Landscape Study of Student Lifecycle Relationship Management

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Delyth Chambers
Delyth Chambers Consulting Ltd

Alan Paull
APS Ltd

JISC LANDSCAPE STUDY OF STUDENT LIFECYCLE RELATIONSHIP MANAGEMENT

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Delyth Chambers
Delyth Chambers Consulting Ltd
16 Oak Hill Drive
Edgbaston
BIRMINGHAM B15 3UG
Tel 0121 244 5598
Mob: 07977 051173
Delyth.Chambers@blueyonder.co.uk

Alan Paull
APS Ltd
58 Norton Wood
Forest Green
STROUD, GL6 0HG
Tel: 01453 835009
Mob: 07977 120886
alan@alanpaull.co.uk

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1 EXECUTIVE SUMMARY

Relationships are about people not organisations or systems. For the purpose of this study, Student Relationship Management (SRM) has been regarded as the intelligent handling of communications between an institution and its students.

A clear description of the landscape of student lifecycle relationship management is difficult to achieve, as there is huge variation in the missions of institutions, learner types and educational provision. Institutions manage their relationships, and communications with students in a great variety of ways: face to face, access to electronic systems to carry out administrative tasks, use of portals, provision of virtual learning environments, email, sms text messaging, and more traditional written and telephone contact. The tools available to them to do this are also varied, and used to a greater or lesser extent in different institutions.

The study has found that powerful integrated student information systems are available in many organisations to support student relationship management, but that these are not necessarily being utilised in a holistic and integrated way, or to their full potential. The reasons for this are varied and often related to resources available at the time of implementation or for on-going development, and a lack of understanding of the full capabilities of the system. Most institutions use proprietary systems, but many have developed their own in-house software over a number of years and continue to use it.

Institutions have a range of motivations for, and expectations of, their student information systems in supporting their business processes. Providing functionality for managing their relationships in an efficient and effective way is important. The external pressures on institutions which include competition for students mean that many are trying to differentiate themselves on the quality of their service, education and support provided to students throughout the full lifecycle of their relationship from initial contact to graduation and beyond.

Students perceive that generally their relationships are being handled well and appreciate the range of resources and channels of communication available to them. Suggestions were received from students about how communications could be handled better. Many believe that face to face contact is the most valuable way of communicating, supplemented by other methods such as email and the use of portals to receive information and complete administrative tasks.

A range of issues has been identified in relation to the use of systems to support student relationship management, and these have been highlighted, along with suggestions to JISC about how they might provide support to institutions in dealing with some of these.

2 BACKGROUND

This study, commissioned by the JISC Organisational Support Committee (JOS), has investigated the ways in which institutions manage their relationships with students, to provide a picture of the current landscape of the different strands of activities, approaches and use of ICT systems throughout the full student lifecycle. The report explores both UK further (FE) and higher education (HE) sectors and international experiences in this area, defines the stakeholder community and determines their key concerns.

The JOS committee has a remit to support the requirements of managers and administrators in institutions by identifying relevant areas of work appropriate to JISC and funds programme activity under the following themes:

The role of technology within the strategic management of institutions;

e-Framework and architectures;

Changing staff roles, relationships and associated skills;

e-Administration;

Business innovation.

Within the theme of *Business innovation*, the committee considers *student lifecycle relationship management* – i.e. the development of strategies and policies, and use of ICT, to support institutions, establish, build and manage relationships with students through a range of interactions and engagements they have with them across the lifecycle of their involvement with them – an important and commercially critical set of activities that all institutions will need to address in an increasingly competitive environment.

The JOS committee wishes to support institutions in improving the overall quality of the student experience, the efficiency and effectiveness of their administrative processes and relationships' contribution to adding business value and delivering success. There is a need to extend this type of work to cover the full gamut of interactions between an institution and its students throughout the lifecycle from prospective student, through active study, to alumni/alumnae. Student-institution interactions are set to become increasingly complex and lifelong learning commitments may mean it is entirely probable that students will regard a number of institutions as 'significant' contributors to learning, sequentially and concurrently. How students and institutions manage this matrix approach to concurrent learning provider and alumni relationships is likely to impact the way in which lifecycle management systems are designed and operated.

3 INTRODUCTION

The Shorter Oxford Dictionary defines 'relationship' as "a connection or association". Therefore student lifecycle relationship management can be defined as:

> *The ways in which learning providers organise their connections with students over the lifetime of their association.*

What we mean by student lifecycle relationship management in this study is the organisation of all interactions, communications, activities and events that create, maintain and deepen the social, academic and cultural bonds between the student, a range of staff and other students to promote better understanding and engagement by the learner.

Student relationship management is becoming increasingly a business necessity, as institutions seek to differentiate themselves from competitors through a range of measures, including the quality of services provided to their students, and to manage the costs of their processes by increasing efficiency and effectiveness. In order to manage these needs successfully, activities must be underpinned by robust and flexible systems that can meet changing requirements. Institutions must be able to demonstrate and realise the benefits of these systems to add value and to justify the expense of implementation.

In the past institutions have tended to manage different stages of the student lifecycle using different IT solutions, for example separate systems for enquiry management, admissions, student records, accommodation, or alumni. Many institutions now believe that an integrated approach is necessary, in order to increase efficiency (for example by reducing the need for multiple data entry), whilst improving the outcome of their activities (for example by improving acceptance rates of offers of admissions).

In recent years, many institutions have sought the 'holy grail' of a student system that can be used to competitive advantage, and have implemented new systems with the aim of improving processes and managing their relationships with students throughout the student lifecycle. Whether it be for increasing the speed of delivery of services such as admissions decisions, provision of information to pre-applicants, management of academic records and their use for indicating the need for student support, or management of relationships with alumni and fundraising, institutions are investigating ways in which they can carry out these activities more effectively.

Institutions are beginning to wake up to the vast amount of data and intelligence available within their own systems that can be used to understand their market, understand the needs of their students and ensure that they secure the reputational and real business advantages arising from the successful management of targeted relationships with students. This needs an integrated approach if the benefits are to be realised.

The range of software options is wide, and whilst some HEIs will manage their processes with one system, others will be using, and often struggling with, separate systems, which may or may not interact successfully with each other. *This study:*

> *Identifies what management information systems and methods institutions are using, and investigates the assumed business benefits that have driven choice of product and whether the benefits have been realised or not;*
> *Helps to identify the common characteristics of, and differences between, these institutional approaches, so that relevant issues and areas for further work can be identified.*

Key drivers of change in student relationship management are the changing expectations of students of their higher education experience, and the way in which they communicate with an institution. *The study investigates the current state of student relationship management policies and activities in relation to these changing expectations and studies the impact on relevant stakeholders.*

The study raises a range of issues in the domain of student relationship management, with which some institutions are currently wrestling, and suggests areas for further investigation.

4 METHODOLOGY

The methods used in carrying out the survey have involved: information gathering, systems thinking techniques and synthesis, analysis and modelling, and the use of case studies.

4.1 INFORMATION GATHERING

Some of the information gathering was carried out specifically for this project, but the knowledge of team members and work in other contexts has also been used to inform thoughts on the work of this project.

Information was gathered through:

- ***Stakeholder identification and analysis***, to identify the best organisations and individuals from whom to gain information.
- ***Identification and description of 'journeys'*** through FE and HE experienced by learners.
- ***An electronic survey*** of FE and HE to identify systems used at different stages of the student lifecycle, and ascertain views on whether these systems were meeting business need or not. This was distributed to 155 AHUA members, and to partner FE colleges of members of the consortium.
- ***Web trawls*** for general information on systems and their use.
- ***Conversations with individuals*** with responsibility for policy and operations focused on business imperatives, and those for functional managers focused on operational matters. Topics covered were their reasons for choosing particular systems; their perceptions of the effectiveness of relationship management facilities available to them in adding business value and delivering success; how they measure 'success' and 'effectiveness'; how the process has affected their day to day work; issues around implementation; acceptance of members of staff to implementing new or changed processes in managing relationships with students; any 'wish lists' they might have in relation to developing their systems in the future and any plans for doing so.
- ***Bringing together existing information and knowledge*** held by team members about software systems currently in use; plus UCISA information already in the public domain. For FE, as the baseline for this work, the University of Nottingham Centre for International ePortfolio Development staff has established a network of MIS and pedagogic contacts throughout the two counties and has created a knowledge base of systems in use in the region's colleges and HEIs.
- ***Desk top research*** to identify student relationship management systems used in the US and Australia. Identification of key individuals with whom to make contact to discuss this further, particularly in relation to determining their views and methods of assessing the delivery of business value.

4.2 CASE STUDIES AND OTHER CONTACTS WITH STUDENTS

We are conscious of the shifting expectations of students, and the diversification of the student body. Recognising the development of personalised and individualised solutions, three focus groups were held with students from the institutions represented on the team (Aston University, Manchester Metropolitan University, The University of Nottingham). These are learners with particular characteristics who have had different learner journeys, and have provided an outline of the views of students of the ways in which their institutions manage their relationships, the methods used and with whom relationships are being conducted.

Additional material has also been used from contact with students through other work that the team members are engaged in.

4.3 ANALYSIS AND MODELLING

The results of the web-based survey have been analysed, and the findings from interviews and case studies described against the original requirements of the JISC tender document, and analysed using systems thinking techniques.

4.4 SYSTEMS THINKING TECHNIQUES AND SYNTHESIS

Soft systems methodology and systems failures work are described in more detail below.

4.4.1 Soft Systems Methodology

The Soft Systems Methodology[1] was used to review the landscape holistically. It involved the following steps, using several iterations to deepen understanding:

- Describing the landscape in a 'rich picture' diagram. The purpose of the 'rich picture' was to capture and display information from the many stakeholder perspectives, and to remove any pre-conceived notions.
- Using the information in the 'rich picture', we pulled out five recurring and significant themes.
- The reviewers then generated four archetypal definitions of systems from the themes, defining several systems of interest. These were 'perfect world' not real world systems.
- Simple logical models for three of the systems of interest were then drawn up.
- Each model was compared with practice in the real world, using material from the case studies, focus groups, surveys and from the soft systems workshop.

Consideration of these comparisons helped to generate a range of key issues that can usefully be addressed and suggested actions that will help to realise stakeholder goals. The overall method helps us to gain insights about changes to the real world systems that may be beneficial.

Details of the methodology

The rich picture diagram was drawn by the project team during a workshop. Members of the team were encouraged to represent their experience, feelings, understanding and knowledge in diagrammatic, graphical and textual form on a large piece of paper, using unstructured and structured discussion and brainstorming techniques. This was supplemented by further discussions and notes.

All elements of the rich picture were reviewed intensively by a smaller team of soft systems practitioners to identify patterns. From these patterns five recurring and significant themes were extracted and formulated in detail with textual descriptions.

Analysis of the themes within the context of the wider information gathered from the research and coupled with the experience of the researchers suggested a number of archetypal systems that could usefully be investigated.

A concise system definition for each archetypal system was drawn up: a formal textual description of the system in plain English, specifying six attributes:

- Customers: People who use the system's outputs
- Actors: People who carry out the processes in the system

[1] For details of the Soft Systems Methodology, see Peter Checkland "Systems Thinking, Systems Practice".

- Transformation: The processes in the system
- Weltanschauung: The world view of the system
- Owners: The people who resource the system (and can therefore shut it down)
- Environment: Elements external to the system that have a key influence on it

For each system a logical model was developed. The logical models show the necessary sequence of steps that must be gone through for the system to function in an idealized 'perfect world' situation.

Each part of the logical models was then compared with circumstances in the real world, in order to yield insights into the situation. Material from the case studies was used at this stage, as well as material from our wider information gathering exercise. It is recognized that this work is normally carried out in relation to a single real world system, and the team had to be careful to evidence its findings from the rich picture and case studies, so that introduction of the team's own pre-conceptions could be avoided.

The outputs are presented in Appendix 7, using a common template with headings for:

Theme

System Definition

System attributes

Logical model

Comparison with the real world

Issues suggested by this work are given in the soft systems outputs section in the main body of the report.

4.4.2 Systems failures work

The "systems failures" work uses techniques drawn from "Understanding Systems Failures"[2], techniques that

> *…can be used for repairing the systems that have yielded failure, can assist in forecasting failure and finally can help prevent future failure.*
>
> *"Understanding Systems Failures", p2*

This is not to suggest that institutional systems have currently yielded failure, we are more properly seeking to avoid failure in the future and to gain a better understanding of the current situation.

The "systems failures" work involves taking specific generic systems models and comparing real world examples with the textbook generic version, the comparisons yielding insights into why the real world system might not work as desired. The first model used is the formal systems one; other relevant comparator models include:

[2] "Understanding Systems Failures" (Victor Bignell and Joyce Fortune, Manchester University Press in association with the Open University)

Communications – ubiquitous as a problem area in many systems, communications is reported as an issue throughout our work. However, this model requires a detailed investigation of particular examples of communications in specific contexts, and as the research involves only brief outline case studies, there is insufficient detail to carry out this comparison.

Control – all systems need some form of control, in order for the outputs from the system to reach or maintain the desired state. As we are considering relationship management, some form of control is implied.

Human factors: "allocation of function" – this is one of many human factors models most of which are not relevant to our subject. This model is highly relevant, because our focus is on the use of ICT within relationship management systems. Under this comparator model we examine the allocation of functions between people and computer systems, using a general list showing the relative advantages of people and electronic or other equipment.

The purpose of all these comparator models is to shed light on the system in question, so that we can understand it better.

5 DESCRIPTIONS OF THE STUDENT LIFECYCLE

There are a number of different definitions of the student lifecycle in use in different contexts. They are valid in accordance with the focus of their particular work. Those with a wider focus have fewer states, whereas those with a narrow focus have more, because greater differentiation of function appears as research moves closer to the point of delivery.

From SPA[3], 'pre-entry impacts, the applicant experience':

- Pre-application
- Application (up to submission)
- Post–application (admissions decision-making; feedback)
- Transition (after offers made, up to induction)

From ADoM (Admissions Domain Map)[4], inspired by HILDA (High Level Domain Architecture for HE)[5]:

- Learner aspiring (widening participation)
- Learner aspiring (FE college)
- Learner aspiring (mature)
- Learner aspiring (secondary school)
- Learner applicant (started)
- Learner applicant (awaiting reference)
- Learner applicant (submitted)
- Learner applicant (offered)
- Learner applicant (declined)
- Learner applicant (rejected)
- Learner applicant (accepted)
- Learner applicant (confirmed)
- Learner student

For the purposes of this study, the lifecycle stages were defined according to broad functions carried out within HEIs, which might be managed by different organisational units, and supported by distinct processes. These stages then informed the questions included in the web survey (APPENDIX 1).

- Pre-application
- Application
- Pre-registration
- Registration
- Induction
- Teaching and learning processes
- Pastoral care
- Employability and careers services
- Graduation
- Alumni processes
- Marketing

[3] Supporting Professionalism in Admissions Project www.spa.ac.uk

[4] JISC funded project: http://www.nottingham.ac.uk/eportfolio/ADoM/

[5] JISC funded project (now completed): http://www.jisc.ac.uk/whatwedo/programmes/programme_jos/project_hilda.aspx

However, the journeys undertaken by students[6] through these stages do vary according to student or *learner type*, which will result in different types of relationship building and contact with their institutions.

Identification of 'learner type': It was agreed that for many institutions the standard school or college leaver at age 18 still provides the core business of an institution. However, changes in funding arrangements, government policies and types of courses have attracted an increasingly diverse student body, each with different needs and who may have less linear or straightforward student experiences.

The main 'learner types' identified for the purposes of this study are:

1 The standard school/college leaver

2 Those whose entry to higher or further education was through the accreditation of prior learning, and who may receive credit for parts of programmes, qualifications or work experience gained elsewhere

3 People in full time employment undertaking part-time study directly related to their work, for example Foundation Degrees or Continuous Professional Development , who may be undertaking their study as a requirement of their employment

4 Students from outside the UK

5 Adult learners, particularly those gaining entry to undergraduate study in higher education through an Access route

6 Students progressing from FE to HE in the same, or closely related, institution

The work identified that there are key points in a student's journey where their institution needs to ensure a secure relationship to ensure progression of the student. These student decision points are well defined during the aspiration raising, pre-application and application phases, but are more complex and difficult to define post-enrolment, when a student may be in contact with many parts of an institution. At each point in the process, an applicant, or student could decide that he or she wishes to discard from their consideration, or leave an institution, and to ensure that these potential 'exit points' do not occur, an institution's relationship management activities take place.

[6] See appendix 2

Figure 1:
Example of potential exit points during the application process:

- Enquiry

  Contact/exit point
- Application

  Contact/exit point
- Decision

  Contact/exit point
- Acceptance

  Contact/exit point
- Registration

Figure 2: Expected interactions at each stage of the student lifecycle:

Lifecycle stage	**Example interactions**
Pre-application	Provision of website information about study opportunities and lifestyle facilities Visit from a member of staff or student of the institution Face to face interaction at higher education fairs Identification of student through gifted and talented streams and subsequent interaction through summer schools, masterclasses, widening participation access schemes, tutoring etc Fulfilment of literature requests: prospectuses, course information Attendance at open days Email response to questions
Application	Use of electronic application forms Acknowledgement of application Information on progress of application Invitations and attendance at applicant visit days or interviews/auditions Provision of additional information about course of study, school/department, sources of funding Rejection of the application Making of an offer Acceptance/decline of an offer by a studentEmail response to questions
Pre-registration	Provision of further information about the school/department/course of study Application for and offer of accommodation Access to chat room facilities with other students with offers Provision of instructions for registration, induction and access to university facilities such as library and sports. Provision of pre-entry log-ins to student portals
Registration	Confirmation of personal details of students, including qualifications held Collection of agreement to abide by university rules and regulations Enrolment on optional modules Provision of log-ins to access university communication facilities, portals, and so on Payment of fees Receipt of student loan and institution scholarship/bursary support
Induction	Welcome and orientation events for familiarisation with university

	environment, expectations of the student experience and social connections with staff and other students Assessment of learning needs Introductions to study methods and skills
Teaching and learning	Direct contact with staff through formal and informal study opportunities Access to e-learning environments Feedback on formative and summative assessments Access to learning support Personal tutor process
Pastoral care	Use of personal tutor for pastoral support Provision of personal support through student advice centres, counselling and occupational health services
Employability and careers services	Access to facilities provided by careers services: employability skills, volunteering opportunities, practical advisory sessions on interview skills, CV writing Access to schemes which provide opportunities to gain employability skills Access to industrial experience opportunities
Graduation	Collation of academic results Preparation of transcripts and certificates Invitations to and attendance at graduation events
Alumni	Invitations to and attendance at alumni events Requests to donate to university development campaigns, e.g. scholarships Alumni newsletters Tracking of career progress
Post-graduation marketing	Use of career tracking information to target marketing information about postgraduate and continuous professional development opportunities.

6 RESULTS OF THE WEB-BASED SURVEY

6.1 GENERAL FINDINGS

Across the student lifecycle, a wide range of different software products are in use, however the most commonly used system is SITS. SITS users tend to use SITS across the full student lifecycle from pre-application to alumni and including finance, although different systems are frequently cited for functions such as the library, alumni management, timetabling and finance. Banner and Campus Solutions also offer full-lifecycle integration, but generally have been introduced within the last five years or so. Many also have in-house systems which have been developed over a number of years.

A combination of commercial products and in-house are used by many, for real reasons:

> *'Most third party systems require some level of in-house enhancement in order to satisfy business process requirements in an increasingly complex business environment. This is especially true of supplied system links (eg between student and finance systems) as they are always based on trivially simplistic models. They rarely work satisfactorily.'*

Four institutions reported that they were intending fully replacing their student system in the next couple of years. Others were developing new functions which often focussed around improving communication with applicants and students, e.g. Implementation of customer relationship management software systems, development of portals.

One institution described how their in-house system is constantly being developed:

> *'In terms of future plans, there is constant change and development of the system support, partly in response to external requirements e.g. to take account of the various national legislatures' rules for student financial support and partly in response to University strategic initiatives. There is currently a strong focus on improvements to student support.'*

Comments were often received about difficulties of adapting off the shelf products to particular circumstances, and this is particularly acute where systems bought from the US have to be adapted for UK education business processes and statutory requirements. The result is often that powerful and useful functionality is placed on 'wish lists', while basic processing requirements are prioritised, and that it is sometimes years before work begins on those facilities.

> *'As we have just implemented a new Student System, it is difficult to judge Usability and Satisfaction. We have derived significant benefits from the new system but there are still areas of development and issue resolution, so it is difficult to judge the situation in steady state. As this is a US system, there have been significant issues with adapting the system for the UK market (additional software to link to UCAS, HESA and SLC has been unreliable to date). However, it is true to say that the software house have taken on board our concerns and are now producing functionality in the core product which will allow the system to work in the UK market. This will be available for the 2008/09 cycle so is as yet untested.'*

A range of comments were made about the ways in which institutions are using their systems, and how well they feel that they are meeting business need.

