Reid Jane   Programme number: B9
Queen Mary, University of London, UK

Management Challenges in the Higher Education Science and Engineering Sector (0095)

1. Background

This work forms part of an ongoing study of student support and the student experience in the Science and Engineering Faculty at the author's home institution [1], which was motivated by several recent, related institutional initiatives [2], [3], [4], [5]. This analysis will feed into faculty-level strategic discussion and planning.

2. Methodology

Interviews were conducted with seven members of senior management staff. Figure 1 shows the distribution of staff across locations.

Location	Number of staff
Office of the Principal (central)	2
Biological & Chemical Sciences	1
Electronic Engineering & Computer Science	1
Engineering & Materials Science	1
Mathematics	1
Physics	1
TOTAL	**7**

Figure 1. Senior management distribution.

A standard set of interview questions focused on strategic issues was developed. All interviews were individual and conducted between January and March 2010. The length of the interviews varied between 40 and 72 minutes. The interviews were documented through extensive notes made on a laptop and audio recordings made with the participants' consent. The data were subject to a thematic analysis, using an approach based on the principles of Grounded Theory [6]. Findings specifically related to current and future management challenges were extracted.

3. Findings

The challenges are categorised into the following seven "meta-themes":
    A. Improving student intake;
    B. Fostering staff community and engagement;
    C. Fostering student community and student-staff relations;
    D. Enhancing IT support and communications;
    E. Optimising the use of limited resources;
    F. Balancing the conflicting demands of teaching and research;

G. Competing effectively with other institutions.

Under meta-theme A, several staff commented on the larger proportion of school-leavers now attending university, and their increasingly "soundbyte" and "consumer" mentality. They highlighted a number of related issues including the difficulty of catering for a wider range of academic ability and the necessity to structure curricula more explicitly, with clear integrating threads, to support less reflective students. The recent strong institutional drive to raise entry tariffs was also noted. One member of staff expressed their belief that, although this strategy would result in student intake deriving from a wider geographical area, technically able students would continue to be comparatively rare for some time, and therefore it was likely that the short-term effect would be to further widen the range of academic ability and increase student support needs. Another member of staff stated that, to try to improve entry tariffs, their School was now marketing more actively their four-year undergraduate Masters programme. They noted that this may prove difficult in the current economic climate, since students may wish to complete their degree and start a career as quickly as possible.

Under meta-theme B, several staff mentioned engaging colleagues, especially those who are more research-active, in contributing to teaching activities that are perceived to be of low value, e.g. first year tutorials. This often results in considerable variability of engagement among staff, and causes tension when other staff members have to compensate. One member of staff commented on the frustration of trying to stimulate discussion and sharing of experience relating to learning and teaching issues.

Under meta-theme C, several staff discussed configuration of the physical environment as a home base for their students – most Schools had attempted to address this by providing dedicated social space. Several staff also noted with regret that it now appears more difficult to foster a sense of student community because of students' focus on assessment activities and their "consumer" attitude. Nearly all staff mentioned that some students are not interested in joining a student social community because they have their own communities elsewhere, e.g. centred on their family and/or local environment. Staff expressed uncertainty about how to handle these "detached" students, and about what they could be offered. One specific suggestion was that they might be engaged in ways other than socially, e.g. through a focus on employability initiatives or an employability award.

Under meta-theme D, nearly all staff mentioned provision of an effective student portal for management of both academic content and student information. Staff whose Schools had already invested significantly in this area were concerned that the new, recently-commissioned, institutional student information system might prove a retrograde step in terms of functionality and the student experience, and emphasised that excellent practice in some Schools should not be discarded. While most staff expressed enthusiasm for the use of new communication technologies, one member of staff expressed fear that some of their colleagues might see this as an easy replacement for quality student contact, rather than as a useful complementary tool.

Under meta-theme E, staff highlighted planning in an uncertain funding context, in which cuts may even lead to a reversion to a distinction between different types of institution (like the former universities and polytechnics), while government continues to demand high quality student outcomes. Concrete issues mentioned included reducing student:staff ratios, providing more meaningful and effective student

support, and catering for increasing student numbers, especially at postgraduate taught level.

Under meta-theme F, nearly all staff mentioned maintaining the profile of teaching against the context of the high-impact Research Excellence Framework. A small number of staff took a pragmatic line, describing the main issue as identifying what is a satisfactory – but not outstanding – level of teaching for all to attain, while maintaining focus on research. Other staff expressed regret that teaching is still perceived as a "second-class citizen", especially in the academic promotion structure. One member of staff stated that their School is trying to reduce the tension by increasing the synergy between teaching and research through promotion of their four-year undergraduate Masters programme, where fourth year project students actively contribute to the School's research.

Under meta-theme G, one member of staff spoke of trying to find ways of making their own School and the institution distinctive from competitors. One member of staff commented on the importance of maintaining the competitive financial strength of the institution, brought about largely through a strong performance in the last Research Assessment Exercise. Other concrete challenges mentioned were reducing student intake and the student:staff ratio, which are perceived as high in comparison to competitors.

4. Further work

The next stage of analysis is to examine these findings in the context of institutional and faculty-level strategy, in order to identify any areas that have not yet been addressed at strategic level.

References

[1] Student Support in the Higher Education Science and Engineering Sector, Reid J. 2010. Society for Research into Higher Education Annual Research Conference, Celtic Manor, Wales.

[2] Queen Mary, University of London Student Support Strategy 2008-2010.

[3] Queen Mary Learning, Teaching and Assessment Strategy 2010-2015.

[4] The Queen Mary Statement of Graduate Attributes, Summer 2010.

[5] Queen Mary, University of London Strategic Plan 2010-15.

[6] The Discovery of Grounded Theory, Glaser B & Strauss A. 1967. Aldine Publishing Company, New York.