-100	Pass with Distinction	Pass with Distinction	Pass

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

Leeds

Mark awarded on 0-100 scale	0-1	2-4	5-7	8-10	11-13	14-16	17-19	20-22	23-25	26-28	29
Translation (20-90 scale)	20	21	22	23	24	25	26	27	28	29	30
Mark awarded on 0-100 scale	81	82-83	84-85	86-87	88-89	90-91	92-93	94-95	96-97	98-99	100
Translation (20-90 scale)	80	81	82	83	84	85	86	87	88	89	90

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

Bristol

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

Grade	0-20 point scale	0-100 point scale	Criteria to be satisfied
A	20 19 18	100 94 89	➢ Work would be worthy of dissemination under appropriate conditions. ➢ Mastery of advanced methods and techniques at a level beyond that explicitly taught. ➢ Ability to synthesise and employ in an original way ideas from across the subject. ➢ In group work, there is evidence of an outstanding individual contribution. ➢ Excellent presentation. ➢ Outstanding command of critical analysis and judgement.
	17 16 15	83 78 72	➢ Excellent range and depth of attainment of intended learning outcomes. ➢ Mastery of a wide range of methods and techniques. ➢ Evidence of study and originality clearly beyond the bounds of what has been taught. ➢ In group work, there is evidence of an excellent individual contribution. ➢ Excellent presentation. ➢ Able to display a command of critical analysis and judgement.
B	14 13 12	68 65 62	➢ Attained all the intended learning outcomes for a unit. ➢ Able to use well a range of methods and techniques to come to conclusions. ➢ Evidence of study, comprehension, and synthesis beyond the bounds of what has been explicitly taught. ➢ Very good presentation of material. ➢ Able to employ critical analysis and judgement. ➢ Where group work is involved there is evidence of a productive individual contribution.
C	11 10 9	58 55 52	➢ Some limitations in attainment of learning objectives, but has managed to grasp most of them. ➢ Able to use most of the methods and techniques taught. ➢ Evidence of study and comprehension of what has been taught ➢ Adequate presentation of material. ➢ Some grasp of issues and concepts underlying the techniques and material taught. ➢ Where group work is involved there is evidence of a positive individual contribution.
D	8 7	48 45	➢ Limited attainment of intended learning outcomes. ➢ Able to use a proportion of the basic methods and techniques taught. ➢ Evidence of study and comprehension of what has been taught, but grasp insecure. ➢ Poorly presented.
E	6	42	➢ Some grasp of the issues and concepts underlying the techniques and material taught, but weak and incomplete.
	5	35	➢ Attainment of only a minority of the learning outcomes. ➢ Able to demonstrate a clear but limited use of some of the basic methods and techniques taught. ➢ Weak and incomplete grasp of what has been taught. ➢ Deficient understanding of the issues and concepts underlying the techniques and material taught.
	1 - 4	7 - 29	➢ Attainment of nearly all the intended learning outcomes deficient. ➢ Lack of ability to use at all or the right methods and techniques taught. ➢ Inadequately and incoherently presented. ➢ Wholly deficient grasp of what has been taught. ➢ Lack of understanding of the issues and concepts underlying the techniques and material taught.
0	0	0	➢ No significant assessable material, absent, or assessment missing a "must pass" component.

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

Dundee

Reporting Scale	Descriptor	Honours class (where appropriate)	Associated aggregation scale
A1	Excellent	1st	23
A2			22
A3			21
A4			20
A5			19
B1	Very good	2(i)	18
B2			17
B3			16
C1	Good	2(ii)	15
C2			14
C3			13

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

D1	Satisfactory	3	12
D2			11
D3			10
M1	Marginal fail		9
M2			8
M3			7
CF	Clear fail		5
BF	Bad fail		2
QF	Qualified fail		-

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

Melbourne

Grade	Mark	Descriptor	Explanation
H1	(80% - 100%)	First Class Honours	
H2A	(75% - 79%)	Second Class Honours Division A	
H2B	(70% - 74%)	Second Class Honours Division B	
H3	(65% - 69%	Third Class Honours	
P	(50% - 64%)	Pass	
N	(0-49%)	Fail	No credit points are awarded.
CMP	-	Completed	Pass (no mark awarded). Only used for subjects marked on a pass/fail basis.
CNT	Mark not awarded	Continuing	Used for subjects that run over more than one teaching period, and the subject has not been completed.

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 C

Aberdeen

Grade	Band Descriptor	Honour Class	PGT Award		Grade Point
A1, A2, A3, A4, A5	Excellent	First	Distinction		22, 21, 20, 19, 18
B1, B2, B3	Very Good	Upper Second	Commendation		17, 16, 15
C1, C2, C3	Good	Lower Second	Pass		14, 13, 12
D1, D2, D3, RP[+]	Pass (pass grade = D3)	Third	Pass		11, 10, 9
RF[++], E1, E2, E3	Marginal Fail	Below Third Class Honours	Fail		8, 7 ,6
F1, F2, F3	Fail	Below Third Class Honours	Fail		5, 4, 3
G1, G2, G3	Fail, Token, or No Submission	Below Third Class Honours	Fail		2, 1, 0

[+]RP is **Resit Pass** at Postgraduate Taught level
[++]RF is **Resit Fai**l at Potgraduate Taught level

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 D

The University of Edinburgh

Senate Learning and Teaching Committee

14 November 2018

Investigating the potential impact of the Peer Assisted Learning Scheme (PALS) at the University of Edinburgh

Executive Summary

Mixed methodology research has been conducted to assess the impact of the University of Edinburgh's Peer Assisted Learning Schemes (PALS, PAL, PASS). This paper provides the findings of the research, and will be presented at the LTC meeting by Katie Scott from the Department of Peer Learning and Support. A short update on current progress with Peer Learning and Support will also be provided.

How does this align with the University / Committee's strategic plans and priorities?

Strategic objective, Leadership in Learning

Action requested

For information and discussion

How will any action agreed be implemented and communicated?

Paper provided for discussion only at this stage

Resource / Risk / Compliance

1. **Resource implications (including staffing)**
   Not applicable currently, but may warrant further discussion

2. **Risk assessment**
   There are currently no known risks associated with this paper

3. **Equality and Diversity**
   No equality assessment has yet been undertaken, but may be undertaken in follow-on work.

4. **Freedom of information**
   Open

Originators of the paper

Katie Scott and Ezster Sebek, Department of Peer Learning and Support

Edinburgh University Students' Association

Peer Learning & Support

Investigating the potential impact of the Peer Assisted Learning Scheme (PALS) at the University of Edinburgh

September, 2017

Highlights

"…It really encourages students, when they arrive to become quite independent and autonomous and looking after their own learning. So, I think in some sense, PALS helps in building up that confidence, that social sense of being part of the university, which is actually really educational, because the educational dimension of university is all about being able to do things yourself, such as finding your own materials and coming up with your own ideas(…) all in all, it certainly seems to create a lot more confidence in the students who come along to the sessions in all areas."

"Students do gain something from it and it could be that academic confidence or it could be just that social community feeling within the school, but it also might just be a mentor, who has gone through enough and might be just the reason that the student ends up staying at the university."

"Most leaders were not the same people they once were before joining PALS."

"..It's a big department, a big university (..) That's what's incredibly valuable about it, that it helps them feel knitted into the environment a little bit more."

ABSTRACT

A mixed methodology research was conducted at the University of Edinburgh in order to assess the impact of the Peer Assisted Learning Schemes (PALS, PAL, PASS). Quantitative analysis was carried out on the final grade record of first year students collected from 5 courses (N=1562), with the aim to determine whether there was a positive relationship between the frequency of attendance at PALS and academic performance. All quantitative data was analysed using Kruskal-Wallis and Mann Whitney-U tests to determine if interactions and differences are significant. Further qualitative analysis was carried out on testimonials collected from students, Leaders and scheme Coordinators, which were used to explore potential co-benefits of PALS. All qualitative data was analysed using a coding technique.

Results showed that there was a positive trend between the frequency of attendance at PALS and the grades achieved by first year students. Quantitative reflected that students who regularly attended PALS (six or more times) were four times more likely to receive a first class grade than those who did not attend at all, and 93% of these regular PAL attendees received at least a second class grade. Furthermore, qualitative analysis allowed the identification of further benefits experienced by active students. PAL Leaders reported gaining employability and leadership skills, as well as having developed an improved sense of belonging. Student attendees also reported an improved sense of community, alongside increased confidence and better academic understanding.

Therefore, the research concluded that active engagement with PALS can bring about positive academic and social benefits. This impact is in line with the scheme's original aims. Findings, limitations and further research recommendations were discussed within the paper, with an emphasis on conducting research focusing on the long-term impact of PAL participation.

INTRODUCTION

Present State of Research

The transitional period students experience when moving from the secondary education system to higher education is undoubtedly challenging for most first year undergraduate students at University. The difficulties experienced tend to cause increased stress levels, alongside high dropout rates (*Gorard et al. 2006*). Issues tend to arise in regard to social and academic integration, lack of appropriate study skills and a mismatch between student expectations and experiences (*Harvey et al. 2006*). In light of this, student support has a significant role in ensuring that such difficulties are alleviated. Indeed, this is one of the main reasons for the introduction and implementation of Peer Assisted Learning Schemes (PALS or PASS) across a large number of universities.

Schemes of this type were originally developed in the University of Missouri, Kansas in 1973. They are underpinned by social constructivist learning theory (peer learning in particular), whereby learning is mediated by interactions with more competent learners: students who work in the same subject area, but whose understanding of the subject is beyond those who act as mentees (*Vygotsky, 1978; Arendale, 1993*). The University of Edinburgh, supported by the Department of Peer Learning and Support (situated within Edinburgh University Student's Association) first implemented PALS schemes in September 2012. There are now 40 schemes across the University and 587 active Student Leaders, with PALS sessions being accessed over 9500 times last year alone.

PALS schemes coordinated by the Students' Association are based on a system of student-to-student support, where higher year students from the same discipline (Student Leaders or SLs) support new students in their studies. The schemes' main aims include providing support for junior honours students through the difficulties associated with the academic and social transition to higher education, whilst developing new learning strategies and creating a trusted social network. PAL groups help new students review essential course content, promote the awareness and critical skills necessary for students to become autonomous learners, and guide them by sharing their own experiences.

Furthermore, although SLs act as mentors, their role is not to 'teach' in the traditional sense. Instead, they facilitate discussions and run activities. This creates a space where students are ultimately responsible for their own learning and engagement, but in which they feel safe to ask questions they may not feel able to ask of tutors. The SLs are all trained by the Department of Peer Learning and Support, who ensure that volunteers have the leadership, communication and facilitations skills necessary to lead sessions and support students.

Research done in the subject area has shed light on the remarkable success of PALS across a diverse set of disciplines in a number of Universities. Chen et al. (2001) found that the guiding principles of PALS bring about effective peer cooperative learning. Further, numerous positive correlations have been established between attendance at peer learning sessions and academic performance (*Andreanoff, 2016;* Ashwin, 2003; *Lundeberg, 1990; Bridgham & Scarborough, 1992; Congos & Schoeps, 1993; Kenney & Kallison, 1994).* Furthermore, quantitative and qualitative studies reveal academic and personal benefits for students who actively take part in PALS *(Loviscek & Cloutier, 1997).* Using rigorous longitudinal studies, it has been found that academic achievement is enhanced, whilst transitional periods for first year students are made smoother *(Glaser et al., 2006; Giles et al., 2012*). A student's mark can improve by 3 points (on a 100 point scale) by attending one hour of PALS (*Paloyo et al. 2016*). Further, studies have found that attendance reduces student dropout rates (*Collings et al., 2014; Pugliese et al., 2015*), which seems to suggest personal benefits, such as increased comfort and improved confidence.