6.2 RESPONDENTS

The survey was distributed to 155 members of AHUA, and FE colleges that were partners of consortium members. 40 institutions responded to the survey, and most of the respondents were administrative managers such as the Registrar or Academic Registrar. These institutions represent a good spread of size and type of institution: 9 Russell Group, 4 1994 Group, 11 University Alliance, 4 Million+ Group, 11 other or no affiliation. 33 offered HE provision only, 6 HE and FE, 1 FE only. The sizes of institutions ranged from relatively small (~2,500 student FTEs) to very large (>35,000 student FTEs).

It is possible that the survey answers were skewed towards those with a high level of understanding of student relationship management or those who perceived that they had 'good' systems. We attempted to validate our survey against the latest UCISA Computer Information System survey (2007), by comparing the most popular systems for student records systems with answers to our survey in relation to registration systems. Both SITS and Banner systems had approximately the same proportion of institutions:

Figure 3: Comparison of SRM survey with UCISA CIS survey respondents

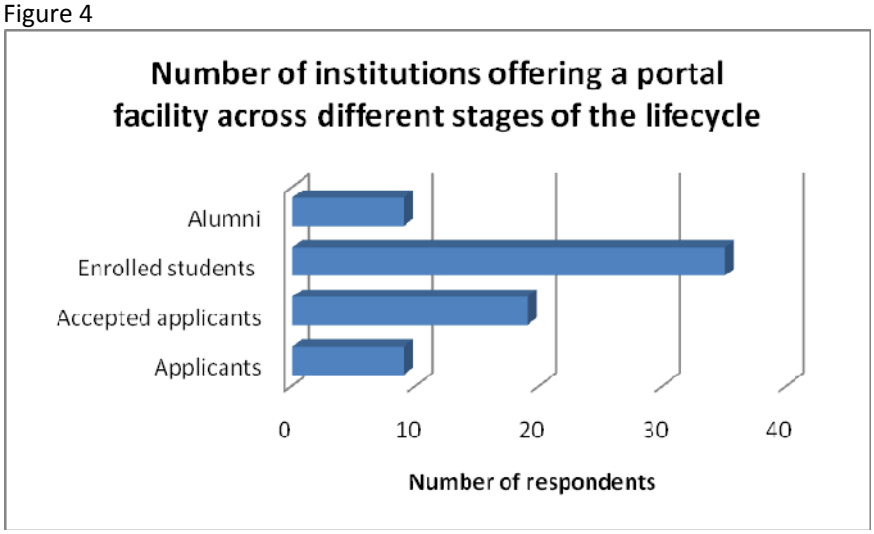
	SRM Survey	UCISA CIS survey (2007)
SITS	23 of 40 respondents	44 of 91 respondents
Banner	3 of 40 respondents	12 of 91 respondents

This brief analysis suggests that our survey was broadly representative.

6.3 USE OF PORTALS

35 institutions use a portal of some kind to communicate with applicants, students or alumni. The numbers granting access to information via a portal changes through the lifecycle:

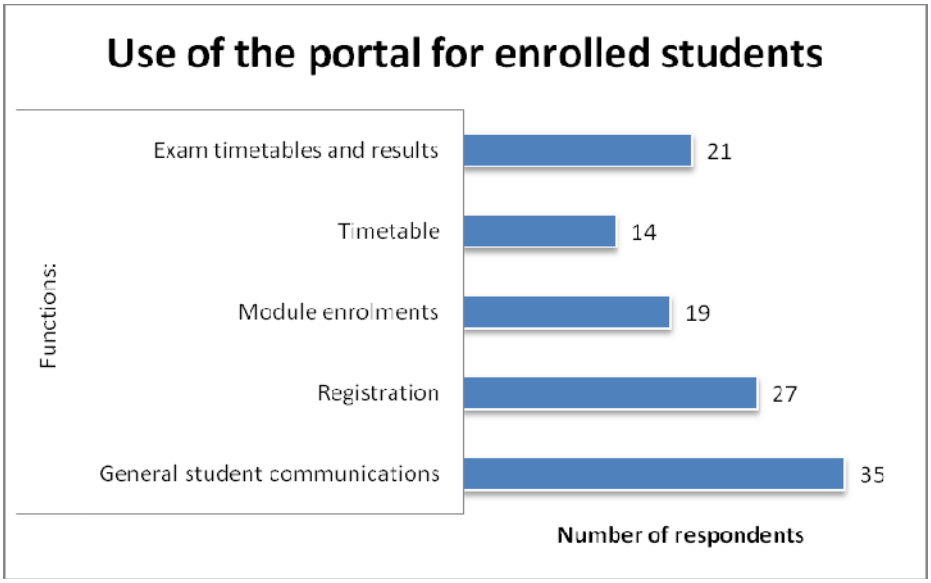
Figure 4



Portals were described as being used to meet a wide range of information needs of students: access to course handbooks, unit handbooks, course-related or academic support information, e-mail,

student/staff search, university news, personal links, bookmarks, view present/past programmes and units, links to careers advice, link to STA travel agency, library search, library loans and renewals, purchase print credits, cash transactions.

Figure 5: Use of the portal for enrolled students



6.4 TOP THREE SYSTEMS IN USE AT DIFFERENT STAGES OF THE STUDENT LIFECYCLE *NB where an institution gave Microsoft Excel or Access as the system in use, these were counted as the system having been developed 'in-house'.*

Figure 6:

Student lifecycle stage	Functional sub-stage	Top three systems in use where more than one institution uses a system
Pre-application	Enquiry management	SITS (15) In-house system (6) Hobsons EMT Connect (4) No response or n/a (8)
Application	Electronic application form	SITS (14) In-house systems (8) Banner (2) None or no response (9)
	Application administration	SITS (23) In-house systems (5) Banner (3) No response or n/a (1)
Registration	Registration/enrolment process	SITS (23) In-house systems (8) Banner (2) Agresso (2) No response or n/a (1)
Academic programme management	Module/course enrolment	SITS (18) In-house system (11) Banner (2) No response or n/a (3)

	Timetabling	Syllabus + (21) Celcat timetabler(6) Serco CIMIS (5) No response or n/a (2)
	Examinations	SITS (15) In-house system (9) Syllabus + (4) No response or n/a (7)
Accommodation		In-house system (8) PAMS Occam (7) Qinetics Hospitality Management (6) No response or n/a (12)
Library		TALIS (10) Millennium (6) Aleph (4) No response or n/a (8)
Graduation processes	Ceremony and event management	In-house (15) SITS (13) No response or n/a (8)
Postgraduation activities	Alumni management	Raiser's Edge (17) In-house (5) SITS (4) No response or n/a (8)

6.5 SATISFACTION WITH AND USABILITY OF SYSTEMS

As well as information about the systems that they were using, the survey asked how well the systems in use are meeting business need, and the perceptions of users of the system. Also of interest was the ease with which data could be transferred between systems and again users were asked to rate their systems at each stage of the student lifecycle.

The questions on 'usability' and 'satisfaction' asked for a rating to be provided on how easy the software is to use, and how satisfied the institution is that it is meeting business need, as follows:

USABILITY	*5*	*Excellent, users find the system very easy to use, and require little support in its use*
	4	*Good, users generally find the system easy to use, and require some support in its use*
	3	*Quite good, users find some aspects of the system easy to use, but some functions are more difficult and require support*
	2	*Difficult, users find many aspects of the system difficult to use, and need considerable support in its use*
	1	*Very difficult, requires very experienced users and often with considerable technical support*
SATISFACTION	*5*	*Extremely satisfied, the system supports this business process well*
	4	*Satisfied, the system supports most of this business process well*
	3	*Quite satisfied, the system supports some parts of this business process well, but others less well*
	2	*Moderately unsatisfied, the system supports only some parts of this business process*
	1	*Unsatisfied, the system provides inadequate support for this business process*

EASE OF DATA EXCHANGE

0	*Not known*
5	*Yes, very easily*
4	*Yes, easily*
3	*Yes, but with some effort*
2	*Only with difficulty*
1	No

In a selection of key processes the top two systems in use were compared for perceptions of usability and satisfaction.

6.5.1 Administrative systems

The most frequently used system across the student lifecycle is SITS with 23 of the 40 respondents using it across the range of student administrative functions. Some institutions turn to alternatives for some elements of the student lifecycle either replacing SITS for that particular function, or in conjunction with it. Some institutions are reporting the use of CRM systems during the pre-application phase.

***Electronic application form*:**

The two most frequently used systems are SITS and in-house developed systems, with 6 institutions reporting that they did not have this facility, and three no responses. Those using SITS reported that they had used the system from between 13 years and six months, although whether the electronic application facility had been available during these periods was unclear. Those who had developed in-house systems had done so relatively recently, probably in response to changing behaviour and expectations of applicants, especially at postgraduate level. Having already experienced fully electronic application processes through UCAS at undergraduate level, many applicants would find a purely paper based system unusual.

With regards to the usability of SITS, the range of ratings was from 5 to 2, hence virtually across the full range from excellent and very easy to use, to difficult with users requiring considerable support in its use. However, the average of the responses was 3.5, with a median and mode of 3. Satisfaction with the SITS support of this business process was slightly higher, with ratings averaged at 3.6 with a median and mode of 4. Many had only had the system for around 2 years, but there were examples of those who had used the system for longer, reporting higher levels of both usability and satisfaction. Although a smaller sample, the in-house users had a narrower range of 4 to 2 for usability, and slightly lower average ratings for both usability and satisfaction, although the mode for satisfaction was 4.

In summary, although there were widely different opinions of SITS between users, users were more likely to allocate SITS top marks more frequently and showed higher levels of satisfaction with the system for business processes, but less for usability, whereas in-house systems were rated more frequently as being easy to use, but less satisfactory in respect of delivering business process.

One of the main functions of an electronic application facility will be to exchange data between it and other systems, and in that respect in-house systems received a slightly higher rating than SITS.

Admissions process:
Again SITS was the most frequently used system with 23 users, and in-house the second with 5 users.

There were high ratings for both satisfaction and usability for SITS and in-house systems, with slightly higher average ratings being seen in the in-house systems, although median and mode ratings for usability and satisfaction with both were 4.

Transfer of data was also rated well for both, being given a rating of 4.

Registration processes:
SITS was again the dominant system here (23), followed by in-house systems with 8 users.

In-house systems received higher ratings for data exchange than SITS, with an average of 4.8 and the median rating being given as 5. Similar to the admissions process, in house systems tended to rate slightly higher for usability compared with SITS, but average satisfaction SITS was higher at 3.9 compared with 3.6 for in-house systems.

***Examination administration*:**
A broader range of systems are in use for examination administration, and many SITS users were reporting the use of additional systems such as Syllabus+, Agresso and Celcat. As with other functions, SITS remained the most frequently used system, followed by in-house developed systems. Both tended to receive 3's for both usability and satisfaction, although on average the in-house systems were rated slightly more highly.

Data exchange will be important where more than one system is in use, and ratings of 3 were most frequently given to SITS, whereas other systems (Oracle Student System, ProSolution) were given the top rating of 5.

Alongside the examination administration systems, institutions use a range of methods to deliver results to students, with use of the portal and VLE systems such as Blackboard.

***Alumni management*:**
Reflecting that the management of Alumni is often carried out as a separate function away from the main student systems and in a separate organisational unit, fewer examples of the use of SITS were reported but many more specific software systems were reported, with the most popular being the Blackbaud product: Raiser's Edge. This had been available in institutions for a relatively long time, the range being 3 to 15 years, with the average being over 9 years. Although two users gave ratings of 5 for both usability and satisfaction, the most commonly allocated rating was 3 for both. A similar pattern was seen for SITS users.

6.5.2 Academic management

Timetabling
The majority of respondents used a separate system for timetabling. The overwhelmingly most frequent is the Scientia Syllabus+ software, followed by the Celcat timetable software. Many institutions had been using these for a long time, with the majority having used Syllabus+ for 7 years of more.

Ratings on satisfaction of Syllabus+'s support for the business process was high, with most giving it a rating of 4, with only two responders giving it a 2. Usability was also most frequently rated at 4, with only one person giving rating of 2. Transferability of data scores varied, with the most common response being 3.

Amongst the smaller Celcat sample, the ratings provided were slightly lower than those for Syllabus+ although one responder gave 5's for both usability and satisfaction, but the others most frequently rating 3 satisfaction, with two 4s for usability. Again transferability of data was rated 3 overall.

Library systems

Specific library packages are also in use in the responding institutions. TALIS being used for a considerable length of time, up to 20 years, in some of the institutions. Only one reported that it had only recently been installed. Usability, satisfaction and transferability of data was rated 3 most frequently by responders, with one giving 2's, but no 5's being reported.

The second most common system, Millenium, had been used for slightly less time – an average of 6 years. Ratings for this were slightly higher on usability and satisfaction with 4's being most commonly given on usability, and 3's on satisfaction. However transferability of data appears to be a problem with most people rating this at 2, although one person gave a very low rating of 1.

7 PERCEPTIONS OF INSTITUTION STAFF ABOUT BUSINESS BENEFIT DERIVED FROM SRM SYSTEMS

Through the survey and subsequent conversations, colleagues within HEIs described a number of drivers behind choosing and implementing particular systems, and the business benefits that the systems were intended to bring:

- ***Competition*** – despite the public perception of elitism in the HE sector driven by concentration by the press on selective courses and institution, HE is a buyer's market. Each year all programmes in all institutions compete to fill places, but only a small minority compete to recruit the 'best' students. Competition is increasingly focused on the 'student experience', and services provided to students. Building a relationship with potential students and their parents and advisors at an early stage is seen as essential to institutional success by many. The use of CRM systems and those which allow easy and tailored communications to particular audiences is increasing, but at present in operation in a minority of cases.
- ***Understanding of market and buyer behaviour*** – student systems are a rich source of data to support an institution's understanding of their market, the characteristics of applicant and student cohorts, the popularity of particular programmes, and monitoring of the success of campaigns. This data can then be used to develop targeted marketing campaigns in the future.
- ***Efficiency*** – many senior managers believe that some processes can be automated and made more efficient as a result, removing the need for staff to be involved in repetitive low level activities and freeing up time for more valuable work, whilst for example increasing the speed of turnaround on admissions decisions, or improving the accuracy of record keeping.
- ***A general belief that use of an information system can help improve the student experience*** – by allowing institutions to forge and maintain better relationships with their 'customers', and allow useful interactions to occur (provision of information through portals, provide useful instructions and information according to the stage in the lifecycle a student is at), and provide a better learning experience (tracking of progress to support formative assessment and feedback, catch those students in need of additional support),
- ***Cost*** – by automating some processes it frees up staff time to concentrate on other more valuable activities (eg teaching, research, other personalised relationship management activities)
- ***New external pressures, particularly legislation and government requirements***. These occur frequently, and a current example is the introduction by the Home Office of the Points Based Immigration System. This is stimulating process redesign in institutions to streamline international student admissions processes and improve CRM. The aim is to speed up admissions decision making and ensure the fastest possible turnaround time from receipt of application to an offer, and then to improve the rate and speed of acceptances of offer so that a Certificate of Sponsorship (which will provide the international student with bona fides to a visa officer) can be generated.

Many users do feel that these desires are borne out in practice, but there are many caveats, such as the significant investment in electronic systems and staff time to develop them and learn to use them. Not much evidence was found of overall reduction in costs as a result of the implementation of systems.

The following are a selection of illustrative comments received:

> *'In general we are content with our software system, which fulfils our current and foreseeable needs.'*

'The various systems outlined above support elements of the business process well however these tend to have developed relatively in isolation and the need to transfer data between systems usually requires bespoke work by our C&IT department as data definitions within each system differ greatly. This has been recognised by our Information Systems Development Group and 2 new projects looking at 'Data Definitions' and 'Identity Management' as well as an ongoing project on Management Information are being tasked with addressing this issue. There are also intentions to roll out a Change Management protocol to all system managers as these interdependencies have become much more complex over time. Current Student Portal technology is being scoped to be rolled out to Applicants during 2008/9.'

'The … system referred to above is [our] Electronic Course and Student Information System. This is actually the primary element of an integrated set of in-house systems covering several of the areas covered in part 2. For simplicity I have used the same title for all sub-systems. [This] is a classic SQL based system augmented by an html web portal called PIP. It is well regarded in the University and by external measures, such as QAA institutional and subject audits. It is economic to run and develop and adaptable to changing needs. The net effect is probably to make the systems environment … somewhat unusual. While [it] is by no means perfect, it does provide an effective framework for efficient, integrated business processes, which can embrace, as far as possible or justifiable, those aspects executed by commercial packaged software.'

A few reported that they are reviewing their fairly new systems:

'We are currently in the second year of running a new student records system, there are a number of initiatives over the next year, to review and standardise a number of business processes. It is anticipated that a number of benefits will come from this. Main systems problems relate to lack of validation in student records. Data exchange is currently by traditional batch interfaces. Web based provision, especially student self service, is still in its infancy.'

8 PERCEPTIONS OF STUDENTS ABOUT RELATIONSHIP MANAGEMENT

8.1 OUTCOMES FROM FOCUS GROUP WORK

Three focus groups were held with students who were likely to have experienced student journeys that were identified during the project team's meeting to pool knowledge and experience.

The three focus groups comprised:

1. Home undergraduate students – 6 students, all final year, standard entrants, i.e. qualifications on entry were A-level or International Baccalaureate
2. Non-EU international postgraduate students – 4 students (3 masters degree students, 1 PhD student), all over 21. Qualifications on entry bachelors degree or masters degree.
3. Foundation degree students – 15 students. All mature, studying part time. Qualifications on entry varied from O-levels to Masters degree.

8.1.1 Awareness of the institution:

The undergraduates interviewed each claimed to have become aware of the institution at around age 16, often in conversation with other students, or through a careers talk at school. One student was recommended to attend a Sutton Trust Summer School by their teacher, which they subsequently did.

The overseas postgraduates had a different experience, searching website lists and looking for 'competitive English universities'. The internet was the main source of information, both the British Council's UK Education website and those of individual institutions.

The experience for adult learners was very different. All but one of the participants were enrolled on the Foundation Degree programme as a condition of their employment. The one enrolled to improve their own prospects and was already employed in the industry sector covered by the programme. All of the students were first made aware of the University and its role in providing work-based learning as part of their training, when they were offered their job.

8.1.2 Choosing a programme:

The undergraduate students used a wide range of sources to help the decision to apply for their chosen programme at this university. Three stated that they were very keen on the subject that they were now studying. One chose the institution rather than the course. Teachers and parents were helpful in making the choice. A range of sources of information was used: prospectuses, open days, The Times Education Guide, visits to universities, direct contact with teaching staff. One, who had attended the Summer School, was highly influenced by that experience, and stated that the Summer School 'made me want to come'. One student did not have any contact with the University, but used the website to look at course details and outline.

The postgraduate students chose their programmes as they related to their former studies or employment. Ranking of the institution in comparison with others was influential, and using on-line sources of information was mentioned most frequently, as were the opinions of friends, teachers and work colleagues.

The adult learners had their programme chosen by their employers.

8.1.3 The nature of first contact with the institution and perceptions of how that was handled:
The undergraduate students made the first contact themselves, either through their own initiative or through being advised to. Requests for prospectuses over the internet were made, and events attended. Although requesting the prospectus was frequently the first contact, this was felt to be impersonal, whereas submitting a UCAS form was felt to be more personal. One was pleased to have met a lecturer from the University at their school, and was 'warmly greeted'.

The internet prospectus request services were felt to be very good, especially when accompanied by an encouraging letter. One felt that 1-1 contact at a university fair was initially disappointing, but improved when the member of staff discovered what programme the student was currently studying (IB). Face to face contact was also welcomed by the student who attended the Sutton Trust Summer School, as well as the experience of having attended the university: 'When I came to Uni later on it felt like I had already been there and knew what it was like'.

The postgraduate students were from overseas and so the nature of the first contact with the university was somewhat different – using British Council higher education exhibitions to meet university staff, using the help of a university agent. Contacts were also made by email, as well as a request for the prospectus over the internet .

The students felt positive about the way that their initial contact had been handled. The student who had met a member of university staff at the British Council exhibition was impressed by that person, and this meeting had made her change her mind from her original choice institution. The website also impressed her, and when she had emailed the school, she had received a prompt response which contrasted favourably with her experience with her original choice institution. Prompt attention and fast responses to applications were also considered favourably. One stated that personal support from, and direct contact with, their intended supervisor were excellent. One person's first experience of the university was on an 8 week pre-sessional English language course.

The adult learners were initially contacted by the University and their partner colleges where teaching would take place. The initial contact was perceived well and the students were sent all of the relevant information and given a 'contact' person who was available to answer all their questions. Their first visit to the campus involved a tour of all the facilities, which was perceived to be extremely helpful. For all but two of the students the tour of the University was their first ever contact with an institution of higher education. The visit allayed their fears of studying. Those who had previously studied at a college compared the facilities at the university with the college and were impressed.

