


The roles of organisational structure and continuing professional development in supporting changes in teaching and learning An Information Services' Perspective

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
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1 Introduction



Today the majority of those associated with higher education would not question the potential for information technology to significantly reshape the academic, as well as the administrative activities, of an institution. Most acknowledge the desirability for information technology to radically transform their institutions however it also remains threatening too many. The drive to address the expectations of the contemporary student may create institutional tensions. For example, the need to achieve efficiencies yet conserve finances, the disruption associated with rapid technological change yet a desire to plan and do so strategically are typical of the strategic issues faced. Recent literature frequently addresses technology-centric or pedagogy centric issues, however this paper examines the perspective of providing and supporting the underlying technological infrastructure.



2 Adopting a suitable organisational model

Borone et al (2000) state "In a field that changes so fast, figuring out how to organise human resources to support technology and information resource management is something akin to trying to stand steady during an earthquake - you almost have to change your footing to maintain your balance". The idea of an organisational structure that transforms itself to keep in harmony with institutional need is articulated in this statement.

Whilst the University of Ulster's Mission Statement does not explicitly refer to information technology, nevertheless it features implicitly in terms of assisting with the delivery of its objectives. The institution has integrated its information and information technology service providers in the form of an Information Services Department (ISD), operational from August 2000. This department is at the forefront in establishing an appropriate computing and communications infrastructure and of service development and delivery. Organisational structure models adopted within the United Kingdom (UK) Higher Education (HE) system broadly follow the classification used by UCISA in its annual statistical returns, namely:

- Merged academic computing service and library
- Academic computing service and library under joint line manager but services are not functionally merged

- Separate academic computing service and library

with the option of the following additional service providers being under the same management structure as the academic computing service or merged service:

- Management information systems or administrative computing
- Telephones (voice communications, telecommunications)
- AV (audio-visual or media services).

Furthermore, with reference to the UCISA classifications, there is a need to consider whether the institution's IT/IS strategy is centrally managed or devolved (www.ucisa.ac.uk) and the extent to which the institution's IT/IS services are provided via a centralised or devolved model.

According to the criteria, the University's ISD may be classified as a merged academic computing service and library inclusive of management information systems and audio-visual (media services). ISD's predecessor organisational units comprised of Library, media services, management information systems and academic computing services.

Its new top-level organisational structure, inclusive of its key service portfolio is as illustrated in Table 1. The SCHoMS classification (www.lboro.ac.uk/service/au/ex/schoms) has been used for media services functions. This structure therefore is merely a first iteration in terms of Borone's statement.

Factors influencing this choice of organisational structure model included:

- Requirement for a clear communications structure between service provider and users
- Need to establish a "one stop" helpdesk service
- Recognition of the convergence of digital, audio-visual and video conferencing technologies
- A desire to create a strong and user-focussed technical support base through combining technical staff teams previously associated with media and IT services.

These factors combine with the wish to have a common IT infrastructure being the full responsibility of the central organisation. Clear leadership, sound vision of the institution's needs and a communications model that is established on flexibility, a respect for the needs of the various organisational units and adaptability blend with the aforementioned factors to create an organisational unit that emphasises its institutional responsibilities.

Whilst our model parallels that of many other UK Higher Education Institutions (HEIs) nevertheless it is appropriate to the particular needs of the University. Already ISD is engaged in a series of strategic developments designed to reshape the institution's IT infrastructure and its associated services. Table 2 provides a summary of a subset of these developments, with the focus being upon the IT remit of the department as this is the facet of the service to be discussed within the paper. Furthermore, the focus is mainly on teaching and learning.

As the table indicates, these activities are the principal responsibility of the IT Infrastructure and IT User Services Divisions within ISD. The classification used may be broadly defined as:

Table 1: Top-level organisational structure and functional responsibilities of Information Services Department

	Main Functional Responsibilities	Associated Senior Officers
Directorate	<ul style="list-style-type: none"> – Strategy and policy – Overall management and planning functions 	Director
Administration and Finance ^a	<ul style="list-style-type: none"> – Financial services – Human resource services – Secretarial, clerical and general administrative services 	Team Manager
MIS	<ul style="list-style-type: none"> – Corporate administrative computing 	Assistant Director
Library	<ul style="list-style-type: none"> – Provision of books, journals, electronic information services and non-book media – Readership services; student induction and training 	Assistant Director
IT Infrastructure (Inf) ^b	<ul style="list-style-type: none"> – Digital network development and support (LAN and WAN) – Centralised server provision and management – Archival and backup services – Major operating system support services – Development of relevant standards – Institutional level security policies 	Assistant Director
IT User Services (ITUS)	<ul style="list-style-type: none"> – Helpdesk service – Information services – Staff training; student induction and training services – Developing and supporting corporate IT laboratory services – Audio-visual services to classrooms and lecture theatres – Photography 	Assistant Director

^a (service provider to department)^b abbreviations also used in Table 3

- infrastructure - underpinning policies, technologies and practices
- service - activities with a clear user-focus and direct service benefit
- Business - activities that deliver well-defined facilities to the user community.