Further research suggests that the SLs, and not merely the students attending, benefit highly from their commitment to peer learning activities. Fuchs et al (2002) argue that the experience benefits not only attendees, but leaders themselves in that they are encouraged to learn and increase their social standing among peers, which brings about personal benefits. Furthermore, Student Leaders have been found to gain valuable leadership skills, alongside improved self-confidence and communication skills (Couchman, 2009; *Congos & Stout,2003).*

Aims of this Project

This research will build upon this existing literature, and will identify potential benefits of active participation in PALS at the University of Edinburgh, focusing both on potential outcomes for first year students and student leaders. Using a mixed methodology design, this work will aim to establish whether participants' grades improve in relation to attending PALS, and whether there are any other associated benefits (such as those identified in earlier research).

The quantitative element of the research aims to establish whether there is a positive relationship between the frequency of attendance at PALS sessions and the academic performance of first year students. The study does not intend to establish a cause-and-effect relationship between these variables due to the large number of confounding variables present in such circumstances, as well as the limitations of the chosen methodology. Given, that various circumstances, such as a student's background, academic confidence and time management skills are just a few of the many factors that determine academic performance, it is biased to assume that attending PALS exclusively can cause an improvement. Furthermore, the study is limited to establishing the quantitative correlation between grades and attendance, excluding factors, such as how actively a student engaged with PALS sessions, how well they understood instructions on assignments they received grades for and how much effort they invested into increasing their average grades. For these reasons, therefore the study does not intend to assume a causal relationship between the measured variables.

The study does however intend to explore whether there is a *correlation* between frequency of attendance at PALS and academic performance. Given the findings of previous researchers in this field, it is predicted that those who attend PALS more frequently will demonstrate better grades than those who do not attend. The qualitative element of the research is intended to enrich and elucidate the quantitative findings, allowing a deeper understanding of the diversity of skills gained through PALS, as well as putting the peer assisted learning process into context. Qualitative data regarding benefits experienced by active student members and leaders was collected using a variety of sources, including comments, interviews and questionnaires.

Overall, the purpose of this research is to explore and identify possible benefits gained by students and leaders who often take part in PALS, and to provide a greater understanding of the general impact of PALS, thereby allowing further potential improvements to be identified and introduced.

RESEARCH METHODOLOGY

Qualitative data

Data for qualitative testing was gathered using three different types of testimonials. 4 First year students' comments were taken from the feedback section of the Scheme Reports (a piece of reporting that all PAL schemes are expected to complete – see Appendix). This data was used to identify potential benefits gained exclusively by first year attendees. Data relating to the benefits gained by 4 Leaders was collected using the Leader's comments section of the Scheme Report, as well as from open-ended questionnaires sent out to PALS Leaders. Furthermore, in order to avoid bias that may arise from using self-report measures exclusively, 4 University staff members who have acted as PALS coordinators (in the sense of being key academic or support contacts) were also interviewed using open-ended questions (see questions in Appendix) to identify potential benefits gained by students and Leaders. Using a coding technique (See Appendix for methodology), each testimonial was carefully examined for potential recurring themes and skills gained as a result of PALS. The data gathered was divided into two main categories, one focusing on benefits gained by Leaders and the other on benefits gained by students.

Quantitative data

The study sample of 1562 students who enrolled in the University of Edinburgh in 2016. Students' marks were gathered from 5 different first year courses, namely first/second semester modules from Economics, Informatics Computational, Infospace, Literature and Accountancy. This data was anonymised to the point of being impossible to identify any of the individuals. All marks were coded according to a 10 point ordinal scale (A1, A2, A3, B, C, D, E, F, G, H)(see Appendix 2) and frequency of attendance for each student was divided into 4 independent groups (No attendance; One attendance; Two to Five; Six or more). Data was measured collectively - using the entire sample provided – and further tests were conducted on a number of modules individually. Where needed, some of the groups were divided into a smaller number of categories in order to refrain from violating the rules of certain statistical calculation (marks were subcategorized into First, Second, Third & Fail marks). The main statistical calculations used were Mann Whitney U, Kruskal Wallis and Chi-Square tests to identify whether the differences between the academic performances of various groups were statistically significant.

DEMOGRAPHICS

"Another positive impact is that PALS offers a structure and recurring place for students whose first language is not English to go over the material again, but at a pace that they are comfortable with" (PAL Leader)

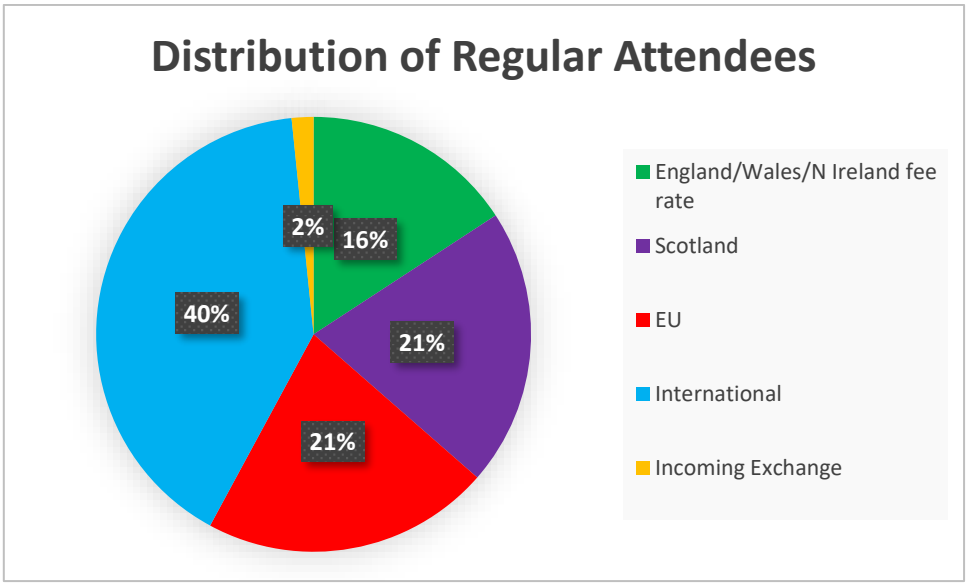

Figure 1

As presented in Figure 1, demographic distribution of regular attendees (those who attended at least two times) shows that the majority (40%) of regular attendees are International students and the second largest group of attendees (21%) come from EU/EEA countries. Over 60% of regular attendees of PALS come from outside the UK. This may be due to a larger need for additional guidance, as the transitional period for these first year students involves not only adjusting to a new academic system, but adjusting to a new culture and possibly language as well.

RESULTS:
QUANTITATIVE ANALYSIS

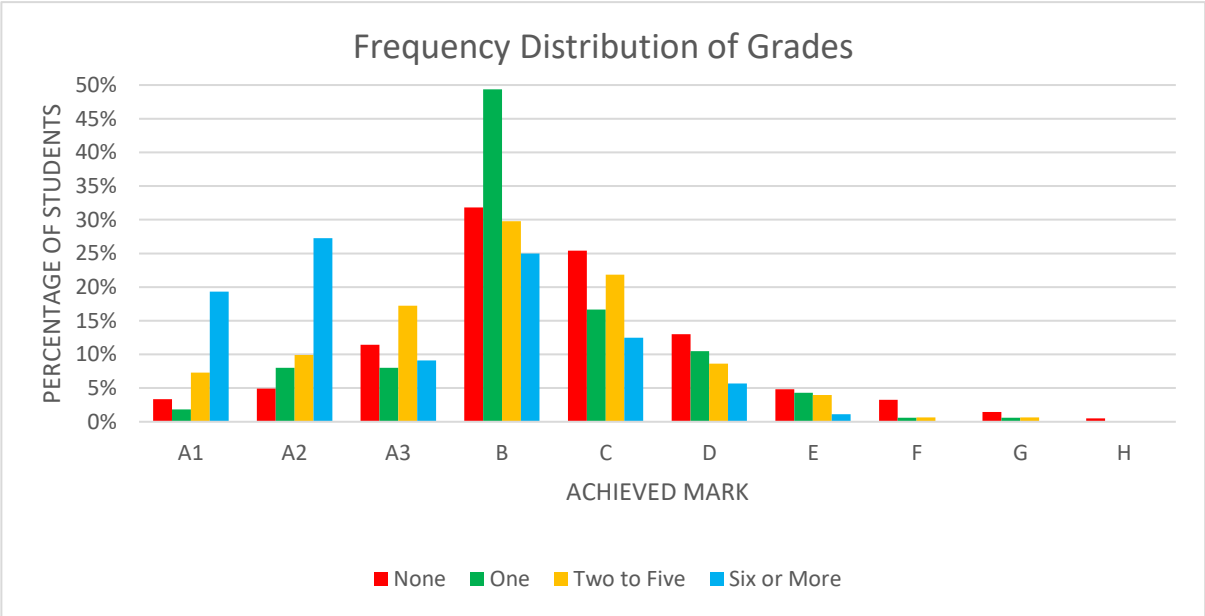

Figure 2

- 19% of people who attended six or more times got A1 as a final grade, in comparison to only 3% of students who never attended
- 27% of frequent PAL attendees got A2 as a final grade, 10% of those who attended two to five times, 8% who attended only once and only 5% who never attended
- 0% of students who attended PALS six or more times received a grade lower than E.

Figure 2 represents the frequency distribution of marks on a 10 point scale in relation to the four categories of attendees (no attendance, one, two to five and six or more). After performing a Kruskal-Wallis, it was found that there are significant differences between the marks achieved (H=78.057, p=.000) reflected in the range and median of the groups. Furthermore, a positive 'dose-dependent' trend appears in the distribution of the achieved marks, since as the frequency of attendance increases, the range and the median of grades increases as well. After conducting a Mann Whitney U test between marks of students who attended once (Median= B, IQ=C-B) against students who attended six or more times (Median= A3, IQ=B-A2), significant differences were found (U= 4055, p=.000): showing that regular attendance at PALS is associated with an increase in marks by 2 grades.

