I.T. Statistics - Why bother?
The use of I.T. Management Statistics in UK Higher Education

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Abstract: This paper reports on the collection and publication of management statistics for Information Technology in U.K. Universities. We describe the way in which initial opposition was overcome and the value and importance attached to the exercise. Despite initial scepticism, the collection of I.T. statistics is now seen as an important activity for the U.K. Higher Education community. The paper concludes with a summary of some of the trends that are emerging.

Historical Perspective

The Universities and Colleges Information Systems Association (UCISA) exists to bring together those involved in providing I.T. facilities in U.K. Universities. In 1998 it was noted that our sister organisation for libraries in higher education, the Standing Conference of National and University Libraries (SCONUL) collected detailed statistics for all aspects of Library use in U.K. Universities. Indeed, SCONUL had been doing this for a number of years and made good use of the resulting statistics for political purposes, including making a case for increased funding. In contrast, there were virtually no statistics on I.T. provision and this was seen as a serious gap in information.

Why did we bother?

As with many other aspects of Higher Education, it was noted that there was an increasing demand for performance indicators for I.T. Indeed, the Higher Education Funding Councils had already commissioned a study into Value for Money (VfM) in I.T. in Higher Education. This VfM study was not well-received by the community and provoked a largely defensive attitude. However, it became clear that the pressure from funding bodies, politicians, Government and institutional managers for more accountability would be unlikely to diminish. National league tables, used to compare institutions in all sorts of ways, were also becoming an unfortunate fact of life. In short, if the I.T. community did not do something itself then some form of accountability would be imposed from outside. An added fact was that a number of individuals within the I.T. Higher Education community felt that proper management statistics, used with caution, could be of real benefit in presenting the case for additional financial resources.

Evolution of the exercise

Having agreed that the collection of I.T. statistics would be in the best interests of its members, UCISA set up a small working party, chaired by Dr Laurie Burbridge and serviced originally by Carys Thomas, now by Martin Price. The original questionnaire sent out to gather information on I.T. was relatively complicated and asked for statistics for the academic year 1996/1997. This was seen as a pilot study and the results were published on paper only. Following the pilot, the nature of the questionnaire was radically changed in response to feedback from members; the number of questions was reduced and the whole exercise was simplified. This was followed by the first full set of statistics for the academic year 1997/1998. About 50% of the 150 institutions responded and the results were collected and published electronically. The questionnaire used is subject to continuous evolution and the third exercise, for 1998/1999, bore little resemblance to the pilot. By now the idea of the statistics was gaining momentum and was seen as a good thing by most of the community. This resulted in a return from more than 100 institutions. The latest set of statistical returns, covering the year 1999/2000 is just being collected and analysed and will be published in July of this year.

During the past 3 years there has been much useful collaboration with SCONUL, UCISA’s sister organisation for libraries. We have now agreed to adopt a common timetable for the distribution and return of the statistics questionnaires and a commonality of basic information. This is of particular benefit to those institutions where I.T. and Library facilities are provided by some form of merged service. Both UCISA and SCONUL have benefited from the experience and expertise of the other. At present a single questionnaire to gather statistics on both Library and I.T. provision is not planned, but it remains a desirable future aspiration.

During the first two years of the exercise, it became apparent that the work involved in collecting, checking and analysing the statistics was considerable and beyond that which could reasonably be expected from a group of unpaid volunteers. As a result, in 2000 a contract was placed with the Library and Information Statistics Unit (LISU) at Loughborough University to analyse and publish the results. LISU has carried out similar work for SCONUL for a number of years. This was a considerable success and the contract has been extended for a further year to cover this year’s exercise. In addition to publishing the year-on-year statistics, LISU has also produced a useful paper summarising the trends in the statistics over the past three years.

Example time series

Simple time series can be used to show institutional management groups how their I.T. departments are coping with sustained growth and offering improved value for money. Typical, albeit simplistic, indicators would be:
• Year-on-year growth in the number of devices connected to the institutional network
• Year-on-year growth in the number of e-mail messages handled
• Year-on-year growth in the number of web pages accessed
• Year-on-year increases in I.T. training delivered to staff and to students.

Many institutions would, of course, already have these statistics, but the need for the annual return to UCISA has provided a focus for the exercise.

Some typical indicators

From the large number of statistics collected, indicative ratios are calculated. These are then summarised and presented as an easy-to-use spreadsheet. Typical indicators include:

• Percentage of Institutional turn-over spent on I.T.
• I.T. spend per FTE student
• I.T. spend ppr FTE staff
• Staff per workstation
• Academic staff per workstation
• Support staff per workstation
• Students per workstation
• Workstation-hours per students
• I.T. training hours per student
• I.T. training hours per member of staff

Most institutions use these statistics to compare their performance with a number of broadly comparable institutions.

The results so far

There has been a steady, year-on-year, increase in the percentage of institutions making returns for the UCISA exercise. This has been achieved with the minimum of coercion and a lot of goodwill. Participation is voluntary. It is considered that because the UCISA statistics exercise is owned and managed by the UCISA members, it is not seen as a threat or an unwarranted intrusion into institutional autonomy. The publicity for the statistics has been deliberately muted as it is an acknowledged fact that without careful interpretation such statistics can be at best misleading and at worst downright dangerous.

Some comments

The UCISA statistics exercise is now firmly established and here to stay. There will be ongoing changes in the nature of the questionnaire distributed to institutions, but the overall structure is now acceptable. With each successive year, the value of time series will steadily increase and should provide useful information to assist institutions in their strategic planning for future I.T. provision.

The demand for management information from those within and outside Higher Education is likely to increase. Though it may be difficult to define appropriate data to collect for IT Service departments, they are not exempt from this growing demand. UCISA believes it is vital for its members to be seen to be actively leading the quest for meaningful management statistics in this area. There is now pressure within U.K. institutions to ensure that they are included in the UCISA returns; any who are not may have to explain to their senior management why they are not included in the return. (Does the I.T. section have something to hide? Does the lack of information indicate a lax management attitude? How do we know how well compare with others?)

Although statistics of the type described here can be dangerous, the lack of such statistics can be even more damaging.

Note that throughout the exercise we have referred to Management Statics and not Performance Indicators and we feel that this is a very important distinction.

The future

For the future, it would be good to collaborate with members of EU-NIS and other international organisations to gather comparable I.T. statistics from Higher Education institutions in other countries. There is some excellent work being undertaken and we all need to capitalise on that and ensure that best practice is used within our own communities and our own institutions.