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STUDENT DATA QUALITY

STUDENT DATA QUALITY

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SUMS Consulting
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1. Introduction

The aim of this paper is to:

“Explore approaches to student data quality management through examining practices within the HE sector and developing a few examples into case studies.”

This is not intended to be a comprehensive review of the subject, but rather a rapid overview to establish some common key points and to reference key papers pertinent to the subject.

The approach taken was to undertake desk research before talking to university practitioners actively involved in improving student data quality. Our thanks are extended to Kathleen Nicholls, Alison Hartrey, Colin Campbell, Peter Datchens and Andrew Coulthard for sharing their thoughts with SUMS.

List of Acronyms

This topic suffers from the overuse of acronyms; the following is a list of those used in this paper:

DLHE	Destination of Leavers of Higher Education
HEDIIP	Higher Education Data and Information Improvement Project
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institution
HEP	Higher Education Provider
HESA	Higher Education Statistics Agency
HESES	Higher Education Students Early Statistics Survey
JISC	(Formerly) Joint Information Systems Committee
KIS	Key Information Set
NSS	National Student Survey
PWC	(Formerly) Price Waterhouse Coopers
SITS	Tribal's Student Information System
SOA	Service Oriented Architecture
SRS	Student Records System

If you have any questions about this paper or would like to discuss the subject further, please contact Andrea Buttle at SUMS Consulting:

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2. Background

This paper takes as a starting point the HEFCE Financial Memorandum and Accountability and Audit Code of Practice, August 2008 [that references a key paper by the Audit Commission]. Following its publication the Funding Councils commissioned PWC to look at HE sector practices. Subsequently the Funding Councils and HESA instigated the Higher Education Data and Information Improvement Programme (HEDIIP).

HEFCE Financial Memorandum and Accountability and Audit Code of Practice, August 2008

This introduced a new requirement for the Audit and Scrutiny Committee to give, as part of their annual opinion, assurance over management and quality assurance of data submitted to HESA and to HEFCE and other funding bodies.

The Code states: "...we are seeking assurances from designated officers and audit committees about the management and quality assurance arrangements for data submitted to the Higher Education Statistics Agency (HESA), HEFCE and other funding bodies. This is imperative in order to improve the reliability of data which is crucial for the efficiency of our funding and to reduce the number of significant funding adjustments needed to correct data errors. We endorse guidance on the principles of data management for public bodies as published in November 2007 by the Audit Commission, 'Improving information to support decision making: standards for better quality data'." (Para. 6, page 9)

HEFCE's guidance to audit committees on how they need to reach the required opinion on data quality states that the committee "needs to be sure that management has assessed the risks posed by data accuracy and taken appropriate mitigating actions".

Audit Commission Report 2007

"Improving information to support decision making: standards for better quality data"

In March 2007, the Audit Commission published a framework to support improvement in data quality in the public sector. This framework includes six key characteristics of good quality data that are summarised nicely by the University of Oxford in their data quality policy as:

1. Accuracy
 - a. Data should provide a clear representation of the activity/interaction
 - b. Data should be in sufficient detail
 - c. Data should be captured once only as close to the point of activity as possible
2. Validity
 - a. Data should be recorded and used in accordance with agreed requirements, rules and definitions to ensure integrity and consistency
3. Reliability
 - a. Data collection processes must be clearly defined and stable to ensure consistency over time, so that data accurately and reliably reflects any changes in performance
4. Timeliness
 - a. Data should be collected and recorded as quickly as possible after the event or activity
 - b. Data should remain available for the intended use within a reasonable or agreed time period
5. Relevance
 - a. Data should be relevant for the purposes for which it is used
 - b. Data requirements should be clearly specified and regularly reviewed to reflect any change in needs
 - c. The amount of data collected should be proportionate to the value gained from it
6. Completeness
 - a. Data should be complete
 - b. Data should not contain redundant records.