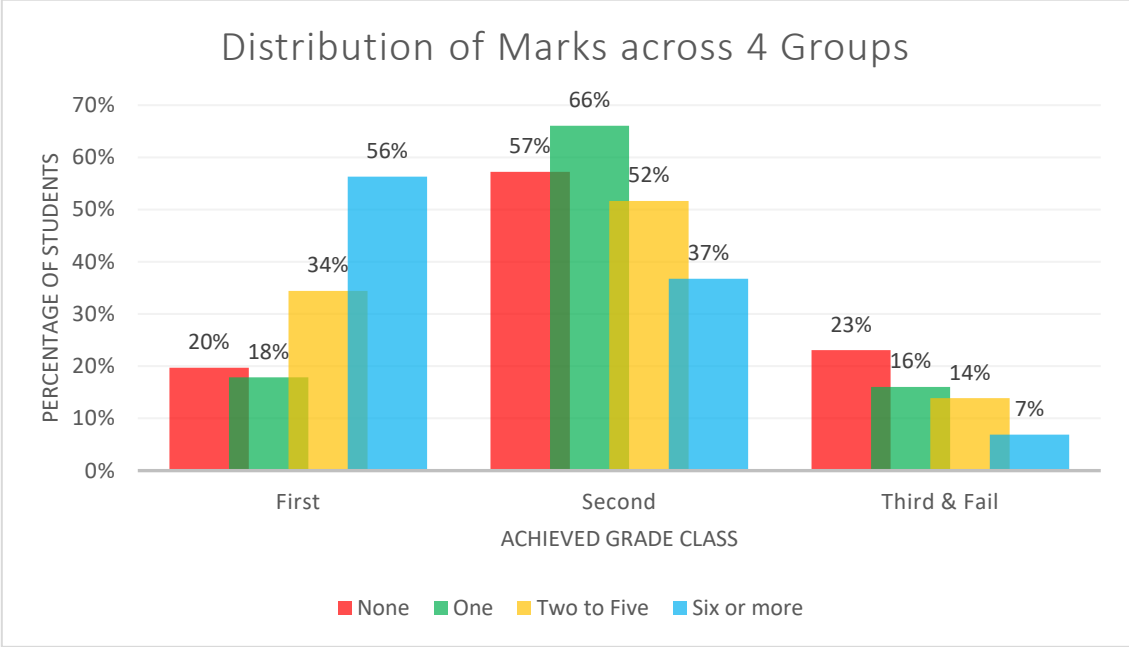

Figure 3

- 56% of students who attended six or more sessions received a first class grade and only 20% of those who did not attend
- 93% of students who attended six or more sessions received a first or second class grade, in comparison to 86% of those who attended two to five times, 84% of those who attended once and 77% of those who did not attend at all
- 23% of students who did not attend any classes received a Third or a Fail grade, in comparison to only 7% of those who attended six or more times

Figure 3 represents the distribution of marks in the four attendance groups. However, marks are grouped according to class categories, instead of a 10 point scale (First Class – A1, A2,A3; Second Class – B, C; Third Class and Fail – E, F, G, H). After conducting a Chi-square Independence Test an association was found between frequency of attendance and the class of achieved marks ($x^2(6)=83.59$, p=.000). A positive relationship is reflected in the distribution of marks in relation to frequency of attendance, as rigorous attendees (students who attended six or more times) received marks almost exclusively within the first and second class range. This is not reflected in the other groups' results, as students who attended less regularly were more likely to have a more negatively skewed distribution of marks toward third class and fail.

Individual Course Marks

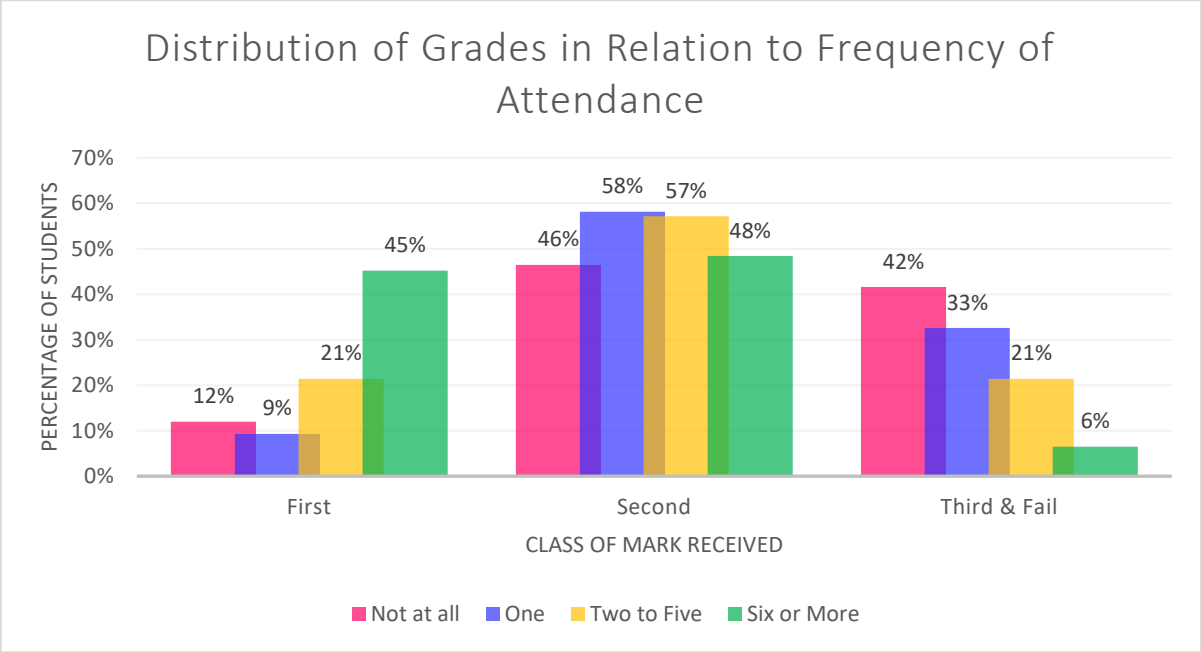

Figure 4

- 45% of students who attended PALS received a first class grade, 21% of students who attended twice or more, 9% of those who attended once and only 12% of those who never attended
- Only 6% of regular attendees received a third class or fail grade and 42% of students who never attended
- Overall, over 93% of students who regularly attended received at least a second class grade

Figure 4 represents the distribution of marks in the four attendance groups in one course (NR- ??). Marks are grouped according to class categories, instead of a 10 point scale (First Class – A1, A2,A3; Second Class – B, C; Third Class and Fail – E, F, G, H). After conducting a Mann Whitney U test between regular attendees (six or more) and less regular attendees (one) significant differences were found between the academic performance of groups, (U=347.50, p=.000) with a steady medium effect size (r=0.45). This strongly indicates that PALS has a positive effect on academic performance. Students who attend PALS six times or more are almost four times as likely to receive a first class grade in comparison to those who attend once or never.

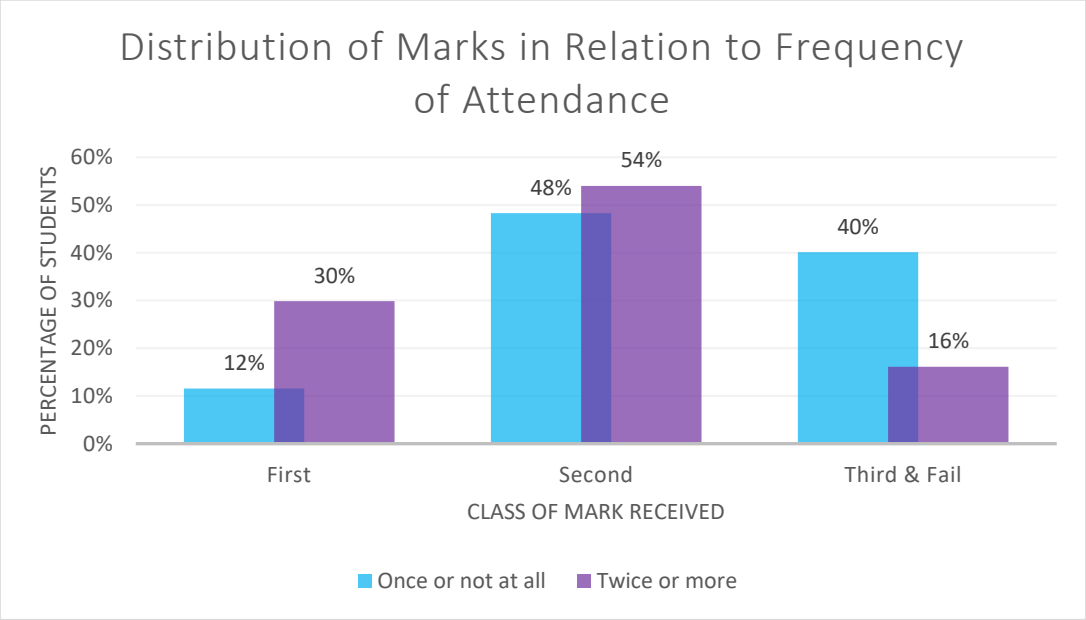

Figure 5

- Almost three times more first class grades received by regular attendees in comparison to those who attended once or never
- Over 84% of students who attended at least twice received a first or second class grade and only 60% of students who attended once or not at all
- Only 16% of students who attended twice or more received a third class grade or worse and 40% of students who attended once or not at all

After conducting a Chi-square Independence Test an association was found between frequency of attendance and the class of marks achieved ($x^2(2)=25.37$, $p=.000$). A positive relationship is reflected in the distribution of marks in relation to frequency of attendance, as rigorous attendees (students who attended twice or more) received marks almost exclusively within first and second class range (only 16% did not). This is not reflected in the other groups' results, as students who attended less regularly were more likely to have a more negatively skewed distribution of marks toward third class and fail (over 40%), as reflected in Figure 6. Students who attended PALS at least twice are three times more likely to receive a first class mark.

RESULTS:
QUALITATIVE ANALYSIS

Students

"…they gain something from it (…)it could be academic confidence, or it could be just that social community feeling within the school, but it also might just be a mentor, who has gone through the same and might be just the reason that you end up staying at the university" (PAL Student)

Using data gathered from self-report comments, Leaders' questionnaire forms, and open-ended interviews conducted with University staff who actively contribute to PALS, three major themes were identified as dominant and reoccurring. They can be seen below in Figure 6.

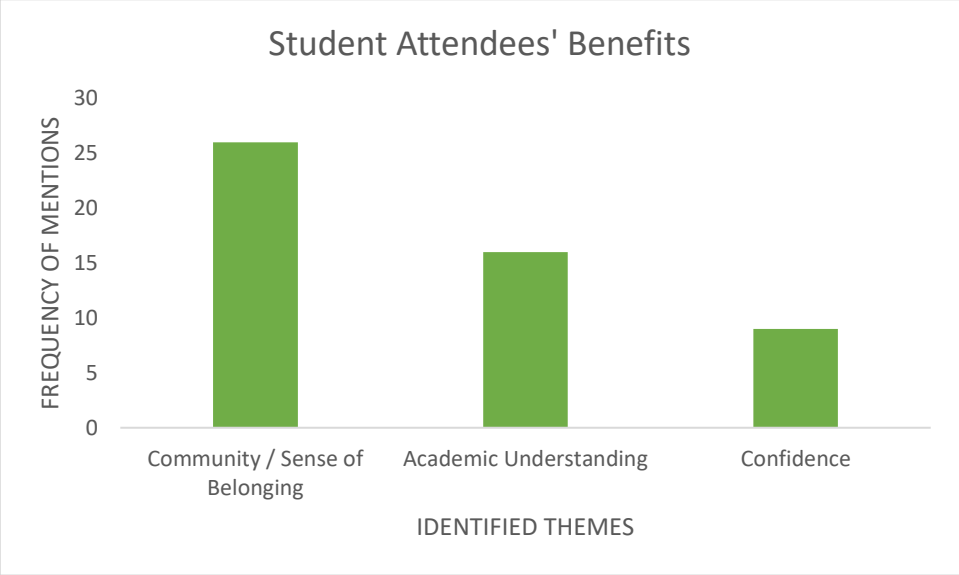

Figure 6

Community/Sense of Belonging

"One of the recurring themes in feedback was that the students appreciated having a space where they could be confused and overwhelmed together, and felt a little bit less lost as a result of it"
(PAL Co-ordinator)

"I think firstly it creates a sense of belonging – a place created by older, experienced students for you to come and ask questions about the course and discuss the topics is very comforting"
(PAL Co-ordinator)

"It's what's beyond lectures and tutorials and introducing me to a community of people who have gone through the same"
(PAL Student)

The most prominent impact identified as the result of PALS is the creation of a community or enhanced sense of belonging in first year students. Naturally, as discussed earlier in the paper, first year students do experience some challenges in regard to social integration to higher education. As the transitional period can be rather difficult and expectations are not always met, it appears that having a group of people who are there to help and provide a 'safe place' for seemingly silly questions to be asked provides students with a level of comfort that is of highly valuable. A PAL Leader said: "it creates a community of like-minded students" and that "friendships often begin from attending the same PAL session". Furthermore, the idea of being able to relate to a Leader (a person who has been through the same experiences of you relatively recently) seems to be a key element to the success of the schemes.