> ***Issue**: How to ensure that first contact is personalised and of high quality throughout the institution.*

> ***Issue**: Institution and other websites are influential in raising awareness of institutions and programmes, and in prompting students to make the first contact and seek further information. They are often therefore the first link in the chain, after personal recommendation. Institutions need to ensure the appropriateness of their website in meeting the information needs of prospective students, and ensure its currency.*

8.1.4 How did the University handle the application and registration process?

The undergraduate students considered that the letters from the University are very polite and encouraging, but realised that they had to remain neutral and formal because ultimately, they may not accept your application. Those who had personal contact through an interview and other contact valued that. They considered however that the information from UCAS at results time was the 'definitive stuff'. After their places were confirmed, students were excited by the communications and information received. One student did not receive a pack of information, and felt seriously disoriented in week 1 as a result. This university provides access to the university website for more letters and detail and also a chat facility providing a link to other people who would be living in the same accommodation. Of the other five students only one had used the chat facility. Registration was done in person, rather than on-line, and the students felt that this was not a warm welcome as it was like a production line and confusing.

The postgraduate students cited a less positive experience. The on-line application process was considered to be good, with swift responses by email followed up by official letters of confirmation. The masters students received a pack of information, a map and a handbook. The research student had not received these things and was feeling somewhat lost. Information on registration was provided on paper at the university school at a welcome meeting. Three of the students had experienced delays in obtaining log-ins for email and so on, and were unhappy about this.

> ***Issue**: Ensuring that every student receives the information that they need prior to registration and induction.*

The application process was handled by the employers for the adult learners, so they were not able to comment on it. Some felt that the registration process was slightly disorganised, which reflected the fact that they were required to register both at a college and the university. However, once on the campus the registration process went with relative ease from their perspective. Arrangements were made for the students to fill out the necessary forms in a classroom environment where help was on hand should they require it.

> ***Issue**: There is a tension between the need for mass application and registration processes and the need for a personal touch.*

8.1.5 Whilst studying how does the university communicate with you? What about? How frequently? Views on these

The undergraduate students described e-mails from the School, and stated that the School Office is good at keeping them informed. The school sends texts to let them know if a lecture is cancelled, and reminder emails when fees are due.

The student portal provides information about everything, and is felt to be very good. One student stated that they would be lost without it. They liked it because they have the choice of when to access it, rather than the university initiating contact with them.

There are 'messages of the day' for everyone, on the intranet every time someone logs-in, often about paying fees, sometimes about exam entry, etc.

Most communication is by email, and the comment was that there are too many emails. The danger is that they begin to be ignored. It was suggested that communication methods should change if

they don't want to bore the students, although some, e.g. about careers service events, or library books overdue were considered helpful.

Other communications were on paper: letters about hall fees, tuition fees, transcripts of examination results, module registration.

Students were concerned about the tone of communications about money, which they considered to be impersonal and give the impression that the university is chasing every last penny.

The postgraduate students had different experiences depending on the school to which they belonged. Schools communicate by noticeboards, appointments with staff, and the hard copy handbook. Welcome events in the school provided information on seminars and option choices, and provided more help than expected. However in a different school there was less contact with staff, and students there were expected to take the initiative and ask for help with academic work by email. The student portal was accessed regularly, as this had to be used to reach email, and to find information about funding.

The postgraduate students cited a range of university bodies with whom they were communicating: the International Office for information on finance and so on, within a hard copy welcome pack; student societies; postgraduate student association, students union and travel agencies.

There was a feeling that much university information is obtained informally through other students. Facebook is used as a communication tool with other students and provides information on social opportunities.

The subject of and method of communications varied, as it did with undergraduate students. Examination and other marks tended to be on paper, and then were later available on WebCT or the portal. Work-in-progress seminars for the PhD student provide good formative assessment and some feedback was also received by email.

Whilst the quality of communications was thought to be good, the general view was that there were too many e-mails and that about a third were irrelevant. One felt that there was too much information on the portal, which made it difficult to disentangle what he needed: in this case the supervisor was helping, acting as a filter to personalise it for the student. It was felt that the hard-copy handbook had very important information within it, but that this was not a very accessible mode of presentation and that the likelihood of students reading it was low. The comment was that when so much comes via email, something in hard copy like this is marginalised.

The adult students received communications from the University using email, noticeboards, the student portal, Blackboard and paper mail. As these students had unique circumstances, the methods of communication varied. Some had difficulties in accessing electronic communications at their workplace due to restrictions on website use. Bespoke arrangements were made for any students who could not access the electronic communication methods, traditional mail was used as a back up, and one student living in a remote part of Scotland on an island was contacted by telephone only.

The subjects of communications focused on timetable arrangements, curricula issues, registration and accommodation. Communications were perceived to be generally helpful. This group was

initially hesitant to contact the university, but now do feel that communication is possible as they have named people to contact and their enquiries are responded to reasonably quickly.

On the whole the quality of communication was considered to be high, and this group considered that they shared responsibility with the university for communication.

> ***Issue**: Portals are perceived as a good means of communication, because they represent a single starting point, and the student can choose when to access it. The system can carry large volumes of structured information, from which the student can choose the relevant sections.*

> ***Issue**: How to make the high quality approach more general throughout the institution?*

> ***Issue**: How to combine high volume communications with personal human contact and do this everywhere.*

8.1.6 Views on how well the University is managing its relationships

The undergraduate students categorised the different parts of the university that was forging relationships with them: the School/Department; the business side of the University; central services like Careers; student-driven services like Students Union and also the student-run societies.

School/Department: The School of these students was perceived as very friendly, had personal tutors, and the lecturers spoke to students when passing them in the corridor. One student whose option choices give him quite a bit of contact with another School said they were lucky, as the other School seemed to him quite different.

The business side of the University: is perceived as 'a big system' which rolls ahead under its own momentum, and is not in touch with the views and values of students. They would like to be able to communicate their views but don't know how to and would not expect them to count.

Central Services: such as Careers, are seen to be positive.

Student-led services: the students felt that the Students Union is meant to be an important channel of communication between the students and 'the University' in both directions, but that it was not really doing this job. One of the students interviewed had been running a student society based in his School and his means of communicating with students included: posters, Facebook, email, word-of-mouth, the website, letters to freshers. He would like access to his School's facility for texting students, which he perceived as very effective.

The postgraduate students agreed that they like the University very much and are glad to be there.

They suggested marks out of 10 for how it is managing its relationship with them and the four students gave four different marks. The lowest was 50:50, positive and negative, because that student felt that she was OK but that one of her friends wasn't, she marked the University at 6/10. The next lowest was the PhD student at 7/10. Then the other two were more positive and awarded 8/10 and 8.5/10.

The majority of adult students were very happy with the manner in which the University managed its relationships with them. The main issues raised centred on students' desire to have greater input from the University in terms of increased classroom time.

8.1.7 How could relationship management be better?

The undergraduate students felt that the portal was crucial and very good but could be even better. They suggested a much fuller coverage of University news on the portal, actual news, so that students could feel informed. All the news should be available, not just 4 selected items as at present, so that they could choose to read the increased number of items or not.

Other suggestions were:

- That students are consulted over major developments in such a way that the student body as a whole feels it has been consulted.

- That the tone of communications about money is changed. One suggestion was more use of the Finance tab on the portal to personalise these messages, for example make it red for the student who owes something.

They reported that ill feeling is generated by general messages such as: you can't graduate if you don't pay your library fines. Other suggestions, are that charges such fines etc are perceived as fair – printing for example is very expensive. Library fines for short loan books are considered to be very heavy, but it is seen as harsh to charge a student for a late book if no one has requested it.

The postgraduate students felt that they would like more communication, and of more appropriate kinds.

It was suggested that the International Office was very important, and that there be more interaction with the International Office while they are on their course, perhaps as a source of greater social contact and in the first weeks in providing student mentors in the first couple of weeks. They point out that there are always some international students who arrive 'late' and that they in particular would benefit significantly from a personal assessment of their information needs.

In terms of their Schools, they would like to gain more specific information, for example about and understanding of the roles of internal and external examiners, and suggested that Masters students be assigned personal tutors in the same way as undergraduates.

The mature student perceived the university to be a highly positive learning environment and all felt that it would be preferable for all teaching to be undertaken at the university rather than split between it and their appropriate college.

> ***Issue**: Perceptions are mostly good, but there are gaps in respect of some experiences and some areas; how does an institution make all its interactions uniformly good?*

> ***Issue**: Ensuring that information is appropriate and timely.*

8.2 MANCHESTER METROPOLITAN UNIVERSITY: MODEL OF THE LEARNER PROJECT[7]

'The Model of the Learner' project has been carried out by Liz Price, in the Faculty of Science and Engineering at Manchester Metropolitan University. The aim of the project is to evaluate, through questionnaire survey and follow-up focus-group discussions, how the current structure, practice and learning environment in the Faculty of Science and Engineering at MMU should be enhanced to support flexible, independent learning to develop independent, autonomous learners. The support for learning and the learning environment are all part of the building of relationships with students. As part of the project learners were asked many questions about their opinions on the importance of a range of issues, some of which have relevance here, for example those about their preferred learning styles and ways of dealing with questions, challenges and problems.

The responses reinforce the results of the focus group work carried out as part of this study: that students most value face to face relationships, but that electronic methods of communication are widely used and expected; and that students felt that improved feedback/communications/contact with staff would help improve their marks and learning experience.

Within the Model of the Learner project, when existing students were questioned about face to face and online learning: 81% of respondents like or generally like face to face learning and teaching, 41% like or generally like online learning and teaching.

The most popular ways of dealing with questions, challenges or problems for existing students are to meet with a tutor (rated within their top three by 61% of respondents), meet other students (rated within their top three by 53% of respondents), contacting a tutor by email or telephone (rated within their top three by 50% of respondents) and looking on the internet (rated within their top three by 49% of respondents).

Interestingly the most popular way that new students expect to deal with questions, challenges or problems are to meet with a tutor (rated within their top three by 76% of respondents), look on the internet (rated within their top three by 58% of respondents), or meet other students (rated within their top three by 55% of respondents). Contacting a tutor by email or phone was only cited by 33% of respondents within their top three.

8.3 CONCLUSIONS ABOUT THE PERCEPTION OF STUDENTS

The findings of the student focus group work and those of the Models of the Learner Project are similar in that they show that students value face to face relationships, but also expect to use electronic methods of communication widely. This also concurs with other recent work by JISC which has looked at the expectations and experiences of students using ICT in higher education[8]. This study concluded that: 'Students are comfortable using technology for the administration functions of their university, personal and social life (paying rent, using online timetable resources, booking out library

[7] Price, E.A.C. (2008) Flexi Learning: Model of the Learner. Faculty of Science and Engineering, Manchester Metropolitan University (unpublished report).

[8] Great Expectations of ICT: how higher education institutions are measuring up. June 2008, IPSOS Mori for JISC

books). Universities should take care, however, not to unwittingly discriminate against those who are less tech-savvy, both in teaching and in expectation of using administration systems, as these may also be the students who are the least financially well-off.'

9 OUTPUTS FROM THE SOFT SYSTEMS WORK

The following themes were drawn out of the rich picture and research materials:

- Improving the quality of the information used by staff who interact with students
- Tensions between cultures
- Personalisation vs the Big System
- Matching functionality with requirements
- Diversity of student body

The first three were chosen to take forward for further investigation. For the second theme, 'Tensions between cultures' it was decided to look at a system whose outputs might be negative, a system that would not be a deliberate construct, but would be a useful one to investigate.

The systems definitions were:

- A system to improve the accuracy, relevance and accessibility of information communicated to students by university staff at key points in the student lifecycle, for example enrolment.
- A system to create cultural barriers between different groups in a higher education institution.
- A system to relate the varied and possibly changing circumstances of highly diverse individual learners to the student lifecycle across one or more HEIs.

See Appendix 7 for details of the investigation.

9.1 ISSUES IDENTIFIED FROM THE SOFT SYSTEMS METHODOLOGY

A significant number of issues were identified during the soft systems work:

Issue: Staff training

Issue: IT – making all the relevant information available to staff and students in a predictable place.

Issue: Staff who answer enquiries from students need access to all the relevant information quickly. Some of this information is detailed material held in databases, some is "softer" information about the institution's services.

Issue: Ensuring the quality of information given to students, including accuracy, timeliness and relevance of each data item, especially in relation to the different circumstances of students.The quality of data about students is questioned, although certain software packages have a higher level of confidence than others. Is the data relevant to the processes? Is too much data collected?

Issue: Are our software packages the right ones for our business processes? Are our processes configured to the software, or is the software configured to the processes?

Issue: How do we provide students with targeted communications relevant to their individual circumstances through media that meet their individual requirements?

Institutions are keen to communicate with students. This can lead to excessive or inappropriate communication, leading to information overload[9] for students and potential communication failure.

Issue: Which channels of communication are appropriate, bearing in mind that many, but not all, students are Digital Natives[10]?

Issue: Students would like timely relevant formative feedback in teaching and learning. How to satisfy this requirement consistently?

Issue: How do we deliver process improvement?

Issue: How can our IT systems support process improvement strategies?

Issue: Can we improve the communications between different interest groups within the university, all of whom are engaged in student relationship management? Institutions have processes in place to cover each part of student lifecycle relationship management. However, many of these processes may be historical, may use inappropriate technology and may not be sufficiently joined up.

[9] See Glossary.

[10] See Glossary.

10 OUTPUT FROM THE SYSTEMS FAILURES WORK

The purpose of the "systems failures" work is to gain insights into the situation by constructing abstract models and comparing them with student relationship management models, drawing conclusions from differences between the two.

10.1 CONSTRUCTION OF A FORMAL SYSTEMS MODEL

As part of the "systems failures" work, a generic student lifecycle relationship management system was constructed. This activity used as its starting point a formal model of a "system that includes people", defined (briefly) as "a set of components put together for a purpose". The principal components of such a formal system are a decision-making sub-system, one or more processes, a performance monitoring sub-system that feeds back to the decision-making sub-system, and a range of more or less explicit information flows that link the components together.

The following diagrams (figures 7 and 8) show both the formal system model and the generic student lifecycle relationship management system model. The generic model is based on our research work, but is of necessity not particular to any HEI, and its features will not be replicated in totality in any specific example. We believe that this approach, while not necessarily academically rigorous, is a pragmatic one that supplies useful insights.

10.1.2 Description of the model and evidence

A key part of a systems thinking approach to problems is to take a holistic view. In this case we have set the student lifecycle relationship management system within a wider system, the higher education institution. This wider system designs, resources and legitimises its sub-systems and makes people involved in the sub-systems aware of what is required.

Not all the components in the wider environment that influence an HEI have been included. The main ones in respect of SRM seem to be funding body and government initiatives, which have been identified during our workshop as elements that attempt to steer HEIs and the direction of student relationship management. Inclusion of other elements in the environment might reduce the clarity of the model.

With a very few exceptions none of the institutions we have been in contact with had a well joined up student relationship management system or strategy, and this statement is reinforced by the results of our survey. As one comment put it:

> *"The various systems … support elements of the business process well, however these tend to have developed relatively in isolation and the need to transfer data between systems usually requires bespoke work by our […] department as data definitions within each system differ greatly."*

While all institutions have designed, resourced and implemented an enrolment system, for example, it is very rare for this enrolment system to be viewed as, or to function as, a sub-system of a wider student relationship management system. The nearest encounter with the latter is an example of enrolment set within a much wider recruitment, admissions and early retention strategy based on customer relationship management, though even this approach was restricted to UK full-time undergraduate provision.

Decision-making systems included many interested parties, some at the level of school, department or faculty, reflecting a decentralized service delivery model, some through central offices. We did not investigate decision-making systems at the most senior levels.

The institutional survey shows that IT systems do not always cover the entire student lifecycle. In many cases it is difficult to share data across the student lifecycle stages. Managers responsible for the specific processes at each stage have in general designed their activities and outputs around the requirements of that stage, rather than in the context of student relationship management as a whole. For example, we encountered comments such as

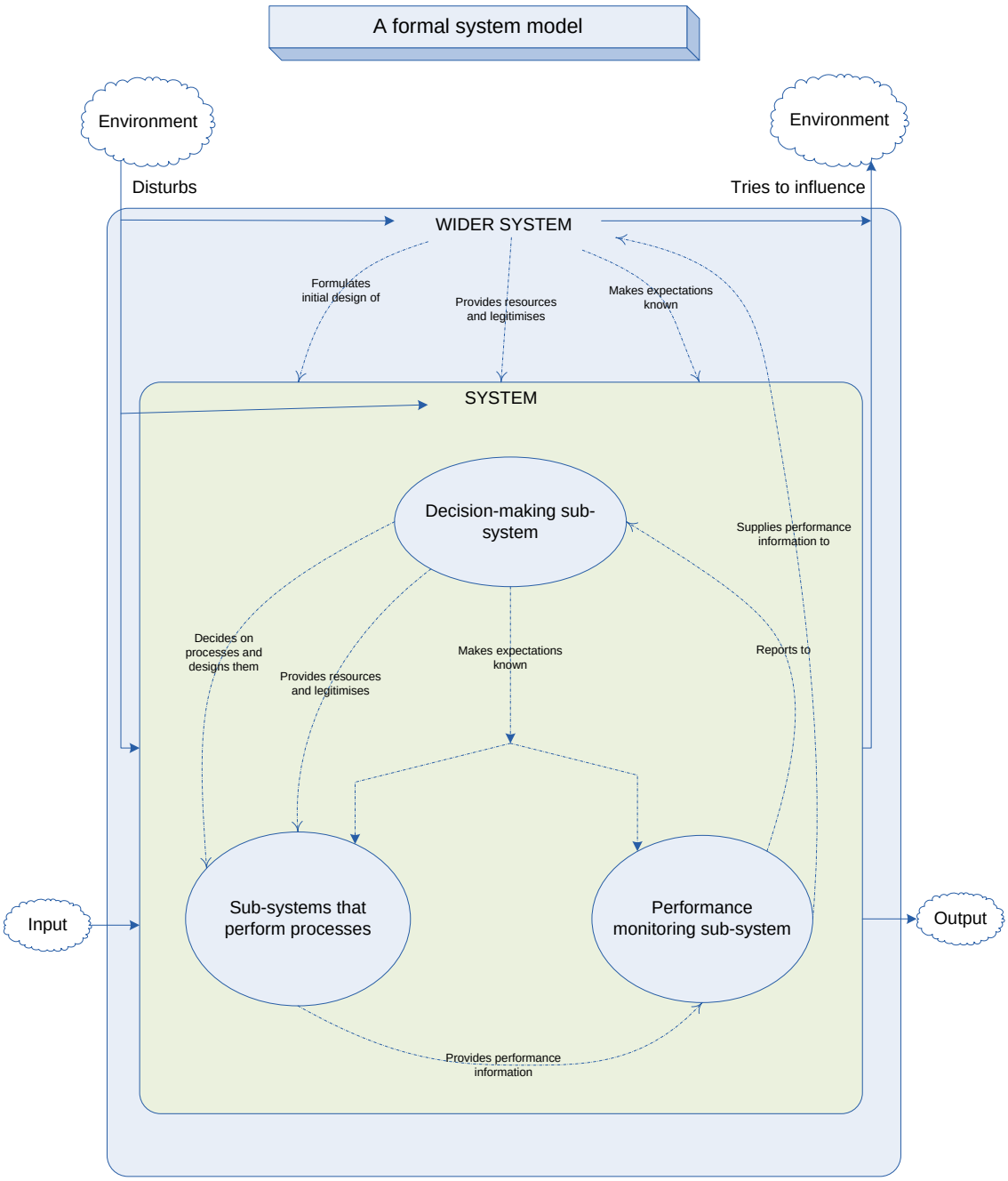
> *"Why is the Accommodation Office so unhelpful to students?"*
>
> *"When the student records are passed on [from Admissions], we can no longer look at them, so we can't make changes."*
>
> *Comments at university visits*

It is also common that Widening Participation initiatives are delivered via separate activities, using separate teams, with little or no articulation with applications processes. For these separate activities there would be no common approach to establishing and maintaining the relationship with individual learners. However, a cautionary caveat is necessary here, because we did find recognition in some institutions that a more joined up approach might be beneficial, and evidence of planning towards that goal:

> *"This has been recognised by our Information Systems Development Group and 2 new projects looking at 'Data Definitions' and 'Identity Management' as well as an ongoing project on Management Information are being tasked with addressing this issue. There are also intentions to roll out a Change Management protocol to all system managers as these interdependencies have become much more complex over time."*
>
> *Scottish university*

Each process relating to a stage in the student lifecycle will often have a monitoring system in place, so that changes can be effected. IT systems encountered had management reporting functions that permitted monitoring of the processes, as expected. However, monitoring was carried out and activities adjusted in accordance with the specific process rather than in relation to student relationship management per se. For example, several institutions with separate IT systems for pre-application enquiry fulfilment and for application processing were unable to provide compatible reports or to integrate data, so that these two processes were each managed in a quite distinct fashion.