The University of Oxford data quality policy (www.admin.ox.ac.uk/pras/aboutus/data_quality) adds a seventh - the need for compliance:

7. Compliance
 - a. Data must comply with regulations on data protection and data security.

Funding Councils Report 2008**"Making your data work for you - Data Quality and Efficiency in Higher Education"**

In September 2008 the funding councils published a report by PWC entitled "Making your Data work for you - Data Quality and Efficiency in Higher Education". This lists a series of good practice statements that were generated and verified by Higher Education Institutions (HEIs). These are:

- Governance and Culture
 - Senior Ownership of Data
 - Ensure that there is a senior member of the HEI who has responsibility for ensuring that the data is accurate and valid
 - Understand Data Usage
 - Ensure the HEI has a business understanding of the use of the data and its benefit to the HEI, both internally and externally
- Process
 - Timely Quality Checking
 - Check data regularly rather than just before the return deadline
 - Managing Change
 - Deliver change within a controlled managed framework
 - Supporting Documentation
 - Ensure that the dedicated data team has appropriate and complete documentation
 - HESA Protocols
 - Have HESA protocols that support the HEIs in focussing internal views on the value of the collection and returns process
- People
 - Data Team Personnel
 - Have a dedicated, motivated, trained and supported team own and manage data within the HEI
- Technology
 - Technology Assessment
 - Ensure the technology meets the business needs of the HEI including data returns
 - Live Quality Assurance
 - Ensure quality assurance is carried out on live data as opposed to historic exported data
- Data
 - Single Data View
 - Prevent the proliferation of databases i.e. to prevent divergence in records system.

Higher Education Data and Information Improvement Programme (HEDIIP)

HEDIIP was established in 2013 as a UK-wide programme to build a more coherent, responsive and less burdensome information landscape. It is funded by the Funding Councils and hosted by the Higher Education Statistics Agency (HESA). HEDIIP identifies four areas that will be pivotal to achieving greater cohesion in data collections and a reduction in burden. One of the building blocks identified is "**enhancement of HEP's data maturity and capability**". Another building block, "rationalisation of data collections through a transformed HESA collection process" puts in-year collections on the horizon. The vision of this programme is a modernised and more efficient approach to collecting data which will require a modernised and efficient approach to data management across the sector.

HEDIIP have developed a data capability toolkit which allows HEIs to self-assess their current maturity level and identify areas for improvement. (www.hediip.ac.uk)

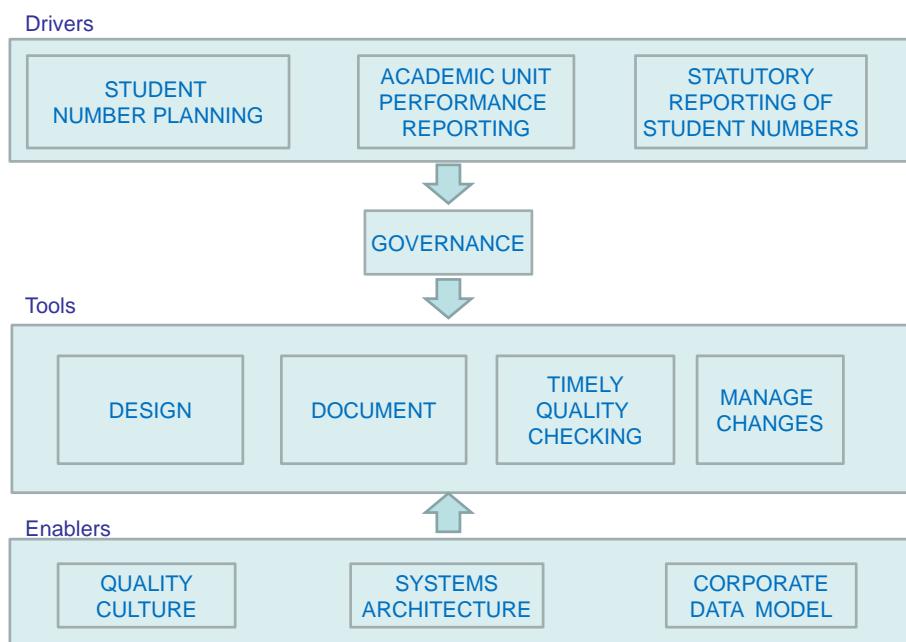
3. Framework

The elements of good data quality have been clearly defined in the material referenced in section 2. In addition, SUMS would advocate establishing very clearly the drivers for good quality student data: student number planning, academic unit performance reporting and statutory reporting of student numbers.

SUMS have also added a further element to process: design. It is important that processes are designed such that data quality is embedded in both the process and system.

The drivers, tools and enablers are pulled together in the framework shown in Figure 1.

Figure 1: Framework for Student Data Quality



Each of these elements is discussed in turn.

4. Drivers

The key business drivers for paying close attention to student number data quality are the need for accurate forecasting, performance reporting of academic units and then the requirement to report to statutory bodies.

