

UCISA Top Concerns 2004/2005

Final report 10 April 2005

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Executive Summary

In the second poll of UCISA members the following issues were identified as of highest concern.

Concern	Rank
Anytime, anywhere computing	1
Systems resilience and availability	2
Network Security	3
Strategic Approach to Infrastructure	4
Learning support	5
Network technologies	6
Enterprise Portals	7
User Management	8
Ensuring sufficient funding	9
Data Management	10
IT Institution's planning	11

Introduction

A top concern across our community is an issue, a technology, a threat, an opportunity or something else which for whatever reasons is high on the agenda of the senior management of the UCISA members' ITS¹ or high on the agenda of institutions' senior management teams.

A concern might be something that is or may require special effort to deal with (such as adopting Grid Technology) or it may be something that you see as being of significance to the successful use of IT to support the activities (and mission) of your institution. It may be something you are deploying resource to handle but still feel you need to keep it on the management radar, or it may be something you are becoming concerned about and that you have not yet decided how to handle.

This note provides the results of the Second UCISA Top Concerns Survey.

Collecting the candidates

Candidate Top Concerns were provided by members of the UCISA Directors email list. These together with input from other sources (including concerns from the 2003/4 survey) were used to form a candidate list. This was reviewed by the UCISA Executive and the following list of twenty eight candidate Top Concerns agreed.

	Concern
1	Network technologies
2	SuperJANET 5
3	Network Security

¹ We recognise that a number of different terms are in use within our community to refer to the department that is responsible for the provision of a central computing service: in this documentation we use ITS to refer to that department (Information Technology Service).

4	Anytime, anywhere computing
5	Strategic Approach to Infrastructure
6	Systems resilience and availability
7	User Management
8	Data Management
9	Grid Technologies
10	Enterprise Portals
11	Business Continuity
12	Information Security
13	Extended hours
14	Data interfaces
15	Learning support
16	Document Management
17	Services Management Formal Approach
18	IT Institution's planning
19	Determining priorities
20	Ensuring sufficient funding
21	Departmental Relationships
22	Internationalisation Challenges
23	Economic Costing
24	New Staffing Structures
25	Staffing
26	Customer Centric Service
27	Freedom of Information
28	Procurement and disposal

Annex A provides full details of these candidate Top Concerns.

Annex B lists the 2003/4 Concerns and includes a table associating these with the 2004/5 Candidate Top Concerns.

Results

The voters

The voting was conducted using the UCISA Directors email list running from JISC. Members of this list were invited to contribute candidate concerns and to vote. 71 individuals submitted valid votes via the voting web page. All of the voters indicated that they were senior managers from our member institutions: from the titles given about 90% were the directors of the institutions ITS (or equivalent). There were only three incomplete submissions of results.

The Questions

Twenty eight candidate top concerns were described in the voting information and voters were asked to answer four questions about the proposed concerns.

- I. Which of the IT related issues below are most important for your institution to resolve for its strategic success? Please select no more than five issues.
- II. Which of the IT related issues below are likely to become much more significant within the next twelve months? Please select no more than five issues.

- III. Which of the issues below as leaders in the provision of IT at your institution are you spending most of your time addressing? Please select no more than five issues.
- IV. On which of the IT related issues below is your institution spending the most resource (human resource and or financial resources)? Please select no more than five issues.

Results for Question I: *Most important for your institution to resolve for its strategic success*

	Concern	Selected
3	Network Security	28
5	Strategic Approach to Infrastructure	28
6	Systems resilience and availability	27
4	Anytime, anywhere computing	26
15	Learning support	22
20	Ensuring sufficient funding	22
18	IT Institution's planning	19
11	Business Continuity	18
10	Enterprise Portals	16

Results for Question II: *Likely to become more significance in the next twelve months*

	Concern	Selected
4	Anytime, anywhere computing	37
13	Extended hours	31
10	Enterprise Portals	23
17	Services Management Formal Approach	23
7	User Management	18
16	Document Management	17
6	Systems resilience and availability	15
1	Network technologies	14
8	Data Management	13