Academic Understanding

"It's an ideal platform for all students regardless if they do or do not need help. A learnt a lot of additional information that I would not have learnt if I hadn't attended the sessions." (PAL Student)

"It thus allows first years to speak more freely and become more confident in their subjects" (PAL Leader)

"The students mentioned most frequently clarifying doubts, followed by group work/peer learning, (…) and improving understanding" (PAL Co-ordinator

"They've fostered my love for Economics" (PAL Student)

An improved academic understanding was also found to be a recognised output of attending PALS. It is important to distinguish this aspect from academic performance, as academic understanding also relates to learning in general, such as the overall ability to grasp ideas in a certain subject area and how effectively a student adjusts to the academic system. This may be related to, but need not be identical to, how well one performs in terms of the marking scheme.

Much of the data that emerged was predominantly focused on PALS providing a place to 'ask the questions that need to be answered'. Often, students may lack the confidence to ask necessary questions that could significantly improve their understanding: in particular, they may not want to ask their lecturers questions as they do not want to appear confused.

With PALS, most students expressed that clarifying a misunderstanding or gaining a deeper understanding of the subject area is a natural outcome. As one PAL leader put it: "exam and essay preparation sessions are always very popular because first year students really want to discuss the topics with each other outside of tutorials and lectures". Furthermore, co-ordinators have mentioned using new techniques, stating that "students brought in ideas to use economics to model the situation within a certain environment (…) It makes you put economics in a real world situation and it stops just being a dull subject". These statements suggest how enriching PALS can be, and that its focus is not only on meeting course requirements, but also improving the general understanding of students and allowing them to think creatively and critically.

Confidence

"The overwhelmingly welcoming approach the EconPALS leaders took was reassuring to a first year just beginning to find his feet in the big pond that is university life" (PAL Student)

"It gives you somewhere to ask questions, to reassure yourself that you might not be the only person who doesn't understand some topic."(PAL Student)

"Having attended PALS myself, based on my experience I can say that I've gained more confidence (PAL Student)"

An improved sense of confidence in students has also been identified as one of the main impacts of attendance at PALS. For the purposes of this paper, confidence refers to a change in attitude and approach when solving a problem or exploring relatively novel topics. In particular, it refers to an improved level of social and personal confidence relating to public speaking or having the confidence to admit to not knowing something.

Perhaps the reason that attendance at PALS promotes improved confidence is because sessions require frequent involvement with new people, new places and topics, which can naturally allow students to become familiar with it and thereby ease their comfort over time. A PAL Co-ordinator said: "If someone is a bit shy (…) over time it allows them to build their own confidence, work their way through it". This may be a crucial benefit, as in many cases, lack of confidence can have severely negative effects on one's attitude towards problem solving in a general sense, and not just in the academic environment. Therefore, an improved sense of confidence can not only lead to improved performance, but a more positive approach to university life in general.

Leaders

"..For leaders, I think it's more about the community side of it, rather than the academic side. Consolidating your knowledge is more of a by-product for me, which helps students regain the foundation of their knowledge, but at the same time they are able to get communication and social skills within the environment, build relationships, building a community as well."
(PALS Coordinator)

Using data gathered from self-report comments, Leaders' questionnaire forms and open-ended interviews conducted with University staff, three major themes have been identified as dominant and recurring in regard to the benefits gained by PAL Leaders (see Figure 7).

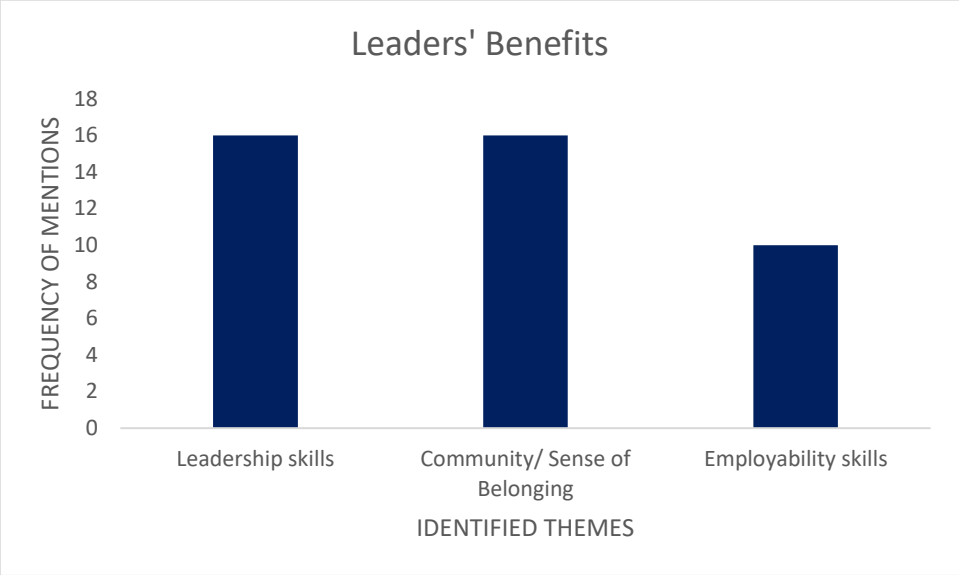

Figure 7

Leadership skills

"I signed up to the leadership development course to become more confident in my PALS role, but I got so much more out of it. Not only did I learn about leadership, but I got practical advice from organizations about how I can use these skills beyond the PAL schemes. I had lots of opportunities to practice and put my knowledge into action, and to top it all off I met some amazing people along the way. I would highly recommend this course. You can never know enough about leadership" (PAL Leader)

"The PALS leader also gains leadership, communication and planning skills" (PAL Leader)

"..As they work in teams they become good at organizing, long-term planning and improvising when something does not go as planned."(PAL Co-coordinator)

"I really found the experience useful in terms of creative thinking, planning, trying to facilitate, revising and many more. Totally useful!"(PAL Leader)

One of the most dominant reoccurring skills gained through PALS was 'leadership skills'. It is worth noting that it can be challenging to precisely define 'leadership skills', as it is often referred to as a set or combination of skills, rather than one measurable ability. According to Goleman et al (2002) a leader can "*execute a vision by motivating, guiding, inspiring, listening, persuading and creating resonance*". Therefore, in this research, leadership skill can be anything related to the ability to 'lead' others, facilitate a group of people, provide guidance, and communicate and comprehend ideas creatively and effectively.

As said by one Leader: "I saw our leaders gaining confidence as a result of their success, taking on more leadership positions throughout the year, and definitely engaging with imagination and creativity in both the running of the sessions and behind-the-scene".

As a Co-ordinator said: "they do get a great deal out of it (…) like how to become a student leader and how to facilitate, how to organize, how to promote – so they are obviously developing a whole range of professional skills". Further, 74% of students reported an improved ability to apply knowledge to a real-world setting through hands-on experiences as result of their peer leadership experiences.

There were also several reports that participants had gained organisational skills, including the ability to deal with the unexpected and an improved sense of general teamwork. This is in line with the aims of the PALS Leadership Development course, and with the aims of PALS in general. Most leaders, staff and students highlighted seeing the PAL leaders as excellent facilitators, easy to approach and very committed to their goals.

Community and a Sense of Belonging

"I signed up to the Leadership Development course to become more confident in my PALS role, but I got so much more out of it. Not only did I learn about leadership, but I got practical advice from organizations about how I can use these skills beyond the PALS schemes. I had lots of opportunities to practice and put my knowledge into action, and to top it all off I met some amazing people along the way. I would highly recommend this course. You can never know enough about leadership" (PAL Leader)

"We are a family" (PAL Leader)

"I felt I owed it to the Scheme and the younger students to give them the help I had" (PAL Leader)

"..It's a big department, a big university (..) That's what's incredibly valuable about it, that it helps them feel knitted into the environment a little bit more." (PAL Co-ordinator)

Another dominant theme which arose from the testimonial data was that the schemes provided a space for the community, and created a sense of belonging in the Student Leaders. Student leaders often mentioned their overwhelming sense of wellbeing and feeling that they were part of a community as a result of being Student Leaders. Most of the comments around community were paired with the act of helping and 'giving back to the community' which once helped them as students. As one coordinator put it: "they do seem to have formed very firm friendships and they are very supportive of each other". Community and sense of belonging was one of the most dominant themes that emerged. Indeed, its benefits were frequently emphasized by both University staff and leaders themselves.

Employability skills

"..they haven't really got their heads into the idea of employment yet (…) So, having experience of working as part of a team and taking on your role as a leader is just as valuable, but students aren't necessarily aware that that is true "(PAL Coordinator)

"It also provided me with valuable teaching experience and other skills for my future work" (PAL Leader)

"Leaders gain a portfolio of experiences that looks really good on their CVs and that prepares them well for interviews" (PAL Coordinator)

"However, through these experiences you develop skills such as communication, organisation, planning and leadership that are definitely transferable to work environment" (PAL Coordinator)

Out of the identified benefits, developing employability skills was mentioned the least in comparison to other impacts, however it was still very commonly reported in testimonials. Rather surprisingly, self-report testimonials were more focused on the personal experience and the immediate gains that may arise from participation. However interviews conducted with staff shed light on a number of transferable skills, which can definitely be a positive addition to any Leader's CV and future career aspects. In self-reports, most students mentioned gaining valuable teaching experience. As one Leader said: "I could build some experience for future teaching work". However, others mentioned skills in terms of organising, planning and executing tasks. Furthermore, 91% of students reported that peer leadership had changed the way they felt about building relationships with people with whom they work and 84% felt that they developed confidence when interacting with superiors as a result of their Peer Leader experiences.

CONCLUSION & RECOMMENDATIONS

After careful analysis of findings the study concludes the following:

- There is a positive relationship between the frequency of attendance at PALS and academic performance, suggesting that more frequent attendance is likely to increase chances of achieving higher marks.
- PAL students reported improved social confidence, academic understanding and sense of belonging/community as a result of active engagement with PALS.
- PAL leaders reported gaining employability and leadership skills, alongside an improved sense of belonging/community as a result of their active engagement with PALS

Due to the presence of potential confounding variables when investigating impact on academic performance, this research study does not aim to establish a causation between PALS and students' grades. However, the findings of this research strongly indicate that students who regularly attend PALS are more likely to achieve higher marks than those who take a less active role or none at all. Additionally, qualitative testimonials showed that first year students gain improved academic understanding, grow in confidence and possess a sense of belonging as a result of active engagement with PALS. These benefits, including social and academic integration, are among those identified as key elements of student support, in regard to reducing dropout rates and easing the transitional period for first year students (Harvey, 2006).