Student Number Planning

Budget rounds need to be informed by data that both the Registry and the academic units trust. Historically universities have wasted valuable time reconciling departmental student numbers.

There is increasing volatility in the number of students enrolling at universities and more particularly how the population is split by subject area. While many universities are seeking to grow their student numbers, it is important from a student satisfaction viewpoint that numbers are not expanded beyond the university's teaching and support capacity.

See Appendix A: Case Study 1 - University of Stirling's Data Warehouse Project and student number planning

Academic Unit Performance Reporting

Making data transparent to stakeholders, enabling them to relate performance measurement to student data is important and specifically for two areas: student success and the university's budgetary model.

Progression, employability, and student feedback such as the National Student Survey are both internally monitored and publicly published through Key Information Sets (KIS); these measures need to be cascaded down to academic units to trigger actions.

A department will wish to understand how its student numbers relate to its financial allocation. The University of Leicester create department profiles for each department detailing their performance.

See Appendix B: The University of Leicester - Department Profile.

Statutory Reporting

While students are increasingly taking up the burden of tuition costs, there is still some government funding made to universities and therefore a continuing requirement to report to HESA on students. The nature of the reporting is under review following the government's recent Higher Education Green Paper, but is likely to remain in some form. Statutory reporting can be used to drive improvements in student data quality by forcing the checking for data completeness. If using statutory reporting to improve data quality, it is only by addressing the root cause of the problem (in the student record system) that improvements can be continually made.

As market forces are increasingly driving the HE sector league table performance is increasingly important. League position can be influenced by data such as tariff points that may not be seen as being as important as student numbers. Getting tariff points correct at the point of entry into the university requires education on what qualifications carry what tariff points. University of Greenwich planning staff have presented to colleagues on this subject with little mini-quizzes to keep people engaged: <http://slideplayer.com/slide/3572259/>

See Appendix C: Case Study 2 - Use of Statutory Returns to Improve Data Quality

5. Governance

The key elements of governance are: ownership, independent review, policy, and risk assessment.

Ownership

While planning often take responsibility for statutory returns, it is clear that data quality is the responsibility of the key data set owners. Therefore Registry, as the owner of the student record system, has to take ownership of the data quality of the student record. Increasingly where there are devolved academic units using central systems, the administrators in these units are being brought under the management of the central Registry. KCL has a functional alignment project underway with Faculty and central administrative staff being brought under the Director of Students and Education.

Independent Review

A thorough assessment of data to be returned externally should be undertaken by a senior person not involved in the collation of the return - to provide a sanity check and a contextual understanding of why numbers may differ from historic trends.

Policy

Whether having a policy achieves significant improvement in student data quality is debatable. However, it does serve as a point of reference and should keep data quality on the agenda through periodic policy review.

Both Oxford and Kent have good data quality policies that could be applicable to any university. Oxford's policy has already been referenced, Kent's policy can be found at: https://www.kent.ac.uk/governance/policies-and-procedures/documents/Corporate_standards.pdf

Interestingly at Kent it is the University Secretary who owns the data quality policy, whereas at Oxford it is the Planning and Resource Allocation Section (PRAS).

Risk assessment

The Oxford policy takes a risk-based approach to poor data quality and says work should be prioritised to improve data quality around the riskiest elements.

Key risks relating to student data are as follows:

- Mandatory conditions of grant could be breached
- Data could give misleading external and internal impressions of institutional performance in teaching
- Poor data could result in inappropriate decision-making across the institution
- Poor data could result in reputational damage in areas such as student recruitment and access, and student records
- Inaccurate data could lead to under-funding
- Inaccurate data could lead to over-funding with subsequent claw-back of overpaid funds which, if significant, could impact adversely on the institution's financial health.

Universities should include failure to ensure appropriate data quality within risk registers and mitigate appropriately.

A more recent and high risk concerns a university's trusted status for tier 4 visas, which conveys the right to recruit international students. Given the valuable income stream from foreign students, it is imperative for universities to ensure good quality record keeping around this particular record set.

It is also important to recognise that where data is reused for a different purpose, risks may occur downstream of the initial data entry, and so not be immediately apparent e.g. tariff points influence on league table position.