Results for Question III: *Leaders spending most time addressing*

	Concern	Selected
5	Strategic Approach to Infrastructure	21
18	IT Institution's planning	21
25	Staffing	21
3	Network Security	20
20	Ensuring sufficient funding	18
19	Determining priorities	17
24	New Staffing Structures	16
7	User Management	15
21	Departmental Relationships	15
26	Customer Centric Service	14

Results for Question IV: *Using most resource*

	Concern	Selected
6	Systems resilience and availability	34
3	Network Security	29
1	Network technologies	28
15	Learning support	28
8	Data Management	20

14	Data interfaces	18
7	User Management	17
4	Anytime, anywhere computing	16
5	Strategic Approach to Infrastructure	15
10	Enterprise Portals	12

The table below combines the scores for the four questions.

Combination score results

	Concern	Sum
4	Anytime, anywhere computing	92
6	Systems resilience and availability	88
3	Network Security	84
5	Strategic Approach to Infrastructure	73
15	Learning support	70
1	Network technologies	65
10	Enterprise Portals	62
7	User Management	61
20	Ensuring sufficient funding	51

Based on being in the top of each group		#groups
3	Network Security	3
4	Anytime, anywhere computing	3
5	Strategic Approach to Infrastructure	3
6	Systems resilience and availability	3
7	User Management	3
10	Enterprise Portals	3
1	Network technologies	2
8	Data Management	2
15	Learning support	2
18	IT Institution's planning	2
20	Ensuring sufficient funding	2
11	Business Continuity	1
13	Extended hours	1
14	Data interfaces	1
16	Document Management	1
17	Services Management Formal Approach	1
19	Determining priorities	1
21	Departmental Relationships	1
24	New Staffing Structures	1
25	Staffing	1
26	Customer Centric Service	1
2	SuperJANET 5	0
9	Grid Technologies	0
12	Information Security	0
22	Internationalisation Challenges	0
23	Economic Costing	0
27	Freedom of Information	0
28	Procurement and disposal	0

Analysis

No candidate top concern appears in the top group for all four questions being asked.

Six concerns appear in the top group for three out of the four ways in which voters were asked to rank the concerns.

3	Network Security
4	Anytime, anywhere computing
5	Strategic Approach to Infrastructure
6	Systems resilience and availability
7	User Management
10	Enterprise Portals

Seven concerns did not come within the top group of concerns in any of the ways voters were asked to rank the concerns.

2	SuperJANET 5
9	Grid Technologies
12	Information Security
22	Internationalisation Challenges
23	Economic Costing
27	Freedom of Information
28	Procurement and disposal

Looking at the items of most concern and the items which are expected to become of significance in the next twelve months there are some items which are in the top part of both of these categories:

6	Systems Resilience
4	Anytime anywhere computing
10	Enterprise Portals

This perhaps reflects the different stages these items have reached in different institutions.

There is some indication of new areas of concern coming onto the radar.

13	Extended hours support
17	Services management formal approach
7	User management
16	Document management
1	Network technologies
8	Data Management

Some of these were in our top concerns list for 2003/4 (#13, #7) or link to some of the 2003/4 concerns (#17) – this perhaps indicates that progress on these items has been slower than hoped.

Considering the top items in the list of where IT leaders spend most time, there are some items on this list that are not within the top part of the other lists. These are

25	Staffing
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20	Ensuring sufficient funding
19	Determining priorities
24	New Staffing Structures
21	Departmental Relationships
26	Customer Centric Service

Looking at the areas where most resource is expended, concern #14 (Data Interfaces) was voted into the top part of the list but did not appear on the top part of the other lists.

The following table list those concerns which appear in the top portion of the responses for each of the four questions. The concerns in the shaded portion appear in top portion responses for three of the questions and the others appear in the top portion responses for two of the questions.

