

RIBA LSS Forum
Conference 2007
Future-Proofing FE

Workshop

Space Planning

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ACTIVITIES

- formerly ran R & D programme in Architects and Building Branch, DFES

- now,
- helping further education colleges with their estate/accommodation strategies

- carrying out space utilisation surveys for them as a required element in their strategies

- advising them on strategic space planning issues

- briefing and space planning for City and Islington College -four main sites consolidated from 10 existing (new build and refurb). See article in PEB Exchange No. 45 and cover story "Architecture Today", March 2004. All new buildings up and running September 2005, with very good utilisation.

EDUCATIONAL CONTEXT for this age group
(16+):

- 3.8m students enrolled on LSC funded further education in 2004/5, in some 400 institutions in England;
- establishment of Learning and Skills Council (LSC) in 2001, to replace the Further Education Funding Council (FEFC), to take responsibility for all post 16 education and training, wherever provided, excluding university (HE) provision; now single joint capital fund for 16-19 across Government.
- White Paper, *Further Education: Improving Life Chances* (DfES, March 2006), a response to *Realising the Potential*, by Sir Andrew Foster, November 2005, recommends a more specialist system, based on an economic mission with regional and local plans to improve quality and diversity of provision.
Report, *Prosperity for all in the global economy - world class skills*, Lord Leitch (HM Treasury, December 2006) reemphasises UK's skills shortage.

CAPITAL, PLANNING AND DESIGN CONTEXT

- floorspace has reduced from 9.1m to 7.4m m² over 10 years (16.5% down)
- the current planning guidelines for colleges, based on the work GK did with FEFC and the DES (all the design notes on FE). Published on web October 2002, under revision. New Capital Handbook (November 2006) still refers to it.
- The overall **planning** guidelines recommend a fixed area of 1,500 m², plus 10-13 m² per MNW (minimum number of workplaces) for sixth form colleges, and 11.5-14.5 m² per MNW for mainstream FE colleges (+150 m² for 14 yr-olds).
- GK devised a method of space planning using these recommendations, together with the more detailed guidance in earlier design notes, refined in discussions with staff and design professionals.

PARTNERS

- **Learning and Skills Council** - long-standing links with the property services officers.
- **Department for Education and Skills Schools Buildings Design Unit** - in constant contact with old colleagues (cf BSF unit)
- **OECD/PEB** - frequent interchange with Programme on Educational Building's network of educational and design experts.
- **City and Islington College** - biggest Further Education college in London; recent work with the Director of Finance and Corporate Planning, and jointly with many other FE colleges in London and elsewhere.
- **Association of Colleges Estates Network** - collaboration on eg workshops on efficient space use and design, including capital project experiences across the sector.

Objectives

- to improve the performance of both clients and design professionals to ensure that value for money, fitness for purpose and quality are achieved in the projects they undertake
- to encourage clients and design professionals to understand and embrace strategic issues, to inform and improve specific project developments
- to research the needs of building users and explore the success of projects, in order to influence future projects
- publicise successful schemes and highlight examples of good practice, as perceived by the client whilst exploring the implications of social, institutional and technological change
- to influence those who commission buildings to appreciate long-term issues rather than short-term, low cost solutions

BRIEFING FRAMEWORK (1)

CHANGES, in the short & long term

Curricula - More generic courses (key skills...)

Numbers - Students and staff

Teaching methods - Use of technology, more individual learning, group sizes...

Type of student/user - Older, from various cultures, with special requirements...

Expectations - Educational, social, cultural...

IMPLICATIONS for buildings

Teaching spaces	-	Size Equipment Storage
Learning spaces	-	Drop-in vs scheduled Opening hours RBLCs
Support spaces	-	Teaching staff work rooms Non-teaching staff work rooms Administrative areas Social areas Student support areas

BRIEFING FRAMEWORK (2)

POINTS TO CONSIDER:

Flexibility (short term)

Adaptability (long term)

Cyclical use (over week, term, year)

Blurring of boundaries (sharing,
community use)

Accessibility (security vs. access,
DDA)

Scheduling (time management)

Appropriate mix (recommendations in
refs)