6. Tools

Design

Data quality should be considered at the design stage of any process improvement or software implementation. It is much easier to design in online validation of data entry at the outset and online verification by the data subject where appropriate than to retrospectively add it in. It is also useful to add contextual information such as guides to likely data ranges. Similarly when designing business processes, thought should always be given to the associated data change/correction process which is a necessary companion to the main process.

With the introduction of student self-service through the web, the responsibility for getting data right can be shared with the student by making student information held by the university transparent to the student. Student self-service should allow the student to maintain and audit their own contact data and ask data to be corrected if they consider it to be wrong. This also helps with Data Protection compliance by making the student aware of the information held by the university. The importance of transparency of data was one of the conclusions from the University of Westminster's Student Record System Optimisation Project.

See Appendix D: Case Study3 - University of Westminster's Student Record System Optimisation Project

Document

Within the HE sector there is a lot of reliance on “on-the-job” training. Given student record systems are heavily configured when implemented, responsibility for good process documentation has to rest with the university rather than the software vendor. In addition the sector’s predilection for jargon and acronyms, it is not always easy for the new employee to get started.

York’s jargon buster for SITS is good:

<https://www.york.ac.uk/about/departments/support-and-admin/student-systems/systems/sits-jargon/>

Good practice is to develop student record system documentation specific to a university’s own system and processes: short video clips are a good means of delivering quick reminders of how things should be done.

Timely Quality Checking

Student data and data quality can be a function of the time at which the data is taken. This is especially true of student number data. It is useful to build an understanding of how student numbers vary during the year to ensure decisions are made at an appropriate time on the most appropriate student numbers.

Where information is passed from one process to another it may be appropriate to initiate a quality check as the data enters the new process e.g. poor quality module enrolment data that is passed to a timetabling system is an issue for the timetable, but may not be an issue for Registry at that point in time. Hence it is a good practice for timetabling to perform some basic data quality checks such as “Do students have the appropriate number of modules attached to them?” All too often this information gets corrected in the timetabling system whereas better practice would be to advise Student Records of the issue and seek to address the error in the base system.

Good practice is to have a Registry calendar of the key data events of the year so people can understand what data is needed when. This should be reviewed annually and issued at the start of the planning for the next academic year – typically November.

Change Management

Data changes need to be controlled and changes need to be appropriately cascaded to subsidiary systems/people. Corporate software will often have the ability to create audit trails so that changes can be seen and attributed, but this does not address the cascading of information changes which need to be designed into business processes.

With the increasing volatility in student numbers it is very important that changes are well-communicated to all the appropriate stakeholders. This requires a good understanding of who is impacted by changes to these numbers and at what level of granularity the information needs to be held e.g. is it student numbers by campus, by Faculty or by programme?

In an increasingly agile environment, changes in organisational structure are common and it is important to ensure that valuable trend data can be used in a meaningful fashion. Data processes triggered by an organisational structure change need to be documented and agreed as does the timing. e.g. academic structural changes will only happen at end of year.

7. Enablers

The enablers of good data quality are: a quality culture, good systems architecture and having a corporate data model. Whilst these are important, it can be very difficult to sell improvement projects in these areas: there needs to be a clear business need to drive the change agenda.

Quality Culture

Data is an asset and not a burden; this needs to be understood by all. The focus needs to be on embedding a culture of “get it right first time.” People need to be given a clear understanding of how data they enter is used and the consequences for all (the university AND the student) of poor quality data.

There needs to be a culture whereby people will surface mistakes so that they can be corrected in the core system and if necessary systemic process changes made.

System Architecture

As technology advances and there is more talk of services in the cloud, the role of enterprise architect becomes more prominent. JISC has encouraged Enterprise Architecture within the sector and Service Oriented Architecture (SOA). While encouraging adoption JISC does not have the clout that the government has to mandate its use: some of the better examples of its use and practice can be found in government services. One of the most difficult aspects of this new way of thinking about systems design is educating non-technical staff about it. The video “How new technology will change the mechanics of government services” does this well:
https://www.youtube.com/watch?v=02_3UTqXmU

IT-led initiatives which have sought to develop these methodologies in universities struggle to win buy-in. At LSE some aspects of enterprise architecture were developed by looking at starters’ and leavers’ processes. Bristol is one of a minority who have invested significantly in this area. It becomes a question of priorities and sequencing with a lot more universities investing in re-implementation of their student record system or as a minimum a serious review of how the student record system is being used.