3	Network Security
4	Anytime, anywhere computing
5	Strategic Approach to Infrastructure
6	Systems resilience and availability
7	User Management
10	Enterprise Portals
1	Network technologies
8	Data Management
15	Learning support
18	IT Institution's planning
20	Ensuring sufficient funding

Comparing the results with 2003/4 Survey

Whilst the nature of the concerns and they way they have been expressed has moved on since 2003/4 and a different way of voting has been introduced for the 2004/5 survey, there is still some merit in comparing the two surveys.

Considering the most important items for the Strategic Success of the member's institution, the top nine items chosen this year were in the top nine last year with the exception of *Systems resilience and availability*, which is new to our major concerns (#6).

For the question about becoming more important in the next 12 months, 3 items were in the top ten concerns in 2003/4, one was just out side the top ten and the other items are "new concerns" (#1, #6,#8,#17).

Looking at the items where senior management is spending most time, five of the items were in the top ten for 2003/4 and four are new concerns (#19, #21, #24, #25, #26).

The resource consumption of concerns shows that six items were in the top ten in 2003/4 and that three items are new top concerns (#6, #8, #14).

The combined comparison with 2003/4 shows that 7 of the nine items were in the top ten in 2003/4 and two are new concerns (#1, #6)

For the second year running Grid Technology did not score highly.

Annex C provides a fuller comparison.

Annex E offers a simple comparison between the EDUCAUSE 2004 Issues survey and the UCISA Top Concerns 2004/5 survey. There are a number of areas not really raised by UCISA's survey (ERP Systems and Web Services) and some items (System resilience, Network Security) that would appear not to be separately identified as EDUCAUSE top issues.

Summary Results

The Top Concerns of the UCISA Membership 2004/5 are set out in the table below. This is based on those concerns that are in the top portion of the responses to two or more of the questions posed and ordered by their combined score for all four questions.

#	Concern	Rank
4	Anytime, anywhere computing	1
6	Systems resilience and availability	2
3	Network Security	3
5	Strategic Approach to Infrastructure	4
15	Learning support	5
1	Network technologies	6
10	Enterprise Portals	7
7	User Management	8
20	Ensuring sufficient funding	9
8	Data Management	10
18	IT Institution's planning	11

What happens next?

So what happens to the Top Concerns?

The 2003/4 Top Concerns Survey was used to steer the programme of UCISA and guided the selection of topics for the groups and meetings of the Association. Vendors used the concerns to discuss matters with the HE Community – one vendor used them as an agenda for a meeting they hosted. The UCISA Executive sent the JISC copies of the Top Concerns and each of the main committees of the JISC considered these at one of its meetings – with the objective of ensuring that those that were within their area were considered. Some members of UCISA have used the results of the survey within their own institution to evaluate their ICT programmes.

The UCISA Executive has invited Sir Ron Cooke (JISC Chair) and Dr Malcolm Read (JISC Executive Secretary) to its Strategy Meeting in April 2005 to brief them on the outcome of this year's survey so that JISC may take account of the 2004/2005 Top Concerns that are relevant to the JISC remit at an earlier point in their planning cycle.

What will happen to the 2004/5 results is up to you!

Acknowledgements

Particular thanks is recorded to Jake Gannon and Duncan Brown from The University of Liverpool Computing Services Department for creating the data collection program used for the survey and to Apple UK who most generously provided two iPods as prizes for the random draw from within the correctly completed surveys.

Annex A: Candidate Top Concerns

Networking

1. Network technologies

- *Wireless*
 - The wireless media: 801.11a, 801.11b, 801.11g;
 - Coverage;
 - Open /closed access;
 - Role
 - Wireless vs wired
- Optical networking
 - Standards and equipment
 - Quality of maintenance and support
 - Dark fibre ownership, leased dark fibre, service provision;
- Public wireless vs wired vs 3rd generation;
- Remote access from other networks;
- VPN.

2. SuperJANET 5

- Making the institution aware of the benefits that are expected to be available from SuperJANET 5;
- Preparations to make use of the additional features expected to be offered by SuperJANET 5;
- Funding of resilient connections to institutions;
- Resources required within institutions to reap the benefit of SuperJANET 5;
- Readiness and ability of the Regional Network Operators (MAN's) to take advantage of SuperJANET 5.

