SQELT PROJECT

SUSTAINABLE QUALITY ENHANCEMENT IN HIGHER EDUCATION LEARNING AND TEACHING. Integrative Core Dataset and Performance Data Analytics

Intellectual Output 1:

Benchlearning Report on Project Partner HEIs' Performance Data Management Models

The Case of Birmingham City University (BCU)

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1.0   Executive Summary

1.1   Birmingham City University

Birmingham City University (BCU) is a large, inner-city university that was formerly the City of Birmingham Polytechnic (later Birmingham Polytechnic). It achieved University status in 1992, changing its name to the University of Central England in Birmingham. The University re-branded in 2007, becoming Birmingham City University, adopting a new logo, a reworking of the tiger crest used by the University of Central England in Birmingham, which itself originally came from the Birmingham College of Commerce, one of the Polytechnic's founder institutions.

BCU has three main campuses serving four faculties, and offers courses in art and design, business, the built environment, computing, education, engineering, English, healthcare, law, the performing arts, social sciences, and technology. The university has around 24,000 undergraduate and (post)graduate students.

Given its provenance, the institution has tended to focus on vocational courses although there has been a concerted effort in recent years to embed a focus on research. Recently, the University has emphasised its links with the heritage of the city of Birmingham and its industries. This is evidenced in the University's Social Responsibility statement, which notes:

> We play a key role in supporting the economy and public sector in Birmingham and the West Midlands, as the University for the City of Birmingham (BCU, 2018).

1.2   Birmingham City University: Digital Performance Data Management

The University, like most others in the UK, collects a wide range of data digitally, but it is not always clear how much this data is actually being used to improve the quality of the student experience. Currently, data is available and is used on a range of different issues and this is shared with relevant individuals, often at senior level. However, there are also classroom level activities that are seldom shared with a wider audience, such as classroom feedback approaches that are used by individual lecturers to improve their teaching.

1.2.1   Contexts and challenges

The University is also subject to a range of national data collection compliance requirements. The University is required to provide information routinely to the Higher Education Statistics Agency (HESA). The University takes part in national surveys such as the National Student Survey (NSS) and the Destinations of Leavers from Higher Education Survey (DLHE) and also takes part in the (voluntary) Postgraduate Research Experience Survey (PRES). The NSS, particularly, causes much anxiety and heartache. Position in this league table is a priority for BCU as with most other institutions. In addition, the University is subject to the teaching excellence framework (TEF) and submits to the research excellence framework (REF). TEF, as a new instrument for judging teaching, causes much anxiety.

In addition, the University faces two specific challenges relating to the type of students traditionally recruited by the institutions: black, Asian and minority ethnic (BAME) students and 'commuter' students (those who have to travel from home to

study). Nationally, these specific issues relate to widening participation; locally, they relate to the nature of the University's recruitment strategy.

1.3 Birmingham City University Position

As has been made clear above, BCU collects a large amount of data relating to its students and its institutional performance; much of this data is required by statutory bodies. In addition, other data relating to student experience is collected at a local level, or to investigate specific student issues as they arise. These two approaches form the basis of both the strengths of the institution and the challenges it faces in the future. The current strengths, weaknesses, opportunities and threats are summarised in Table 1.

Table 1: Preliminary SWOT analysis of BCU's performance data management

Strengths	Weaknesses
Mature system of data collection	No shared institutional understanding of the purpose of collecting data
Existing data collection can be mapped across and form the basis of performance indicator development	Little joined-up working within the institution
Recognition that all staff need to be able to access data to inform personal and institutional progress	Existing data collection fails to adequately address current needs
Willingness to build systems that work for all staff	Relevant data is not available to all stakeholders
Recognition of the importance of data analysis/ development of performance indicators	Diversity of the institution lends itself to 'silo' working
Opportunities	**Threats**
An opportunity to improve the situation: to start from scratch if necessary	Development of performance indicators that do not reflect the reality of the institution
To harness existing functions to support the development of a new system	Excessive reliance on the collection of data: less reliance on interpretation
To ensure that the right data is getting to the right people	Policy changes relating to current debates in UK HE: i.e. student fees, value for money etc.
	Partnership working/collaboration in the wake of Brexit

1.4   Conclusion and Recommendations

1.4.1   Conclusion

There is currently no overall model of digital performance data management at Birmingham City University that relates to learning and teaching. However, an institutional strategy is being developed, based on accepted wisdom on learning analytics that relates to all aspects of learning and teaching at the institution. The University faces challenges that are similar to other institutions in the UK and much is driven by the issue of fees: what are students actually getting for their money?

