

HUMANE

## IT and Management Information

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### ABSTRACTS AND DISCUSSION

#### **“The Post-implementation Review of the MAC Initiative in the UK”**

***David Mason (David Mason Associates)***

#### **Abstract**

UK universities are independent organisations and are partially funded by the UK government through central Funding Councils. Up until the early 1980s, successive UK governments progressively increased the grants given to HEIs in order to encourage expansion, to improve the educational standards of the UK workforce, to generate increased research activity and hence improve UK international competitiveness.

During the 1980s the emphasis in policy changed to focus on efficiency and value for money. Increasingly more output was required from institutions with only limited increases in resources. Various efficiency studies were undertaken, and universities were both called to account for the monies received from government and also to demonstrate their efficiency. The increased reporting requirements and the need to demonstrate added value generated increased needs within HEIs for information on their operations. However, with a few notable exceptions, the general management and information systems within HEIs were poor.

Computerisation of some of the key administrative activities was seen, by Funding Council and university staff alike, as the answer. However, the costs of computerisation, particularly software development costs, were known to be high. At that time, there were no commercially available software packages covering the full range of requirements for administration and management and

the development time for a complete set of new applications was estimated at around 100 years of effort. This was considered too high a load for any individual institution and on a national level would represent a considerable effort if every university were to commit anywhere near this level of resource.

In 1988 the UK Universities funding body (then called the University Grants Committee or UGC) launched a national initiative to assist institutions to develop adequate systems. This was known as the Management and Administrative Computing Initiative, or MAC. David Mason had led the team to develop the outline specification or software 'blueprint' for the UGC. The UK universities then used this outline specification to develop the required software, forming four groups to provide some variation to the common blueprint, and each group (or "family") developed a set of applications. In 1998 David Mason was appointed to conduct a post-implementation review of exercise. The review was to determine if the MAC initiative had met its objectives and what lessons could be learned. The results of the review were published in early 1999 and a summary of David's report is available in electronic form from him (please email [davidmason@cwcom.net](mailto:davidmason@cwcom.net)).

In brief, the ultimate results of the initiative were disappointing. Despite considerable effort by the universities, the separate groups developed few systems and the ones that had been developed were little used, except by a minority of institutions. The reasons for this were various. The (non-technical) presentation will discuss how the software was developed, the reasons for the poor results, the main lessons to be learnt from the initiative, the 'spin off' or unexpected benefits that were generated and pointers for future developments.

## **Discussion**

Discussion centred on the question of ownership, and in particular the way in which technical considerations had tended to remove the MAC products from the requirements of users. Even in Finland, where only seven universities were involved in a similar project, there was seen to be potential for such a drift, but (as noted in Arne Laukholm's talk - see below) that danger had been largely avoided. It was, however, recognised that users might not always know best, and that when dealing with such strategic issues it was vital to ensure that the senior users in institutions were aware of developments. While this might be quite easy within a single institution it was much more difficult at national level. There was also agreement on the crucial role of the project manager in any such undertaking.

In one sense MAC was seen as an analogy for the constant process of change in HE, with initiatives being launched with a startling lack of business awareness. It was suggested that universities were only now truly coming to terms with the business world. Again, the response was that users must remain in control, and that the technical designers must not be allowed to take over. MAC had been a highly ambitious programme, in which technological developments overtook events - although it was recognised that in all such analyses hindsight is always "20/20". It was also pointed out that although the MAC initiative was now seen to have been too big, it was still imperative to have

integrated systems of management information. In this sense, the ultimate failure of MAC to produce integrated software suites across extended families of universities was mitigated both by the highly beneficial learning process which had gone on, and also by the informal networking which grew out of it. David Mason quoted an observation to the effect that if the MAC initiative had actually produced useful software it would have been a bonus to add to these more intangible benefits.

## **"Cooperative Administrative IT systems in Norway"**

*Arne Laukholm: Director of the Information Technology Centre, University of Oslo.*

### **Abstract**

The Higher Education System in Norway has recently been reorganised to accommodate the rapid increase in the student population during the last decade. As part of this reorganisation the institutions have been granted more autonomy by the Ministry of Education in order to facilitate the handling of the increase in student population with only modest budget rises. The Higher Education System consists now of 26 Colleges (down from 98), six University Colleges and four Universities. The reorganisation required new administrative tools to handle the new challenges. The three largest universities chose to join efforts by building a consortium to handle the acquisition, adaptation and implementation of new financial and payroll systems. They chose to modify Oracle Financials extensively to cater for their needs for financial control, and to implement IBM PR2000 as their payroll system.