3. Network Security

- Hacking, SPAM, computer viruses;
- Firewalls, intrusion detection;
- Identification of security breaches;
- Authentication for use of data network; 802.11x and other mechanisms;
- Potential conflicts between open network access (to provide wide access to facilities) and security of access;
- VPNs.

Itinerant/Peripatetic computing

4. Anytime, anywhere, with any thing computing (mobile/itinerant/peripatetic/*Martini* computing)

- *Infrastructure issues:*
 - Network connectivity, network sign-in, network authentication, and accounting;
 - Network security; balance between security and convenience/ease of access.
 - Resource management in a peripatetic environment.
 - Enabling technologies for secure use and access.
- Application issues:

- remote desktop eg file store access, document management;
- office productivity tools eg CRM, MSOffice (or indeed Open Office);
- mobile device synchronisation eg phones, PDAs, laptops;
- mail system;
- portal channel access eg phone, PDAs and other small display devices.
- Off site access to corporate information and business applications;
- Governance issues for remote use of corporate information and systems; development of institutional policies;
- Security; policies for using institutional applications and data on systems not owned by the institution; risks to institutional data held on such machines;
- Institution's rights to access/control such systems when connected to its network.

Infrastructure

5. Strategic approach to developing, maintaining and upgrading the IT infrastructure needed to deliver strategic IT based academic and business services.

- Development and implementation of a policy/strategic direction for IT infrastructure;
- Determining the scope of an enterprise/institutional IT infrastructure policy;
- Obtaining buy-in for the institutional IT infrastructure policy;
- Selection, deployment and maintenance of an enterprise wide IT infrastructure;
- Role of proprietary and open source elements in the IT infrastructure;
- Change control for an evolving IT infrastructure.

6. Systems resilience and availability

- Conflict between service provision and the application of updates and other maintenance activities;
- Business requirements for continuous availability of services (24x365)
- Timing of maintenance activities: *when is out of hours?*
- Technologies for resilience: Layer 4 network switches and routing, system clustering for resilience, storage infrastructures, SANs. Data backup.

7. User management

- Identification, authentication, authorisation of users;
- Intra-organisation and inter-organisation user management issues;
- Short term users, visitors etc;
- Authorisation for use of remote resources.
- User Directories: Managing user identities through e-directories and meta directories; maintenance of multiple directories, synchronisation of directory contents.
- Single sign-on: Systems to enable users to make use of one set of credentials to access a number of different resources; users may only be challenged for credentials for the first system they access – once

identification is established other systems allow access based on the authentication established.

8. Data management

- Storage and handling of increasingly large volumes of data; storage technologies (including reliable storage (RAID, mirroring), SANs, virtualisation, fibre channels, SCSI over IP); backup systems.
- Data curation – provision of access to data in the future (cope with technology changes);

9. Grid technologies

- Absorbing new and emerging technologies from the *e-science* area into the normal business of the computing service;
- Developing the necessary skills within the ITS staff;
- Establishing clarity with respect to the services required for *e-science* and *e-research* and appropriate service definitions for new and rapidly evolving services; developing workable partnerships with *e-scientists*;
- Resources required to adopt a major additional service area.

10. Enterprise portals, web based services

- Justifying their need, determining benefits;
- Business strategies and web portal issues;
- Management issues, *ownership*;
- Standards and implementation issues;
- Robustness.

Services Management and governance

11. Business continuity policies, plans and provision

- Determination of the organisation's policy for the business continuity; identification of the appropriate level of business continuity provision for particular business processes (and services).
- Ownership of business continuity planning with the organisation.
- Development and maintenance of business continuity plans.
- Provision for systems and facilities for business continuity.

12. Information Security

- Development of information security policies;
- Adoption and enforcement of information security policies.

13. Extended hours service

- Provision of support for key services beyond *normal* working hours;
- Determination of which services need to be provided for extended hours.
- Consideration of methods of providing extended hours support.
- What are extended hours (are they 24*7 or something less);
- Staffing issues for extended hours support.
- Resources for extended hours support.