Figure 7


A formal system model
Environment
Environment
Disturbs
Tries to influence
WIDER SYSTEM
Formulates initial design of
Provides resources and legitimises
Makes expectations known
SYSTEM
Decision-making sub-system
Supplies performance information to
Decides on processes and designs them
Provides resources and legitimises
Makes expectations known
Reports to
Input
Sub-systems that perform processes
Performance monitoring sub-system
Output
Provides performance information

10.1.2 Comparison of the abstract model of student lifecycle relationship management and the formal systems model

A comparison of the two models shows some distinctive differences:

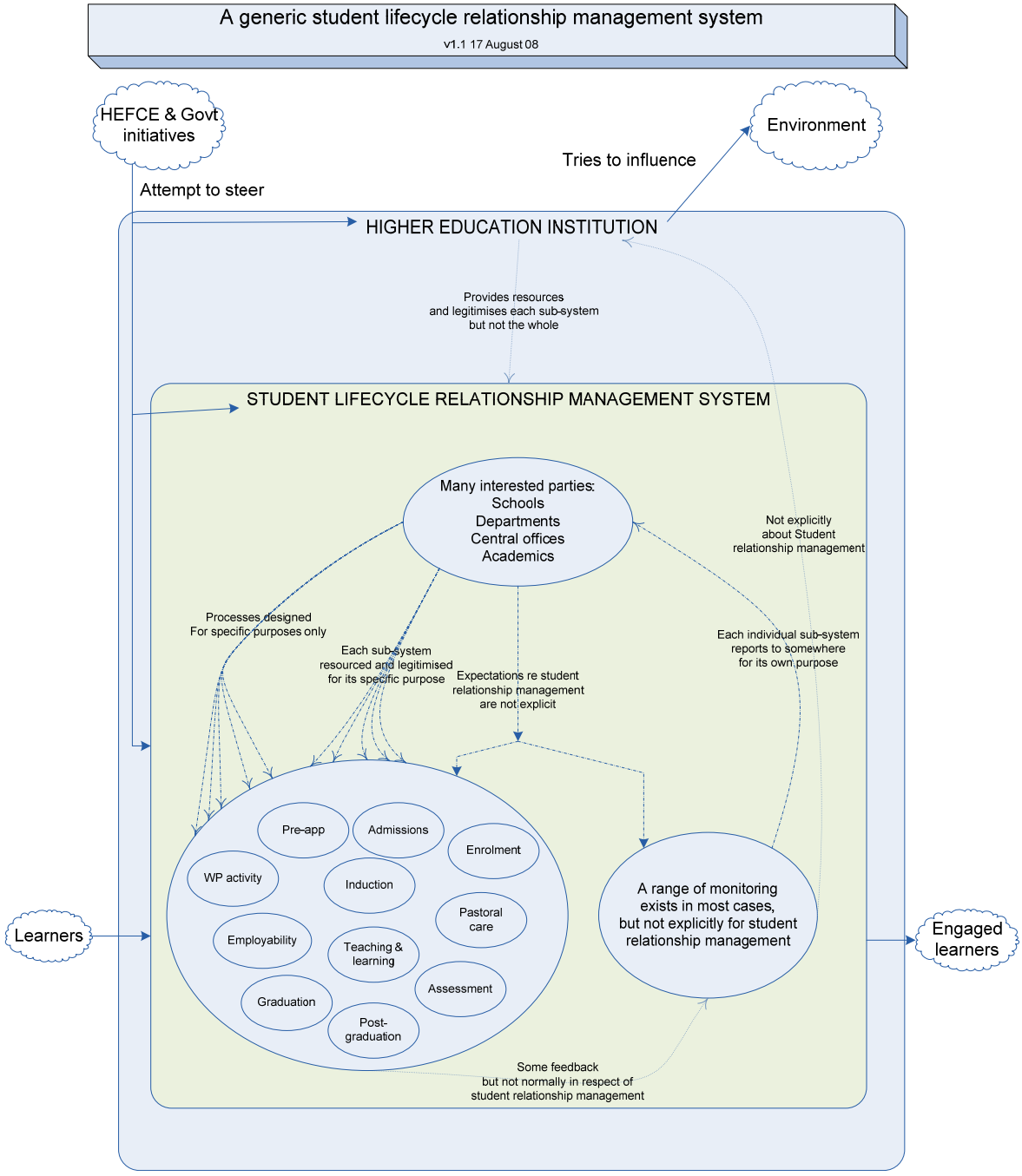
- The student lifecycle relationship management system is not well formulated; it consists instead of largely separate systems, designed for specific purposes, each of which has its own decision-making sub-system, information flows, processes and monitoring.
- The HEI only rarely resources and legitimises a 'student lifecycle relationship management system'. Instead it does so for component processes, such as admissions, teaching and learning (often via a VLE) or alumni relations. Only very rarely are these processes considered as a whole, so that typically a learner will have several different logins to a university system, or staff will use entirely different systems in their relationship with learners, dependent on the lifecycle state (applying, learning, postgraduation) or the type of learner (UK full time undergraduate, WP group, overseas research student, and so on). A co-coordinating and decision-making sub-system for student lifecycle relationship management is usually lacking.
- The previous point has a knock-on effect on the links between the decision-making sub-system and the process components. While information flows and links do exist, they are in the context of each individual process, not an integrated system. Perhaps the most important implication here is that the expectations in relation to student relationship management are not known at each point of contact. This encourages differences in the character and quality of each event in the relationship. For example the student may have an excellent experience during application and admissions, but this may not be matched in the institution's approach to teaching and learning, which may exhibit an entirely different style and quality.
- The same separation into distinct processes noted above permeates the performance monitoring sub-system area and the information flows into and out of it. This effect may depend on the size of the institution, the larger ones having more specialization and differentiation of processes; this may mean that larger institutions are able to cope more readily with the individual processes, gaining economies of scale, but are worse at the overall integration of student relationship management. This issue may need further investigation.
- Those involved in the components of student relationship management tend not to influence their environment in a coherent fashion with respect to student relationship management as a whole, but rather for their own particular interest. It is fairly typical, for example, for an institution to provide a high quality personalized electronic teaching and learning environment for students attending the university, but to provide only a very generic approach to giving information to pre-enrolment learners or to post-graduation contacts. While there may be very extensive information about module content and the choices available to students once they have been accepted and are engaged in selecting options within their programme, such information is not usually available when choosing the programme itself, and many institutions struggle to give the recommended level of information through entry requirements and Entry Profiles for admissions purposes. For example, to date about 67% of courses in the UCAS scheme have Entry Profiles, many of these not of first rate quality, against a target of 85% for September 2008 and 100% for September 2009.

10.1.3 Issues identified from the formal system model

Issue: Student relationship management is only rarely considered a holistic concept, leading to compartmentalisation of functions, processes and methods. This can lead to a fractured experience for students with very varying character and quality. It can also mean that data exchange between processes is inefficient or non-existent.

Issue: Monitoring of the student experience is similarly compartmentalised, making it difficult to co-ordinate process improvement, to gain economies of scale or to report on it in a holistic fashion.

Figure 8


A generic student lifecycle relationship management system
v1.1 17 August 08
HEFCE & Govt initiatives
Environment
Tries to influence
Attempt to steer
HIGHER EDUCATION INSTITUTION
Provides resources and legitimises each sub-system but not the whole
STUDENT LIFECYCLE RELATIONSHIP MANAGEMENT SYSTEM
Many interested parties:
Schools
Departments
Central offices
Academics
Not explicitly about Student relationship management
Processes designed For specific purposes only
Each sub-system resourced and legitimised for its specific purpose
Expectations re student relationship management are not explicit
Each individual sub-system reports to somewhere for its own purpose
Pre-app
Admissions
Enrolment
WP activity
Induction
Pastoral care
Employability
Teaching & learning
Assessment
Graduation
Post-graduation
A range of monitoring exists in most cases, but not explicitly for student relationship management
Learners
Engaged learners
Some feedback but not normally in respect of student relationship management

10.2 USE OF A CONTROL MODEL

There are several control models used in systems failures analysis. The most pertinent, because the most used and suggested by the information from the study, is the classic feedback control model (see figure 10). The purpose of a control sub-system is to enable a system to deliver outputs within consistent parameters or to reduce disturbance of the system by the environment. Under classical feedback control the sub-system measures the output from a process, compares it with a desirable or reference level, and modifies one or more input streams, so that any errant output is returned to acceptable limits.

10.2.1 An example control model: The Manchester Metropolitan University Shock Absorber Project

> *The project team believe that it is important to ensure that all our first year students have the best possible experience in their early weeks here at MMU. Research studies show us that a positive and productive first year is essential for progression and success throughout the undergraduate years.*
>
> *The Shock Absorber Project Team, MMU*

We have used the example of Manchester Metropolitan University's Shock Absorber Project to illustrate good practice in terms of control of student relationship management processes, in this case the induction or transition process. The Shock Absorber project is a three-year HEA-funded project, based at MMU and run in partnership with The University of Liverpool and Stockport College, looking at ways to ease the 'shock' of transition into university. It aims to put in place activities and interventions that will aid the process, from pre-registration to the first assignment and produce a toolkit for staff to improve the first year experience. Interventions include such activities as using Second Life as an environment for new students to meet one another online before beginning their studies, so that relationships between students and with staff can start early. The university is running a range of activities across selected programmes, evaluating them through an extensive questionnaire, which tests the level of engagement of the student and the quality of their experience of university life, and then effecting further change as a result of the evaluation.

The aim of the university is encapsulated in the following sign-graph diagram. The greater the effectiveness of induction activities, the better engaged students are at the start of their course, and the less the "shock of transition". This leads to better retention. Conversely if induction is ineffective the reverse will happen, leading to higher drop-out rates.

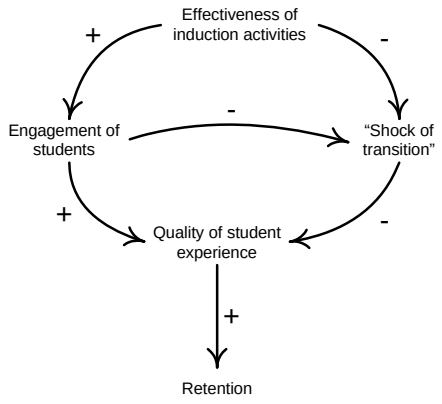


Figure 9: sign-graph diagram showing the effect of induction activities on retention

Figure 10 The generic control system model

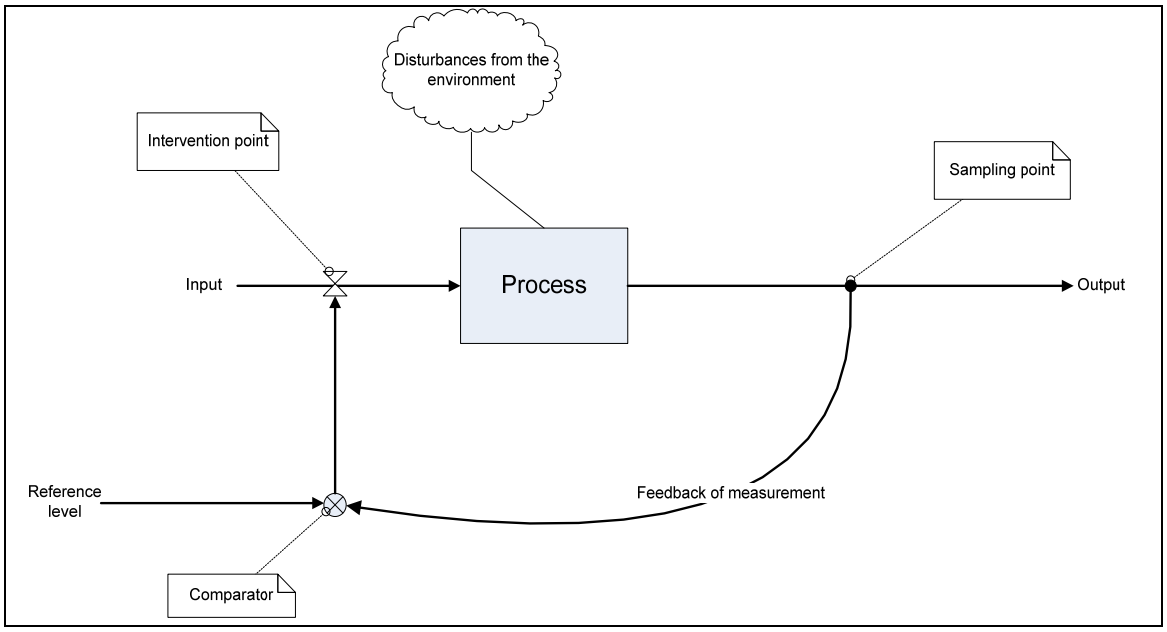
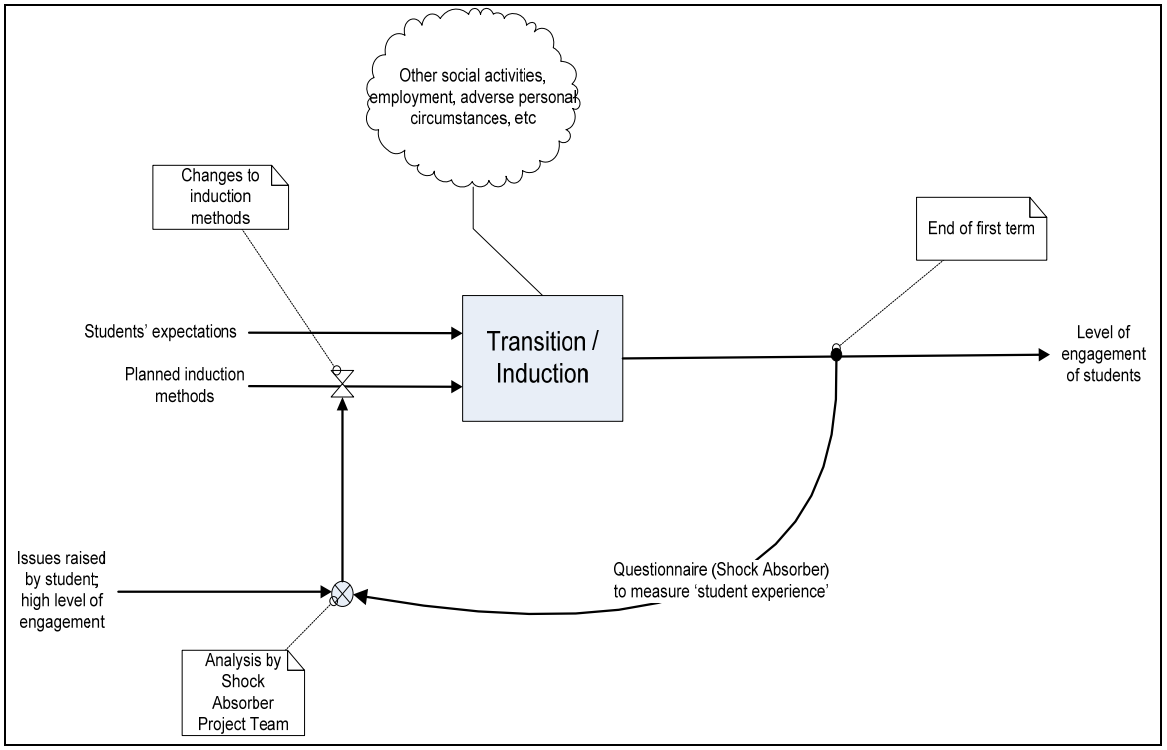


Figure 11. The "Shock Absorber" Model



Although the Shock Absorber Project has not yet finished its work, it is demonstrating a sophisticated approach to student relationship management in the lifecycle stages of pre-

application, induction and the early stages of teaching and learning. The new activities include many instances that use electronic tools to facilitate communications between the student and staff, and between student and student. The approach is very detailed, with an extensive questionnaire designed to reach the heart of the issues from the learners' perspective. It is noticeable that these induction methods are in many instances localised to particular departments or programmes. The University has cross-university initiatives for retention and induction, but implementation work takes into account local work practices, history and types of student group.

10.2.2 Issues identified from the Control Model

***Issue**: Feedback from students. It is important to obtain and analyse systematic feedback from students about the relationship between students and the institution. This should be the basis of the design, planning and implementation of changed processes in response to the feedback, taking into account the students' lifecycle state, the institution's approach to student relationship management and any local context in relation to the part of the institution that is involved. Our research has shown that few institutions are carrying out this type of change process*

11 HUMAN FACTORS AFFECTING COMPUTER SYSTEMS: ALLOCATION OF FUNCTION

A useful model for comparison in situations involving humans and computer systems is the "Allocation of Function". This model recognises that humans and computer systems have very different capabilities, so some functions are better allocated to one side or the other. The first list of such capabilities was drawn up by Fitts in 1951 (hence these are known as 'Fitts lists')[11]. There are significant drawbacks to this approach, because of the rapidity of the development of new technology, and the lack of fine detail in the attributes, but it can still be an instructive method. This is particularly true in an era when hardware and software systems are increasingly seen as mediating tools, and part of "human and machine systems", rather than as automation systems to which humans must conform.

We have used a modified version of Fitt's list to help with our analysis, as shown in the following table.

Figure 12: Fitt's list analysis

Property	***Computer***	***Human***
Communications	Multi-channel: Large volumes of information through a large number of media. Formal communications.	Single channel at a time (speech; writing; non-verbal). Low volume. Informal, empathic communication. Short formal communications.
Information Processing	Large volumes can be processed quickly. Routine and repetitive tasks are easy. Fast sorting and filtering capabilities. Cannot process emotional information.	Subject to information overload. Poor sorting and filtering capabilities. Poor at routine and repetitive tasks. Slow. Can process emotional information.
Storage and memory	Good at long term, high volume storage and recall of data without degradation. Cannot receive or store emotional information.	Poor at accurate storage and recall of data without degradation. Can store unstructured social, cultural and emotional information.
Input	Very limited input mechanisms, primarily digital (sound, text, graphics). Poor pattern recognition. Quantitative, not judgmental.	5 senses (experiential). Wide range of inputs. Good pattern recognition. Social and cultural nuances. Qualitative, judgmental

[11] Bignell and Fortune, p193

Reasoning	Deductive (logical). High volume, general and impersonal.	Inductive (evidence-based, intuitive). Low volume, specific and personal.
Intelligence	No spontaneous goal or strategy switching. Only deals with the predictable or predicted.	Can adapt. Can deal with the unexpected.
Accessibility	Requires equipment and a level of technical ability. No time constraints. Stored (standard) information available continually.	Readily accessible within time and language constraints. More nuanced information available.
Breakdown	Sudden and complete (but nowadays comparatively rare).	Graceful degradation, can adapt to pressure (but reduction in performance common).

11.1 INFORMATION FROM ANALYSIS OF THE CASE STUDIES

The following points have been identified by comparing the case studies with the above table.

11.1.1 Communications

Manchester Metropolitan University

A reliance on providing 'standard' information to all students leads to information overload[12] that can result in students failing to receive or understand important details. Information should be targeted to individual needs and relevant trigger points.

A multi-channel approach (Law department) to pre-entry information can result in more students receiving and understanding it.

Tools such as social networking sites are used to promote social interaction that builds relationships amongst students and between students and staff at an early stage.

Extended induction with a range of interventions, both using and not using electronic tools, helps students to engage with the university's academic and social culture.

Aston University

Extensive induction is supported electronically: My Aston Portal (MAP), electronic postcards advising of required actions; and by people: social activities, manned help desks, allocation of personal tutors. These measures are designed to assist with retention.

For alumni the university uses multi-channel communications: website, magazine, email, telephone, social networking sites, events, discussion forum.

[12] See Glossary.

Further Education

Computer systems are used for quantitative 'hard' data driven by funding needs. Course tutors are used for individual problems; electronic support tools, such as Nottingham's Passportfolio or ConnectPoint could help support staff to communicate with students, but are not yet widely used.

11.1.2 Information Processing

Manchester Metropolitan University

The university recognised that information overload on students in some departments was contributing to drop out rates. Specific interventions to address this have been adopted on both a university-wide basis, for example the Retention and Student Success project, and within individual faculties, for example Retention Strategy Groups. These interventions have included 'human interventions', such as mentoring, increased use of individual tutorials and 'just-in-time' access to core skills, as well as computer-assisted ones, such as the delivery of information only at relevant times and according to circumstances identified through capture of data from the students. They are designed to deliver support to individuals and to collect data about student engagement and progress, so are covering both quantitative and qualitative aspects.

Interventions have included early access to online courses, the VLE and social networking sites, as well as self-diagnostic activities and those aimed at awareness raising. It is worth noting here that these interventions make appropriate use of computer processing power, for example through innovative 'web quests' or the 'Alternate Reality Games for Orientation, Socialisation and Induction (ARGOSI) project, in conjunction with direct interpersonal contacts.

Further Education

In the FE arena computer processing power is used primarily on quantitative data and requirements are funding driven, rather than driven by relationship management. Student support and engagement is handled by support staff and tutors mainly by face-to-face communications.

11.1.3 Input

Manchester Metropolitan University

The university uses its staff to handle the social, academic and cultural understanding of students and to promote the institution's values and culture. These are aspects that cannot be allocated to computer systems, although computer-based tools can support them. A specific example of significant change here as a result of feedback from students was in the biomedical sciences department; library induction had been handled online (allocated to electronic systems), but will in future become a face-to-face event (allocated to humans), because students wanted to be shown around the physical environment. For this event face-to-face contact is seen as an important part of the relationship.