Furthermore, PAL leaders have been found to have improved their employability and leadership skills, as well as their own sense of belonging within the university. The theme that appears to have been most dominant in testimonials is the improved sense of belonging and feeling part of a community, which appears to have been gained by both Leaders and student attendees. Therefore, although the quantitative focus of the paper is academic performance, the most prominent benefit of PALS identified through the testimonials is social, rather than academic, in nature. Therefore, the research concludes that students who are more involved with PALS are more likely to perform better academically, but also, may develop an improved sense of confidence in their core subjects, feel like they are part of a trusted social community and therefore benefit in terms of social integration as well.

A variety of future research can be recommended in order to gain a more in-depth understanding of the underlying impact of PALS. Unfortunately, a causal effect may never be established between engagement with PALS and academic performance, due to the variety of confounding variables (including personality traits, environmental circumstances and learning habits- other factors that may influence one's academic success).

However, to further support the indication of a positive effect on academic performance, within-subject and longitudinal research may be valuable. This would allow research to focus on the changes in behaviours, skills and academic performance of individual students over a period of time (possibly their first and second semester), thereby allowing for a higher degree of control over external variables. This would also permit more specialised investigation into the skills, benefits and benefits students may develop, and the extent to which PALS may have an effect on students. For example, one of the main goals of the PAL program is to allow first year students to gain the self-esteem necessary to become autonomous and independent learners. In contrast to this, previous research has indicated that students' academic performance increases simply because they gain more meaning-oriented approaches to studying as a result of increased

awareness of the course demands (Ashwin, 2003). In order to investigate whether learning behaviours and general understanding are shaped in the long-term, more longitudinal research needs to be done on the fluctuation of marks from the first semester until graduation, as well as further collection of qualitative data in order to deepen the understanding of improvement reflected in academic performance.

Another aspect, discussed by Chris Keenan (2014) is the need to define and articulate a clear purpose and focus for each scheme before implementation and ensuring that schemes are delivered in line with clearly communicated evaluation strategies, quality and performance measures. This can support both the intended outcomes of the scheme and makes evaluation easier and clearer for further analysis.

Finally, yet importantly, it is important to note that although the research project does not intend to establish a causal relationship between PALS and academic performance, it is strongly indicated that PALS brings about a variety of benefits to its regular attendees and Student leaders. Regardless of whether PALS directly improves the performance of students, or it simply attracts students who were always going to work hard (and so could reasonably be predicted to perform well academically, given that they are likely to put in extra work), what can be confidently stated is that PALS provides a space for peer support. At the University of Edinburgh, peer support of this kind is in high demand, and appears to bring about academic and social benefits (either directly or indirectly). Accordingly, it can be claimed that PALS has been implemented successfully by Edinburgh University Student's Association, and has met its original aims – to improve the student experience.

Limitations of Research

It is important to highlight potential limitations of this research for future projects. One issue is data protection, particularly restrictions in place regarding gathering data on the academic performance of students within universities. Due to such policies, the accuracy of data may have been compromised, as instead of actual marks achieved (points on a 100 point scale), marks have only been enclosed on a 10 point scale (A-H). In order to avoid such issues, it is strongly recommended that future research analysis is conducted on actual, rather than average marks. This would allow the identification of stronger relationships and shed more light on potential effects.

The same issues apply to grouping of students on the basis of their frequency of attendance. All students were grouped according to four categories (No attendance, One attendance, Two to Five and Six or more), which created difficulties in establishing a correlation between the variables. This is because there are significant differences between the engagement level of students who attended PALS twice in comparison to those who attended five times, yet they were grouped in the same category. It is therefore strongly recommended that future research determines exactly how many times students attended PALS, and then uses this data.

Furthermore, due to limitations regarding the scope of the research, not all student marks were analysed. This may have compromised the research, as a representative sample has been used, rather than the entire sample. However, obtaining the entire sample may prove challenging, as not all courses have a PALS scheme in place, and so one cannot compare the academic performance of attendees and non-attendees. Therefore, using the entire student population would have meant that the number of non-attendees would have been significantly higher than attendees, which would have further compromised the accuracy of statistical calculations. In order to avoid such issues, the research focused on the five courses with successfully implemented PAL schemes in order to identify the outcomes of such well-structured schemes.

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APPENDIX

1. Common Marking Scheme

Grade	Mark	Honours Class	Description
A1	90-100	First	Excellent performance
A2	80-89	First	Excellent performance
A3	70-79	First	Excellent performance
B	60-69	Second	Very good performance
C	50-59	Second	Good performance
D	40-49	Third	Pass
E	30-39	Fail	Marginal Fail
F	20-29	Fail	Clear Fail
G	10-19	Fail	Bad Fail
H	0-9	Fail	Bad Fail

2. Scheme Feedback Report Questions

PALS Leaders Questionnaire

Thank you for taking the time to complete this questionnaire. Please, try to answer the questions as honestly, as possible and keep in mind that there are no wrong answers.

1. In your opinion, what impact does the PALS scheme have on first year students?
2. In your opinion, what impact does it have on PAL Leaders? What are the most valuable skills you've gained by taking part?

3. Do you think the benefits of the scheme are more related to academic improvement/employability or personal gain, such as making friends and feeling like part of a community?
4. What challenges have you faced as a leader?
5. Are there any surprising outcomes that you experienced as a PAL leader?

3. Coding Technique example

In your opinion, what impact does it have on PAL Leaders? What are the most valuable skills you've gained by taking part?

PALS leaders become more confident in their own subjects too and gain great facilitation skills. They learn how to stir discussions by preparing the right methods and asking the right questions. I have seen them develop these skills a lot!

Besides that, as they work in teams they become good in organizing, long-term planning and improvising when something does not go as planned.

- Themes identified: Confidence, facilitation skills(leadership skills), organizing, long-term planning and improvising when something doesn't go as planned (leadership skills)

1. Interview questions

In your opinion, what impact does attending the PAL scheme have on students? Leaders?

Do you think the benefits of being involved in the PAL scheme are more related to academic improvement or personal gain?

What challenges have you faced in supporting / implementing schemes?

Are there any surprising elements in terms of the PAL scheme's outcomes that you have experiences / did not plan?

Real winners are the leaders. Do you agree with that?

LTC: 14.11.18
H/02/25/02

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The University of Edinburgh

Senate Learning and Teaching Committee

14 November 2018

Student Employment Matters

Executive Summary

LTC was asked in March 2018 to review the advice to PGT students about the maximum number of hours they should work whilst studying. LTC recommended that the advice for PGT students should be the same as that for UG students (< 15 hours per week during semester time). It also recommended that the Careers Service should conduct further research into the potential impact of this on PGT students. This paper summarises the outcomes of this research and makes some suggestions for enhancing the support to PGT students who work while studying.

How does this align with the University / Committee's strategic plans and priorities?

Helps students from all backgrounds achieve their potential by providing a supportive environment to help them balance paid work and study. Contributes to students' employability and transition to successful graduates.

Action requested

LTC may like to discuss suggestions arising from the research for enhanced support for PGT students who work while studying.

How will any action agreed be implemented and communicated?

Agreed recommendations to be shared with all L&T and support staff and published on appropriate websites.

Resource / Risk / Compliance

1. **Resource implications (including staffing)**

   None

2. **Risk assessment**

   Risk of inaction relating to providing advice on working hours could be detrimental to the student experience.

3. **Equality and Diversity**

   None

4. Freedom of information

Open

Key words
PGT student employment, working hours

Originator of the paper

Ruth Donnelly, Assistant Director, Careers Service
7th November 2018

Student Employment Matters – PGT student experience

LTC was asked in March 2018 to review the advice to PGT students about the maximum number of hours they should work whilst studying. LTC expressed the view that the PGT experience was more closely aligned with the undergraduate (UG) than with the PGR experience and that the recommendation for PGT students should be the same as that for UG students (< 15 hours per week during semester time). It also recommended that the Careers Service should conduct further research into the potential impact of this on PGT students.

This research was conducted over the summer by an undergraduate intern, as part of the Employ.ed on Campus programme. Existing published research focuses on the experience of undergraduate students in balancing work and studies, so this report adds to the body of evidence relating to the experience of PGT students. Desk research and a focus group were conducted, followed by a survey - it should be noted that the response rate to the survey was low (214 - 4.23% of the eligible PGT population) with a strong bias for responses from students in CAHSS.

Key findings:

- PGT students' experiences of working while studying vary substantially according to their financial circumstances and the number of contact hours for their courses. The majority of respondents (73%) who undertake paid work while studying commit to 6 or more hours per week. Just under a quarter work 16-20 hours each week. Most students are employed in jobs unrelated to their course of study with the top 3 sectors being Hospitality, Tourism & Sport; Teaching & Education and Retail & Sales.
- Around one third of respondents undertook unpaid work experience during their course. Of those who did, the vast majority of them (73%) did work which was related to their course of study.
- **Motivations** for working while studying mirrored those of the UG population with financial necessity topping the list. Other motivations were mainly employability-related, such as gaining relevant experience, developing skills and social benefits.
- **Benefits,** in addition to financial gain, the development of soft skills, particularly time management, increased social and cultural awareness and extension of networks were highlighted The vast majority of respondents (93%) thought that employment would have a positive impact on their career prospects.
- **Impact on academic study** 35% of all survey respondents who undertook paid work while studying felt that their employment status resulted in fluctuations in their ability to deal with demands of their course. An increase in the number of hours employed corresponded with a decrease in the number of hours of independent study undertaken by students and a perceived impact on the quality of their academic work as a result.
- **Other impacts** reported were dissatisfaction with the amount of time spent on extra-curricular activities (47%) and the availability of personal leisure time (41%).
- **Seeking support** - some respondents sought support in balancing work and study, particularly those who reported difficulty in dealing with their course demands. Interestingly, they tended to seek this support from their personal networks or

employers, rather than from the University. When this was explored, respondents said they did not know where to look for help or thought that the support available was inadequate or not well suited to their circumstances.

The report recommends that:

- The advice for PGT students in employment should be brought in line with the maximum of 15 hours per week recommended to undergraduate students, which also corresponds to the Russell Group average. This recommendation should be considered as a guideline only with the proviso that 15 hours per week may not be appropriate for every PGT course. Students should clarify their position with their School if they have concerns. There is also an onus on staff to consider what is appropriate for their students, bearing in mind any visa restrictions on their right to work, and to communicate this clearly.
- Increased support to improve students' experience of balancing work and study should be considered. Suggestions for enhanced support include:
    - Tailored advice from course leaders about appropriateness and impact of 15 hour recommendation for their course context.
    - Proactive interest from personal tutors in students' outside work commitments and how they are balancing this with study.
    - Signposting to appropriate sources of help, including funding sources to reduce the need to work excessive hours.
    - Flexible deadlines and earlier publication of timetables would allow students to better manage their time.
    - More availability of paid, relevant opportunities which can be combined with academic commitments.

Ruth Donnelly, Careers Service
November 2018

LTC: 14.11.18
H/02/25/02

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The University of Edinburgh

Senate Learning and Teaching Committee

14th November 2018

VLE Minimum Standards Project: Information

Executive Summary

In this paper, we outline the changes that have taken place to expand the ISG project on VLE Standards.

Following a period of consultation and planning it was identified that the scope of the project should be widened in order to fully engage colleagues to address the student feedback relating to organisation of their VLE courses. The name of the project will change from 'VLE Minimum Standards' to 'Learn Foundations'.

How does this align with the University / Committee's strategic plans and priorities?