Applications

14. Data interfaces

- Integration of application systems;

- Inter/intra organisation data exchange standards;
- Aggregation of user interfaces through portals
- Data interfaces and exchange issues relating to
 - Unique Learner Number
 - Bologna,
 - Personal Development Programme
 - e-Portfolios
- Web Services, integration and interfaces

15. Learning support applications

- VLE development and integration with other applications for supporting learning (such as e-Portfolios, Personal Development Programme support tools, e-assessment, plagiarism detection);
- Linking VLE to corporate information; use of VLE systems with mobile computing devices.
- Exchange of student information: Alignment for standards for the exchange of information about students within the H and FE community and with other educational bodies;
- Ongoing costs of VLE/MLE systems.

16. Document management

- Policy issues – what documents are managed?
- Long term access to documents; data curation;
- Integration of documents with other types of data and other applications within the institution.
- Relationships between document sharing, web content management *traditional* shared file storage. Integration of information management.
- Sharing of documents for research and learning;

Management

17. Adoption of more formal approaches to service management

- Formalisation of processes and procedure; improved change control and change management; Role of the IT Infrastructure Library (ITIL));
- Formalisation of project management and project management methods;
- Service definitions, performance measurement, key indicators;
- Development of policies to meet standards (eg BS7799, BS15000, ISO9000, PD0005);
- Risk analysis and mitigation;
- Demonstrating value for money – return on investment;
- Reviews and audits;
- Legal and contractual compliance.

18. Ensuring that IT is being full considered in the development and planning of our institutions.

- Changing role of ITS within the institution;
- Involvement of ITS / consideration of IT issues in development of institutional plans and developments;
- Institutional recognition and acceptance of the importance of IT in formulation of all policy issues;
- Engagement of ITS with institution at an appropriate level to ensure appropriate policy input is received from and by ITS;

- Ensuring strategic investments are made in IT to sustain the service required by the institution.

19. Determining priorities within ITS

- Relationship of IT and ITS to institution's strategic plans;
- IT and ITS supporting (not hindering) institutions strategic plan;
- Setting the priority for the development of IT solutions to support and enable the implementation of the institution's strategic plans.

20. Ensuring sufficient funding of IT

- Ensuring continued institutional, strategic investment in IT and systems;
- Ensuring resourcing levels (funding levels) are sufficient to properly support the portfolio of services and the levels of service require by the institution;
- Ensuring sustainable, strategic investment in High Performance Computing, e-Research and other additional technologies services;
- Being asked to do with the same or with reduced levels of resource;
- Avoiding risks to IT services (eg unreliability, poor performance) and to ITS personnel (eg having to try to do more than is reasonable, excessive levels of work related stress) from inadequate funding;
- Cost of software licences and maintenance.

21. Relationship of central IT departments and departmental (faculty) IT teams

- Source of tension between central and departmental IT teams;
- Conflicting standards and recommendations;
- Institutional view vs departmental view;
- Duplication of effort (eg central service email service vs departmental email service).

22. Challenges of internationalisation of institutions activities

- Provision of IT support at distant campuses (in a country outside the UK);
- Use of licensed resources (software and e-library materials) at campus outside the UK;
- Use of resources by distance learning students outside the UK;
- Differences between local laws relating to IT and legal framework at foreign campus;
- Data Protection issues including the transfer of personal data across borders;
- Replication of IT infrastructures from a local (UK) campus at an overseas location.

23. Dealing with full economic costing

- Inclusion of IT in the development of the institution's Full Economic Cost models for research and teaching.
- Identifying the cost of services provided; identification of services provided and *quantities* consumed;
- Audit issues.

24. Implementation of new staffing structures (HE institutions)

- Introduction of the *single pay spine*;
- Role evaluation – choice of evaluation model;
- IT management not engaged in the process within their institution;
- Performance related pay.