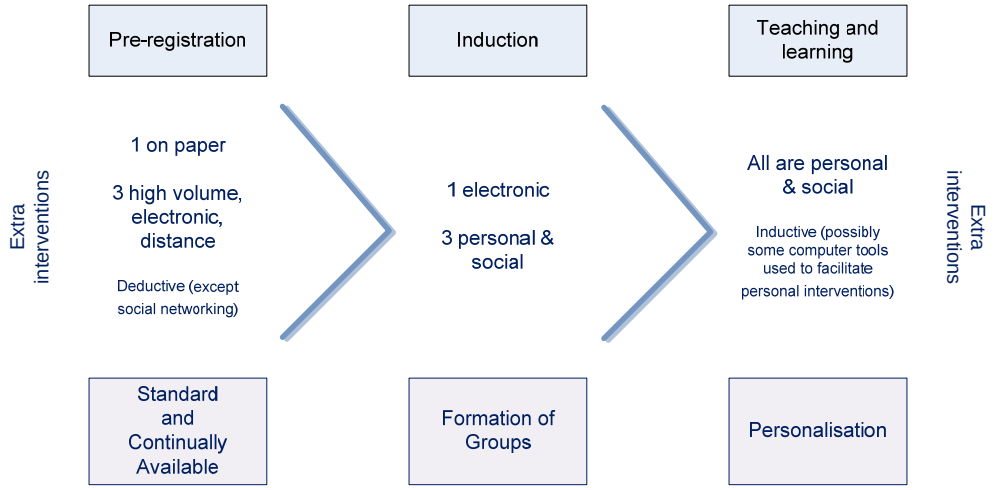
11.1.4 Reasoning, Intelligence, Communications

Manchester Metropolitan University

From the MMU case study it is noted that planned and implemented interventions from pre-registration, through induction, to teaching and learning use less electronic methods as the student moves through the life cycle. At pre-registration stage three of the four extra interventions mentioned used electronic tools, at induction one used electronic tools, and at the teaching and learning stage use of electronic tools was minimal. These specific extra interventions can be

mapped as described in the following diagram. However, it is important to note that these are extra interventions, electronic and personalised methods are used throughout the life cycle. Allocation of function in these cases illustrates that personal involvement by staff becomes more and more relevant as the students' requirements become more specific to individual circumstances.

Figure 13: Retention and Engagement at MMU: Relationship between type of intervention and personalisation



Aston University

The university's successful use of personal tutors and peer mentoring shows the importance of human adaptability in response to differing personal circumstances. These facilities are coupled with specific targeted support where needs are identified, for example a new Learning and Skills Centre, Programming Support Office, Assistive Technology Officer.

11.1.5 Accessibility

Manchester Metropolitan University

The university provides access to the VLE from the time a place is offered, so that students can choose to familiarise themselves with it if they wish. It is important that the use of this tool in advance of the start of the course is voluntary.

Aston University

The MAP portal represents a single point of contact for the student, which can make much information more readily accessible. The case study provides some illustrative usage figures, demonstrating a high level of logins and significant activity in the area of assessment. Although other areas of activity are much lower in numbers, the volume of interactions is impressive for a new service and bearing in mind the total number of students at the university.

11.1.6 Issues identified from human factors: allocation of function

***Issue**: Information provided to students needs to be appropriate, timely and understood.*

'Appropriate' means taking into account individual circumstances, as well as lifecycle state. As computers are primarily good at routine, high volume and repeatable processes, some responses will require personal attention of staff. Therefore systems containing humans and computers need to be able to identify where these human interventions are required. All interaction processes need a backstop of a person. Feedback from the recipient is important, so that staff know that the information has been not only sent, but received and understood. This feedback acts as a process control mechanism.

***Issue:** Information can be relevant to all, or relevant to only one individual.*

Information can be high volume, relevant to all students, or to large groups, or can be very specific to individuals or to small groups with relatively rare needs. Sometimes the information needs are determined by the students themselves. These different needs suggest a multi-channel approach, taking into account information requirements and accessibility issues. Channels used in our case studies have included web portals and other institution websites, VLEs, social networking software, virtual reality environments, email, letters, newsletters and magazines, sms text messaging, face to face contact, voice telephony, forums, surveys, physical locations.

***Issue**: Promotion of social interactions.*

Promotion of social interactions (staff to students; students to other students) is vital for student engagement, retention, social, academic and cultural understanding. Communication within relationship management consists of both formal and informal patterns, which deepen the association of the student with the institution. Computer systems can be tools or facilitators for this, but direct personal interactions are perceived by both staff and students in our research as very important for cementing social, academic and cultural engagement.

Further Education institutions have well developed electronic tools to help collection and analysis of data for the purposes of funding and attendance, geared to reporting to LSC and OFSTED. These tools are less well developed for student support functions.

***Issue:** Interventions tend to involve less electronic tools as the lifecycle state progresses. As the lifecycle moves from addressing the mass of potential learners (pre-application) through groups (cohorts applying and registering on specific programmes) to individuals (personalised teaching and learning; pastoral support), so interventions become more specific and personalised and harder to support by allocating functions to impersonal machines. This issue reflects the ease with which computers can communicate standard messages and large volumes of information very widely. Institutions are increasingly recognising the need to be attuned to the danger of information overload for students, which can be alleviated by careful consideration of the 'when', 'how' and 'how much' of each communication.*

***Issue:** A suitable starting point for communications.*

Students appreciate a stable, single starting point for information gathering and communications, for example a student portal that allows the student to control when, where and sometimes how it is accessed. Early experience of these systems pays dividends, because the student becomes used to this as a cultural norm, particularly if it is via a single interface or a consistent style of interface. While these systems have been available at the teaching and learning stage, for example through VLEs, they are still comparatively rare at other stages of the student lifecycle. However, feedback on the qualitative and quantitative benefits of these systems is still needed. There is also evidence from our case studies that these systems need to be coupled with targeted communications triggered by changes in the student's lifecycle state and geared to eliciting specific actions from the student, for example a reply to an offer of a place, payment of fees, submission of piece of work for assessment or agreement to attend an alumni event.

Issue: *Accessibility*

Access to individualised personal support is vital for some students, and these individuals cannot be identified in advance.

Issue: *Student choice*

There is a premium on systems that students can choose to use or not to use. There are four principal implications from this brought out from our analysis of the case studies:

.1 Multi-channel communications should be used;
.2 Feedback should be gathered…
.3 … And changes implemented in response;
.4 Targeted support should be available where needs have been identified.

12 INTERNATIONAL EXPERIENCES

The project definition of the Landscape Study of Student Lifecycle Relationship Management asked that some enquiries be made into the experience of other countries.

Apart from web-searches, this has proved very difficult (possibly due to time of year).

Searches have been made of sources in the United States and Australia – being two of the major competitors with the UK for students. These investigations have shown that the environments for higher education, and the pressures on them to recruit and retain students are very similar to those of the UK.

In the United States, pressures on higher education are similar to those in the UK – squeezes on finance and resources leading to a drive for greater efficiency, and increased marketisation of the higher education sector. This, as in the UK, is prompting institutions to undergo process change. 'Because of increasing pressure to reduce costs, keep tuition increases small, and serve more students, institutions are seeking ways to improve their productivity and efficiency. They are creating administrative efficiencies, such as by streamlining business processes. They are innovating with technology-based teaching to reach more students both on campus and in the broader community through distance education.'[13]

Over the past 5 years or so, many institutions in the US have been focussing on 'strategic enrolment management' (SEM) which considers the entire lifecycle of a student from pre-admission activities to postgraduation within the strategic goals of the institution.

The Oracle Peoplesoft Campus Solutions product has a great many customers in the higher education sector in the US claims to be 'the world's leading student system and alumni development solution for higher education and is being used at over 800 campuses in more than 20 countries'.

Sungard products, notably Banner also have a large presence in the US, and the company website states that: 'SunGard Higher Education assists more than 1,600 customers worldwide...'

Both Oracle and Sungard have a presence in Australia.

In Australia, there are very similar pressures to those in the US and UK. Although incomes of Australian institutions have increased in recent years since the introduction of the Higher Education Contribution Scheme (ie, student tuition fees), resulting in a lesser dependence on government income, Australian Higher Education institutions are also facing increased competition for students through increases in higher education provision within Australia and also in countries which have traditionally provided a good source of international students. Rising costs are also an issue.

'Universities are also confronting the very major costs of moving to computer-mediated, electronic and flexible delivery modes, while at the same time attempting to sustain, as far as possible, their campus-based and face-to-face teaching approaches. While there may arguably be some downstream savings from increased use of 'e-learning', there are enormous transitional costs in creating digital libraries, converting existing courses and developing new ones, and establishing new electronic infrastructure. International evidence also suggests

[13] Eckel, P and King, J American Council on Education (2004) *An overview of higher education in the US: Diversity, Access and the role of the marketplace*

that these costs will recur frequently due to the rate of change in technology and student expectations for both e-learning and face-to-face teaching.'[14]
The report goes on to say that:

'.....the new generations of younger students entering university are very ICT literate, and expect a high level of on-demand, on-line access to learning materials, assessment, and administration. The majority of first year students surveyed in 2004 used online course resources, email and software designed for their course. A minority used online discussion opportunities (Krause et al. 2005). All universities are investing substantial amounts in these types of initiatives'

Anyone involved in international student recruitment in the UK will speak about the way in which Australian institutions recruit students. Australia has seen a huge growth in international student numbers of recent years, which has driven the development of sophisticated recruitment and international student service operations. Stories tend to concentrate on the excellent service provided to international applicants, particularly in terms of speed of admissions decision making.

Should JISC wish to explore the landscape of student lifecycle relationship management in other countries in more detail, then it is recommended that this be commissioned as a separate project.

[14] Australian Government (June 2008) Review of Higher Education Discussion Paper http://pandora.nla.gov.au/pan/85826/20080618-1222/www.dest.gov.au/NR/rdonlyres/06C65431-8791-4816-ACB9-6F1FF9CA3042/22465/08_222_Review_AusHEd_Internals_100pp_FINAL_WEB.pdf

13 CONCLUSIONS

13.1 THE LANDSCAPE

A clear description of the landscape of student lifecycle relationship management is difficult to achieve. There is huge variation in the missions of institutions, learner types and educational provision. Institutions are affected by external pressures which in turn affect the systems and processes they use. Competition for students, changing expectations of students, changes in legislation (eg immigration rules), changes in national processes (eg UCAS), funding methods all require system changes many of which are directly related to the management of relationships with students. This is true in the FE sector as well as the HE sector, where student funding from government is closely controlled in relation to outputs and therefore needs the support of well managed systems.

In the future, the missions of institutions are likely to diverge further, as institutions explore new lines of business in relation to students. From 2020 the population of the traditional university entrant (18-20 year olds) will begin to decline, and institutions reliant on this market sector will have to compete more aggressively for those students and diversify their activity. As a result, student relationship management processes will become more sophisticated, as institutions increasingly use the student experience as a differentiating factor rather than their educational provision. Well resourced institutions are better placed to deal with these pressures, but smaller institutions would benefit from work which helps them to develop their systems and processes without the significant investment of 'doing it from scratch'. It is likely that the respondents met through this study are the ones who are doing things quite well by themselves, but there will be very many more institutions that are struggling and need help.

As human interactions increasingly take place on-line, there appears to be a blurring of the line between 'using a computer' as an activity, and the actual activities themselves. Use of portals help to improve the consistency of the relationship experienced by students across different parts of the institution, but this is not always the case with human interaction, which is much more difficult to achieve. It is possible that student relationship management in the HE sector is more fragmented now than in times of the 'University Registry' that carried out student administration from application to graduation. Recent times have seen increased professionalization of functional areas and separation of functional units, each responsible for different stages of the student lifecycle and with their own methods of communicating. The separation of functional and professional areas brings tensions which makes it more difficult to achieve an integrated student relationship management system.

We believe that student relationship management should be seen in an holistic way across functions, and that an integrated system is preferable in trying to achieve this, although it seems inevitable that some more specialised functions such as timetabling and library management will remain separate. Provided data transfer between systems is easy to achieve, this should not be a problem.

13.2 STUDENT RELATIONSHIP MANAGEMENT SYSTEMS

Powerful integrated student information systems are available in many organisations to support student relationship management, but the functionality in some cases has hardly been explored.

Most systems in use are proprietary systems but there are also many examples of in-house developed systems. The clear market leader in the UK is the SITS Vision software product of Tribal, which claims a market share of over 65% of the UK HE sector, and provides a full lifecycle product. There are many other products in use however, and recent entrants to the market such as the US Sungard product Banner and Oracle PeopleSoft Campus Solutions also offer full-lifecycle functionalities. Most respondents claimed satisfaction with the systems they are using and the ways in which they are supporting business processes, although some did qualify that, expecting benefits in the future from newly implemented systems.

The reasons for the less than full implementation or development of systems are many, but there is a real tension between resources available within IS departments and the aspirations of functional managers to improve their processes. Many complain about long-winded application processes to compete for system analyst and programmer time, and that often the strategic importance of large or even small changes is lost amongst competing priorities, greatly slowing down process improvement, and in some cases leading to worries about reduction of the competitiveness of the institution.

In dealings with institutions through this and other projects, examples have been found of systems being used as part of manual processes, largely as repositories of information, and also more sophisticated ways providing automated processes some of which are new, for example automatic checking of applicant entry qualifications against set criteria, generation of standard offers and enforcement of the principles of fair admissions.

Decisions made during the initial implementation phase often set the tone for the life of the system. At the time of implementation, systems often have capabilities far advanced of current business processes, and there is always competition for resources within institutions. Scarce availability of resources at time of implementation in IS departments, a lack of forward planning for future need, planned phased implementation over a number of years, and also lack of understanding amongst users of potential capabilities, all contribute to the piecemeal implementation of functionality. This last sometimes causes problems such as those identified in the systems failures work: there is sometimes lack of agreement, or lack of understanding about who owns the data: is it the operational area, or is it the IS department? Many would claim that it is the operational area, but those people often see the technology that they are using as the product of someone else and see it as technical, and so do not come forward to request changes. IS departments expect operational managers to approach them with requests for change, and operational managers expect the IS department to be proactive in suggesting change.

> ***Issue**: How to empower operational managers to understand their ownership of the operation and data, and to empower IS departments to become more consultative in their approach to supporting these.* Some of the consultants in this project have found themselves in circumstances where they are discussing business process change with operational managers, which will require adaptation to systems, but where there is no involvement of the IS department team.

One of the conclusions that has been drawn about the SRM landscape is that systems do need to be seen holistically across the student lifecycle. However, functional managers do not always see it that

way. A senior manager in a large institution who is very clear about ownership of their business process and data had recently made an urgent system change request arising from an external process change:

> *'The IS department is working at a different speed to us! Our request is unlikely to be actioned any time soon. This function was considered to be applicable across the whole student system, and so they are going to have to go out to tender, which will take six months or more before someone is in place to do the work. This process is fundamental to the operation of my area, and we need it now, the result is having to develop manual work-arounds which will prove very expensive in the long run.'*
>
> *Senior functional manager, English university*

13.3 MANAGING RELATIONSHIPS WITH STUDENTS

Institutions manage their relationships, and communications with students in a great variety of ways. The tools available to them to do this are also varied, and used to a greater or lesser extent in different institutions. Electronic methods are available and used widely, but institutions need to consider the tone and frequency of email contact, and the content of student portals.

Students questioned were largely satisfied with the relationships that they had with their institutions, and provided suggestions for how these could be improved or managed differently.

Students appreciate the more personalised approach. Increased personalisation of communications and targeting of information is required by students to enhance their experience, and opinion, of their institution, but this is very difficult to achieve, particularly where there are pressures to reduce costs.

Different types of students have differing communications needs and also have different channels of communication available to them. Institutions will best manage their relationships where this is understood, and where they have the ability to personalise communications. However, this will require a level of resource in first identifying information needs, and then in developing and using the most appropriate methods for each student. Students consider that the most valuable method of communication is still personal contact, particularly face to face, although direct email contact with a named individual was also valued. However, students expect to use electronic methods for a number of things (administration, access to learning resources) and this preference should not distract institutions from developing creative and cost-effective methods of contact. Considering carefully information needs, ensuring consistency of approach and message, and keeping information channels up to date, are all very important.

13.4 SUMMARY

We have identified a large number of issues indicated in the text of our report. These have been brought together and listed in Appendix 8. The range of issues, like the domain of student lifecycle relationship management, is wide. For convenience we have analysed the issues and offer a consolidated list of concerns that institutions might wish to consider, when looking at how to design, develop and implement student lifecycle relationship management systems. These concerns have formed the basis of our recommendations to JISC in the next section of this report. We believe that staff managing the institution's relationship with its students should consider how to:

1. Use not only mass communications for efficiency and cost effectiveness, but also address individual personalised needs;
2. Provide consistent high quality interactions between students and the institution;
3. Provide information that is relevant, timely and accessible to each individual learner;
4. Give the student the choice of when, where and how to access information, wherever possible;
5. Make the best use of available functionality in existing and planned systems;
6. Improve communications between institutional staff engaged in student relationship management;
7. Improve current student lifecycle relationship management processes in a strategic manner;
8. Manage student lifecycle relationship management holistically.

14 RECOMMENDATIONS TO JISC

Based on the issues found in the report we conclude that the following could be further lines of work that JISC might wish to consider:

Promoting SRM as a concept. It seems that to meet strategic needs of institutions, student relationship management does need to be considered in an holistic way, but despite finding examples of integrated systems there needs to be greater exploration of whether the holistic approach is being taken. Our findings suggest that despite integrated systems, operational processes continue to be carried out in a siloed way and there is often little interaction across functions. Therefore JISC might like to consider how it can promote SRM as a concept which cuts across functional areas.

Communications. The wide area of communications management and channels of interaction needs more investigation to answer the following questions: how can institutions best make use of opportunities? What are the most appropriate channels for individual students? How can communications for students be personalised? Are the solutions technical or human?

Improving the interface between operational and technical operations. There may be cultural problems and tensions between functional managers and technical managers. How can this interface be improved? How can functional managers be empowered to take ownership of their processes and data? How can the technical experts be empowered to take a more consultative and proactive role to help functional managers see the possibilities for the technical support and development of their processes?

Supporting process improvement and unlocking the power of systems. Case studies tend to focus on 'best practice' and although examples of good practice have been identified through this project, it might be useful to do a comparative study of good, mediocre, and poor/struggling practice. The aim of this would be to develop a tool kit for those wishing to undertake process improvement, containing for example the right questions to ask in order to determine what their processes should achieve.

Should JISC wish to explore the landscape of student lifecycle relationship management in other countries in more detail, then it is recommended that this be commissioned as a separate project.

APPENDIX 1

Web-based survey questionnaire

JISC Landscape study of Student Lifecycle Relationship Management

INSTITUTION NAME	
TOTAL STUDENT POPULATION	

YOUR NAME		
YOUR POSITION		
CONTACT DETAILS	Telephone	
	Email	

Thank you for completing this questionnaire. The purpose of the survey is to provide JISC with a comprehensive picture of the systems that are being used across HE and FE institutions in the UK to manage the full student lifecycle from pre-application to post-graduation. The survey is written with users and business process owners in mind, and does not require technical expertise to complete. We therefore hope that its completion will not be too onerous. Institutions manage their student interactions in many different ways, so we apologise if the function descriptions that we have used do not match your institution's practice. Most of the sections have been kept general, but we have subdivided the sections where we are aware that some institutions might operate different systems within the same functional area eg. Post-graduation activities. The questions on 'usability' and 'satisfaction' asks for a rating to be provided on how easy the software is to use, and how satisfied the institution is that it is meeting business need, as follows:

*USABILITY	5	Excellent, users find the system very easy to use, and require little support in its use
	4	Good, users generally find the system easy to use, and require some support in its use
	3	Quite good, users find some aspects of the system easy to use, but some functions are more difficult and require support
	2	Difficult, users find many aspects of the system difficult to use, and need considerable support in its use
	1	Very difficult, requires very experienced users and often with considerable technical support
#SATISFACTION	5	Extremely satisfied, the system supports this business process well
	4	Satisfied, the system supports most of this business process well
	3	Quite satisfied, the system supports some parts of this business process well, but others less well
	2	Moderately unsatisfied, the system supports only some parts of this business process
	1	Unsatisfied, the system provides inadequate support for this business process

Please return this questionnaire to: Delyth.chambers@blueyonder.co.uk by .....