PLANNING PRINCIPLES

- keep a high proportion of generic teaching spaces
- do not assign general purpose teaching spaces to specific curriculum areas
- locate RBLCs near the learning centre and IT rooms so the LRC can expand or RBLCs can be converted to other uses
- make sure that large specialist spaces can be reassigned to other uses
- avoid internal load-bearing walls, so that spaces can be made bigger or smaller as required
- make use of a scheduling system, to optimise space use over **time**

IMPROVING UTILISATION (1)

Improvements by management

- place as much accommodation in a common pool for timetabling, to be shared between departments or, in large institutions where distances are great, between groups of departments
- classify rooms by their basic size, shape and facilities so that all potential uses are revealed
- examine carefully the customs that have grown up in the timetabling of events and the use of rooms in order to see which are essential and which may be altered with advantage
- spread scheduled activities as far as possible throughout the day, week, term and year so that unnecessary peaking is avoided, bearing in mind that the hours of opening of non-teaching areas such as cafeterias may have a considerable effect on the timetable

IMPROVING UTILISATION (2)

Improvements by design

- develop sites and buildings so that working links between different faculties can be established easily
- surround departments that require an identifiable core or nucleus by spaces which are shared in a way that allows the departments to expand or contract their activities by using shared spaces for more or less time
- avoid the use of schedules of accommodation consisting of rooms tailor-made to a single activity - rooms should be grouped into the broadest possible categories and particular functions should be provided for by furniture and services that can be altered easily to meet alternative uses
- make sure that buildings contain a variety of room sizes suitable for a wide range of different teaching groups so that changes in courses and teaching methods can be accommodated principally by timetabling, and thus the amount of moving of partitions that is required can be limited.

ASSESSING SPACE NEEDS

- Obtain total annual on-site, daytime (09.00 - 17.00) student guided learning hours (GLH) (annual seat-hours), by room type, from course list or space utilisation survey
- Derive Minimum Number of Workplaces (MNW) ($MNW = GLH / 1440$) required by room type
- Apply utilisation factor:
result - number of workplaces required by room type
- Multiply number of workplaces by appropriate area standard, (including percentage for storage)
result - area of teaching/learning accommodation
- Add area for non-teaching/learning and balance:
result - total area
- Compare total area required with total area available

Advantages: all the assumptions are open to negotiation, and can be changed over time

LSC AREA GUIDELINES (per MNW)

For sixth form colleges

Guidance = 1,500 m² + 10 m² per MNW

Acceptable

upper limit = 1,500 m² + 13 m² per MNW

For general FE colleges

Guidance = 1,500 m² + 11.5 m² per MNW

Acceptable

upper limit = 1,500 m² + 14.5 m² per MNW

n.b. Where 14-16 vocational education is to be included, 150 m² may be added to overheads.

LSC AREA GUIDELINES (for workplaces)

	sq.m.
GENERAL PURPOSE	
1 Lecture theatres	1.0
2 Students seated at tables or in informal groups	1.8
3 Demonstration facilities, or students seated at large tables	2.5
LABS	
4 Laboratories	3.0
IT	
5 IT, commerce, business studies	2.7
SPECIALISED	
6 Home economics, dressmaking, workshops for carpentry, plumbing, electronics etc	4.5
7 Catering, hairdressing	6.5
8 Heavy crafts with large machines and/or equipment for welding, m.v. work, construction, installation trades etc	7.5
STUDIOS	
9 Art and design studios, drawing offices, dance	3.2
10 LEARNING RESOURCE CENTRES Libraries, study centres, resource centres	2.5

LSC GUIDELINES (percentages)

Percentage of GIA

Teaching	50%
Learning	10-15%
Administration	5%
Catering and communal or other large spaces	10-15%
Balance areas	15-25%

GK'S ASSUMPTIONS (2)

Areas as percentage of GIA (from DN 50)

The boundaries between different teaching and learning spaces should not be rigid.

