Evidence for Enhancement:
Improving the Student Experience

Learning Analytics:
Student Categories

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Contents

Executive summary

This work forms part of the Learning Analytics collaborative cluster project, funded by the Quality Assurance Agency (QAA). This is a report on an exploration of student categorisation in 11 departments at the University of Strathclyde. The work followed on from two initial workshops hosted at the University of Strathclyde. The 11 departments categorise and record and access different kinds of student data and use it for various purposes. In order to explore student categories, face-to-face and telephone interviews were conducted with departmental staff.

The findings show that students are categorised in six broad clusters: e-student record, demographic data, widening access, student support data, academic status, and extracurricular data. Within each cluster, there is further sub-division of student categories. The findings form a base for future work, which could further explore the use of these categories in order to be more inclusive of students of different backgrounds and circumstances.

Introduction

Learning Analytics is an area that is concerned with the measurement, collection, analysis and reporting of data about learners and their learning context. Learning Analytics data is useful in predicting and identifying trends with regard to learning, as well as in understanding and optimising learning and the environments in which it occurs.

The report was compiled by a research intern who resides in the Education Enhancement department at the University of Strathclyde. The aim of this part of the cluster work was to identify how different departments at the University of Strathclyde categorise its students. The findings form a base for further analysis and investigation around the topic of Learning Analytics.

This work will be used as a basis to identify the needs of individuals, in order to provide support to students who belong to several groups. In future, it is expected that several Scottish institutions will participate in collecting their own student category data, which could result in a more extensive data set of student categories in the Scottish higher education sector. Such a data set would provide new insights on student categories that are common to each institution, but which may vary from one institution to another.

Methods

Participants

A number of interviews were conducted across 11 University departments in order to identify student categories. Departments were chosen specifically to cover a wide range that potentially hold data on different categories of students. Although the departments communicate and share student data with each other, each department usually accesses different types of data. The participating departments were:

- Student Support and Well-being Services
- Disability Service
- Careers Service
- Students' Union
- Sports' Union
- Widening Access Team
- Strategy and Policy
- Research and Knowledge Exchange Services (RKES)
- Recruitment and International Office (RIO)
- Andersonian Library
- Student Lifecycle.

The following paragraphs briefly describe the services and purposes of the 11 departments to demonstrate their diversity.

Student Support and Well-being services offer support and advice to students and have a range of services to improve student wellbeing such as the Disability Service, Student Counselling Service, Student Health and Student Financial Support services.

The Disability Service was contacted individually to provide a better overview of their student categories.

Careers Service activities are embedded in the course structure. The Service also operates in an independent and voluntary way with students using it for: one-to-one appointments; workshops; guidance sessions; or employer days.

Every student who is enrolled at the University of Strathclyde is a member of the Union. The Union is mostly concerned about extracurricular activities such as societies and clubs and student representatives in the faculties and courses.

The Sports' Union is the responsible body for sports clubs and competitions.

The Widening Access Team aims to increase the opportunities for people of all backgrounds. They target specific students who are considered vulnerable or disadvantaged supporting their access to, and retention in, higher education.

Strategy and Policy and Research, Knowledge and Exchange Services were contacted independently, although both belong to Professional Services. The two departments are concerned with reporting data to official bodies outside of the University and reporting trends to University departments.

The Recruitment and International Office is responsible for marketing the University of Strathclyde all over the world and collecting data about international students.

Data were collected from Student Lifecycle, which handles student data in terms of student business, registration status and graduation.

Procedure

Interviews were conducted by the research intern. Interviewees were asked one main question on how they categorise students. Additional questions were asked in order to facilitate the exploration of more student categories. Interviews varied in length from 20 minutes to 90 minutes, depending on the amount of information interviewees provided. Every interview, except for the Disability Service, was conducted in person.

Findings

Across the 11 University departments there were 206 separate student categories, which were grouped into six main clusters:

1   student record - 49 student categories
2   demographic data - 30 student categories with overlap of eight categories between two or more departments
3   widening access - 30 student categories. The Widening Access Team, which uses these data to identify disadvantaged students
4   Student Support - 25 student categories
5   academic categories - 53 student categories with overlap of 40 categories between two or more departments
6   extracurricular - 19 student categories identified by the Students' Union and Sports' Union.