1.4.2   Recommendations

In light of these conclusions, a set of key recommendations can be drawn from the existing situation at Birmingham City University. These are as follows:

1. BCU must engage in **sharing and exchange** ideas on learning analytics with partners from across Europe. This is vital both to learn from the experiences of other institutions but also to share the good practice it has developed. This is a key learning expectation of BCU from the SQELT project and will help inform BCU's future direction at a key turning point;
2. BCU staff should have more confidence in the institution's **established achievements** in data collection. Not only is there a long history of collecting and using student-generated data, the University has many examples of innovative and best practice in learning analytics, learning and teaching practice;
3. There is a need to **review performance indicators** for learning and teaching, especially in the current context of re-building the institution's data management system. Stimulation and support in this regard are key expectations of BCU from the SQELT project;
4. There is a need for developing a **total data collection and management system**. BCU expects that other partners in the SQELT project will have experiences in managing such systems;
5. There is a need for a balance between data requirements for **compliance** and that which is collected to **support change and improvement.** Compliance and improvement should not be separated but considered as having the same goal. The SQELT project will highlight the different experiences of institutions in this regard;
6. It is clear that one person or area must be allocated **ownership** and **leadership** of data management. BCU expects that other partners will have had experiences of this issue;
7. It is vital that data is **accurate** and **consistent**. Currently, weaknesses have been identified in the accuracy and consistency of data collection. It is expected that other partners in the SQELT project will have experiences of this significant issue**;**
8. Data must be kept **secure**. Data security is a key concern across the sector and applies to BCU as it will to other higher education institutions in the SQELT partnership;
9. Appropriate **access** controls must be used, so that people who need the data can access it and people who don't cannot. Currently, it is not always clear who has access to data. The biggest problem identified by staff is that many

academic staff who need access are not given it. The SQELT project will highlight the varying degrees this is an issue;

10. It is vital that a **culture** is created where data is everyone's asset and everyone's responsibility. Currently, data collection and management are activities that are limited to some individuals. For BCU, this is expected to be an important role of the SQELT project;

11. It is essential to develop good **data capability** among their staff. It is expected that the research undertaken in SQELT project will help identify staff needs and current awareness.

2.0   Introduction

Good data management is essential for higher education institutions looking to support their students in a data-driven world (HEC, 2016: frontispiece).

This report provides an overview of how Birmingham City University collects and uses data in support of learning and teaching improvement processes. The University fits into a wide context of data requirements and conducts similar data collection processes to those of most other UK universities. In addition, the University is influenced by wider theoretical and political debates.

2.1   Key Purposes

The report therefore has three main purposes. First, it briefly situates Birmingham City University within its contexts: its history and development and its particular issues and its place within the wider context of UK higher education. Second, the report outlines the key performance indicators (KPIs) and sources of data for them that may have a bearing on learning and teaching. Third, it explores and discusses the key issues relating to learning analytics both nationally and within the University and considers the current Strengths, Weaknesses, Opportunities and Threats at the institution relating to the on-going development of performance indicators (PIs) that is the focus of the SQELT project.

2.2   Methodology

This report is based on a review of largely documentary sources, informed by conversations with senior managers who have responsibility for various aspects of quality management within the University. The documentary source material is of two main types:

1. Internal material from the BCU intranet.
2. External material from organisations such as HESA and HEFCE (Higher Education Funding Council for England).

In addition, the report highlights work undertaken by organisations such as the Joint Information Systems Committee (Jisc) relating particularly to learning analytics and the UK's Quality Assurance Agency for Higher Education (QAA).

As part of our exploration of this material, we identified KPIs in UK higher education. In addition, we mapped the KPIs as identified by the SQELT coordination team against the University.

3.0   Birmingham City University and its Context

This section outlines the key context of the development of PIs for learning and teaching at Birmingham City University. The section provides an outline history of Birmingham City University and its context within the UK higher education sector. The history and development of the University, whilst interesting in itself, is important to highlight that the institution is unique and has its own particular culture, while it also shares a great deal in common with other institutions in UK higher education. An understanding of the sector as a whole is important because it highlights the pressures, requirements and context within which Birmingham City University, as others, work.

3.1   Birmingham City University (BCU)

Birmingham City University was formerly the City of Birmingham Polytechnic (later Birmingham Polytechnic) from 1971 to 1992. As a polytechnic, it shared a lot of characteristics with other such institutions. The Polytechnics were established with a view to creating a sector of vocational higher education and that focused on teaching students who would work in the local economy and public sector. Over time, there was significant academic drift; however, the focus on teaching has remained strong to this day.

The Polytechnic, like others, originated in a range of local colleges, mainly owned by Birmingham City Council that provided training in support of specific sectors. The Art School, College of Technology and College of Commerce were municipal colleges that supported local commerce and industry. In the 1970s, the Polytechnic gained the College of Education, which taught primary school teachers; in the 1990s, the institution, now a university, incorporated the nursing college of Birmingham.

Like all the former polytechnics, Birmingham Polytechnic achieved University status in 1992 as a result of the Higher Education Act of that year. In consequence, in the same year, the overseeing body of the Polytechnics, the Council for National Academic Awards (CNAA) was dissolved and the new universities, the 'Post-92s', became subject to the usual regulatory authorities and funding processes that applied to the older universities. This mean that the University entered into competition with other universities and it now became subject to a new set of quality assurance rules that began to be implemented from this time.

The new university was named 'University of Central England in Birmingham' then 'UCE', and finally, Birmingham City University in 2007. This last was an attempt to make the 'brand' more recognisable and the university's relationship with the City more obvious. The struggle with the name reflects a wider issue of institutional identity. It is arguable that the institution has not developed a 'brand loyalty' as effectively as some other institutions.