25. Staffing

- More professional approach required from IT staff;
- Recruitment, retention, remuneration;
- Performance appraisal; Reward related to effort and contribution;
- Motivation of staff; staff morale;
- Career progression and personal development;
- Succession planning;
- Particular shortage of staff with skills in technical infrastructure support and maintenance where competition with other sectors is more acute;
- More commercial ethos within the institution leading to tensions with *traditional* IT staff
- Adopting best practice from within the sector and elsewhere (“IT won’t work here syndrome”);
- Development of team working and sharing.

26. Developing a customer centric service

- Continuing difficulties in recruiting, training and retaining staff with a customer service ethos;
- Challenges of engendering a customer service culture throughout ITS.

27. Freedom of Information

- Institutional and departmental policies for document management;
- Provision and use of appropriate technologies to support document management policies;
- Tools to support institutional policies on FoI.

28. Procurement of assets and services and asset disposal

- Development of appropriate institutional procurement policies for IT assets and services;
- Application (enforcement) of institutional IT procurement policies;
- Showing lifetime value for money;
- Evaluating the options to lease, buy or outsource;
- Use of regional purchasing groups and national agreements and mechanisms;
- Awareness of public sector procurement regulations;
- Implementation of the EC Directives on Waste Electrical and Electronic Equipment (WEEE);
- Dealing with the proper destruction of data held on equipment before disposal (or redeployment).

Appendix B: 2003/4 Top Concerns and their relation to the 2004/5 Candidate list.

Comparison with 2003/4 Survey

	Concern	Ranking	Similar 2004/5 concern
U2	Data network access from devices owned and/or controlled by end users. Network access for mobile users.	1	Included in 4
U3	Security management of network attached systems	2	3
U1	User authentication and resource control	2	7
U5	Ensuring that IT is being full considered in the development and planning of our institutions.	4	18
U4	Strategic approach to developing, maintaining and upgrading the IT infrastructure needed to deliver strategic IT based academic and business services.	5	5
U19	Enterprise portals, web based services	5	10
U12	Ongoing costs of VLE/MLE systems	7	Included in 15
U6	Business continuity planning	8	11
U16	Risks to services and computing service personnel from inadequate funding	8	Links with 25 and 20
U14	Adopting best practice when managing and developing ICT systems	10	Relates to 17
U18	Managing Complexity	11	
U7	24 x 7 and extended hours Service provision	12	13
U15	Promoting and sharing good (best) practice across the sector	12	Relates to 17 & 25
U13	Software costs and Licences	12	
U11	Professionalisation of the provision of IT services	15	Relates to 25 & 17
U20	Grid technologies and their integration into the campus infrastructure	16	9
U8	Legal and contractual compliance	17	Included in 17
U9	Commercial/Academic tensions	18	Included in 21
U17	Risks to services through the loss of staff (to the private sector) and/or the failure to attract good quality staff to work within university ICT departments	18	Included in 21
U10	Extending access/Insurance	20	

Comparison with 2004/5 Survey

	Concern	2003/4 Concern
1	Network technologies	
2	SuperJANET 5	
3	Network Security	U3
4	Anytime, anywhere computing	Part in U2
5	Strategic Approach to Infrastructure	U4
6	Systems resilience and availability	
7	User Management	U1
8	Data Management	
9	Grid Technologies	U20
10	Enterprise Portals	U19
11	Business Continuity	U6
12	Information Security	
13	Extended hours	U7
14	Data interfaces	
15	Learning support	Part in U12
16	Document Management	
17	Services Management Formal Approach	Relates to U11, U14 & U15
18	IT Institution's planning	U5
19	Determining priorities	
20	Ensuring sufficient funding	Links with U16
21	Departmental Relationships	Relate to U9 & U17
22	Internationalisation Challenges	
23	Economic Costing	
24	New Staffing Structures	
25	Staffing	Relates to U11 & U15
26	Customer Centric Service	
27	Freedom of Information	
28	Procurement and disposal	