STAGE OF THE STUDENT LIFECYCLE	NAME OF SYSTEM CURRENTLY IN USE	PRODUCER/ SOFTWARE HOUSE	Can the system exchange data with other systems?	LENGTH OF TIME IN USE	USABILITY* PLEASE RATE 1 – 5 (*see above)*	SATISFACTION# PLEASE RATE 1 - 5 *(see above)*	WHEN DO YOU PLAN TO REPLACE THIS SYSTEM?			NAME OF REPLACEMENT SYSTEM (IF KNOWN)
							12 – 18 MONTHS TIME	ABOUT 5 YEARS TIME	ABOUT 10 YEARS TIME	
PRE-APPLICATION STAGE										
eg. Enquiry management										
Widening participation										
Event management										
Literature request fulfilment										
Other functions or activities undertaken using a different system at this stage:										
APPLICATION STAGE										
eg. Electronic application										
Admissions process										
Other functions or activities undertaken using a different system										

STAGE OF THE STUDENT LIFECYCLE	NAME OF SYSTEM CURRENTLY IN USE	PRODUCER/ SOFTWARE HOUSE	Can the system exchange data with other systems?	LENGTH OF TIME IN USE	USABILITY* PLEASE RATE 1 – 5 (*see above)*	SATISFACTION# PLEASE RATE 1 - 5 *(see above)*	WHEN DO YOU PLAN TO REPLACE THIS SYSTEM?			NAME OF REPLACEMENT SYSTEM (IF KNOWN)
							12 – 18 MONTHS TIME	ABOUT 5 YEARS TIME	ABOUT 10 YEARS TIME	
at this stage:										
POST-APPLICATION/PRE-ENROLMENT STAGE										
INSTITUTION REGISTRATION/ ENROLMENT										
eg. Registration/ enrolment functions										
Payment of fees due										
Other functions or activities undertaken using a different system at this stage:										
ACADEMIC PROGRAMME MANAGEMENT										
eg. Module/course enrolment										

STAGE OF THE STUDENT LIFECYCLE	NAME OF SYSTEM CURRENTLY IN USE	PRODUCER/ SOFTWARE HOUSE	Can the system exchange data with other systems?	LENGTH OF TIME IN USE	USABILITY* PLEASE RATE 1 – 5 (*see above)*	SATISFACTION# PLEASE RATE 1 - 5 *(see above)*	WHEN DO YOU PLAN TO REPLACE THIS SYSTEM?			NAME OF REPLACEMENT SYSTEM (IF KNOWN)
							12 – 18 MONTHS TIME	ABOUT 5 YEARS TIME	ABOUT 10 YEARS TIME	
Recording of achievement										
EXAMINATIONS MANAGEMENT										
PROGRESS MANAGEMENT										
STUDENT FINANCIAL SUPPORT MANAGEMENT										
Eg. Student loan company interactions										
Management of initial selection for scholarship, bursary support, or prizes										
Payment of monies to scholarship, bursary or prize holders										
Record keeping of scholarship,										

STAGE OF THE STUDENT LIFECYCLE	NAME OF SYSTEM CURRENTLY IN USE	PRODUCER/ SOFTWARE HOUSE	Can the system exchange data with other systems?	LENGTH OF TIME IN USE	USABILITY* PLEASE RATE 1 – 5 (*see above)*	SATISFACTION# PLEASE RATE 1 - 5 *(see above)*	WHEN DO YOU PLAN TO REPLACE THIS SYSTEM?			NAME OF REPLACEMENT SYSTEM (IF KNOWN)
							12 – 18 MONTHS TIME	ABOUT 5 YEARS TIME	ABOUT 10 YEARS TIME	
bursary or prize holders										
ACCOMMODATION AND RESIDENCES MANAGEMENT										
MANAGEMENT OF COUNSELLING/OTHER SUPPORT SERVICES										
LIBRARY MEMBERSHIP										
SPORTS FACILITY MEMBERSHIP										
STUDENT UNION MEMBERSHIP										

STAGE OF THE STUDENT LIFECYCLE	NAME OF SYSTEM CURRENTLY IN USE	PRODUCER/ SOFTWARE HOUSE	Can the system exchange data with other systems?	LENGTH OF TIME IN USE	USABILITY* PLEASE RATE 1 – 5 (*see above)*	SATISFACTION# PLEASE RATE 1 - 5 *(see above)*	WHEN DO YOU PLAN TO REPLACE THIS SYSTEM?			NAME OF REPLACEMENT SYSTEM (IF KNOWN)
							12 – 18 MONTHS TIME	ABOUT 5 YEARS TIME	ABOUT 10 YEARS TIME	
GRADUATION PROCESSES										
EVENT MANAGEMENT										
POST-GRADUATION ACTIVITIES										
eg. Alumni management										
Donor management										
Post-graduation marketing activities										
OTHER										
Any other functions or activities undertaken otherwise not mentioned										

FURTHER COMMENTS

Please provide us with any further comments about whether the systems in use meet the overall requirements of your institution. For example, some systems might work very well for a particular business process, but not exchange data with the subsequent process, thereby requiring additional data entry and so compromising efficiency and data quality.

APPENDIX 2

Learner Journeys Brainstorm, 15 May 2008

Attendees: Delyth Chambers (DC), Clive Church (CC), Alison Halstead (AH), Mandy Ingleby (MI), Alan Paull (AP), Charlie Paull (CP), Mark Stubbs (MS).

LIST OF LEARNER JOURNEYS AND TYPES OF LEARNER

- Aspiring
- Primary schools – aspiration raising
  - individual help in some cases
- Secondary – KS3; (core business of many HEI and FEIs)
  Support and guidance from school
- Diploma students (Aston = Engineering)
  Sponsorship of academies
- Employed people
- FE community
  Traditional A-levels
  Diplomas
  Work-based learning
  Mature (access)
  Support issue
- International students
  EU; Non-EU; targeted countries; ERASMUS; exchange students.
- Alumni
- CPD
- Staff of the institution
- Distance learners
- Disabled learners
- Ethnic minorities
- Age
- Gender
- Students who live
  … at home
  … on campus
  … regional
- Returning students
  … between years
  … post grad
- Credit transfer ; APL / APEL
- Advanced entry
- Part time
- Foundation degrees
- Fudged UCAS entry
- HE and FE journeys more formalised in scotland

PRIORITISATION

Core business: standard school/college leaver

These have already got support

Growth of student numbers will be in work based learning (WBL), especially non-traditional WBL

Extent of support required

HE in FE

2+2

Accreditation of prior learning

National Student Survey (NSS) - dissatisfied students?

Decided on:

1 Standard school/college leaver
2 APL
3 People in full time employment (e.g. doing Foundation Degrees or CPD)
4 Non-EU students
5 Adult learners, particularly through Access route
6 FE to HE in the same, or closely related, institution

Aim Higher groups like this:

School/college

WBL

Adult

SCENARIOS

1. School leaver

Key transition points: When might an HEI lose a potential student?

Awareness/Aspiration raising stage

- other agencies, Aim Higher (tracking for evaluation of initiatives); LLN (progression emphasis)
- Connexions
- schools liaison, master classes, etc
- addresses pupils, teachers and parents

- Recruitment databases
- HEI engages with pupils, parents and teachers (primary pupils)
- Recording school activities but not individuals
- Mentoring
- Start to capture individual information, but not main emphasis; this is raising awareness and aspiration; involves partnership/collaboration with other HEIs.
- Possibly a small amount of accrediting of activity is done.
- Widening Participation activities; eg summer schools.

All this activity is not directly for recruitment. It's raising aspirations about HE in general, but also leaving a warm feeling towards the HEI doing the activity (MS)

Lifelong learning – progression agreements

Recruitment and sales

Start of a relationship
Recording begins at individual level not just school level
Triggered by: Open days
Summer schools – targeting WP learners
Enquiries
HE fairs

Application

Application through UCAS
Plagiarism issue – personal statements
IAG
Local, informal information from HEI admissions tutors
Knowledge base (e.g. Ask Jeeves)
What happens between acceptance and registration?
Web Portal
Pre-entry e-mentoring
Different HEIs use UCAS system to communicate in different ways

Enrolment

Accessibility issues – e.g. disabled
Enrolment in advance through web portal
Booking accommodation
Paying fees

Induction

Register for modules
Induction
Identification of learner support
Peer mentoring

Teaching and Learning

Learner support
Individual learner plans
Attendance records
e-Learning environment
Assignments
Feedback on assignments
Pastoral care
Use of mobiles for relationship management
Relationship during work placement
Student volunteers
Student working
Societies & sports
ePortfolios
Library
Community engagement
See HEFCE/HESA web sites for data on student transfers / drop outs

Graduation

Graduation ceremonies
Final assessment
Careers guidance

APPENDIX 3

FOCUS GROUP WITH STUDENTS TO ASCERTAIN VIEWS ON RELATIONSHIP MANAGEMENT

FOCUS GROUP QUESTIONING GUIDE

Collect general data on:

a. Student age group
b. Programme
c. Qualifications on entry

1. When were you first aware of the institution?
2. What sources of information did you use?
3. When and how did you choose your programme of study? (What people inside or outside the University helped or hindered you? What kinds of information did you use?)
4. How did you make your first contact with the institution? (Did you initiate it, or was contact made on your behalf?)
5. What was the nature of this contact? (eg. Telephone, request for literature over the internet, attendance of an event on campus, visit by university staff to your school or college, other)
6. What did you feel about the way in which your first contact was handled?
7. How did the university handle: a. the application process, b. the registration process? (information provided, ease of access to information, tone of communications, methods of communicating)
8. Now that you are a student, how does the university communicate with you? (eg email, via student portal, letter, noticeboards)
9. What does the University communicate with you about? (eg module registrations, text/exam results, timetables, social activities)
10. Please provide your views on:
    a. The frequency of communications
    b. The usefulness of communications
    c. Methods of communicating
    d. Quality of communications
11. How well do you feel that the University is managing its relationship with you?
12. How could it be better?

APPENDIX 4

***JISC* Landscape Study of Student Lifecycle Relationship Management**

ASTON UNIVERSITY CASE STUDY

Outline case study in respect of student retention methods, student recruitment and post graduation activities. Description of methods used for retention, recruitment and alumni activities; high level view of the processes involved in communicating with students; what type of information is recorded and what type of information is given to students; approximately how many interactions (electronically) are there; what is quality of the interactions - rough time spent, perception of staff and students.

Amanda Ingleby, Strategic Adviser Learning Enhancement, CLIPP

a.ingleby@aston.ac.uk, 0121 204 4756, July 2008

1. STUDENT RECRUITMENT

The University's Entry requirements and admissions policy is available to prospective students on the University's website.

The principal aim of Aston's Admissions Policy is to offer admission to and admit students who offer the greatest potential to contribute towards the University's mission, "*To be an international centre of excellence in teaching, research and consultancy. Aston is focussed on subjects of professional and vocational relevance in the sciences, engineering, business and the humanities.*" To that purpose admissions staff seek to recruit students who demonstrate the best talent towards successfully completing their chosen studies, in view of specific recruitment targets, without bias on grounds of social, racial, gender, disability or religious considerations.

The University's admissions practice acts in accordance with the Universities Corporate Plan, Equal Opportunities policies, Widening Participation Strategy and various codes of practice for example QAA 'Code of practice for the assurance of academic quality and standards in higher education: Admissions to higher education' and the requirements of accrediting professional bodies where relevant.

Admissions Policy is driven and monitored by the University's Admissions Forum serviced By Registry and Planning.

The Schools and Colleges Liaison Office exists to help prospective and careers advisers looking for information on all aspects Education in general. It aims to give applicants and their informed choice about their Higher Education options.

The Schools and Colleges Liaison Office offers a range of support and activities for Students, Teachers and Careers Advisers, including:

- Open Days - Open days provide presentations on the University's various degree programmes, student life, graduate employment, student finance and offer campus/accommodation tours.
- Visits to the University
- Talks/Presentations in Schools and Colleges - SCL visits over 100 schools and colleges across the Midlands and beyond. Talks include:

- Applying through UCAS and Choosing a Course

- HE Talks to Year 12 induction sessions
- What Admissions Tutors look for, UCAS personal statements etc
- Student Life and Finance
- Why Go to University? - Trends in Graduate Employment etc
- Issues for Parents

- Aimhigher Activities - events for year 9 to year 13 students aiming to broaden awareness and understanding of Higher Education and help raise students' aspirations. These include Masterclasses, Sixth Form Subject Conferences, University Visit Days, Subject Taster Days, Workshops, Raising Aspirations & Team Building, and Business Games.
- Excellence Hub Gifted and Talented Events As the lead institution of the West Midlands Excellence Hub, the University offers a wide range of activities designed to enrich and enhance the education of gifted and talented students across the country. The Excellence Hub initiative is part of the national Young, Gifted and Talented Programme managed by CfBT Education Trust on behalf of the Department for Children, Schools and Families. Activities include: Experts in Aston Lectures for students aged 14 to 19, Interactive subject residentials and on-line debates for students of all ages in French and German.
- Birmingham HE Convention, Events for Teachers/Careers Advisers - SCL regularly hosts events for teachers and careers advisers, to update them on current issues relating to Higher Education in general as well as Aston University. Bespoke programmes are provided on campus for Careers Companies and groups of School/College teachers.

2. INDUCTION/ORIENTATION

The University has undertaken a comprehensive review of the Induction process and the programme is currently being developed for the new academic year. The Review Group considered induction to start at the point at which the student confirmed an offer and technically lasting for the duration of their course, but in practice focussed on the point from confirmation of the offer to the first few weeks of arriving at the University.

Once a student confirms an offer they will be able to access the My Aston Portal (MAP) and will have an email address. They will receive electronic postcards to advise them of action they should have taken or processes they need to complete prior to arrival.

International student orientation and Freshers' Week will be known as 'Aston Welcome' and a broader programme of events will be offered during the orientation week. Students can, for example, check the programme in advance through the portal, sign up for specific activities, book transfers to the University from Birmingham airport. The traditional 'Freshers move in weekend' will have a sense of celebration with a jazz band by the Lake and a quartet by low rise. Roving entertainers will be used if queues form anywhere. Catering outlets will be open. The Vice-Chancellor and senior staff will host tea in the Lakeside Conference Centre on the Saturday and Sunday afternoons to meet students and parents. There will be information stands. A parents overnight 'accommodation package' will be offered in the Nelson Building. A personalised programme for the week (Schools activity and social events) will be available to each student through the portal and again some opportunity to pre-book activities.

There will be help desks throughout the 2 weeks as well as helpers once term starts. A mini-induction will be offered to students starting at other times of the year and induction will be seen not as a one-off but other sessions will be offered throughout the year such as cultural awareness (for all students) and other workshops and activities, appropriate to that stage of their University career.

3. STUDENT RETENTION

The following are examples of student retention and progression initiatives, a number of which have been commended as part of the University's internal quality review process:

- Personal tutoring system and quality of support from academic and support staff for example: staff considered by students to be *'professional, very approachable and caring'.* Students are assigned a Personal Tutor at induction and meetings are organised in Freshers' Week (Sociology)
- University-wide Peer mentoring programme. The programme offers mentoring *for* students *by* students on a one-to-one basis, providing a flexible and confidential service. Whilst aiming to provide support for students from non-traditional backgrounds – mature students, local students, students living off campus and those who are the first in their family to go into HE – the programme is open to, and of benefit to, all students. Peer Mentoring is supported by Schools across the University.
- Maths Drop-In Centre. This WP-funded intervention was first introduced to support students with non-traditional qualifications in the School of Engineering and Applied Sciences. The intervention was commended in the Internal Review report with positive feedback from both staff and students.
- Learning and Skills Centre (LSC). The LSC was opened in the Library in October 2006, building upon the success of the Maths Drop-in Centre. The LSC brings together appropriate highly skilled staff to provide coordinated learning development for Aston students, including maths, study skills, academic writing and assistive technology. The Centre helps all students to achieve their full potential and meet the high academic standards required by the University, by providing individual and group learning opportunities.
- The Programming Support Office, based in Computer Science, provides targeted support to undergraduate students requiring computer programming skills, particularly to those with non-traditional entry qualifications, supporting the retention and progression of students. This service was commended by students as part of the Internal quality review of Computer Science.
- Foundation programmes such as the Engineering Foundation Year and Science Foundation Year in the School of Engineering and Applied Sciences gives students who do not have the required entry qualifications the opportunity to gain the necessary knowledge and experience to progress to their chosen field of study students, progressing to the main BSc/BEng degree programmes and then Honours degrees.
- DANU and Assistive Technology Officer. DANU provides an advice, guidance and information service to applicants, inquirers and current students with disabilities (physical, sensory, mental health issues, Specific Learning Difficulties – SpLDs and other medical conditions). The Unit also advises and trains staff about how to support and work with disabled students and help in developing University policies and procedures concerning disability issues. The Assistive Technology (AT) Officer provides of AT services to students and staff with disabilities/additional needs and to staff working with students with disabilities/additional needs.
- Fostering learning communities. For example extra-curricular activities such as the Film Club *'to encourage students to develop a greater sense of identity with the School'* (Sociology, January 06); *'role of staff in creating and fostering a supportive learning community for IBML which is appreciated by students'* (International Business with a Modern Language)
- Early formative assessment for example revised first year programmes which include formative assessment in languages modules earlier in the year which allow for identification of individual or group problems (French and German)
- First Year Perspectives module. This module run by Psychology was commended as a model of best practice. The module which engages students' personal tutors in assessing a series of their students' work. (Psychology).

4. POST GRADUATION - ALUMNI

The University communicates with its alumni via the University's website, the APEX magazine, email, telephone, social networking sites and specific alumni events. Alumni are also encouraged to get involved in a number of projects and initiatives to harness their support across the university.

The Apex magazine is for all graduates of the University. It provides the latest news from Schools, including information on the latest research and developments, and provides news about fellow students.

LINK is written by the Alumni & Development Office for current Aston University students. It provides the latest news from Aston's thriving alumni population and details about our work and current projects. Each edition contains a feature about one of Aston's graduates, as well as information on forthcoming Network Lectures and events we think may be of interest to you.

The Alumni Group enables alumni to keep in touch. Alumni can update their details on-line, the 'In-touch' service helps alumni to find lost friends. Aston's alumni community is located all across the globe. The Department provides a variety of services and contacts to help alumni to keep in touch through International branches and groups.

The University organises a Network Lecture Series which brings together Aston graduates and Aston students in an exciting discussion forum. Aston graduates are invited back to their alma mater to address an invited audience of professionals and undergraduates interested in their particular area of expertise. Current students can gain a valuable insight into the real world of their chosen careers. They can make that important business contact or discuss issues related to their studies at Aston.

5. COMMUNICATING WITH STUDENTS

5. 1 TYPES OF INFORMATION RECORDED

Most student information collected is recorded on SITS. The type of student information recorded on SITS is as follows:

1. Admissions

Personal information, (e.g. name, age, address details, nationality, ethnicity, qualifications), name of course, year of entry, offers made, decisions (CF, UF, etc.)

2. Students

Personal information (e.g. name, age, address details, nationality, ethnicity, qualifications), course, stage of study, mode of attendance, end of year progression decisions, placement details (if appropriate), disabilities, last school attended, finance, sponsors.

3. Credit Accumulation

Personal information (e.g. name, age, address details, nationality, ethnicity, qualifications), programme of study, stage of study, mode of attendance, Student Module taking and module results records including marks, attempts, re-assessment details, intended award, actual award, award calculations, coursework submission dates, examination scheduling, module details including credits, titles, module tutors.

The main tables in SITs include:

Module Assessment Body

Assessment details of a module

Module Assessment Pattern

Module Assessment Patterns define how modules are assessed. Typically, each module has a unique assessment pattern

Module Availability

The year and teaching period that a module is available.

Module

Details on modules, module availability and module assessment.

Re-Assessments

The point of data entry for students in re-assessment.

Student Addresses by Course

Provides details on student addresses, telephone nos. and email address by year and degree programme.

Student Assessments Log

This records continuous assessment received.

Student Annual Progression

This will record the overall decision on a student's annual progression e.g. proceed, fail/repeat etc.

Student Course Enrolment

Records the enrolment details of a student

Student Course Enrolment List

Useful table for producing class lists

Student Detail by Course

Allows retrieval of data by course

Student Module Taking

Record details on the modules a student is taking for the current year

Student Module Result Status

This provides data on the overall module result.

Super Student Module Result

More detailed data on a student's module result(s)

Full Student Details

This table defines the characteristics and details of a student. The record is intended for use throughout a student's career from enquirer to applicant to student.

Student Programme Route

Details of students on degree programmes, personal tutor data, modules attached to a student and module results etc.

Full Student Details

This table primarily details personal information on a student. e.g. home and term-time addresses, qualifications, DoB etc.

ENROLMENT

The following information is collected at enrolment: gender, ethnicity, disability, Date of Birth, Home Address, Country of Domicile, Nationality, Term-Time Address, Term-Time Accommodation Type, Programme details, Predominant source of finance for fees, Home/Overseas fee payer, Previous institution/school/college attended, Qualifications including tariff points where applicable, and whether parents/guardians have HE qualification.

MAP – My Aston Portal

My Aston Portal (MAP) is a new web based system at Aston University that will become a single point of contact for many of the services you use at the University as a student.

MAP gives students access to student information, including personalised teaching timetables; module enrolment lists; access to Blackboard and WebCT and allows them to keep the University up to date with addresses and personal details.

Future developments will also allow the viewing of accommodation and finance details directly through MAP. New students will be able to log into MAP once they have completed enrolment and have received their University computer account details.

MAP for Staff

University staff are able to view and print students details by module/degree programme and look up the basic details on students, as follows:

Module/Degree Programme Lists

- Student lists for modules and programmes.
- Links to student e-mail addresses.
- Links to group e-mail addresses.
- Re-assessed students highlighted.
- View/print student photographs.
- Module assessment details.

Student Look-up

- Home/contact addresses.
- Current degree programme details.
- Examination and Teaching timetables.
- Provisional assessment marks.
- List of modules being taken.
- Previous Aston degree programme details.

Major developments for 2008-09 include results and Transcripts on-line, enrolment on-line and integration of placement activities.

5. 2 INFORMATION GIVEN TO STUDENTS

Various forms of communication are deployed to engage with students, including email, post, the University website, and Virtual Learning Environment (VLE) platforms.