As part of the development of institutional identity, there has been a concerted effort by senior management to encourage a range of aspirations, in particular, for Birmingham City University to be 'the University for Birmingham'. This is a common

current approach by universities to try and make a closer link between themselves and their communities. In the case of Birmingham City University, there are two important elements in its strategy. First, it traditionally recruits largely from the immediate geographical area and continues to do so. Second, the University champions industry links and development of practice-based courses.[1]

3.2 UK higher Education Context

Birmingham City University must be situated within the wider context of higher education in the UK. Like most other universities in the UK, Birmingham City University is engaged within a competitive higher education market. Universities are referred to frequently as 'competitors' and student recruitment is a key way of making money. In addition, the University, like most others, is actively seeking contracts for the multifarious work of its staff. The University, like others is also engaged in the drive to recruit high fee-paying students from regions such as China and India. At the same time, the University is exploring ways of diversifying its academic offer: it is engaging with the trend to introduce online courses, degree apprenticeships[2] and foundation degrees[3]. Higher education in the UK is changing dramatically and it is, to use a mild current cliché, a highly diverse sector.

3.2.1 Student fees and debt

One of the most noticeable and problematic features of current higher education is student fees and student debt. Students have been charged significant tuition fees in UK higher education since 1998 and the scale of such fees has increased substantially since then. The initial £1000 fee increased threefold in 2003 and notoriously, has risen to amounts in excess of £9000 since 2012. Along with fees has come debt and a general problem of how students can expect to afford to go to university.

3.2.2 Value for money concerns

An increasing concern amongst students, governments and institutions that what the students are paying for is in fact value for money has accompanied the growth in the scale of tuition fees. This has manifested itself in various ways. There has been some influential research into the number of 'contact hours' that students may expect to receive at university and the indications are that students are not satisfied with current provision (Neves and Hillman, 2018; HEPI/Which? 2013).

There have been moves by institutions to ensure that once loose academic timetables are increasingly tightened up. The National Student Survey (NSS) has become a core and powerful part of the higher education calendar – a controversial

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[1] For more detail on the history of BCU, see here: http://www.bcu.ac.uk/about-us/our-history
[2] Degree apprenticeships are a new type of apprenticeship offered by some universities. These allow students to take a full degree as part of their apprenticeship. For further details, see the UCAS (Universities and Colleges Admissions Service) webpage: https://www.ucas.com/alternatives/apprenticeships/apprenticeships-england/what-apprenticeships-are-available/degree-apprenticeships
[3] Foundation degrees were introduced in 2001. For further details, see UCAS webpage: https://www.ucas.com/undergraduate/what-and-where-study/choosing-course/foundation-degrees

consumer satisfaction survey applied to higher education. Higher education, as Joanna Williams (2013) has cogently argued, has become fully consumerized.

3.2.3 Teaching Excellence Framework (TEF)

One consequence of the concern with value for money, arguably, has been a renewed focus on improving university teaching. Teaching had always been of secondary importance to academics at universities. However, the Teaching Excellence Framework (TEF) has been developed by the Government to ensure that teaching standards improve – or at least that universities all take teaching seriously.

The TEF is a new scheme for recognising excellent teaching, in addition to existing national quality requirements for universities, colleges and other higher education providers. It provides information to help prospective students choose where to study. The TEF is voluntary and each higher education provider decides whether or not they wish to take part. Participating higher education providers receive a gold, silver or bronze award reflecting the excellence of their teaching, learning environment and student outcomes.

The TEF covers undergraduate teaching and is effectively a new form of league table. The data on which the TEF is based includes the number of students who remain on their course from one year to the next, graduate-level employment and students' views about their experience. The TEF also takes into account students' entry qualifications and characteristics and the subjects studied at each institution (OfS, 2018a).

3.2.4 Research Excellence Framework (REF)

At the same time, Universities are expected to provide useful products: useful inventions, applied research that improve society and infrastructure around them. Universities are increasingly viewed as key producers in the 'knowledge society'. University research outputs have for some decades been measured by a form of research assessment exercise but the nature of the exercises, which have generally been every four or five years, have changed.

Most controversially, the UK's research assessment changed in 2012 to become the Research Excellence Framework, an assessment that added a key new criteria of 'impact'. Whilst never satisfactorily defined, research impact has, arguably, become more central with time. This element has been included because of the growing concern that much research is funded by public money but with little regard to its value to the public. This may also be seen as part of the wider movement of 'public understanding of science'. Scientific research is increasingly required to include work to promote and explain the results to a wider public audience.

3.2.5 Employability agenda

One notable trend in UK higher education in the last twenty years has been a new focus on graduate employability. What was once referred to as the 'Cinderella Service', the University Careers Service, has now become centre stage in university student services. Employability has become a core part of the curricula of most academic programmes. There is increasing pressure on institutions to produce 'work-ready' graduates.