In contrast to this process, two new systems, for student administration and for admissions, were developed in-house by the University of Oslo. All four universities and most of the major colleges have since adopted these systems.

This presentation will try to balance the merits and pitfalls of in-house development as compared to the modification (customisation) of large, commercial systems for university purposes.

A brief overview of each of the major systems will be given and the organisational structures that were established to handle the needs of these contrasting processes will be described. Key cost figures will also be cited.

## Discussion

The contrast with the UK experiment was very notable, and the successful collaboration of the Norwegian universities was attributed to the small size (7) of the single group. Nevertheless several references were made to the dangers of poorly written contracts and the escalation of indirect costs, and members noted the need to have in-house support at an appropriate level, and to train any outside consultants in the ways and habits of higher education. Arne acknowledged the huge costs involved - a student record system had been estimated to cost some 40 man-years of work - and the cost was about 2.7 million euros. Arne very much felt that in-house work should be done only when there was no alternative, and agreed that the integration of systems would in future be facilitated by Web interfaces.

Christine Challis's summary of the first two sessions highlighted a sense that enthusiasm for IT projects is very often greater than the degree of planning, and that original intentions can often be diverted by technical staff or agencies. It was felt that the scope of such planning should be no more than a five-year horizon, since developments were taking place so rapidly. There was a corresponding need to develop staff resources and skills over a period of time - and universities should be more business-like in their framing of contracts.

“An ICT-Strategy for a University: The Aalborg ICT Network “

*Peter Plenge, University Director, University of Aalborg*

## Summary

Peter described the University of Aalborg - at 25 year of age, the youngest university in Denmark. The Aalborg ICT plan had four main areas of focus:

- the physical university and ICT
- the virtual university
- using ICT to open the university to the region
- research and ICT

A group had been set up to create a budget and a project plan, based on usage and information needs. The most important point at the outset was that ICT is not neutral. It changes the way in which people work. There was an awareness that existing IT solutions were not being optimally

used, with not enough coordination between departments and with all funds being taken up on practical operation rather than leaving some money for development work.

The strategy was to establish a research-based learning process in an environment where everyone could provide or gain access to information. Each department had a contact person, and the project relied heavily on the enthusiasm of participants as opposed to being enforced. It needed to be seen as development work, not as a new, imposed activity. A Web page had been set up to advertise and explain the project, and collaboration with other universities was also encouraged - this had been very successful in terms of student cooperation.

After one year some 40 projects had been started and funded, albeit using relatively small sums. These projects covered every field (teaching, research, the Library and the administration). The plan for the year to August 2000 was based (internally) on developing the “ambassador” network, and removing barriers to the optimal use of IT, and (externally) on cooperative IT agreements with other agents and a Think Tank including Danish IT experts. Peter went over the nine themes for the next year, ranging from the use of IT in the university infrastructure to educational cooperation with developing countries.

Discussion explored the use of the departmental “ambassadors” - chosen by departments or Study Boards, with the aim of keeping themselves informed and spreading information about projects - and the management structure. Peter explained that the Steering Group for the project included (nominated) staff and students, but had no formal organigram since it is very much seen as a developing body. He himself was not a member of the Steering Group, but needed to keep in touch with written reports in order to report to the University Board. The project should not, he felt, be run from above. This touched on the problem of how to impose or develop a Strategic Plan when individual departments were already working to their own existing plans or routines. Peter’s answer to the matching dilemma of how to meet milestones while allowing free creativity was based on a concept of “invisible management” - an idea which participants greatly liked!

### **“The Global Campus: A Complement to Traditional Education.”**

*Alfonso de Alfonso: Gerente, Universidad Pompeu Fabra (UPF), Barcelona*

#### **Abstract**

The need to distinguish the UPF’s tuition from that provided elsewhere lies behind a large number of initiatives to reform teaching methods. The “Global Campus” project is just one of these measures.

The project makes intensive use of information technology (IT) to create a virtual campus which both complements traditional teaching approaches and offers new ways of learning.