This project was initially identified as a response to the 2017 NSS results. The 2018 NSS results support continuation of this project. The project also supports the University Learning and Teaching Strategy in particular:

- "Committing to the creative use of digital technologies in our teaching and assessment where appropriate whether online, blended or on-campus
- Utilising our world-class libraries and collections in innovative and research-led ways to enrich our curriculum
- Reviewing and enhancing the way that our physical and digital estates support high quality learning and teaching and interaction between staff and students
- Pursuing the aspiration that every educator is a digital educator, and that all teaching staff are supported in the appropriate use of the full breadth of learning technologies"

This project supports mainstreaming adjustments detailed in the University Accessible and Inclusive Learning Policy (https://ed.ac.uk/files/atoms/files/accessible_and_inclusive_learning_policy.pdf) including making it easy to access course outlines, reading lists, lecture notes and recordings of lectures quickly and easily.

This project has been identified as part of our institutional response to the Quality Assurance Agency Enhancement Themes work – Evidence for Enhancement: Improving the Student Experience.

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 F

Action requested
This paper seeks LTC support for the revised 'VLE Standards project' – now known as 'Learn Foundations'.

Additionally, we seek feedback from LTC on what the key challenges might be in gaining academic buy-in for this project and any suggested actions on how to overcome them.

How will any action agreed be implemented and communicated?
If the Committee supports the changes, ISG will incorporate feedback into the project. The Committee will be given interim reports on the project's progress.

Resource / Compliance

1. **Resource implications (including staffing)**. ISG has planned and secured 3-year resourcing for this project. Resources are a mixture of existing LTW staff and specialist resource recruited specifically to support this project. Opportunities for student internships are also included.

2. **Freedom of information**
   The paper is **open.**

Key words

Originator of the paper
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Information Services Group

October 2018

Background

The original project proposal for *VLE Minimum Standards* was given support by the Learning and Teaching Committee in November 2017 (https://www.ed.ac.uk/files/atoms/files/20171115agendapapers.pdf). Following on from this a period of further planning and research has taken place. In particular the project team have spent considerable time liaising with colleagues both inside the University to find out more about existing good practice (https://www.wiki.ed.ac.uk/display/LF/Consultation+Activities) and also learning about how other Universities are attempting to resolve issues around inconsistent use of the VLE, and the impact this is having on measures of student satisfaction in the wider sector (https://www.wiki.ed.ac.uk/display/LF/What+other+universities+are+doing). New public sector web accessibility regulations were also introduced in September 2018 which will have an impact on a wide range of user's responsibilities with regards to content that is made available in the VLE, and this must be considered as part of the project (https://www.policyconnect.org.uk/research/accessible-virtual-learning-environments-making-most-new-regulations). In response to this work a decision has been made to widen the scope and lengthen the timeline of the project. This was signed off by the Project Board in August 2018 and a new project, *Learn Foundations*, was initiated.

About the new project

The high-level project aims of *Learn Foundations* are that:

- Courses in Learn are accessible, and relevant information is easy to find by students.
- Staff are well supported to make and deliver rich courses in Learn.

Whereas the original project focussed primarily on the development of institutional and school level course templates, *Learn Foundations* combines multiple strands that aim to underpin a sustainable culture of VLE use where consistency, accessibility, and high-quality online student experience are regarded as foundational by teaching and teaching support staff across the University. To achieve this there will be a focus on the ongoing support and guidance required by staff to develop the skills, and embrace the values, to enable them to deliver courses in Learn that meet our students' needs. The six strand of work that have been identified by the project are:

- school-level templates;
- standardised terminology;
- checklists;
- auto-populating standard information;
- development of new ways, and modes, of training and support;
- quality assurance and auditing of courses.

Consistent course navigation and layout will be supported through the use of agreed standard terminology and templates. Templates and checklists will be developed to make it easy for staff to build courses that meet an agreed standard, whilst leaving enough flexibility to accommodate the breadth of teaching activities and subject areas within the institution. Standard information will be automatically created for each course to avoid rework and double handling where possible. A range of training and support resources will be developed to ensure that all colleagues have the digital skills they need when they need them. These will be designed and made available in various modes and locations to ensure that they are as accessible as possible to all staff.

The use and success of these approaches will be evaluated on a regular cycle to ensure that we continue to support staff and students appropriately. As this project will inevitably focus on culture change in relation to VLE use, evaluation approaches will be specifically designed to look deeper into the complexities of teaching and teaching support practices.

The project recognises that a good deal of work has already been done in some areas of the University to develop high quality courses and programmes in Learn, as well as in other VLEs. The team will continue to learn from, and work with, a range of practitioners to consider and incorporate examples of good practice where appropriate. We will continually consult with leaders in the areas of teaching, learning, and technology to ensure that what is delivered most closely meets the needs of the broadest University community. The project will work in close collaboration with all relevant parts of the University community; the project board has been designed to ensure that key areas have input (https://www.wiki.ed.ac.uk/display/LF/Project+Board). Student and staff working groups will be set up to ensure that a broad range of users are consulted as the project progresses and are given the opportunity to have their say on all aspects of work.

The project's guiding principles will be to:

- Remove unnecessary complexity.
- Bring together all the information users need to do a task.
- Use simple language, without jargon or acronyms.
- Use task-based navigation.
- Show students what they need when they need it.
- Show "Just in time" contextual help, reminders or prompts.
- Integrate existing data sources to present information that is useful to each individual student.
- Allow students to use whatever device they want.
- Use accessible design from the ground up.

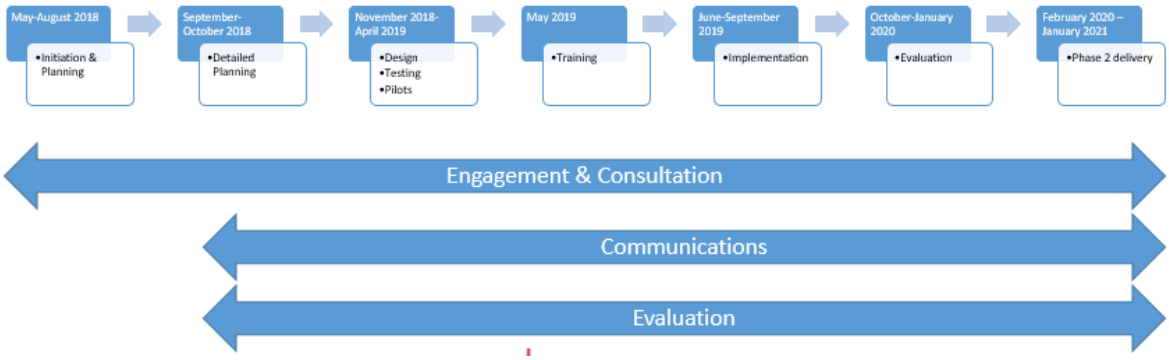
This paper seeks Learning and Teaching committee support for the project and would invite committee representation and / or nominated representatives from Schools and Colleges for the project user groups.

LTC will be given regular updates throughout the project.

See Appendix 1 for Project timeline

Appendix 1 - **Project timelines**

These timelines high-level and subject to change as the design phase of the project gets underway.



LTC: 14.11.18
H/02/25/02

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The University of Edinburgh

Senate Learning and Teaching Committee
14 November 2018

Thematic Review 2017/18 – Mature Students and Student Parents and Carers Remitted Recommendations

Executive Summary

Senate Quality Assurance Committee (SQAC) has now approved the final report of the Thematic Review 2017/18 and has remitted the recommendations outlined in the paper to LTC.

How does this align with the University / Committee's strategic plans and priorities?

Leadership in Learning

Action requested

For discussion of the way in which the recommendations remitted to LTC might be taken forwards.

How will any action agreed be implemented and communicated?

Action will be reported to SQAC via 14-week and year-on progress reports.

Resource / Risk / Compliance

1. **Resource implications (including staffing)**
   Not included in the paper

2. **Risk assessment**
   Not included in the paper

3. **Equality and Diversity**
   Not included in the paper

4. **Freedom of information**
   Open

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 G

Thematic Review 2017/18 – Mature Students and Student Parents and Carers Remitted Recommendations

Senate Quality Assurance Committee (SQAC) has now approved the final report of the Thematic Review 2017/18, which can also be found at Thematic Review Final Report

Recommendations from the Review are to be taken forward by the individuals and areas identified in the report. SQAC has remitted the following recommendations to LTC:

- **The review panel recommends that Senate Learning and Teaching Committee explore the options for growing undergraduate part-time provision to provide more flexible study options for mature students and student parents and carers. This would benefit many other groups of students, including those from Widening Participation backgrounds.**

- **The review panel recommends that Senate Learning and Teaching Committee embed lecture recording fully across all academic areas, with an opt-out policy to maximise the availability of lectures to mature students and student parents and carers. This would benefit many other groups of students, including those from Widening Participation backgrounds and international students.**

LTC will be responsible for submitting progress reports (14-week (due February 2019) and year-on) to SQAC for comment, approval and feedback.

Members are invited to discuss the way in which these recommendations might be taken forward.

LTC: 14.11.18
H/02/25/02

LTC 18/19 2 I

The University of Edinburgh

Learning and Teaching Committee

14 November 2018

Lecture Recording Programme Update

Executive Summary

This paper provides a summary of the first full year of operation of the new Lecture Recording service 2017/18 along with some details on Semester 1 of this academic year 2018/19. The paper also provides a summary of progress on the deliverables of the Lecture Recording Programme as it moves into a further year of roll-out, opt-out and evaluation.

How does this align with the University / Committee's strategic plans and priorities?

The programme and paper align with the strategic objective of 'Leadership in Learning' and improving the student experience as a key priority for the University.

Action requested

This paper is provided for information.

How will any action agreed be implemented and communicated?

All activities described within this paper are being implemented and communicated within the plans of the Lecture Recording Programme.

Resource / Risk / Compliance

1. **Resource implications (including staffing)**

   There are no resource implications beyond those already planned into the scope of the Lecture Recording Programme.

2. **Risk assessment**

   Risks were identified and monitored as part of the procurement and implementation phase. The Lecture Recording Programme Board will continue to monitor outstanding risks and identify and monitor new risks during the expansion phase.

3. **Equality and Diversity**

   Equality and diversity are significant drivers of the Lecture Recording Programme. There is substantial research that shows lecture recording can support a range of different student needs including required adjustments and helping students cope with complex lives.

An EqIA was developed for the launch of the technical service and updated at the start of the new academic year. A separate EqIA has been developed for the Lecture Recording Policy.