3.2.6 Coming challenges: Brexit

UK higher education is clearly confronted by a range of challenges, many of which have at their heart the issue of public funding and how to support Universities in a hugely transformed sector. A further challenge to university funding and resources is presented by Brexit. Student recruitment from China, India and other non-European regions is now an imperative as universities look away from the European Higher Education Area. At the same time, there are concerns that European funding for research in UK universities may be severely reduced, especially in institutions where nearly 70% of funding is from EU sources. In addition, there are fears about what will happen to the 20% of academic staff who come from other EU member states. Brexit adds another layer of uncertainty to contemporary UK higher education.

4.0   External Metrics

As highlighted in the section above, Birmingham City University, like most other UK universities, conforms to a range of sector-wide metrics that are then provided to the public in the form of league tables. The most prominent metrics are: the Teaching excellence Framework (TEF) and the Research Excellence Framework (REF).

4.1   TEF Criteria/Metrics

The Teaching Excellence Framework is the UK's new method of measuring learning and teaching. It is the first attempt to raise the profile of teaching and provide it with a nationally recognised set of metrics.

The TEF rating is determined by scores achieved across a number of institutional functions. These are shown below: the source of the data is indicated in brackets:

•   Academic Support (NSS)

•   Assessment and feedback (NSS)

•   Teaching on my course (NSS)

•   Employment (Destinations of Leavers from Higher Education Survey – DLHE)

•   Highly skilled employment (DLHE)

•   Non-continuation – drop-out rates/retention (local data) (HESA: UK PIs; individual learning record – non-continuation records).

The TEF is new and its effectiveness has yet to be seen: however, it seems that institutions are expressing a great deal of concern that they score well in the framework.[4]

4.2   Research Excellence Framework (REF)

The Research Excellence Framework (REF) is the UK's method of assessing academic research. The REF is not directly related to learning and teaching but it has a bearing on the wider discussion about how far research by academics informs their

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[4] For more information on the TEF visit: http://www.hefce.ac.uk/lt/tef/whatistef/

teaching. It also highlights where research that is regarded as 'leading' is taking place, which in turn may influence students' choice of university.

The REF was first undertaken in 2014, replacing the earlier Research Assessment Exercise (RAE). It is carried out by the higher education funding councils of England, Scotland and Northern Ireland. There are three main purposes of the REF. First, it provides accountability for public investment in research and produce evidence of the benefits of this investment. Second, it provides benchmarking information and establish reputational yardsticks, for use within the HE sector and for public information. Third, it informs the selective allocation of funding for research.

Research submissions are judged by expert panels. These are organised by subject area or 'Unit of Assessment'. The panels include not only subject experts from the UK and abroad: they also include representatives from the public – groups that use the research.

The key indicator areas for the REF are:

- The quality of the outputs
- The impact of the research on the wider community
- The environment that support research in an institution

5.0   Performance Indicators in UK Higher Education

In 1998, the UK government asked the funding bodies (HEFCE, HEFCW, HEFCS and HEFCNI) to develop suitable indicators and benchmarks of performance in learning and teaching in higher education, bearing in mind the diversity of the sector and the needs of different stakeholders.

HEFCE published the first set of PIs in their current form in December 1999, on behalf of all four UK funding bodies. The indicators were published annually until 2003, with additions and amendments as the coverage was extended. Since 2004 HESA has published the UKPIs, in much the same format as indicators previously produced by HEFCE.

5.1   HESA Requirements

HESA requires the University, in line with others in the sector, to provide information relating to students, graduates, staff and providers (including universities, colleges and private providers). Within each group, a number of key indicators are required as follows:

5.1.1 Student data

- Who studies in HE? This includes demographic data and information about domicile.

- Where do they study? This includes information about the where institutions recruit there students from.

- What do they study?

- What are their progression rates and qualifications?

5.1.2 Graduate data

- Employment and further study (DLHE survey).

5.1.3 Staff data

- Staff numbers and characteristics (demographics)

- Terms of employment and contract information (such as level, gender, job role, full time/part time)

- Academic staff by 'cost centres' (broadly, discipline group, based on allocation of funding)

5.1.4 Providers

- How do HE providers engage with business and the communities?

- How do they manage their estates?

- What is their expenditure and income?

5.2 Performance Indicators in the BCU Context

As indicated above, the University collects large amounts of data. Much of this activity is in response to statutory demands, but there are many other activities that collate data both to monitor institutional performance and to respond to specific issues. The University was, for example, in the vanguard of collecting student experience data with its Student Satisfaction Survey, developed in the late 1980s to respond to concerns expressed by part-time students.

Data Performance Management is currently concentrated on two main areas: the collection of data, which the University is required to collect on a statutory basis and 'static' data, which is characterised by the student records maintained by the Academic Registry.

In addition, there have been local 'fluid' initiatives that have arisen in response to a local demand. One School, for example, recently identified a number of students who might require additional support by engaging them in an online exercise prior to their arrival at the University. Such elements of good practice are, however, not widespread throughout the institution and are often as a response to institutional priorities including retention, BAME achievement, 'commuter' students and student experience.