An enterprise architect spoken to for this paper changed his job title to Business Development Manager in recognition that the better sell was to appeal to users’ understanding that current systems are often heavily underutilised. The immediate business need is to review processes and thereafter through stealth gradually build up an architecture view adopted by IT departments.

Corporate Data Model

As data becomes ever more integrated with an emphasis or reuse of master data sets wherever possible, it is important that the existing spaghetti of one-to-one system interfaces is cleaned up. It is equally important that definitions of data in different systems align to allow reporting across systems. An example was given where a SAP HR system allows 8 levels of organisational hierarchy whereas the SITS student record system only allows 3 and so joining data from these two systems becomes problematic.

Edinburgh Napier University have taken a lead in master data management and prior to their development of a data warehouse they mapped and documented all University data. They took the decision that “ownership” of data was transferred to “the University” from the lead business function. While in principle this is correct, a pragmatic concern is that the “University” is not an individual - is the University sufficiently mature in its data capability for such a step? Details of the work at Napier can be found here:
<http://www.ucisa.ac.uk/~media/Files/members/awards/excellence/2010/Napier.ashx>

This can also be tackled in part by seeking to move beyond a records retention schedule to establish an information asset inventory.

8. Summary

Any attempt to improve student data quality has to clearly demonstrate a business driver: three drivers have been presented:

1. Student Number planning
2. Academic Unit performance reporting
3. Statutory reporting.

It is the business need for management information that leads to data warehouse development. Data warehouse development typically highlights issues with underlying student data quality because the focus is on the data, unlike transactional systems where the focus is on completing the transaction.

This paper has presented some different approaches to tackling student data quality through:

- Policy
- Process
- Systems Architecture.

The key is to work on all areas, but balance resource and effort appropriately. The current majority view in the sector would seem to be on focusing on the root cause by reviewing student record system processes and functionality - potentially opting to re-implement. However, given that technology is drastically changing, a university should be investing in enterprise architect skills within their IT department.

Similarly governance cannot be ignored because the consequence of failure to maintain good records rises in an increasingly volatile and legislated environment. It is sensible to put in place a risk management approach to information assets with clear ownership and responsibility for key assets such as student data.

On a day-to-day basis, all managers need to take responsibility for instilling good discipline within their staff so that they understand how the data they input is both used and reused. They also need to instil a culture whereby errors can be acknowledged, loops are closed and data corrections are made in the transactional systems.

Appendix A**Case Study 1: University of Stirling's Data Warehouse Project****Background**

In 2009 SUMS undertook a review of Student Management Information for the University. One conclusion was that there was a huge unmet demand for student management information from academic units who wanted to track their recruitment through the year so that they could budget according to their planned student numbers. SUMS recommended to Stirling that they implement a data warehouse to meet this need.

The Project

A project board was convened in 2011 and requirements for the warehouse were set out of the business need stated above. As the University was an Oracle user already, the Oracle Business Intelligence software was the obvious technical choice.

One of the very first steps in the project was to cleanse the data. Typical errors found in the student data were:

- Text characters in fields which should have held numeric characters
- Incorrect postcodes
- Invalid codes for ethnic origin and country of domicile
- Manually overwritten fields in SITS and manually uploaded data from spreadsheets overwriting fields.

Two warehouse developers spent much time writing Export Transfer Load (ETL) documentation detailing the data sources and contextual metadata concerning the data source.

An early win was the ability to support the HESES report, because the data warehouse could support checking the data validity much better than other tools.

Whilst it had initially been anticipated that users would want to create their own queries, the reality is that 80% of the warehouse interrogation is supported by common dashboards. Popular dashboards for academic units are those relating to admissions and planning and budgeting. They can also run things such as exception reports on tariff points. In order to tightly monitor admissions, an extract from SITS is run every night from around 11pm to 4am so there is very detailed trend information on take up of offers.

The University is also starting to create cohort reports to look at DLHE statistics.

The project is now at the stage where it is about to be shut down.

After the Project

The Project Board will be replaced by a Business Intelligence Advisory Group who will continue to prioritise the work. The initial project focused on student numbers, but finance and staff numbers are now also being brought in so that metrics such as staff/student ratios can be easily calculated. This is another level of complexity as the core systems need to have key structures such as organisational hierarchies aligned. At Stirling, whilst their HR system supports eight levels, SITS only supports three.

As the management information project moves to an operational stage, so Stirling is looking to map the entire student journey from enquiry through admission to employment.