4. Freedom of information

The paper is open

Presenter of the paper

Melissa Highton Director Learning, Teaching and Web Services
Information Services

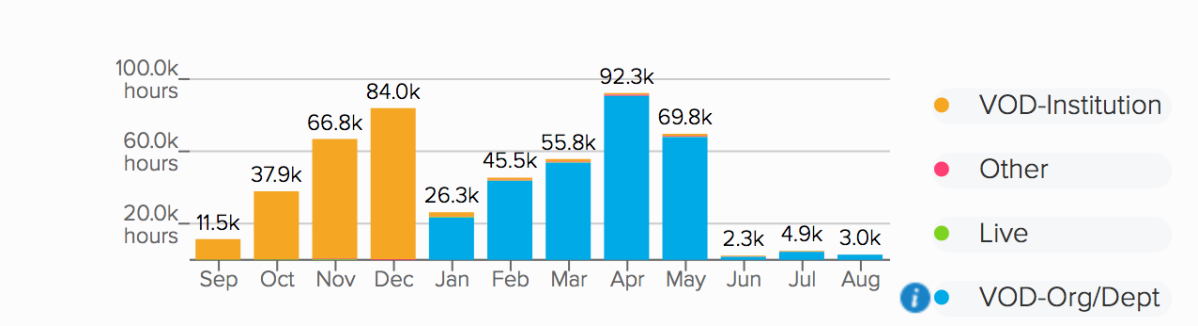
Originator of the paper

Anne-Marie Scott Deputy Director Learning, Teaching and Web Services
Information Services

Lecture Recording Programme Update

Review of Year 1

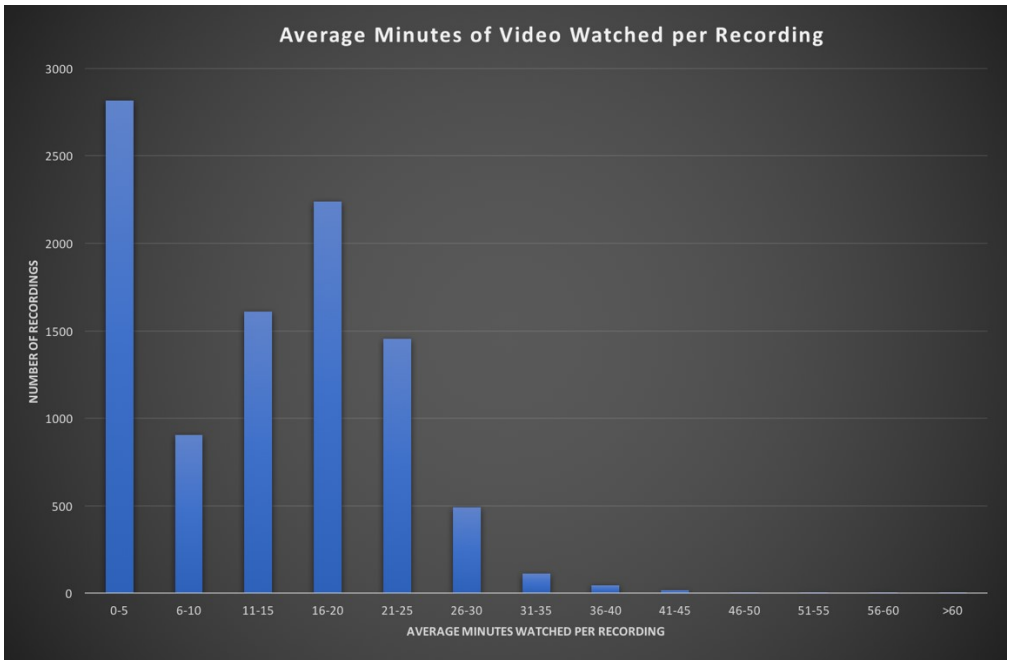
In the first year of operation of the new centrally-supported service lectures from over 400 courses were recorded. 18,812 individual students accessed the service and around 500,000 hours of content was watched. Some Schools are making very heavy use of the system, for example nearly all UG courses are being recorded in Law, Business School, Engineering and Informatics.



Hours of video viewed over last academic year

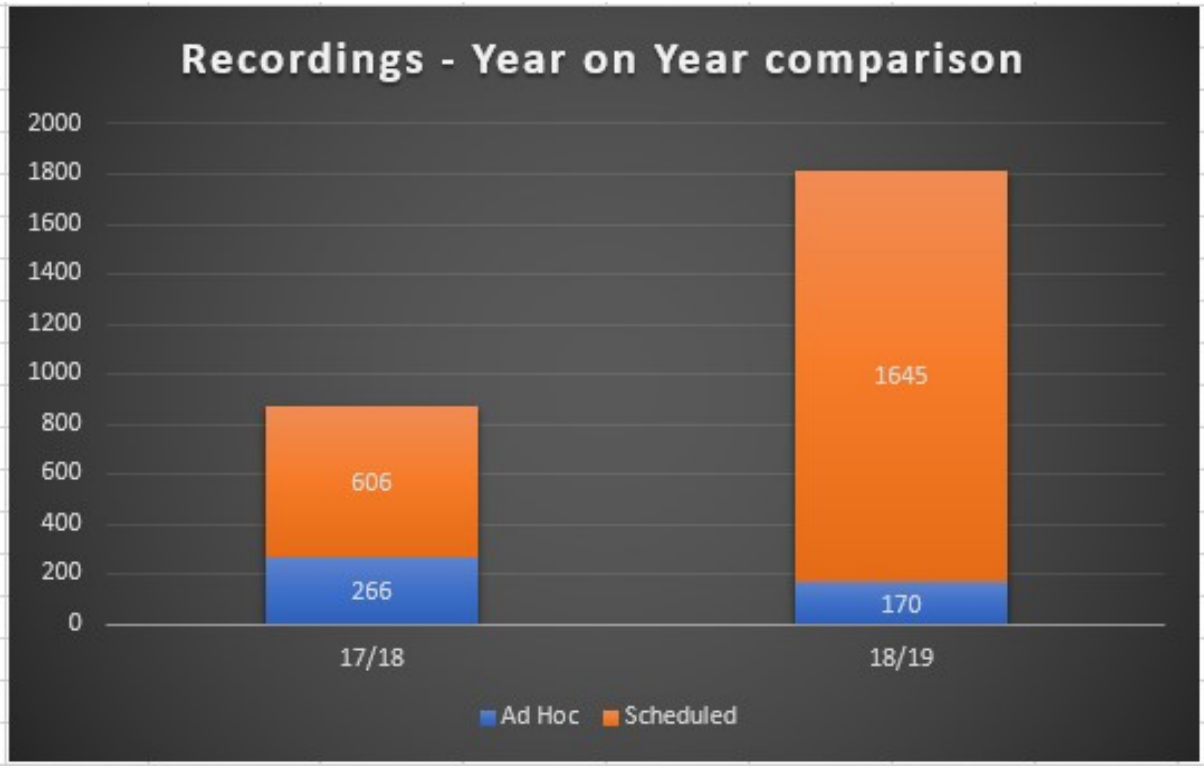
Although there were clear spikes in usage around revision periods, there was also a steady and substantial stream of regular viewing activity throughout the year which indicates ongoing use to finesse notes or clarify understanding.

PTAS funded projects in Education, Vets, Maths and Physics along with the core Lecture Recording programme research project all found evidence of this kind of use, and indicate that students are not in the main using recordings as a substitute for attendance except where life circumstances prevail. Analysis of average minutes watched per recording confirms that students typically watch between 5 and 20 minutes of a recording, and whole lectures are not being watched routinely.



Review of start of academic year 2018/19

The number of courses requesting automated scheduling for the start of the 2018/19 academic year has grown substantially and compared to the start of last year we have double the number of recording schedules in the system for the start of year. In addition to Schools who already had substantial use of lecture recording, the School of Chemistry decided to adopt a local opt-out arrangement from the start of this academic year.



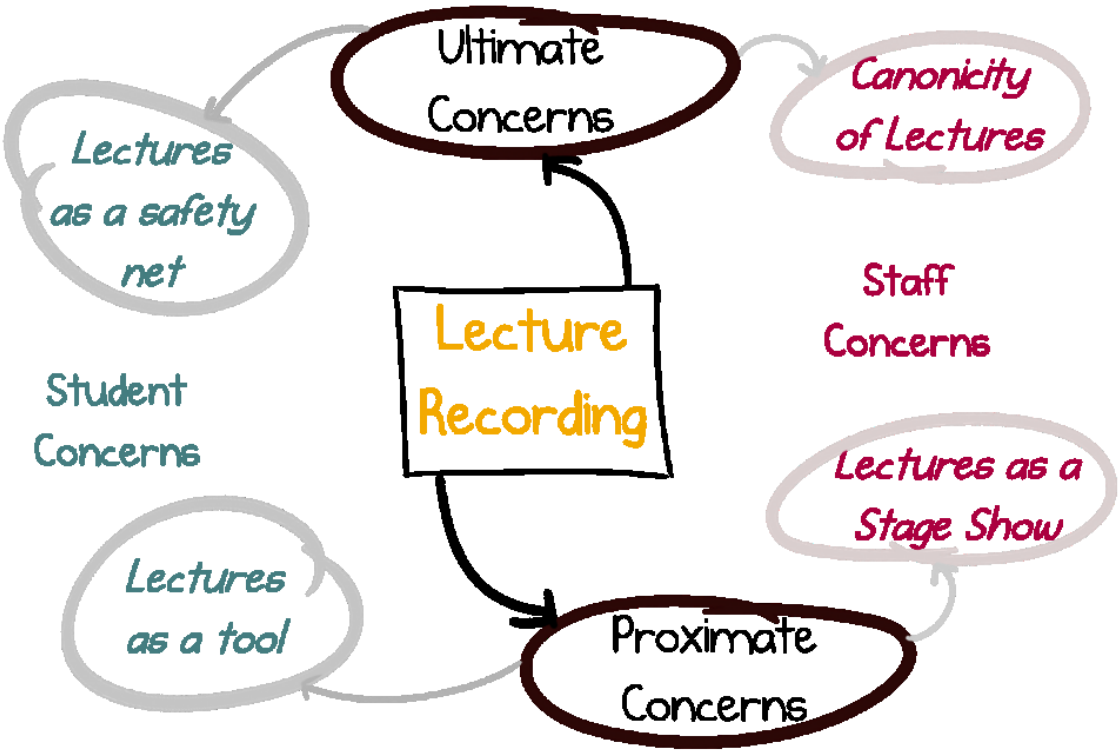
As with the start of last year we deployed a team of 40 student helpers into our largest teaching spaces to ensure academic colleagues had all the information they needed and to signpost sources of support where there were questions. Helpers also ended up giving advice on the changes to Windows 10 on the lecture theatre PCs including how to log out and where to access files on a USB stick.

The service is in the main highly reliable, with recording carrying on even in areas affected by network issues at the start of term. The single biggest service issue remains around sound quality. Most problems occur in smaller teaching spaces where microphones may not always be being worn. Microphones are not always being placed back in charging cradles, proactive checks by local servitor staff are not always happening uniformly, and faults are not always being reported in a timely fashion. In addition to reinforcing messages around shared responsibility for teaching spaces we are rolling out improved signage to go on microphone cradles.

We are running a mini-series of posts in the Teaching Matters blog, covering our 10-year history with lecture recording, the rationale for scaling up and the current internal research and what we are learning. http://www.teaching-matters-blog.ed.ac.uk/tag/mini-series-lecture-recording/

Evaluation

One of the most substantial findings from the research and evaluation projects carried out so far is that there are big gaps in understanding and perceptions between staff and students about the purpose of the lecture (and recording of a lecture) within the wider set of activities and resources within a course.



The Evaluation and Engagement group will be addressing this by convening a series of workshops with staff and students to co-create pointers and tips on to discuss the role of the lecture and how to use lecture recording effectively in a variety of subject specific contexts.

Policy

Following wide stakeholder consultation earlier this year, the University will implement our new lecture recording policy from 1st January 2019. A Lecture Recording Policy FAQ has been prepared and circulated to colleagues as part of the initial communications campaign.

The new policy supports staff in delivering an improved, consistent student experience, and provides clarity on the rights of those involved in each recording and the conditions under which lectures should and should not be recorded, released to students or released publicly.