SITs has a facility whereby students can be grouped together and contacted via email or by standard letters.

The student portal is a relatively new form of communication with students which is currently proving popular with students.

5. 3 SCALE AND QUALITY OF ELECTRONIC INTERACTIONS

MAP for Students Usage

Table 1: Students Usage of MAP 2007-08 (3 September – 16 May 2008) showing number of Hits per Task

Total number of student logins to MAP	645,403
Check and/or update home and contact addresses	8,753
View their own provisional assessment marks	90,842
Check and/or update Next of Kin information	3,404
Check current degree programme details	9,522
Register for their Graduation Ceremony	2,279
Re-enrolment for returning students	6,726

A survey has been recently conducted gathering feedback from students and staff on the use of MAP. Findings are currently being analysed.

APPENDIX 5

Manchester Metropolitan University Case Study: Building the student relationship from pre-registration onwards

Introduction

This case study describes the range of innovations that have been implemented or are planned to take place at Manchester Metropolitan University to support and develop the student relationship prior to and during the registration period, in induction, and onward through the design of teaching, learning and assessment.

Identifying the issues

The Shock Absorber project is a three-year HEA-funded project, based at MMU and run in partnership with The University of Liverpool and Stockport College, looking at ways to ease the 'shock' of transition into university. It aims to putting in place activities and interventions that will aid the process, from pre-registration to the first assignment and produce a toolkit for staff to improve the first year experience. The first year of this project concentrated on carrying out research into the student experience, through the use of a survey, which was undertaken by students in three MMU undergraduate programmes as well as at both of the partner institutions.

The questionnaire was given to students at the end of their first term and received nearly 400 responses. It examined students' backgrounds, information received prior to registration, induction and how they were feeling at that stage, their expectations before coming to university and how they had been met, as well as more general questions relating to their experience in the early weeks of year one. Analysis of the data highlighted a range of issues with the student transition into university over this period. These included: the importance of appropriate and timely pre-entry information; the design of induction to ensure that students can make the most of that period; the importance of socialisation during induction; a desire for early feedback on assessment; a desire among students for more group work and tutorials and for improvements in library induction..

In a separate piece of research, a Masters study carried out by a member of staff in the Physiotherapy department also revealed that many students in that department were coming straight from school lacking the core learning skills that they required to successfully undertake the course. Students were dropping out because they felt overwhelmed by the amount that they had to learn at the start of the course.

A number of interventions are in place, or planned, throughout the institution aimed at addressing the issues identified here and building the student relationship. Figure 1 below shows some of the main interventions at various points of the academic year.

Pre-registration

The second year of the Shock Absorber project involves working with the three programmes within MMU to experiment with different mechanisms for engaging students in the early stages of their programme. These will be evaluated and refined and will form the basis of the Shock Absorber

Toolkit. A range of trials of new pre-registration activities are planned in the programmes (biomedical sciences, law and photography)to help to ensure that students engage with their courses prior to registration.

Issues were highlighted with many students not recognising the importance of the pre-registration information that they had received or being overwhelmed with the volume of information, and it is planned to reduce the amount of paper-based information sent out prior to registration, and to ensure that the information received by students is limited to that which is essential at that time. In biomedical sciences an online course will also be made available to students before registration about what to expect from university and what it means to study online. This course aims to enable students to be more aware of what university study is going to involve, allow them to undertake self-diagnostic activities and prepare themselves for studying at university.

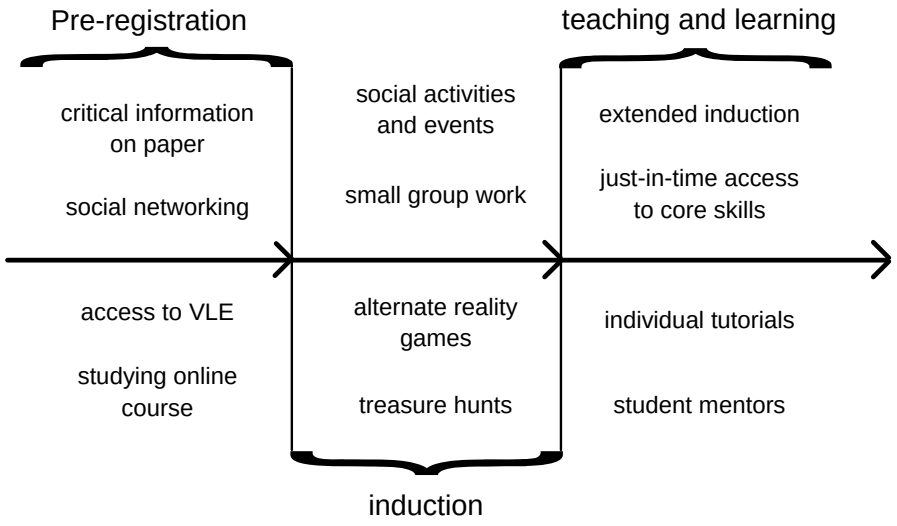


Figure 1: Interventions taking place at MMU to support the building of the student relationship

In the law department steps are also being made to improve and rationalise the pre-entry information made available to students, providing the essentials on paper (for example an indicative timetable, reading list, and map) and also some online. There will also be an online web quest for students to familiarise themselves with the law school and with Manchester, and students will be encouraged (but not obliged) to join a social networking group.

The Shock Absorber project also plans to use social networking sites, such as Facebook and MySpace, and the Second Life multi-user virtual environment to enable students to meet one another online before the start of the course and to begin to establish social relationships with their peers and tutors.

In physiotherapy, another HEA-funded project is taking place, which aims to improve the student induction process from pre-registration into the first year. This project is providing online materials

to students prior to entry via the university's virtual learning platform. It is also to give students access to the university's virtual learning environment before enrolment, from the time that they are offered a place on a course, so that they can familiarise themselves with the environment in advance. In addition, the Student Induction and Transmission (SIT) project is an internal initiative aiming to improve the pre-entry and induction period, looking in particular at the information provided to students during this period, ways of effectively managing the information delivery and best practice from other institutions.

Induction

A range of interventions and innovations are also being introduced to improve the induction process and develop the student relationships at this time.

In the law school, the induction period has been revised to include much more information on assignments, setting expectations about what will have to be done and providing learning skills information on how to tackle them. There will also be more emphasis on students getting to know each other, outside the pub environment, which is becoming increasingly unsuitable for social events when students come from a variety of backgrounds and cultures. For example, a quiz session social event is planned with a mixture of law and general knowledge questions, information from the pre-entry packs, to act as a teambuilding and socialisation event.

It is also planned for students to being to work in their tutor groups during the induction period so that they can get to know their peers, and for course-related activities to be provided for groups to manage in their own time. Other activities, such as reconstructions of law-related interactions for students to watch and start getting exposed to what the law is about and a treasure hunt around the law school, to expose the students to the physical environment, are also planned.

In biomedical sciences there are changes planned to the library induction, which was previously online, but has now become a face-to-face event because students specifically asked to have hands-on library induction and to be shown around the physical environment. It is also planned to introduce social events that are associated with an assignment-related activity. In physiotherapy, the first week induction schedule has also been altered to include more social elements and small group work, which give the students the opportunity to meet one another in a purposeful but informal environment.

The Alternate Reality Games for Orientation, Socialisation and Induction (ARGOSI) project, is a JISC-funded project run in collaboration with the University of Bolton, and plans to address some of these issues using an alternate reality game to support the student induction process and provide an engaging alternative to traditional methods of introducing students to university life. It will consist of a series of challenges, an underlying narrative, and a collaborative community, and while all three elements will be facilitated online, many challenges take place in the real world, and may be collaborative or individual. The ongoing story provides coherence to the challenges, and the collaborative community provides a forum for students to share information, provide hints for each other and work together. As well as providing a forum for students to meet each other and get to know the city, this pilot also focuses on the development of library and information skills.

MMU is also undertaking university-wide initiatives to provide a social support structure for students during induction. This builds on the student ambassador scheme to provide advice and support for new students from open days onwards, and a range of activities has been organised by the Students' Union, particularly focussing on events in halls of residences.

Teaching and learning

As well as improving the student experience prior to registration and during induction, efforts are also being made to support students through re-design of teaching, learning and assessment with more formative and diagnostic assessment. The Shock Absorber project aims to support students to the point of their first assignment and, for example, in the law school assessment has been redesigned so that there are more short assignments to enable students to get used to what is expected in assignments and to allow formative feedback to be provided at an early stage.

The Department of Engineering and Technology have adopted an innovative approach to supporting students to get started by embedding teaching and learning within an extended induction process for their undergraduate students. One group of approximately 50 mechanical engineering students took part in a two-week extended induction, working on a team-based project around building a racing car, with supporting labs and workshops, which finished with a race and a social event. A second group of around 100 media technology, information technology and computer and network technology students took part in a five-week extended induction, which included three consecutive group-based projects that captured the main themes of the course (for example, making videos, getting a robot to solve a maze, building a computer), supported by tutorials.

These extended inductions enabled students to get to know staff and students by seeing the same three or four members of staff and working in the same team throughout. It meant that staff could get to know students at a much more basic level, have a higher degree of informal communication with them, and have a greater awareness of their problems and concerns. The extended inductions also provided a mechanism to contextualise initial activities, providing purpose and setting student expectations. The projects enabled the students to make a strong start and to keep up a strong momentum, with an early cycle of assessment and feedback, and retention rates have increased as a consequence. Repeating students were particularly keen on the extended induction because it allowed them to settle in immediately with the new set of students, and staff report that the atmosphere in the classes is different, with attendance up, disruption decreased, and a more equal relationship between staff and students. A variety of mechanisms were used to support the extended induction, including a web site with administration materials, timetables sent out in advance, weekly face-to-face briefings and invited speakers (e.g. from the Careers service), and the use of telephone text messages and email to keep in contact with students during this period.

In the physiotherapy department the level one curriculum has been tracked to key learning outcomes associated with core academic skills, and a just-in-time approach has been adopted so that students are able to access the information and learning materials required to learn these skills as and when they need it throughout the year. So, rather than frontloading these skills into

induction, when they are not contextualised and more likely to be forgotten, this enables students to acquire and apply these key skills when they need them.

The Retention and Student Success project is a cross-university initiative to improve retention. Each Faculty has a Retention Strategy Group and there is also a Central RSG for support and services staff. The Project is currently focussing on three main areas: monitoring and tracking student engagement and progress; the role of the individual tutorial within the institution; and a student mentoring scheme.

Conclusions

From the interventions taking place at Manchester Metropolitan University described in this report it is clear that a great deal is taking place to aid the student transition into university and build the relationship with students. The range of approaches offered will be better able to cater for the needs of a growingly diverse range of students and increase student choice.

Setting student expectations at the start of their university careers will be a crucial factor in their success, as is the importance of building on the relationship with students throughout their time in academia, not just during the first weeks or months. The need to introduce formative assessment and feedback early, and ensure that students have clear expectations in this area is also crucial.

Evaluation and review of these innovations will be important for considering the effectiveness of these activities, and the involvement of students throughout these projects, through the students union, both paid staff and elected representatives, and through research with students and student ambassadors, aims to help to ensure their ongoing success.

APPENDIX 6

Student Engagement with FE Colleges

Further Education College's funding has been far more driven by retention of enrolled students and their levels of achievement than universities in schools. Existing and future funding models (a new one is now being introduced for the coming academic year) are complex and include not only factors concerning previous student achievement data but also the extent of deprivation of areas within which students live and the level of additional support that will be required for different learning challenges faced by students.

The financial success of colleges depends on not only having tight information systems that record student attendance and results but also applications that facilitate the optimisation of income from the level of local deprivation and the special needs of the students.

Computer based management information systems collect much of this data at enrolment and also provide ongoing real time information to managers and tutors as to students' attendance and achievements so that problems can be quickly addressed.

Such data although vital for funding is also important to provide information for OFSTED inspections

All colleges have their own systems for applications, induction, attendance and assessment of necessary learning support and information and guidance.

The degree that each system is applied varies on the type of student. A full time student of age 16 will have a far higher engagement with these systems than a student on a part time employer sponsored programme who in turn will have more engagement than a retired adult on a 30 hour short course. (Departure before course completion) of a full time student will cost a college far more than the loss of the retired adult).

Unlike many universities but like schools the focus of day to day monitoring and support of students is the course tutor. The tutor is generally the first point of contact for dealing with problems that a student has. If problems are of a severe nature and are considered outside the experience of the tutor then specialist support staff will be involved. For minors, support will often include engagement with parents or guardians. Such support is not just of an academic nature. For many students non-academic issues such as personal hygiene and access to additional grants have to be addressed.

The tutor has to investigate lapses in attendance and performance and identify remedies. Regular tutorials will provide opportunities for Individual Learning Plans (including action planning) to be addressed. Although career advice will often be delegated to professional (including Connexions for the under 19s) it will be the tutor who will provide references such as required by UCAS.

Few IT based systems support the work of the tutor although initiatives such as Nottingham's school based Passportfolio systems with electronically based applications and student action plans and planned national systems such as Connectpoint (for recording agencies that have been involved in a

child's school life) could well provide catalysts for more use of computer based data for pastoral support for young full time students within the colleges in the future.

Libraries are little used by the bulk of FE students and many have been integrated with computer based learning centres. As with security systems (many inner city colleges have card controlled gates) data to support library membership will be fed from the college's MIS system.

It can therefore be seen that at the moment in most college there is a strong contrast between those student engagement systems such as enrolment and attendance monitoring that influence the level of funding for colleges and those that provide student support. The former are heavily computer based, the latter are generally paper based and locally adjusted by the tutors involved.

From 2010 the current funding for further education will change. The Learning and Skills Council will no longer be the main source of funds for colleges. The local authorities will fun 14-19 year olds, the Skills Funding Agency will fund adults except for those studying higher education programmes which will be sponsored by HEFCE.

It is unlikely though that the culture of FE will change. Systems (and the students' necessary engagement) to optimise funding and the results from inspections will be key. Alongside those systems, though will be a large number of localised, personal and informal mechanisms that help large numbers of students gain qualifications that enhance their lives.

APPENDIX 7

Soft systems analysis

System 1

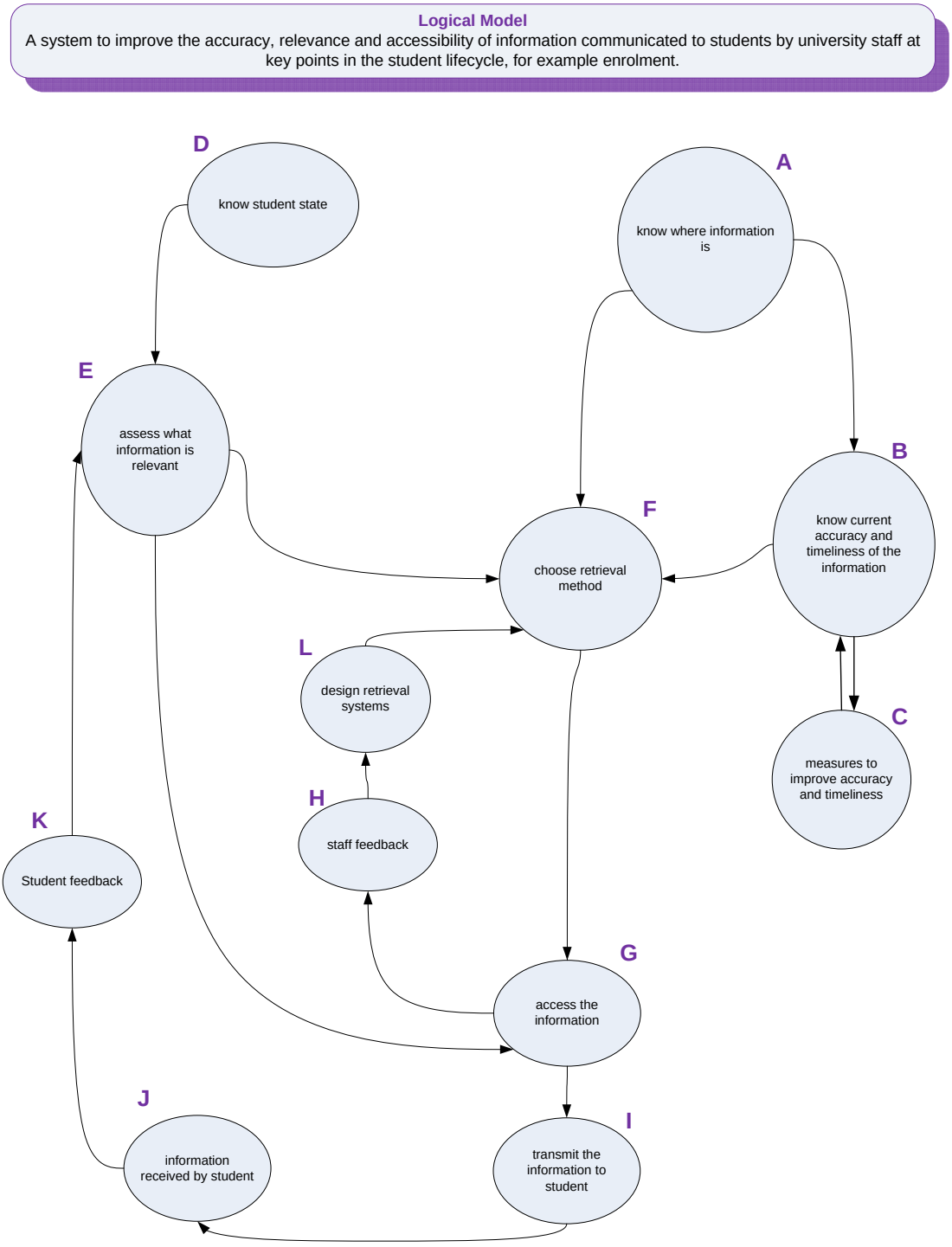
Theme: Improving the quality of the information used by staff who interact with students

System Definition: A system to improve the accuracy, relevance and accessibility of information communicated to students by university staff at key points in the student lifecycle, for example enrolment.

System attributes:

Customers	Staff who interact with students (academic, admin, managers, IAG, etc)
Actors	IT dept and / or vendors of software
Transformation	Improving information accuracy, relevance and accessibility
Weltanschauung	The current system is a "big messy pile of data", which needs to be made useful.
Owners	Senior management
Environment	Students, UCAS, SLC, Govt initiatives, size of institution, JISC, funding bodies, experiences of other institutions at home and abroad.

Logical model:



Comparison with the real world (quotes are from the rich picture exercise):

A: Individual members of staff know where some of the information is. The sum of these individuals probably knows where it all is. Just because the information and staff are brought together, it doesn't mean that all members of staff have access to it.
Staff training issue: knowing where to get the information; being informed by the data owners.
IT issue: holding the information in a predictable place.
"95% of data is not used"

B: Not done, or else, it is known that it is inaccurate or in some cases, accurate. Certain software packages give confidence.

C: Buying a better package. Training. In-house configuration. Validation (and tracking?).
Timeliness issue: regardless of package. Process improvement issue. Standards (data entry; quality).

D: Traditional student states are usually known. Others are more challenging; don't fit with "standard" processes. Depends on lifecycle stage and type of student.
Need the student record quickly when contacted.
Known, as long as the right staff are contacted.
"I don't see my teacher very often; it's not like school"
"Disabled students who are not happy to disclose [information about their disability]"

E: Triggered by state or by student enquiry. These triggered items may be too blanket, so some students receive irrelevant communications or some irrelevant material mixed in with the relevant.
"Nobody told me there was a deadline."
"What am I supposed to know?" "I don't know what I don't know" "What am I supposed to do with this?" [pointing at a VLE]

F: Individuals look at stuff or give pointers to portals, etc. Sign-posting either electronically or manually (e.g. to another staff member or portal).
Use information systems they have access to.

G: Problems with some kinds of information.
Interface problems – e.g. more than one system, each with a different interface. New systems and inadequate training. Poor interfaces.

H: Not structured, or acted upon.

I: Conduits:
email *** - too much !
portals ** - they like this; can be improved easily; can choose relevant things; gives student control.
Mobile phone *
direct *
written

K: National Student Survey. Own surveys are common now amongst people we've contacted.

Immediacy of feedback.
"Formative feedback mentors!" "Less but more effective assessment." "More timely formative feedback."

System 2

It can sometimes be insightful to imagine and construct systems whose outputs might be negative.