Learnings

Start with the business need and work down from this to the data. It is the transactional system owners who have responsibility for data quality, but a data warehouse project can act as a driver to improve it.

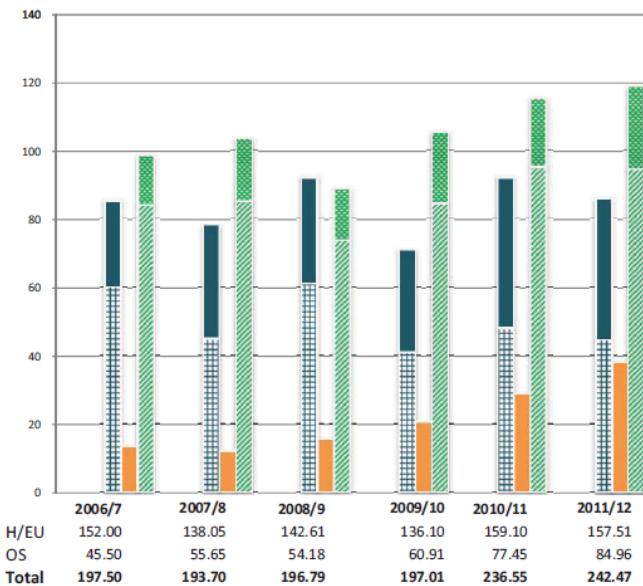
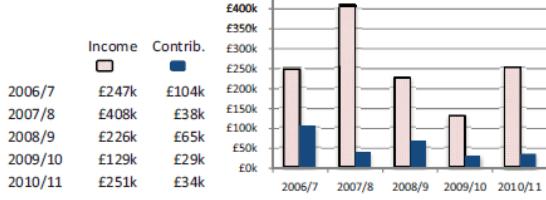
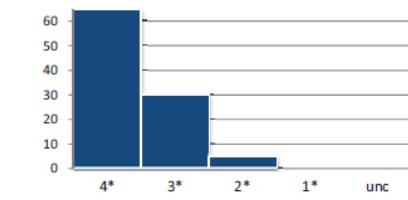
Appendix B**University of Leicester's Departmental Profile - an example****Museum Studies**

FEC Analysis		2007/08	2008/09	2009/10*	2010/11	Key Ratios
A	Total Funding Council Income	295,736	283,870	616,178	647,858	Growth 09/10 > 10/11
A	HEFCE T	124,879	113,419	102,820	130,692	Income 20.21%
B:C	HEFCE R and other Funding Council income	170,857	170,451	513,358	517,165	Expenditure 7.94%
D:H	Total Tuition Fee Income	1,054,370	1,166,649	1,245,613	1,611,056	Surplus 89.01%
N+Q+T	Contributions from DDF, RGC, other activity	(17,482)	11,955	19,223	2,301	% ges of income:
U	Total Income	1,332,624	1,462,474	1,881,014	2,261,215	Expenditure 53.09%
I	Total Pay expenditure	(802,491)	(775,597)	(842,617)	(935,472)	Pay 41.37%
I	Pay Expenditure - academic staff	(564,478)	(509,218)	(459,203)	(742,820)	Academic Pay 32.85%
J	Pay Expenditure - support staff/other	(238,013)	(266,379)	(383,414)	(192,652)	
K	Total Non-Pay expenditure	(225,289)	(255,697)	(269,509)	(264,919)	
V	Total Expenditure	(1,027,780)	(1,031,294)	(1,112,126)	(1,200,391)	
W	Contribution	304,844	431,180	768,888	1,060,823	
	Contribution	22.9%	29.5%	40.9%	46.9%	
	Corp Services excluding Estates/IT	(179,319)	(179,375)	(180,702)	(216,068)	
	Estates (includes maint'nce & utility costs)	(52,154)	(55,671)	(98,375)	(103,745)	
	IT	(70,273)	(67,610)	(65,671)	(81,519)	
	Library	(56,735)	(59,048)	(57,406)	(65,215)	
	Other	(102,683)	(127,220)	(90,009)	(71,229)	
Y	Total Central Charges	(461,165)	(488,924)	(492,162)	(537,774)	
Z	Operating Surplus/ (Deficit)	(156,321)	(57,744)	276,726	523,049	
AA	Surplus as % of Net Income U	-11.7%	-3.9%	14.7%	23.1%	
	Rank in University (in College) by Total Surplus	21/26 (7/7)	20/26 (5/7)	16/26 (5/7)	8/26 (2/7)	

* the FEC methodology changed between 2009/10 and 2010/11 therefore the 2009/10 FEC data has been restated for comparison purposes.