5.3 Sharing Data

Making sure the right data is available to be accessed by those who can make use of it is one of the greatest challenges facing the HE institution. Currently, the University collects and shares data via a number of initiatives as follows:

- Student attendance (SAMS system)
- Student application data (SITS) – contains demographics, entry grades, etc.
- Library usage – available

- Moodle usage – available but not very accessible; seems to be largely through individual gatekeepers.
- Usage of other facilities
- Classroom feedback – examples of digital feedback to test what students are learning in class.
- Student experience surveys
  - National Student Survey (NSS) – national
  - Destinations of Leavers of HE survey (6 months post-graduation) – national
  - Module experience surveys – internal/institutional
  - Various facility user surveys – internal/institutional

In addition, BCU Registry data is available via the 'MySRS Portal.' This includes data relating to students – A-level results, etc., but has its own challenges in terms of compliance; i.e. staff wishing to access student data to address a particular concern have sometimes found that they do not have access to the appropriate data.

There has recently been recognition that these existing functions should be supported by additional collection and distribution of data. This has led to the development of STASH. STASH is: 'a sharepoint resource on the Planning & Performance SharePoint teamsite for staff across the University to locate information on student or corporate performance, business intelligence and learning analytics'. This is a relatively new development and many aspects of the service are currently 'in development', including the section on PIs. STASH generates reports on aspects of the University. The main areas are recruitment, retention, achievement and outcomes. However, it also provides information about the TEF. It currently does not include student attendance or usage of Moodle, for example.

The comparative sector for this initiative is the further education (FE) sector. In many ways, FE is currently ahead of HE in both the development of data collection and engaging stakeholders with the institution. For example, the TYBER system (The Sixth Form College Solihull, 2018) holds all data in one place and can be viewed by all stakeholders.

Once a student is enrolled, as a Parent / Guardian they are able to view:

- Student Timetable
- Live Attendance and Punctuality Records
- Student Record, including Praise and Concerns
- Checkpoint Information, including Targets and Working at Grade
- Student Targets
- Exam Timetables
- UCAS Personal Statement (The Sixth Form College Solihull, 2018)

The TYBER system reflects the practice of many FE institutions in the UK and it could be argued that one of the primary reasons why FE is leading the way in this area in the UK is the presence of the OFSTED regime. OFSTED is:

> … the Office for Standards in Education, Children's Services and Skills. We inspect and regulate services that care for children and young people, and services providing education and skills for learners of all ages (UK Government, 2018).

For many in the FE sector, OFSTED has come to represent a close and burdensome monitoring system. It has, however, improved data collection and encouraged FE institutions to be stakeholder-facing. There are rumours that HE in the UK will soon be faced with a similar regime that is likely to follow the OFSTED model (see Williams, 2016).

It is also interesting that BCU has recently identified eight PI areas that can be mapped across the HESA requirements given above. The eight BCU PI areas are as follows:

1. Financial stability
2. Student population
3. Profile & reputation
4. Student experience
5. Employer engagement & research
6. Staff recruitment, retention & development
7. Value for money
8. Estate development

In addition, the University has identified three comparator groups to assist in a benchmarking analyses. These are as follows:

1. UK Higher Education Sector (167 institutions).
2. Extended Million + group (49 institutions). The Million + group is a think tank of university membership with a shared mission belief. This mission group has been extended to include other similar institutions. The group largely comprises institutions that had roots as polytechnics and other newer university creations.
3. Aspirational group (6 institutions). This is a group of higher education institutions that are deemed to excel in one or more aspects of performance that is included in the KPIs.

6.0   Applying Performance Indicators

The PIs and their areas, as identified by the SQELT coordination team at the beginning of the SQELT project are relevant for BCU. In the areas teaching and learning environment, teaching and learning processes, and in leaning outcomes and their assessment, data is collected.

The key sources of information for these PIs are as follows:

- National and local user surveys – NSS, modular evaluation; service user surveys;
- DLHE survey;
- Human resources (HR) data;
- Registry data;
- Information such as individual performance reviews of staff members (IPR) and staff work allocation model (WAM);
- Examination and assessment data;
- External examiner assessments.

In the following tables, the PIs identified by the SQELT coordination team are addressed in the BCU context.

6.1 Learning and Teaching Environment

Performance types	Performance indicators	Sources
Quality of incoming students	Grades; experience	UCAS; Registry
Learning resources	Library resources; specific resources such as laboratories	Library usage; NSS, Modular evaluation forms
Teaching resources	Staff:student ratio; staff with PhDs; staff in CPD	Faculty data; HR
Facilities and equipment	Student space; IT expenditure; accessible computers; internet bandwidth; laboratory resources	Estates department; IT department; NSS; Modular evaluation

Performance types	Performance indicators	Sources
Financial management	Total operating expenditure on students; proportion of total allocated to student services	University accounts
Student composition, administration and services	Demographic makeup; student assessment of services; provision of services	Registry; various student experience surveys; NSS and modular evaluation; service usage figures
Staff composition	International staff; staff from industry; staff from relevant subject areas	HR

Performance types	Performance indicators	Sources
Social context	Opportunities for students to engage with networks, contact lecturers and engage with local industry	In part the NSS
Stakeholders' perceptions	Depends on the stakeholders	