Annex C: Comparison with the 2003/4 Results

Question I

	Concern	2004/5 Rank	Similar 2003/4	2003 /4 rank
3	Network Security	1	U3	2
5	Strategic Approach to Infrastructure	1	U4	5
6	Systems resilience and availability	3		
4	Anytime, anywhere computing	4	U2 (part)	1
15	Learning support	5	U12 (part)	7
20	Ensuring sufficient funding	5	U16	8
18	IT Institution's planning	7	U5	4
11	Business Continuity	8	U6	8
10	Enterprise Portals	9	U19	5

Question II

	Concern	2004/5 Rank	Similar 2003/4	2003/4 rank
4	Anytime, anywhere computing	1	U2 (part)	1
13	Extended hours	2	U7	12
10	Enterprise Portals	3	U19	5
17	Services Management Formal Approach	3		
7	User Management	5	U1	2
16	Document Management	6		
6	Systems resilience and availability	7		
1	Network technologies	8		
8	Data Management	9		

Question III

	Concern	2004/5 Rank	Similar 2003/4	2003/4 rank
5	Strategic Approach to Infrastructure	1	U4	5
18	IT Institution's planning	1	U5	4
25	Staffing	1		
3	Network Security	4	U3	2
20	Ensuring sufficient funding	5	U16	8
19	Determining priorities	6		
24	New Staffing Structures	7		
7	User Management	8	U1	2
21	Departmental Relationships	8		
26	Customer Centric Service	10		

Question IV

	Concern	2004/5 Rank	Similar 2003/4	2003/4 rank
6	Systems resilience and availability	1		
3	Network Security	2	U3	2
1	Network technologies	3		

15	Learning support	3	U12 (part)	7
8	Data Management	5		
14	Data interfaces	6		
7	User Management	7	U1	2
4	Anytime, anywhere computing	8	U2 (part)	1
5	Strategic Approach to Infrastructure	9	U4	5
10	Enterprise Portals	10	U19	5

Combined

	Concern	2004/5 Rank	Similar 2003/4	2003/4 rank
4	Anytime, anywhere computing	1	U2 (part)	1
6	Systems resilience and availability	2		
3	Network Security	3	U3	2
5	Strategic Approach to Infrastructure	4	U4	5
15	Learning support	5	U12 (part)	7
1	Network technologies	6		
10	Enterprise Portals	7	U19	5
7	User Management	8	U1	2
20	Ensuring sufficient funding	9	U16	8

Annex D: Top Concerns 2004/5

Results (24 March 2005)

1. Anytime, anywhere, with any thing computing (mobile/itinerant/peripatetic/Martini computing) #4

- *Infrastructure issues:*
 - Network connectivity, network sign-in, network authentication, and accounting;
 - Network security; balance between security and convenience/ease of access.
 - Resource management in a peripatetic environment.
 - Enabling technologies for secure use and access.
- Application issues:
 - remote desktop eg file store access, document management;
 - office productivity tools eg CRM, MSOffice (or indeed Open Office);
 - mobile device synchronisation eg phones, PDAs, laptops;
 - mail system;
 - portal channel access eg phone, PDAs and other small display devices.
 - Off-site access to corporate information and business applications;
- Governance issues for remote use of corporate information and systems; development of institutional policies;
- Security; policies for using institutional applications and data on systems not owned by the institution; risks to institutional data held on such machines;
- Institution's rights to access / control such systems when connected to its network.

2. Systems resilience and availability #6

- Conflict between service provision and the application of updates and other maintenance activities;
- Business requirements for continuous availability of services (24x365)
- Timing of maintenance activities: when is "out of hours"?
- Technologies for resilience: Layer 4 network switches and routing, system clustering for resilience, storage infrastructures, SANs. Data backup.

3. Network Security #3

- Hacking, SPAM, computer viruses;
- Firewalls, intrusion detection;
- Identification of security breaches;
- Authentication for use of data network; 802.11x and other mechanisms;
- Potential conflicts between open network access (to provide wide access to facilities) and security of access;
- VPNs.

4. Strategic approach to developing, maintaining and upgrading the IT infrastructure needed to deliver strategic IT-based academic and business services.