In the following section of the paper the emphasis is placed upon staff development, which is considered to be a dominant player in empowering the workforce of ISD to execute its duties and maintain its focus on institutional needs.

3 Staff Development

Hagner (2000) in a recent article on new learning environments observed that an "enabling environment" is a precondition to institutional change. He also stated that such an environment included factors like universal student access and multiple opportunities for training

Table 2: Summary of Strategic Activity associated with Information Services Department

Focus	Activity	Responsibility ^a
Infrastructure	Regional area Network	Inf.
	Network security policies	Inf.
	Hosting service strategy	Inf.
	Project Management Standards	ISD
	Staff development policy	ISD
	Common standards for desktop computing	Inf/ISD
Service	Helpdesk	ITUS
	Single sign-on for student computing	Inf.
	Review of teaching and learning and IT laboratory services	ITUS
	Basic IT skills training courses for students	ITUS
Business	Open and distance learning services	Inf./ITUS
	Document management	MIS
	IT asset management	ITUS

^a the abbreviations used relate to those given in Table 1

and consultation. Whilst the article had a faculty focus, nevertheless several of its comments are applicable to an institutional service provision model established to deliver a centralised support service.

Faculty support, training and consultation for such innovations may also be built upon centralised support services where the culture fosters these activities as part of its mission. Management of change, including cultural change is considered as priority for ISD, also empowerment of its staff through knowledge transfer and acquisition, and an ethos of effective communication. Already an internal Staff Development Report has been compiled to address needs across the entire department, with the ITUS Division, perhaps, having a lead as one of its predecessor units had a well-established staff training track record. Typical areas of training identified within ISD including needs indicated in the Report are those generic topics highlighted in Table 3. It is acknowledged that specific areas of demanding technical training will continue to be identified by each Division and addressed as part of that organisational unit's priorities. Such activity lies outside of this discussion. Already ITUS has completed an inventory of training and staff development activity undertaken by its staff complement. It has also initiated the concept of personal (or professional) development portfolios (PDPs) and taken as its model the work of various relevant professional bodies. For a useful and concise source of information on continuing professional development and allied work associated with related professional bodies refer to UCISA's web-based service, established by its Staff Development Group (SDG).

From recent e-mail communications, initiated by the first author, with the membership of EDUCAUSE and EUNIS, conducted in 2000, it is clear that the level of interest in sharing knowledge and practice associated with staff development is minimal. On the other hand each of these organisations do promote professional development through, for example, their range of events and incentives including providing financial support to undertake pe-

riods of work exchange and to attend senior level management and leadership programmes. UCISA has recently undertaken to assist in the promotion of staff development activity by providing an annual monetary award for the institution that demonstrates the best approach to the task. A spin-off from this UCISA scheme will be the ability to compile a web-based suite of profiles of ongoing work in the field of staff development within UCISA member institutions. This service will considerably enhance the present resource on opportunities offered by the many IT-related professional organisations. Ideally, through further collaboration with EUNIS member institutions, it would be invaluable to develop a more comprehensive resource to facilitate and promote staff development practice. The pace of technological change already referred to suggests that each institution's support department would gain significantly from sharing of intelligence rather than perhaps adopting an insular practice of limiting one's vision and innovation. In a recent EDUCAUSE Executive Briefing on recruitment and retention of IT staff (EDUCAUSE, 2000) it was stated that the opportunity to learn new skills was a key retention factor, as well as a recruitment factor. The Briefing also cites a number of tactics that have been found to be successful in the areas of recruitment and retention; these include a number of the "modes" identified in Table 3.

4 Responding to Institutional Change

Already the need to provide a flexible organisational structure and to establish an effective staff development ethos has been presented as critical considerations whenever dealing with institutional changes. The establishment of the university's ISD along with its plans and practices relating to staff development have yet to be put to the test in terms of determining whether they are responsive to institutional change. Already we are aware of improved user relationships.