6.2 Teaching Process

Performance types	Performance indicators	Sources
Quality of staff	Staff recruitment	HR
Teaching staff work load	Teacher assessment of workload	IPR; staff satisfaction survey; WAM
Competence in subject	Student assessment; teacher ability to communicate subject; research outputs	NSS; Modular evaluation; REF
General education/skills	Activities provided; teacher engagement with students	NSS; modular evaluation; peer observation; TtC
Experience of teaching staff	Teacher self assessment	IPR
Course quality	Student assessment; teacher assessment; peer review of teaching	NSS; Modular evaluation; IPR; Peer review of teaching; external examiner
Teaching diversity	Student assessment of learner diversity	NSS; Modular evaluation

6.3 Learning Process

Performance types	Performance indicators	Sources
Student workload	Student and teacher assessments of workload	NSS: Modular evaluations
Quality learning	Students' assessment; Development of self learning; group work; Teacher and students' knowledge of learning models;	NSS and modular evaluation; not aware of anything collected on students' knowledge of learning models
Learning diversity	Student and teacher assessment of learning diversity (i.e. engaging with different ways in which people learn)	For students – NSS and modular evaluation; for teachers – not aware of anything

6.4 Learning Outcomes and their Assessment

Performance types	Performance indicators	Sources
Student success rates	Completion rates: those completing first year and those completing in specified time	Registry
Student and alumni satisfaction	Freshman, senior and Alumni satisfaction	Modular evaluation on each module; NSS for final years; no alumni survey (except DLHE)
Employability	Graduates in graduate jobs; graduates in further study; employer satisfaction	DLHE; some employer satisfaction surveys
Achievability of high level learning and teaching goals	???	???

Performance types	Performance indicators	Sources
Problem solving	Documentation of problem solving processes; observation of students	Not aware of anything: other than by assessment by lecturers; external examiners
Research	Application of scientific methods	Assessment by lecturers and external examiners
ICT	Observation of students using ICT	Not sure of this
Applied knowledge	Application of knowledge	Lecturers assess and placement tutors will assess

Performance types	Performance indicators	Sources
Social and self competences	Observation of students; motivation for life long learning; fostering sustainable values	Not sure any of this is collected; employability is tested and some sustainability is tested as part of a course
Assessment of learning outcomes	Engaging assessment formats; grades; understanding of method; student assessment of their knowledge	This is part of the accreditation process and will be assessed by Modular evaluation; students are not really asked to self-assess
Assessment of assessments	Assessment forms assessed by different groups; peer review; analysis of assessmmnt protocols	No information

6.5   Performance Overall

This exercise highlights that many of the areas identified by the SQELT coordination team at the beginning of the SQELT project can be broadly mapped across to the UK higher education sector and are generally important to all institutions and certainly to BCU. However, there are some issues which simply do not exist within the UK sector. Indeed, some issues are not really observable.

The exercise highlights that the data is a mixture of static and fluid data. Much data, such as demographics, are simply collected and it is not really possible to draw conclusions simply from such data. There is also a concern that such data can, in fact, be used to draw incorrect or faulty conclusions.

The exercise highlights that there is a fairly small set of dominant data. In particular, it shows that the student feedback plays a particularly important role as a metric in informing wider agendas. Reliance is placed upon the National Student Survey and the Destinations of Leavers of Higher Education (DLHE) survey.

The exercise does not indicate how well co-ordinated data collection and analysis actually is within the University. Similarly, the exercise does not give any indication of how accessible and available the data actually is.

7.0   Learning Analytics – the UK

Sclater et al. (2016) note that a survey undertaken in 2015 suggests Vice Chancellors perceive the UK to be lagging behind the rest of the world in the development of learning analytics, with 60% believing that the important innovations in student data analytics are taking place primarily overseas (Sclater et al., 2016, 4). Using a series of case studies, the authors argue that a number of learning analytics initiatives worldwide provide evidence that:

- researchers have demonstrated the validity of the predictive models used by learning analytics systems;
- the interventions carried out with students have been effective;
- there are other benefits to taking a more data-driven approach to higher education provision (ibid.).

7.1   Core Areas of Contribution

Sclater et al. (2016) extrapolate from the evidence gathered and propose that learning analytics could make a significant contribution to HE in the UK in three core areas.

Firstly, as a tool for quality assurance and quality improvement – with many teaching staff using data to improve their own practice, and many institutions proactively using learning analytics as a diagnostic tool on both an individual level (e.g. identifying issues) and a systematic level (e.g. informing the design of modules and degree programmes).

Learning analytics could also contribute to the Teaching Excellence Framework with institutions utilising them as part of their submission of evidence to support applications for the higher levels of TEF. It is also envisaged that learning analytics data will also be useful for institutions in demonstrating compliance with the new quality assurance arrangements being developed in England, which will require more regular review of outcomes and evidence of action taken by institutions to deal with issues.

Secondly, as a tool for boosting retention rates – with institutions using analytics to identify at risk students and intervening with advice and support at an earlier stage than would otherwise be possible.

Thirdly, as a tool for assessing and acting upon differential outcomes among the student population with analytics being used to closely monitor the engagement and progress of sub-groups of students, such as BME students or students from low participation areas, relative to the whole student body, prior to assessment results being made available. Additional support can be provided to identified individuals from underperforming groups to improve attainment.