Research Applications, Awards and Targets

Year	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13
No. Applns	12	12	27	22	25	35		
Value Applns	£ 598,781	£ 827,952	£ 2,134,428	£ 2,249,161	£ 1,993,209	£ 1,650,946		
No. Awards	9	6	10	6	11	22		
Value Awards	£ 631,485	£ 210,057	£ 298,852	£ 40,800	£ 605,849	£ 197,278		
Target							£ 310,000	£ 310,000

Student Load over Time**Research Income****RAE Performance**

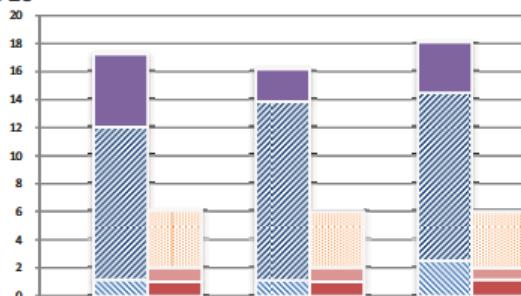
The graph above shows the RAE 2008 research profile for UoA 66B Museum Studies. In total 8.8 Cat A FTEs (9 staff) were entered under this UoA. Additionally four staff were entered under UoA 33 Archaeology and one member of staff was entered under UoA 17 Earth Studies. This UoA did not exist in 2001.

Student Intake / Total Population / Load

		Taught On Campus						PGR	Distance Learning				
		UG			PGT				UG		PGT		
		Other	OS	HEU	PT	OS	HEU	PT	All	OS	HEU*	HEU	OS
2012 Target Recruitment FTE		0.00	0.00	0.00	42.00	50.00	0.00	8.00	0.00	0.00	36.00	12.00	
2011 Actual Recruitment FTE		0.00	0.00	0.00	41.00	43.00	0.00	15.00	0.00	0.00	33.34	13.67	
% 2011 College Recruitment		0.00%	0.00%	0.00%	46.07%	31.39%	0.00%	18.40%	0.00%	0.00%	52.64%	49.40%	
% 2011 Uni Recruitment		0.00%	0.00%	0.00%	2.83%	5.42%	0.00%	3.69%	0.00%	0.00%	10.09%	3.11%	
Total Load FTE 2011/12		0.00	0.00	0.00	0.00	41.17	44.61	0.00	38.00	0.00	0.00	94.40	24.29
Total Headcount		0	0	0	0	41	43	0	54	0	0	286	73

Museum Studies (cont.)

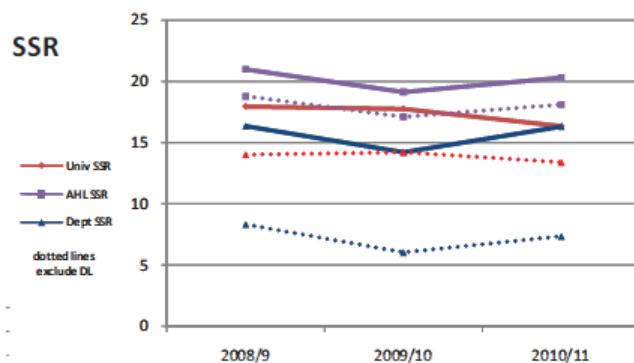
Staff FTEs



NSS Performance

Not applicable

	2008/9		2009/10		2010/11	
	All	Payroll	All	Payroll	All	Payroll
Academic	Ext Inv T	0.00	0.00	0.00	0.00	0.00
	T Only	1.15	0.17	1.12	0.00	2.52
	T & R	10.90	10.64	12.75	12.75	11.99
	R Only	5.20	4.85	2.31	2.31	3.59
	Other	0.32	0.00	0.35	0.00	0.39
Non-Acad.	AcadRel	1.01	1.00	1.01	1.00	1.15
	Tech.	1.00	1.00	1.00	1.00	0.83
	Clerical	4.07	4.00	4.00	4.00	4.01
	Other	0.00	0.00	0.00	0.00	0.00