- Development and implementation of a policy/strategic direction for IT infrastructure;
- Determining the scope of an enterprise/institutional IT infrastructure policy;
- Obtaining buy-in for the institutional IT infrastructure policy;
- Selection, deployment and maintenance of an enterprise wide IT infrastructure;
- Role of proprietary and open source elements in the IT infrastructure;
- Change control for an evolving IT infrastructure.

5 Learning support applications #15

- VLE development and integration with other applications for supporting learning (such as e-Portfolios, Personal Development Programme support tools, e-assessment, plagiarism detection);
- Linking VLE to corporate information; use of VLE systems with mobile computing devices.

- Exchange of student information: Alignment for standards for the exchange of information about students within the H and FE community and with other educational bodies;
- Ongoing costs of VLE / MLE systems.

6. Network technologies #1

- *Wireless*
 - The wireless media: 801.11a, 801.11b, 801.11g;
 - Coverage;
 - Open/closed access;
 - Role;
 - Wireless vs wired
- Optical networking
 - Standards and equipment;
 - Quality of maintenance and support;
 - Dark fibre ownership, leased dark fibre, service provision;
- Public wireless vs wired vs 3rd generation;
- Remote access from other networks;
- VPN.

7. Enterprise portals, web-based services #7

- Justifying their need, determining benefits;
- Business strategies and web portal issues;
- Management issues, *ownership*;
- Standards and implementation issues;
- Robustness.

8. User management #7

- Identification, authentication, authorisation of users;
- Intra-organisation and inter-organisation user management issues;
- Short term users, visitors etc.;
- Authorisation for use of remote resources.
- User Directories: Managing user identities through e-directories and meta directories; maintenance of multiple directories, synchronisation of directory contents.
- Single sign-on: Systems to enable users to make use of one set of credentials to access a number of different resources; users may only be challenged for credentials for the first system they access – once identification is established other systems allow access based on the authentication established.

9. Ensuring sufficient funding of IT #20

- Ensuring continued institutional, strategic investment in IT and systems;
- Ensuring resourcing levels (funding levels) are sufficient to properly support the portfolio of services and the levels of service require by the institution;
- Ensuring sustainable, strategic investment in High Performance Computing, e-Research and other additional technologies services;
- Being asked to do with the same or with reduced levels of resource;
- Avoiding risks to IT services (eg unreliability, poor performance) and to ITS personnel (eg having to try to do more than is reasonable, excessive levels of work related stress) from inadequate funding;
- Cost of software licences and maintenance.

10. Data management #8

- Storage and handling of increasingly large volumes of data; storage technologies (including reliable storage (RAID, mirroring), SANs, virtualisation, fibre channels, SCSI over IP); backup systems.
- Data curation – provision of access to data in the future (cope with technology changes);

11. Ensuring that IT is being full considered in the development and planning of our institutions. #18

- Changing role of ITS within the institution;

- Involvement of ITS / consideration of IT issues in development of institutional plans and developments;
- Institutional recognition and acceptance of the importance of IT in formulation of all policy issues.
- Engagement of ITS with institution at an appropriate level to ensure appropriate policy input is received from and by ITS.
- Ensuring strategic investments are made in IT to sustain the service required by the institution.

Annex E: Comparison of the EDUCAUSE Top Issues 2004 and UCISA Top Concerns 2004/5

The EDUCAUSE Top Issues survey is held annually. The table below compares the UCISA results with the EDUCAUSE results.

(www.educause.edu/2004SurveyResources/1715)

Educause Rank	Issue	#UCISA 2004/5 Equivalent	Rank of UCISA Equivalent
1	Funding IT	20	9
2	Administrative/ERP/Information Systems		
3	Security and Identity Management	7,4,12	8,1,-
4	Strategic Planning for IT	18	11
5	Faculty Development, Support, and Training for IT		
6	Infrastructure Management for IT	5	4
7	e-Learning/Distributed Teaching and Learning	15	5
8	Web Systems and Services (tied)		
8	Enterprise Level Portals (tied)	10	7
8	Business Continuity/Disaster Recovery (tied)	11	[13]
8	Governance, Organisation, and Leadership for IT (tied)	17 (in part)	[15]