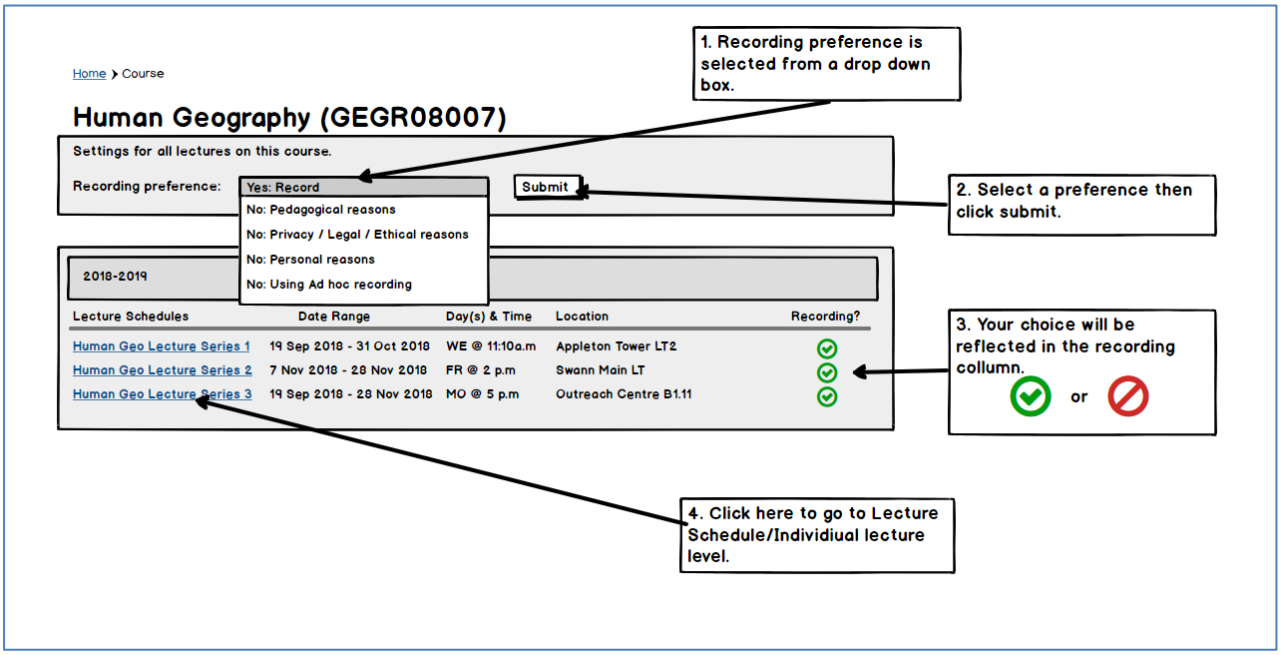
As previously reported to this group, there was excellent involvement in the consultation with 80 responses received, representing the views of 27 Schools, committees or organisations and around 150 individuals. The policy has been amended to take account of these views and strengthened in the process. You can find out more about the consultation responses on the consultation wiki site.

You can view the Lecture Recording Policy on the consultation wiki including a timeline of actions that have taken place since the end of the consultation.

The policy covers a number of very important areas such as intellectual property and data protection issues and appropriate use of recordings. The policy places individual lecturers very much in control

Preparation for Moving to Opt-Out

Software that integrates lecture recording with the University Timetabling system will launch in late Semester 1 and will be used for all scheduling from Semester 2 onwards. This will improve rescheduling of lectures where rooms are changed. It will also be the mechanism by which academic colleagues can opt-out of recording. Course Organisers and Course Secretaries will have access to this tool by default. Other members of staff teaching on courses can be added upon request. You can see a graphic of the online tool below:



Recordings that are initiated manually (an “ad hoc recording”), rather than using the automatic scheduler, will also be captured on the interface.

Where academic colleagues are happy for recordings to be scheduled automatically, no action will be required.

The interface allows search by course name or course code and displays schedules of lectures allocated to rooms enabled for lecture recording. There are simple drop-down options where colleagues can choose to opt-out of scheduled recordings by selecting one of the following reasons:

- No: Pedagogical reasons
- No: Privacy / Legal / Ethical reasons
- No: Personal reasons
- No: Using Ad hoc recording

It will be possible to opt-out of recording at course level or specific lectures within a course.

A comms campaign to promote the opt-out mechanism and reassure colleagues that it is easy to do will launch at the same time.

Next Steps – Year 3

Over the next year, in addition to supporting the transition to an opt-out model, the programme will continue to equip further teaching spaces and develop more detailed reporting capabilities.

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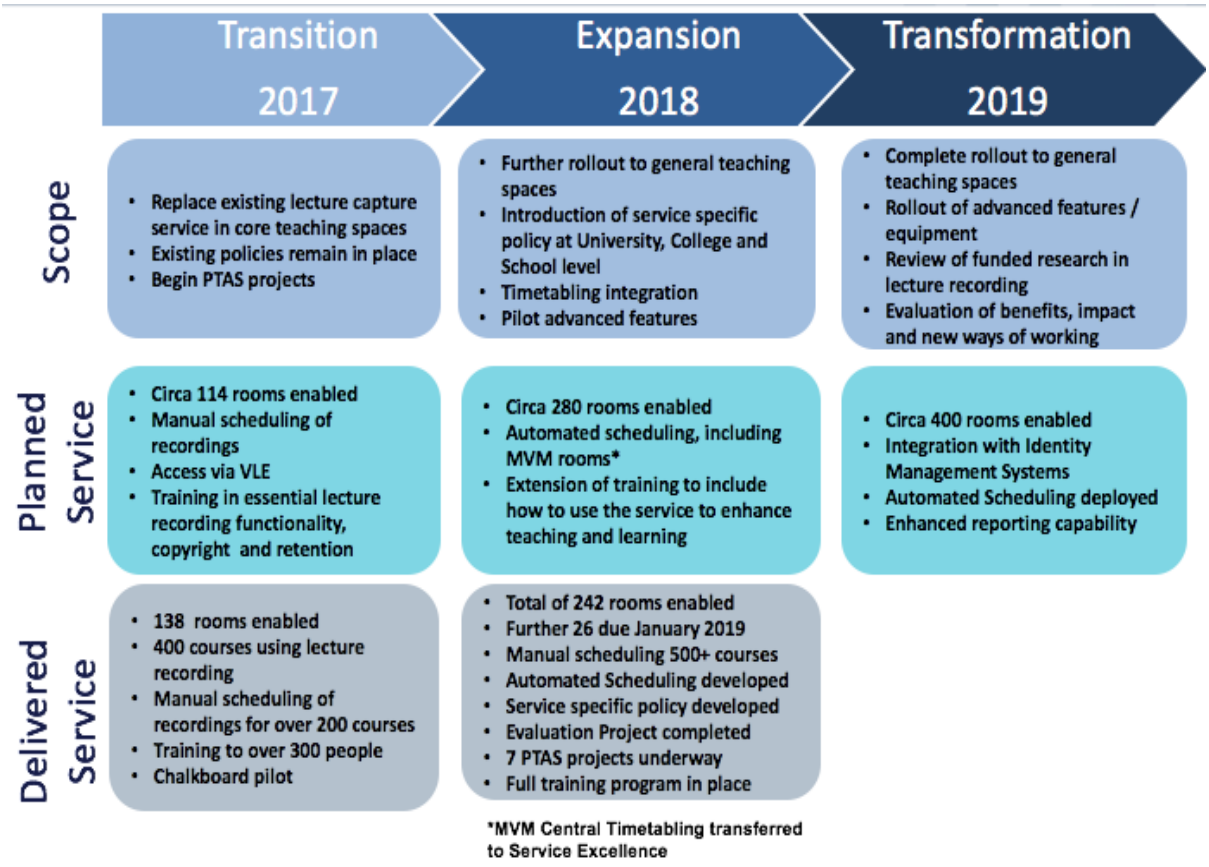
Transition
2017
Expansion
2018
Transformation
2019
Scope
Replace existing lecture capture service in core teaching spaces
Existing policies remain in place
Begin PTAS projects
Further rollout to general teaching spaces
Introduction of service specific policy at University, College and School level
Timetabling integration
Pilot advanced features
Complete rollout to general teaching spaces
Rollout of advanced features / equipment
Review of funded research in lecture recording
Evaluation of benefits, impact and new ways of working
Planned Service
Circa 114 rooms enabled
Manual scheduling of recordings
Access via VLE
Training in essential lecture recording functionality, copyright and retention
Circa 280 rooms enabled
Automated scheduling, including MVM rooms*
Extension of training to include how to use the service to enhance teaching and learning
Circa 400 rooms enabled
Integration with Identity Management Systems
Automated Scheduling deployed
Enhanced reporting capability
Delivered Service
138 rooms enabled
400 courses using lecture recording
Manual scheduling of recordings for over 200 courses
Training to over 300 people
Chalkboard pilot
Total of 242 rooms enabled
Further 26 due January 2019
Manual scheduling 500+ courses
Automated Scheduling developed
Service specific policy developed
Evaluation Project completed
7 PTAS projects underway
Full training program in place
*MVM Central Timetabling transferred to Service Excellence

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REPORT FROM THE KNOWLEDGE STRATEGY COMMITTEE

12 October 2018

1 Digital Disruption

The Chief Information Officer delivered a presentation on Digital Disruption, highlighting other sectors that have been disrupted by digital technologies and the scope for similar disruption within higher education. Opportunities to deliver high quality online education at scale and to use new technology to benefit 'on campus' students were considered. The Committee discussed difficulties in predicting the extent and type of digital disruption, to be mitigated by using flexible, broad-based platforms for online learning and student preference in many cases for in-person contact with academics, particularly at undergraduate level.

2 University Study Spaces

The Director of User Services delivered a presentation on study spaces across the University. There are 7,588 individual study spaces (equivalent to 19% of the student population), 2,263 of which are in the Main Library, the most popular study space area. Options for increasing the proportion of study spaces in the Central Area (equivalent to 8% of the student population) were considered, including increasing study spaces in the Main Library and utilising some teaching rooms as study spaces after 5pm in peak periods. The Committee welcomed further work to develop shorter and longer term options to increase study spaces and discussed advertising available study spaces to students using a mobile application, ensuring new or refurbished buildings have flexibility to accommodate temporary study spaces if required and the accessibility of some campuses and their study spaces outside normal working hours.

3 Report on National Student Survey IT and Library Questions

Responses to the three library and IT-related questions in the 2018 National Student Survey and associated free text comments were reviewed. A theme of student frustration with inconsistency in availability of recorded lectures, library materials, printing of course materials and the quality of study spaces was noted. The possibility of developing an examination timetable mobile application was welcomed, with a class timetable mobile application in pilot project stage. It was noted that library opening hours had previously been the most frequently raised issue but the Main Library is now open 24 hours a day, 7 days a week and similar ambition would be shown in addressing the current issues raised in the free text comments.

4 Distance Learning at Scale Update

An update on the Distance Learning at Scale pilot programmes was considered. A partnership agreement has been signed with edX, with a Business School MSc in

Business Analytics to be the first course offered under the partnership with an accompanying Predictive Analytics 'MicroMasters.'

5 Other items

A proposed programme of 16 digital research services projects to be undertaken in 2018/19 were reviewed and approved. An update on the ongoing procurement exercise for Phase 1 of the Core Systems Strategy was reviewed. Revisions to the Web Accessibility Policy were approved. An update on the review of the University's web estate, including a risk register and activity plan, was considered.