Fourthly, as an enabler for the development and introduction of adaptive learning – i.e. personalised learning delivered at scale, whereby students are directed to learning materials on the basis of their previous interactions with, and understanding of, related content and tasks (Sclater et al., 2016, 5).

The above recommendations are reinforced by the Higher Education Committee (HEC) who, in a 2016 report noted that 'learning analytics has the potential to be enormously powerful for improving the student experience of university' (HEC, 2016, frontispiece). The same report recommended that initiatives should maximise benefits by ensuring that analytics systems are:

- Designed in **consultation** with students;
- Supported by an **ethical** framework or policy;
- Driven by the improvement of learning and teaching processes and student engagement;
- **Tailored** to the particular needs of each institution;
- Embedded in an institution's **strategic** plan (ibid; emphasis in original).

The HEC report also detailed a number of recommendations drawn from the above list that will act to move the adoption of learning analytics system forward (see HEC, 2016, 7-8). The first of these recommended that:

HESA, Jisc and Universities UK should work together to develop a sector-wide strategy for excellent and innovative data management. This strategy will support and enable sharing and collaboration between institutions (ibid., 7).

In response to this, Jisc, a membership organisation providing digital solutions for UK education and research, worked with over 50 universities in the UK from 1 August 2014 until 31 August 2018 to set up a national learning analytics service for higher and further education. The membership of Jisc is hugely diverse and includes institutions from across the higher education sector.

7.2 Areas in Development

Jisc are currently developing:

1. A basic learning analytics solution

This will include everything institutions require to track student learning activity to assist in the improvement of retention and attainment. It will include an app for students to allow them to maximise their learning potential by tracking their learning activity.

2. Supporting resources

Also under development are initiatives to assist institutions take up the learning analytics solutions and navigate challenges such as legal and ethical issues. A number of key points are underpinning this work as follows:

- Effective use of learning analytics was identified as a priority via a stakeholder consultation process known as co-design;
- Universities and colleges use student data to help make informed decisions which can lead to improved student satisfaction, retention and attainment;
- Organisations will benefit from tools and exemplars so that they can implement the best solution for their needs and priorities (Jisc, 2018).

Unfortunately, BCU was not one of the 50 universities and colleges signed up to the initial phases of the Jisc implementation. However, the current institutional strategy to undertake a fundamental restructure of data collection indicates that the University recognises that current systems are not working effectively as they should and that learning analytics is a tool that offers a solution to this problem. The following weaknesses of performance data monitoring in learning and teaching at BCU are identified:

- There is no shared institutional understanding of the purpose of collecting data. Different people have different understandings of what data is collected and why. The biggest distinction is the age old one of compliance versus improvement, which, as Amaral (2007) noted, has characterised universities for centuries.

- There is, related to this, little joined-up working within the institution when it comes to data collection and management. Different departments and individuals within the University collect data without necessarily sharing what they are doing with others in their own department let alone across the institution.

- Concomitantly, existing data collection fails adequately to address current needs. Data is collected but not always for a clear purpose other than, often, simply to comply with external requirements.

- Relevant data is not available to all stakeholders. The most commonly referred to situation currently is that academic staff are unable to gain access to datasets about their own students. This has been accentuated by increasing concerns with data security in the context of such legislation as the GDPR.

- The diversity of the institution lends itself to 'silo' working. The institution is formed of many different parts. Not only is there a division between academics and administrators: many of the different departments and schools originated as separate colleges and these have remained fiercely autonomous.

8.0   Strengths, Weaknesses, Opportunities and Threats

8.1   University Position

As has been made clear above, BCU collects a large amount of data relating to its students and its institutional performance; much of this data is required by statutory bodies. In addition, other data relating to student experience is collected at a local level, or to investigate specific student issues as they arise. These two approaches form the basis of both the strengths of the institution and the challenges it faces in the future. The current strengths, weaknesses, opportunities and threats are summarised in Table 1.

Table 1: SWOT Analysis

Strengths	Weaknesses
Mature system of data collection Existing data collection can be mapped across and form the basis of PI development Recognition that all staff need to be able to access data to inform personal and institutional progress Willingness to build systems that work for all staff Recognition of the importance of data analysis/ development of PIs	No shared institutional understanding of the purpose of collecting data Little joined-up working within the institution Existing data collection fails to adequately address current needs Relevant data is not available to all stakeholders Diversity of the institution lends itself to 'silo' working
Opportunities	**Threats**
An opportunity to improve the situation: to start from scratch if necessary To harness existing functions to support the development of a new system To ensure that the right data is getting to the right people	Development of PIs that do not reflect the reality of the institution Excessive reliance on the collection of data: less reliance on interpretation Policy changes relating to current debates in UK HE: i.e. student fees, value for money etc. Partnership working/collaboration in the wake of Brexit

8.2   The BCU Journey

Birmingham City University does not currently have a Digital Performance Data Management model or approach but a new, University-wide strategy is being developed led by the University's Deputy Vice Chancellor. This is reflected in Table 1 above. There is an awareness at senior management level of the importance of

learning analytics and a desire to develop a University-wide approach to collecting and using digital data collected from the students.