On several occasions, interviewees mentioned the same student categories. For example, Student Lifecycle Services maintain the student record, which is analysed and reported by Strategy and Policy, and onwards to the Higher Education Statistics Agency. Therefore, the student categories these two departments provided were essentially the same but they are used for different purposes. Furthermore, there are categories that are used by only one department or are used in different clusters by other departments. The more detailed presentation of the student categories that follows shows these overlaps and multiple connection points.

Student record

The first cluster of categories refers to the student record. The student record is reported to the Higher Education Statistics Agency (HESA) by Strategy and Policy. These types of data are shared across the participating departments. All departments use these data for very different purposes and have different access levels. The student record is collected upon registration as a student at the University. It mostly contains student demographic information. Every university collects these types of information and reports it to HESA in the UK.

Age	Under 18	
	Above 18	
	Mature students*	
	55 and over	
Disability	Two or more impairments and/or disabling medical conditions	
	A specific learning difficulty such as dyslexia, dyspraxia or AD(H)D	
	A social/communication impairment such as Asperger's syndrome/other autistic spectrum disorder	
	A long standing illness or health condition such as cancer, HIV, diabetes, chronic heart disease, or epilepsy	
	A physical impairment or mobility issues, such as difficulty using arms or using a wheelchair or crutches	
	Deaf or a serious hearing impairment	
	Blind or a serious visual impairment uncorrected by glasses	
	A disability, impairment or medical condition that is not listed above	
Gender identity	Female	
	Male	
	Non-binary/Transgender (LGBTQI)	
Ethnicity	White	English/Welsh/Scottish/ Northern Irish/ British
		Irish
		Gypsy or Irish Traveller
		Any other white background
	Mixed/multiple ethnic groups	White and Black Caribbean
		White and Asian
		White and Black African
		Any other mixed/multiple ethnic background
	Asian/Asian British	Indian
		Pakistani

		Bangladeshi
		Chinese
	7	Any other Asian background
	African/Caribbean/Black/Black British	Caribbean
		African
		Any other African/Caribbean/Black background
	Other ethnic group	Arab
		Other
Carer experience		
Learner with learning difficulties and health problems		
National identity*		
Nationality**		
Sexual orientation	Heterosexual/Straight	
	Bisexual	
	Gay/Lesbian	
Term time accommodation type	Parental/guardian home	
	Provider maintained property	
	Private sector halls	
	Other rented accommodation	
	Own residence	
	Not in attendance at the provider	
	Not known	
	Other	
Religion and belief		

* A person's subjective sense of belonging to a nation.
** A legal relationship between a person and a state.

Demographics

Further demographic categories were identified by several departments: [1] Student Lifecycle Services; [2] Student Support; [3] Disability Service; and Strategy and Policy [4].

Immigration status [1] [2] [4]	No Visa required
	Tier 4
	Asylum seekers or refugees
Fee Status [1] [4]	Home (Scotland)
	Rest of the UK (R-UK)
	EU (excluding UK)
	International non-EU
Working status [2]	Unemployed
	On zero-hours contract
	Part-time
	Full-time
Working at University (both students and staff) [2]	
Domicile [2] [4]	
Immigration history [2]	
Mental health, physical health and well-being [3]	Bereavement
	Anxiety
	Depression
	Exam stress
	Course related stress
	Homesickness
	Cultural
	Financial
	Gender identity
	Sexuality
	Gender-based violence
	Trauma
	Eating disorders
	Health condition
	Accommodation/homelessness
	Alcohol/substance misuse

Widening access

The following categories were identified via the Widening Access Team. This cluster contains various student categories that have been previously mentioned. This repetition is because the Widening Access Team uses the categories to make decisions in order to aid students, whereas the student record is collected to fulfil national requirements.

HNC or College entry	
Care experienced	
Carer	
Mature students	
College entry	
Year 2 or 3 entry	
Ethnicity	
Nationality	
Disability	
First person at university from family	
Armed forces veteran	
Centre for Lifelong Learning student	
Student with dependents	
Students with different backgrounds	Students from schools that are in the Schools for Higher Education Programme
	Students from Focus West Top-up programme
	Students who were provided free school meals at school
	Students from the Scottish Wider Access Programme
Source of funding	Scholarship
	Bursary
	Funding
	Sponsorship
	Loan
Receipt of a hardship found	
Maximum bursary received from Student Awards Agency for Scotland	
Estranged student	
Home status	
Asylum seeker	
Refugee	
Scottish Index of multiple deprivation	
Students from low progression schools	

Student support records

The following cluster of student categories was identified via the Student Support Services department.