The digital era is indeed radically transforming higher education and creating major challenges, as already referred to. In the UK widening access to third level education through affording opportunity to lower socio-economic groups, attracting greater participation from within sectors of population not usually active in higher education, and by creating suitable entry routes for mature students are factors increasing the participation rate. Furthermore, the idea of a full time student who has a significant commitment to concurrently earning an income to finance his education is impacting on the education process. Indeed the digital era is being called upon to provide innovative solutions that match student expectation. Off-campus or distance learning, the deployment of managed learning environments and the creation of virtual schools of learning are commonplace strategic areas for development within the HEIs. How does the services of an ISD respond to such a challenge?

Strong and responsive visionary leadership is a mandatory catalyst for change. Collaborative working with Faculty is also essential since a tightly coupled service provider-faculty relationship enables change to be managed as a partnership. As part of our new structure, ISD has established a team of Faculty Contacts to co-ordinate media and IT-related matters that arise within faculty. These Contacts are professional grade staff who assume an additional responsibility to liaise and work closely with their individual Faculties. Their

proactive role is of particular importance to ISD since it affords a conduit for two-way communications; the curriculum development needs are articulated by Faculty and the ISD response in terms of technology-based facilitation are part of a weave that will deliver an evolving fabric of a contemporary education system. The vision of a tightly coupled partnership will enhance the internal value of ISD as a strategic partner in achieving the institution's goal. It also serves to emphasise a shift from a purely utility-type organisational unit to one that is a led player in strategic development.

Subordinate to these high-level considerations remains the critical mass of personell who are charged with development and service functions. Their ongoing staff development needs are clearly of paramount importance in changing the knowledge base of the organisational unit in response to the spectrum of needs associated with the trends in curriculum design and delivery. With reference to Table 3, the generic needs in terms of on-going personal development may be tuned to any particular emerging demand. For example, the practice of regular staff briefings will ensure that the workforce is kept in touch with development at the Faculty and institution level. Also, reskilling is readily facilitated through project work and internal secondment. As previously stated, this generalist approach must be complementary to specific technical training needs identified within each Division of ISD, with the latter aspect of staff development being much more highly dependent upon the appropriate selection of commercially available training opportunities.

The conceptual model outlined for a proactive staff development policy should have the robustness necessary to maintain ISD at the leading edge of the University's internal support system.

5 Conclusion

This overview of an organisational model for an internal IT service provider department is seen as an appropriate response to the needs of a higher education institution in today's ever changing environment. The emphasis on effective leadership, good internal communications and a clearly articulated staff development policy is designed to highlight the strategic importance associated with "human factors" management. Without these considerations it is argued that technological change in itself will not deliver the prerequisites so needful in responding appropriately to the expectation of the student community.

References

- [1] Barone, Caroline A et al, Information Technology, Systems, and Services in Higher Education; © National Association of College and University Business Officers (www.nacubo.org) 2000
- [2] EDUCAUSE, Recruiting and Retaining Information Technology Staff in Higher Education, EDUCAUSE Quarterly, Vol 23, 2000, No 3
- [3] Hagner, Paul R, Faculty and the New Learning Environment, EDUCAUSE Review, Vol 35, 2000, No 5

Table 3: Typical Areas of Staff Development

Activity Category	Typical Instances
Basic	<ul style="list-style-type: none"> – awareness of institution's management structure and key business statistics e.g. staff and student population, range of courses. – oversight of ISD's management structure and key responsibilities or key projects – be aware of institutional-level developments of significance.
Functional	<ul style="list-style-type: none"> – working knowledge of ISD's internal processes – re-skilling or up-skilling to enable effective execution of core duties – ability to hold and administer meetings e.g. team meetings
Occupational	<ul style="list-style-type: none"> – customer care/relations skills – knowledge of line management responsibilities, typically of organisational layer superior to individual – working knowledge of current legislation relevant to function
Information	<ul style="list-style-type: none"> – effective oral and written communications techniques – presentation skills – report writing and manipulating data
Technological	<ul style="list-style-type: none"> – competent in the use of desktop productivity tools – awareness of developments relevant to area of responsibility
Managerial	<ul style="list-style-type: none"> – project management skills – PR competencies – leadership skills – awareness of relevant legislation
Professional	<ul style="list-style-type: none"> – compiling professional/conference papers – preparing papers/reports for senior committees – participation in CPD for professional body membership – activity associated with professional bodies
Portfolio of Modes for Staff Development	<ul style="list-style-type: none"> – staff briefings – in-house workshops – awareness raising events – cross-Division knowledge transfer – mentoring, shadowing – conferences, workshops, seminars, external training – further education, incl. Project work – internal secondment to special projects – CPD activity for a professional body