League Table Performance

Not applicable

	Dept	College	Dept	College	Dept	College
Students	196.79	3685.88	197.01	3870.13	236.55	3882.35
Students (ex-DL)	100.00	3298.53	83.65	3462.87	106.70	3462.42
Teaching Staff	12.05	175.67	13.87	202.44	14.51	191.17
SSR	16.33	20.98	14.21	19.12	16.30	20.31
On-Campus SSR	8.30	18.78	6.03	17.11	7.35	18.11

Undergraduate FT

Not applicable

Postgraduate Taught On Campus

FT Students	Department		University		Applications	
	Intake	Pop.	Intake	Pop.		
% Overseas	48.8%	48.8%	64.4%	62.9%	End of 2011 cycle Applications	290
% Female	89.3%	89.3%	66.2%	65.9%	End of 2011 cycle Offers	160
% Ethnic Minority	22.0%	22.0%	35.3%	37.1%	2012 Applications (Year to 5th Jan 2011)	69 (79)
					2012 Offers Made (Year to 5th Jan 2011)	17 (22)

Appendix C**Case Study 2: Use of Statutory Returns to Improve Data Quality****Background**

Statutory returns can be used as a mechanism to drive better data quality. However, given they are generated late in the cycle, there must be a mechanism to close the loop and go back to correct the underlying problem. Information that is used for statutory returns is often also used for league tables. Student data quality can impact this adversely if not well controlled.

A people-based approach

Student data starts with admissions data. It is the admissions data that is the most reused data set and hence the data set where people are inputting data for their own requirements and not realising that that data goes on and may well be re-purposed elsewhere.

An example to illustrate this is tariff points. Tariff points influence league table position. What qualifications qualify for tariff points may not be fully understood by admissions team staff and the fact that careless entry of tariff points can impact league table positioning is not the immediate concern of admissions staff. Corporate planners are more likely to be engaged with this agenda and may well run exception reports to encourage this data to be entered better. The exception reports can be repeatedly run to show how tariff point positioning can be improved if people are tasked to clean up their data. The key though is to educate admissions staff about where the data goes and the importance of entering it correctly in the first place. The more the dialogue across the silos of admissions and student records can be improved, the better.

Learnings

Educate staff about the implications of poor data quality and show them how the data they put into the system goes on to be put to further use.

Appendix D**Case Study 3: University of Westminster's Student Record System Optimisation****Background**

In 2005 Westminster implemented SITS with one organisational structure. Over time the academic structure has changed and complex mappings have been used to get students into the new structure. The Westminster student record system optimisation project has two key aims:

- a) Getting the organisational structure right AND setting up due process to ensure likely organisational change in the future can be accommodated with minimum impact
- b) Revamping the curriculum from a 15 to 20 credit module format where there is a one-to-one mapping of course/programme to route/pathway.

Westminster uses a separate instance of SITS for reporting purposes but they are starting a project to review management information needs.

The SRS Programme

There is an Information Management Group which has four sub-groups – student, finance, staff and business intelligence. The Students' sub-group runs and approves outputs of an SRS Management group which meets monthly to authorise changes and prioritise project work. The SRS programme started by mapping the student journey and associated processes. Each process has been, or is planned to be, reviewed in order to simplify and streamline administration with a goal of online student self-service wherever possible.

There is also a data quality work stream. SITS consultants ran scripts on the SITS database which identified where data needs to be cleansed (3 days' consultancy). Responsibilities for action were then allocated to the appropriate workstream. A student record support team of three are just being put in place in the Registry. It is Registry who own student data quality and not Planning.

Technically Westminster use SITS and eVision wherever possible to try and minimise the number of systems through which data passes. By making extensive use of eVision as the front-end to SITS, tighter control can be maintained as to which fields should be updated as well as drop down lists for valid data entry and so minimise manual re-keying or data transfers.

However, Azorus is used for enquiry fulfilment and even if the number of systems involved is minimised there is still a lot of one-to-one interfacing between SITS and its satellite systems.

A typical SRS project is to put mitigating circumstances claims online with the aim of taking this out of email systems where emails get lost and are not tracked and making it an eVision task so that all concerned know where a claim is in the workflow and where appropriate documents can be shared. Westminster believes transparent processes are good for data quality and the students themselves are the best auditors of their data quality, alongside workflows where drop-down lists only allow valid choices rather than using free text.

After SRS Optimisation

The governance mechanism is operational and so will continue. The main body of project work is planned to complete in July.

Learnings

Review your processes

Make your data as transparent as possible

Increase online student self-service.