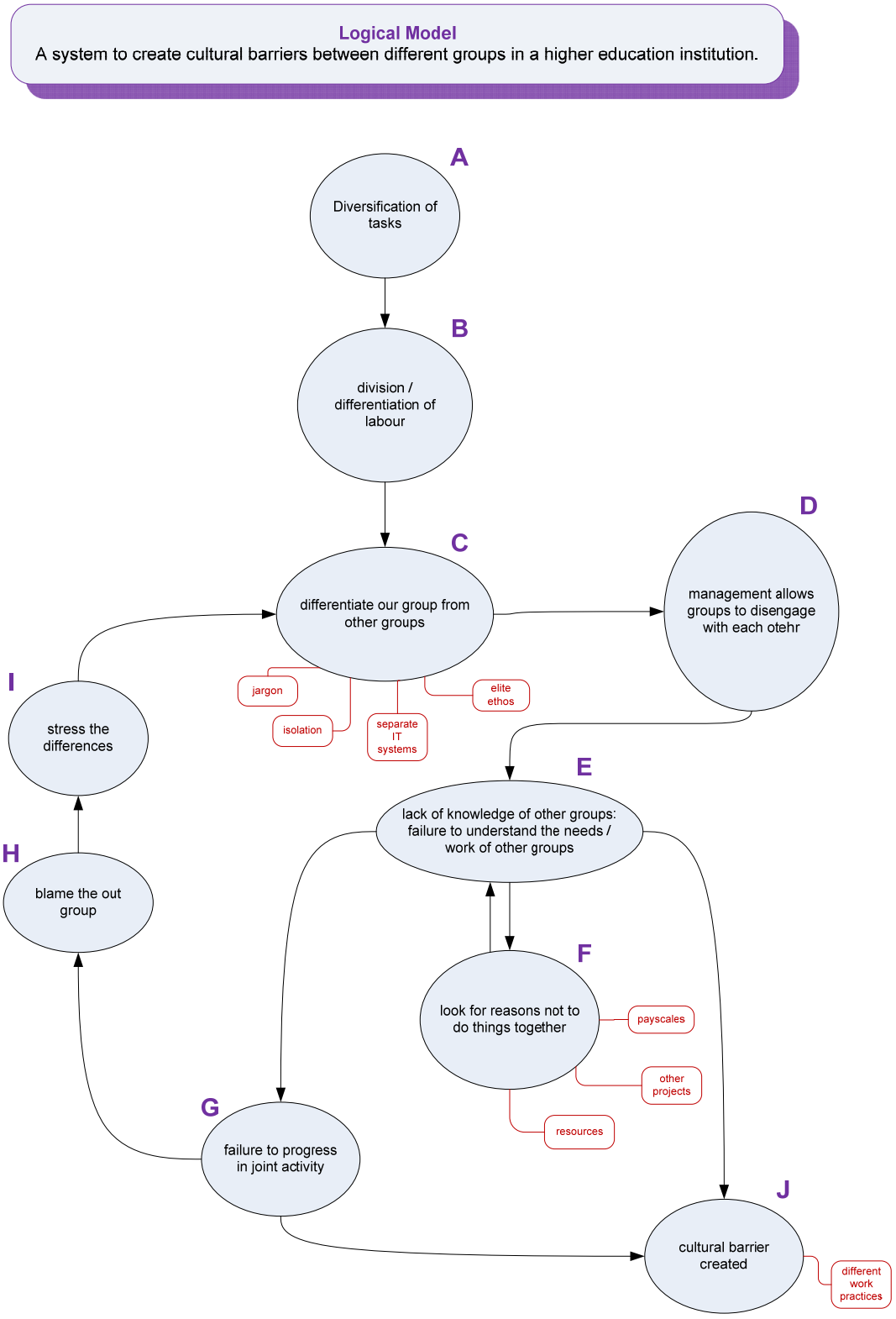
Theme: Tensions between cultures

System Definition: A system to create cultural barriers between different groups in a higher education institution.

System attributes:

Customers	Specialists who want to get on with the job.
Actors	People who do not communicate well with other groups.
Transformation	Creation of cultural barriers.
Weltanschauung	We're trying to do the best we can and nobody understands our work.
Owners	Everybody in the institution
Environment	IT systems, work practices of groups, organisational structure.

Logical model:



Comparison with the real world

A and B: Inevitable in larger organisations.

C: Our impression is that this does happen, though it's not inevitable; for instance admin, academics and IT are separate groups, which like to differentiate themselves from other groups. Employers are differentiated from HEI staff and from students.

D: IT departments can be unengaged with operational groups; tendency to use in-group jargon. WP staff may have made arrangements, but admissions may not know of them. We have also encountered examples where academics are not disengaged with admin.

E: WP activities not known about widely within staff in contact with students. Insufficient training is common.

"We haven't had enough training in the new systems." "Why do we collect data. 95% of data not used, does it matter?" "Why doesn't admin computing unit understand urgency of changes requested?"

F: "People who don't talk to each other." "Systems that don't speak to each other." "Admin wagging the tail of the academic activity dog."

G: Example: "Software systems and admin staff not progressing well." May not be a general problem; need case studies. "New system too difficult for staff to understand; assumption: techy's the way."

H: Typically IT systems get blamed. Evidence? "Gatekeepers control access." "Vendors take over, one system."

I: "Disabled students who are not happy to disclose [information about their disability]"

J: "Disciplinary Boards: do students understand/so we enable them to learn the cultural rules!" "Tug of war between institutions and students and HEFCE"? "attitudes of staff to applicants and students not always appropriate; talking different languages. Why is accommodation office so unhelpful to prospective students." "Pre-entry students misinformed by first year students through social software."

System 3

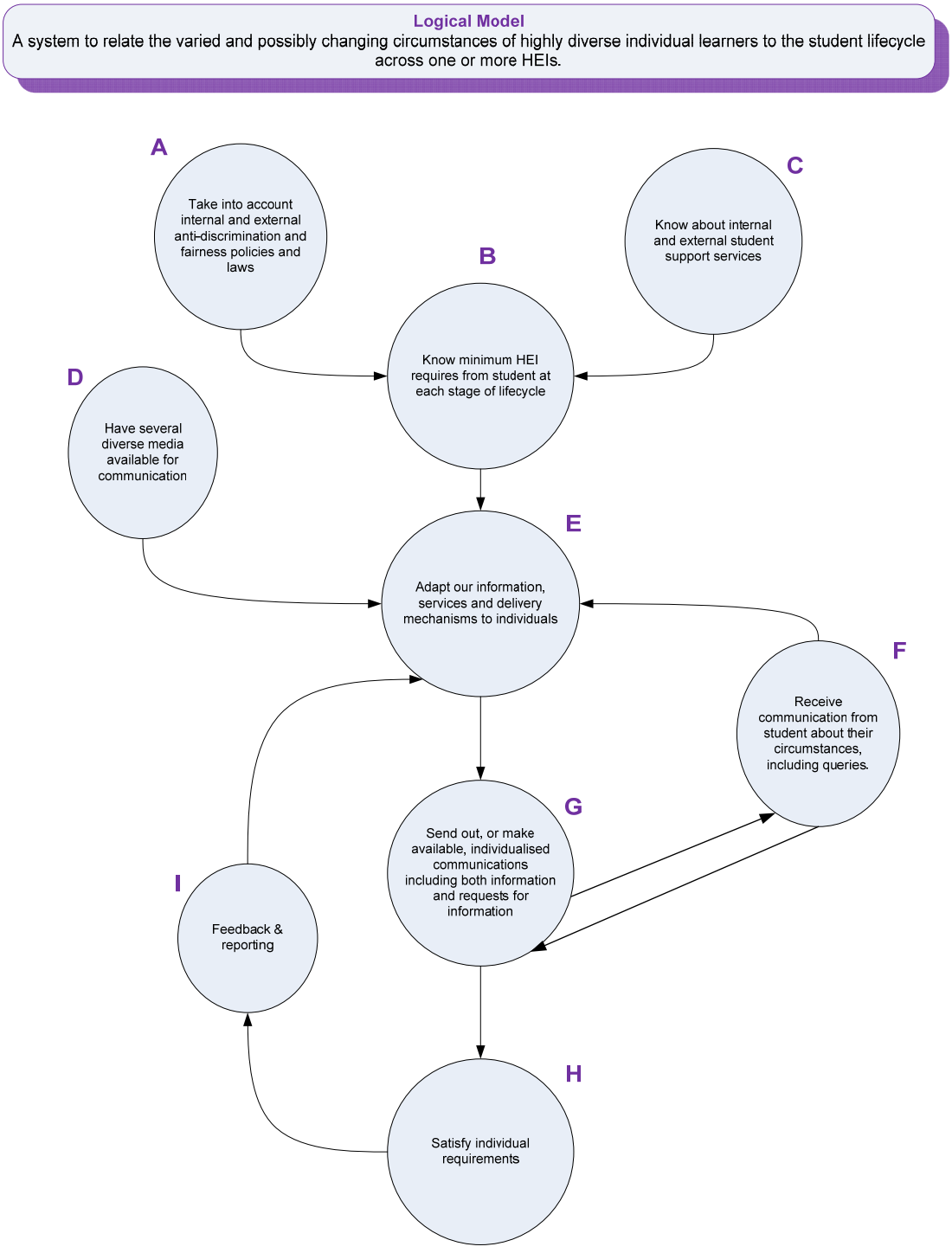
Theme: Personalisation vs the Big System

System Definition: A system to relate the varied and possibly changing circumstances of highly diverse individual learners to the student lifecycle across one or more HEIs.

System attributes:

Customers	Individual learners
Actors	Staff at the HEIs
Transformation	Make HEI processes fit with the learners' circumstances.
Weltanschauung	We celebrate the diversity of our students and want to help them get the most out of our courses.
Owners	Senior management at HEIs
Environment	Staff training, government WP initiatives, IT systems, credit transfer systems; international student support (e.g. NARIC); SKILL, NUS

Logical model:



Comparison with the real world

A: Fairness study evidence.

B: Currently very standardised in many institutions. And it relates to the traditional student. Is there questioning of the necessity of collecting each data item? HEI may want more information from a non-standard student.

"Staff -> students. What do we know about our students? What do we want to know?"

C: Often not coherent, e.g. not centralised effectively. May be different in different departments.

"Students poorly informed by staff who are not up-to-date with UCAS developments."

D: Good evidence for this. Portal may lead to over-reliance on it???? Diversifying the media available, so that the main method is changing: paper -> email -> SMS -> portal

E: Is D universal or adapting to individual circumstances? Is there an assumption that our students are Digital Natives and will cope with whatever we throw at them? Do HEIs take into account the circumstances?

"One hurdle after another"

F: Done. But is there a change of activities in response to monitoring.

"Digital dunce vs I don't do letters." "Disabled students not happy to disclose information" Often because of the way they are asked. Parental involvement in HE question - esp. relevance to decision-making.

G: General information is sent out. But not about adaptations. Often too many communications, and too much irrelevant content.

"What do I do after my Foundation Degree? contrast with 'normal' undergrad routes."

"Appropriateness of assessment in terms of timeliness and formative/summative."

H: "square peg in a round hole"

Issues identified

Staff who answer enquiries from students need access to all the relevant information quickly. Some of this information is detailed material held in databases, some is “softer” information about the institution’s services.

Issue: Staff training

Issue: IT – making all the relevant information available to staff and students in a predictable place.

The quality of data about students is questioned, although certain software packages have a higher level of confidence than others. Is the data relevant to the processes? Is too much data collected?

> Issue: Data quality, including accuracy, timeliness and relevance of each data item, especially in relation to the different circumstances of students.

> Issue: Are our software packages the right ones for our business processes? Are our processes configured to the software, or is the software configured to the processes?

Institutions are keen to communicate with students. This can lead to excessive or inappropriate communication, leading to information overload for students and potential communication failure.

> Issue: How do we provide students with targeted communications relevant to their individual circumstances through media that meet their individual requirements.

> Issue: Which channels of communication are appropriate, bearing in mind that many, but not all, students are Digital Natives?

Students would like timely relevant formative feedback in teaching and learning.

> Issue: How to satisfy this requirement consistently?

Institutions have processes in place to cover student lifecycle relationship management. However, many of these processes may be historical, may use inappropriate technology and may not be sufficiently joined up.

> Issue: How do we deliver process improvement?

> Issue: How can our IT systems support process improvement strategies?

> Issue: Can we improve the communications between different interest groups within the university, all of whom are engaged in student relationship management?

APPENDIX 8

List of issues identified during the research

***Issue**: how to empower operational managers to understand their ownership of the operation and data, and to empower IS departments to become more consultative in their approach to supporting these.*

***Issue**: How to ensure that first contact with a student is personalised and of high quality throughout the institution.*

***Issue**: Institution and other websites are influential in raising awareness of institutions and programmes, and in prompting students to make the first contact and seek further information. They are often therefore the first link in the chain, after personal recommendation. Institutions need to ensure the appropriateness of their website in meeting the information needs of prospective students, and ensure its currency.*

***Issue**: ensuring that every student receives the information that they need prior to registration and induction.*

***Issue**: There is a tension between the need for mass application and registration processes and the need for a personal touch.*

***Issue**: Portals are perceived as a good means of communication, because they represent a single starting point, and the student can choose when to access it. The system can carry large volumes of structured information, from which the student can choose the relevant sections.*

***Issue**: How to make the high quality approach more general throughout the institution.*

***Issue**: How to combine high volume communications with personal human contact and do this everywhere.*

***Issue**: Perceptions are mostly good, but there are gaps in respect of some experiences and some areas; how does an institution make all its interactions uniformly good?*

***Issue**: Ensuring that information is appropriate and timely.*

There are a variety of methods of interaction between institutions and their students. Electronic methods are available and used widely, but institutions need to consider the tone and frequency of email contact, and the content of student portals. Students appreciate the more personalised approach, and the understanding of the different communications needs and methods of off-site adult learners provide a good example of how this can be achieved.

Different types of students have differing communications needs and also have different channels of communication available to them. Institutions will best manage their relationships where this is understood, and where they have the ability to personalise communications. However, this will require a level of resource in first identifying information needs, and then in developing and using the most appropriate methods for each student. The most valuable method of communication is still considered to be personal contact, particularly face to face, although direct email contact with a named individual was also valued. This preference however, should not distract institutions from developing creative methods of contact and using cost-effective methods of contact. Considering carefully information needs and ensuring that information channels are kept current, is very important.

***Issue**: Staff training*

***Issue**: IT – making all the relevant information available to staff and students in a predictable place.*

***Issue**: Staff who answer enquiries from students need access to all the relevant information quickly. Some of this information is detailed material held in databases, some is "softer" information about the institution's services.*

***Issue**: Ensuring the quality of information given to students, including accuracy, timeliness and relevance of each data item, especially in relation to the different circumstances of students.*

The quality of data about students is questioned, although certain software packages have a higher level of confidence than others. Is the data relevant to the processes? Is too much data collected?

***Issue**: Are our software packages the right ones for our business processes? Are our processes configured to the software, or is the software configured to the processes?*

***Issue**: How do we provide students with targeted communications relevant to their individual circumstances through media that meet their individual requirements? Institutions are keen to communicate with students. This can lead to excessive or inappropriate communication, leading to information overload[15] for students and potential communication failure.*

***Issue**: Which channels of communication are appropriate, bearing in mind that many, but not all, students are Digital Natives?*

***Issue**: Students would like timely relevant formative feedback in teaching and learning. How to satisfy this requirement consistently?*

***Issue**: How do we deliver process improvement?*

[15] See Glossary.

***Issue**: How can our IT systems support process improvement strategies?*

***Issue**: Can we improve the communications between different interest groups within the university, all of whom are engaged in student relationship management? Institutions have processes in place to cover student lifecycle relationship management. However, many of these processes may be historical, may use inappropriate technology and may not be sufficiently joined up.*

***Issue**: Student relationship management is only rarely considered a holistic concept, leading to compartmentalisation of functions, processes and methods. This can lead to a fractured experience for students with very varying character and quality. It can also mean that data exchange between processes is inefficient or non-existent.*

***Issue**: Monitoring of the student experience is similarly compartmentalised, making it difficult to co-ordinate process improvement, to gain economies of scale or to report on it in a holistic fashion.*

***Issue**: Feedback from students.*

It is important to obtain and analyse systematic feedback about the relationship between students and the institution from students. This should be the basis of the design, planning and implementation of changed processes in response to the feedback, taking into account the students' lifecycle state, the institution's approach to student relationship management and any local context in relation to the part of the institution that is involved. Our research has shown that few institutions are carrying out this type of change process.

***Issue**: Information provided to students needs to be appropriate, timely and understood.*

'Appropriate' means taking into account individual circumstances, as well as lifecycle state. As computers are primarily good at routine, high volume and repeatable processes, some responses will require personal attention of staff. Therefore systems containing humans and computers need to be able to identify where these human interventions are required. All interaction processes need a backstop of a person. Feedback from the recipient is important, so that staff know that the information has been not only sent, but received and understood. This feedback acts as a process control mechanism.

***Issue**: Information can be relevant to all, or relevant to only one individual.*

Information can be high volume, relevant to all students, or to large groups, or can be very specific to individuals or to small groups with relatively rare needs. Sometimes the information needs are determined by the students themselves. These different needs suggest a multi-channel approach, taking into account information requirements and accessibility issues. Channels used in our case studies have included, web portals and other institution websites, VLEs, social networking software; virtual reality environemtns, email, letters newsletters and magazines, sms text messaging, face to face contact, voice telephony, forums, surveys, physical locations.

***Issue**: Promotion of social interactions.*

Promotion of social interactions (staff to students; students to other students) is vital for student engagement, retention, social, academic and cultural understanding. Communication within relationship management consists of both formal and informal patterns, which deepen the association of the student with the institution. Computer systems can be tools or facilitators for this, but direct personal interactions are perceived by both staff and students in our research as very important for cementing social, academic and cultural engagement.

Further Education institutions have well developed electronic tools to help collection and analysis of data for the purposes of funding and attendance, geared to reporting to LSC and OFSTED. These tools are less well developed for student support functions.

***Issue**: Interventions tend to involve less electronic tools as the lifecycle state progresses.*

As the lifecycle moves from addressing the mass of potential learners (pre-application) through groups (cohorts applying and registering on specific programmes) to individuals (personalised teaching and learning; pastoral support), so interventions become more specific and personalised and harder to support by allocating functions to impersonal machines. This issue reflects the ease with which computers can communicate standard messages and large volumes of information very widely. Institutions are increasingly recognising the need to be attuned to the danger of information overload for students, which can be alleviated by careful consideration of the 'when', 'how' and 'how much' of each communication.

***Issue**: A suitable starting point for communications.*

Students appreciate a stable, single starting point for information gathering and communications, for example a student portal that allows the student to control when, where and sometimes how it is accessed. Early experience of these systems pays dividends, because the student becomes used to this as a cultural norm, particularly if it is via a single interface or a consistent style of interface. While these systems have been available at the teaching and learning stage, for example through VLEs, they are still comparatively rare at other stages of the student lifecycle. However, feedback on the qualitative and quantitative benefits of these systems is still needed. There is also evidence from our case studies that these systems need to be coupled with targeted communications triggered by changes in the student's lifecycle state and geared to eliciting specific actions from the student, for example a reply to an offer of a place, payment of fees, submission of piece of work for assessment or agreement to attend an alumni event.

***Issue**: Accessibility*

Access to individualised personal support is vital for some students, and these individuals cannot be identified in advance.

***Issue**: Student choice*

There is a premium on systems that students can choose to use or not to use. There are four principal implications from this brought out from our analysis of the case studies:

.1 Multi-channel communications should be used;
.2 Feedback should be gathered…
.3 … And changes implemented in response;
.4 Targeted support should be available where needs have been identified.

APPENDIX 9:

Glossary

Term	***Description***
ADoM	JISC funded Admissions Domain Map Project led by The University of Nottingham
AHUA	Association of Heads of University Administration
CATWOE	Acronym for part of the Soft Systems Methodology, it identifies a systems Customers, Actors, Transformation, Weltanschauung, Owners and Environment
CRM	Customer Relationship Management
Entry Profile	A structured collection of information about a course, usually published on the UCAS website (http://www.ucas.com)
Fitts List	A group of attributes used to differentiate the allocation of function to humans or machines, particularly computers
FTEs	Full time equivalent student numbers
HEI	Higher education institution
HILDA	JISC funded research study High Level Domain Architecture for HE
IS	Information Systems
IT	Information Technology
ICT	Information and communications technology
Information overload	State in which an individual receives so much information that it becomes very difficult to perceive which parts are important or relevant and which are not.
JISC	Joint Information Systems Committee
JOS	JISC Organisational Support committee
Learner journey	The track a individual or representative individual takes into and through higher education.
Logical model	An abstract representation of a system, information flow or process.

MIS	Management information system
MMU	Manchester Metropolitan University
Multi-channel communications	Provision of information through several different media.
Portal	Web site with a login that students can use to access information and use university systems
Rich Picture	A diagram type designed to capture perceptions, feelings, and personal, subjective views about a situation, as well as facts.
Shock Absorber Project	MMU project looking at ways to ease the transition to HE.
SITS	Proprietary system for student relationship management offered by Tribal
Soft Systems Methodology	A set of systems thinking techniques developed by Peter Checkland (et al) to gain insights into unbounded 'messy' problems.
SPA	Supporting Professionalism in Admissions project
SRM	Student relationship management
System definition	Formal textual description of the purpose of a system
Systems failures approach	A set of systems thinking techniques designed to address the reasons why systems involving people and machines fail or might fail in the future.
Systems thinking	An approach to problem solving that takes a holistic view of the situation, rather than a reductionist (analytical) view.
Transition	The time between a learner deciding to apply for admission to HE and the end of induction
UCAS	Organisation that manages undergraduate (and some other) higher education applications on behalf of most HEIs
UCISA	Universities and Colleges Information Systems Association
VLE	Virtual learning environment
WP	Widening Participation

APPENDIX 10

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