The main differences between this virtual campus and the main University Web site are related to content and to the access restrictions applied in the former case. The complementary measures outlined in this presentation focus on the contents of the virtual campus and on technical aspects. Considerable importance is also given to training users in how to get the most out of the system.

Over a year of hard work has produced a system which works effectively and reliably. The experience built up over this period also allows one to draw some practical conclusions (some of which were expected, but others were unforeseen). In any event, all of the lessons learnt are extremely useful in perfecting the project.

The Global Campus programme covered 600 students during its first year of practical operation. These were distributed between four “long-degree” courses (Biology, Public Management & Administration, Humanities and Audiovisual Communication). The project was extended to include other degree courses in the 1998-99 academic year.

As well as foreseeable problems, several unexpected ones cropped up such as: the need for greater computing capacity; constant technical adjustments to meet gradual expansion of the system; copyright issues; and getting faculty members to actually use the system once they were linked up.

These issues (and others) pose questions about the path for future development. To what extent should the system be tweaked to meet users’ needs? What role should individual initiative play in an environment which demands painstaking thoroughness? How can faculty staff be tied into the system?

One of the keys to the initial success of the project lay in competitive support programmes promoting teaching innovation among faculty staff. Training faculty how to use the system was carried out at the same time and contributed substantially to the project’s success. On-going training for all those involved is a salient feature of the approach adopted. One also needs to bear in mind that virtual environments have to dovetail with computing requirements and users’ needs; support structures have to be created; and multimedia authoring and style standards established. Our experience makes us sure that the application of the project to the whole university community over the next two years will prove a great success.

## **Discussion**

Alfonso’s session was a progress report on what had been reported in Stockholm (June 1998). He stressed above all that the programme of electronic teaching was in addition to the traditional provision, which continued, and that the new programme therefore needed additional funds. There was considerable debate on the nature of such extra funds, especially if provided by an outside sponsor. Alfonso insisted that the aim of the exercise was to create added value for the institution and for students, though some members felt that in the longer term the aim must be to cut contact hours. The analysis of staff and student attitudes to the service provided by the Global Campus initiative was particularly informative.

## **Panel Session [A series of mini-presentations]**

**Christine Challis** illustrated the various means used at the LSE for School-wide (internal) information. Email bulletins were regularly used, divided into information for all staff and that which applied only to academic experts in particular fields. There were also various kinds of intranet (for example administration-wide for things like guidelines, statistics, reports and committee minutes, or smaller, more localised forms for shared diaries). Management information was thus available at various levels. Her essential message was that while there were clear successes in terms of sharing information, speeding up access and fostering a spirit of collaboration across divisional or office boundaries, the very multiplicity of routes discouraged widespread use of the facility.

**Trevor Field** provided an illustration of how committee minutes might be circulated or made available for wider consultation by using the Web (with restricted access). It was recognised that, as in other areas of IT, the technological problems were often far easier to solve than the behavioural ones - it was (for example) notably difficult to persuade some colleagues that such developments were in essence no more dangerous than circulating paper copies. Like Christine Challis, he noted the problem of how to deal with colleagues who did not wish to share information!

**Kurt Carlsson** described a system of electronic registration for classes. Students enrolled by selecting from courses offered on-screen - there was a great saving in administrative time, and the system could be said to increase the student's life skills. One or two members had concerns about the risks of error, but the consensus was that as in other areas of e-commerce it was up to the "customer" to get things right - such decisions were not immutable. More generally, there was some interesting discussion of the "open" Swedish culture as opposed to the traditionally closed culture which the UK speakers had to deal with.

**Sally Neocosmos** gave an outline of the possible misuse of email, and included two examples which members found highly interesting. In the first, an academic member of staff had indulged in such extreme email-rage following a decision with which he disagreed that there had briefly been a danger of legal proceedings on the part of one of the many other staff who became implicated via copied mail. In a second example, a student who became totally obsessed with a lecturer wrote a series of increasingly disturbed emails and threatened to become violent when rebuffed. A ban on use of computing facilities led to the student's finding a way of hacking into the system - clearly not a good way of increasing one's life skills! The issue had finally been resolved when the student went overseas, but had been a serious cause for concern. These two graphic illustrations prompted more than one member to note that they had had similar problems, but had believed their own cases to be unique.

*Summary prepared by Trevor Field.*

wages/salaries

dangers/mistakes

occurred

modified

very careful

incorporated

to remember

to fit/match/comply