However, there is currently also an awareness that the University is only at the beginning of its 'journey' in this respect and the starting point is to establish effective, accurate collection of data. The Deputy VC is aware of local attempts to conduct effective learning analytics at faculty, school or department level but feels these are confusing the issue. The development of such local practice has, therefore, been postponed pending the development of an institution-wide approach.

9.0   Conclusions and Recommendations

9.1   Conclusions

From the above, we can conclude that BCU is in a position to react to current demands, but will face a number of challenges in doing so. It has strengths in relatively mature systems of institutional data collection, both to satisfy statutory demands and to respond to local issues. As an institution that puts students at the heart of its activities, the institution is open to new ways of improving the student experience and, indeed, has a track record in collection of data in this respect.

A further strength is the recognition that current systems are not working efficiently as they could and that changes are necessary to respond to international, national and local demands. There is a commitment from senior management to address the current situation and to re-think current practices if necessary. This extends to the notion of ensuring that data becomes available to those who can make best use of it, which is something that the institution has not addressed in its practice to date.

This leads into identification of weaknesses that largely stem from the dispersed nature of data collection throughout the University. BCU has no dedicated Institutional Research office and current practice is characterised by pockets of practice for specific purposes and people, without a wider understanding of how the institution could benefit holistically. A clearly expressed rationale, following a process of consultation with relevant stakeholders, might be one way to address current issues. This is not an issue that is unique to BCU: in general, universities are driven by uniformity and standardisation, which acts to encourage the development of rigid and not always appropriate systems.

To compound this, it is often the case that universities are often not really very good at knowing their own students and don't make good use of the data that is collected. In the UK, this has been recognised and is being addressed through a wide range of work, mainly in the form of specific funded projects, such as the Office For Students (OfS) Learning Gain projects (OfS, 2018b) or the Higher Education Academy's (HEA) 'What Works?' (HEA, 2018) project that seeks to get to know the students and support them better.

BCU has been in the forefront of canvassing students for their opinions over many years and this stands the institution in good stead as it moves forward with the development of its systems and processes. There is currently a management commitment to address the collection and use of statistics, development of PIs (see above) and incorporate the use of learning analytics. It is also refreshing to hear that,

if needed, there is the potential to 'start from scratch' to ensure that the institution has a solid foundation on which to build.

The threats that BCU currently faces are ones that face HE on a national level. These are largely concerned with student fees, value for money and employability. Accompanying this is the position of the UK HE sector post-Brexit: will collaboration, partnership working and exchange of good practice with European colleagues continue to flow and flourish?

In terms of the development of PIs and data collection models, there is the danger that data can be foregrounded and institutional reality relegated to a minor role. There is also the possibility that the collection of data rather than interpretation and analysis is seen as the goal. It essence, it is important that mistakes made in the past are not repeated.

9.2   Recommendations

In light of these conclusions, a set of key recommendations can be drawn from the existing situation at Birmingham City University. These are as follows:

1. BCU must engage in **sharing and exchange** ideas on learning analytics with partners from across Europe. This is vital both to learn from the experiences of other institutions but also to share the good practice it has developed. This is a key learning expectation of BCU from the SQELT project and will help inform BCU's future direction at a key turning point;
2. BCU staff should have more confidence in the institution's **established achievements** in data collection. Not only is there a long history of collecting and using student-generated data, the University has many examples of innovative and best practice in learning analytics, learning and teaching practice;
3. There is a need to **review performance indicators** for learning and teaching, especially in the current context of re-building the institution's data management system. Stimulation and support in this regard are key expectations of BCU from the SQELT project;
4. There is a need for developing a **total data collection and management system**. BCU expects that other partners in the SQELT project will have experiences in managing such systems;
5. There is a need for a balance between data requirements for **compliance** and that which is collected to **support change and improvement.** Compliance and improvement should not be separated but considered as having the same goal. The SQELT project will highlight the different experiences of institutions in this regard;
6. It is clear that one person or area must be allocated **ownership** and **leadership** of data management. BCU expects that other partners will have had experiences of this issue;
7. It is vital that data is **accurate** and **consistent**. Currently, weaknesses have been identified in the accuracy and consistency of data collection. It is expected that other partners in the SQELT project will have experiences of this significant issue**;**
8. Data must be kept **secure**. Data security is a key concern across the sector and applies to BCU as it will to other higher education institutions in the SQELT partnership;

9. Appropriate **access** controls must be used, so that people who need the data can access it and people who don't cannot. Currently, it is not always clear who has access to data. The biggest problem identified by staff is that many academic staff who need access are not given it. The SQELT project will highlight the varying degrees this is an issue;
10. It is vital that a **culture** is created where data is everyone's asset and everyone's responsibility. Currently, data collection and management are activities that are limited to some individuals. For BCU, this is expected to be an important role of the SQELT project;
11. It is essential to develop good **data capability** among their staff. It is expected that the research undertaken in SQELT project will help identify staff needs and current awareness.

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