Household income	
SCQF level	
Marital status	Married
	Civil partnership
	Divorced
	Widowed
	Single
Dependents	
Declared bankruptcy or trust deed status	
Consumer debt	
Previous UK study	
English Language status	
Religious identity	
Maternity status	
Lone parent	
Receipt of tax credits	
Previous receipt of student loan	
Previous receipt of financial services at university	
Receipt of State benefits	
Employment status of family members	
Receipt of Disabled Students Allowance	
Medical conditions	
Legal representation	None
	Lawyer outside of University
	Lawyer at University

Academic categories

The following categories were identified via: RIO ([1]), Student Support Services ([2]); Students' Union ([3]); Careers Service ([4]); Student Lifecycle ([5]); Strategy and Policy ([6]) and Andersonian Library ([7]).

Level of study ([1]) ([2]) ([3]) ([4]) ([5]) ([6]) ([7])	Undergraduate	Year 1 to 4
		International Articulation students
		Year 2 or 3 entry
		Study centre/Preparation courses
	Postgraduate Taught	
	Postgraduate Research	
	PhD	
	Centre for Lifelong Learning	
	Pre-sessional English Language course	
Mode of study ([1]) ([2]) ([3]) ([4]) ([5]) ([6])	Full-time	
	Part-time	
	Distance learning	
Faculty ([1]) ([2]) ([3]) ([4]) ([5]) ([6]) ([7])	Humanities and Social Sciences	
	Science	
	Engineering	
	Business School	
	Departments and Course	
Mobile students ([1]) ([2]) ([3]) ([4]) ([5]) ([6])	Erasmus	
	Non-Erasmus exchange	
Applicant students ([1]) ([5])	Student through direct recruitment (via agent or website)	
	International Articulation students via partnership	
	Sponsors	
	Students via Clearing	
Use of Careers Service ([4])	Appointment type	One-to-one
		Workshops
		Employer days
		Researcher Development Programme for

		Postgraduate Research students
Student placements (4)	Work placements as part of curriculum	
	Industrial placements/Gap year placements	
	Summer internships	
	Vacation schemes	
	Graduate jobs	
	Voluntary work placements	
Academic performance and Degree classification (5) (6)	Credit load	
	Pass level (Pass, Merit, Distinction)	
	Compensated pass award	
	Credit Weighted Average	
	Resits (number of attempts)	
	Second attempts at class	
	Register with attendance	
	Academic suspension	
	Returning from voluntary suspension	
	Retaking full year	
	Attempt discounts	
	Credit balance between semesters	
Registration status (2) (6)	Registered and attending	
	Voluntarily suspended	
	Academically suspended	
	Non-progressing students	
	Non-graduating students	
Use of the library (7): entry/exit and borrowing		
SCONUL Access (7)	Students from other universities using the Andersonian Library	
Students with library fines (7)		

Extracurricular categories

The following extracurricular categories were identified by the Students' Union and the Sports' Union.

Society membership	Membership	
	Society executives	Treasurer
		President
Student Parliament member		
Student executives		
Student representatives	Class representatives	
	Course representatives	
	Faculty representatives	
Sports membership	Sport Society members	
	Executive members in Society	President
		Treasurer
	Competitors	Elite international
		National performance
		Local competitive
		Development
		Various award-winning members
Gym membership	Staff	
	Student: semester pass or full year	
	Reduced membership	

Conclusions

Strengths and limitations

This report is unique as its aim was to bring together student categories from different departments across a Scottish university. It details which student categories are used in each department. Therefore, it will be useful when attempting to access data across departments. The report will be a strong base for future work that might aim to explore categories in other institutions. It provides a foundation for the use of certain categories to target students in the future.

A limitation of this report is that interviews were typically conducted with one or two members of a particular department. There was only one meeting with each department, apart from the Student Lifecycle. This inevitably raises the question of missed categories. A future analysis or replication of the report could either include meetings with at least two members of each department or gaining access to forms and reports that are produced in the departments to review student categories from records systematically.

Future implications

In future, there may be limitations in accessing student data. For example, although Student Lifecycle is responsible for maintaining the student record, pulling the data from the system is a manual exercise. Employees in the department are not able to identify students based on a category membership but they can access individual data. Similarly, the Widening Access Team makes decisions based on multiple categories. However, these decisions are based on data that are identified by a member of the team.

The new General Data Protection Regulation, which came into force in May 2018, govern the using, sharing and accessing of data. An audit of student categories within an institution may be a valuable aspect of planning for the implementation of learning analytics, identifying the shared and unique student categories collected and managed by different departments.