	Percentage %
<u>Teaching</u>	
General	20
Specialised	20
<u>Learning</u>	20
<u>Non teaching/learning</u>	15
<u>Balance</u>	25
	————
	100

EXAMPLE (GK method)

Total annual GLH c. 2,565,000

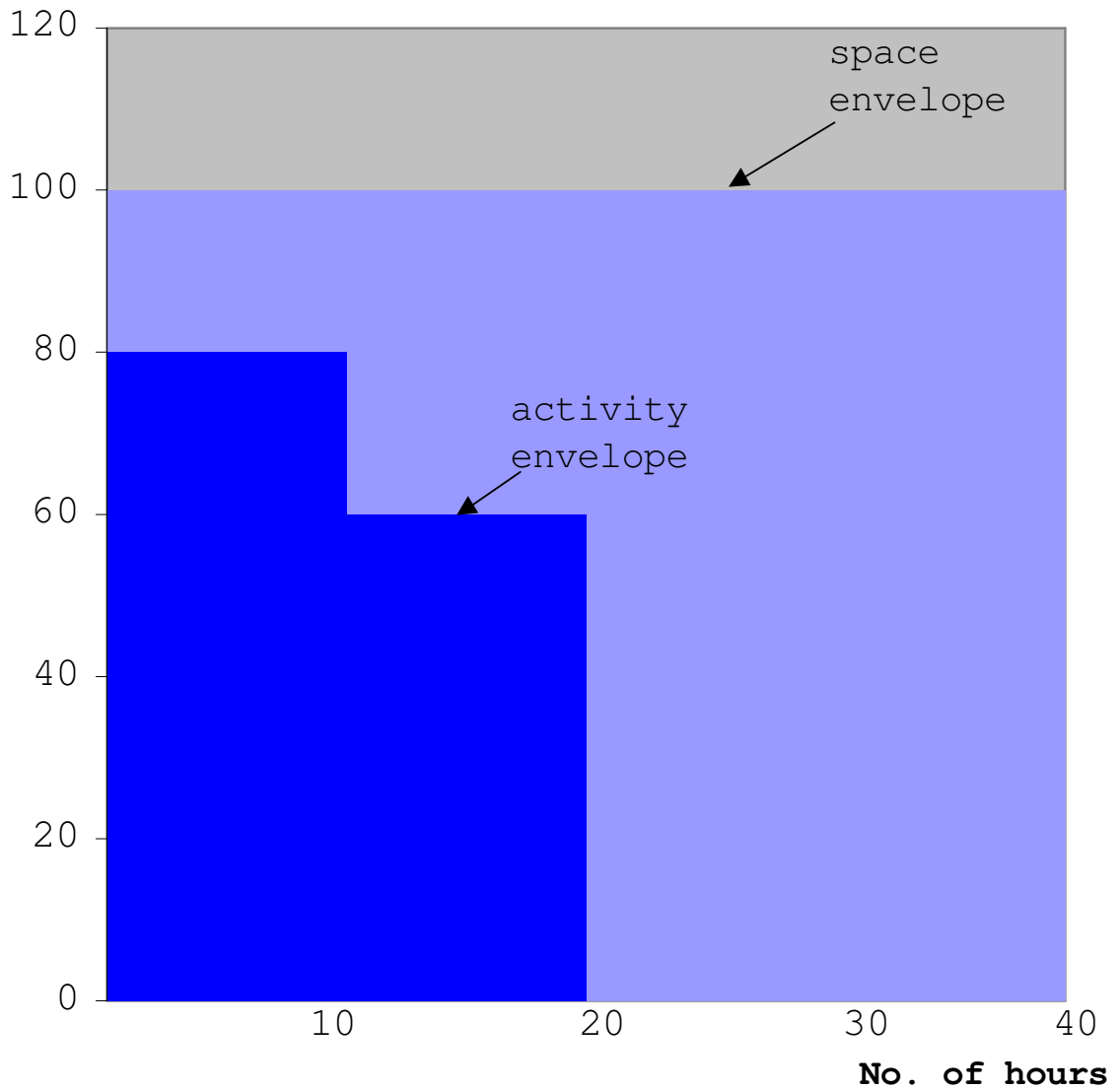
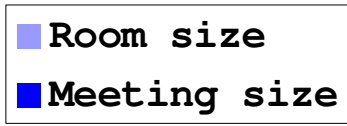
<u>Space type</u>	<u>MNW</u>	<u>Work places @40%U</u>	<u>Area m²</u>
General purpose	782	1956	3912
Specialist	232	579	3476
Studio	160	401	1564
Resource centre	211	527	2108
IT	396	991	3072
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All teaching/ learning (60%)	1781	4454	14132
Non t/l (15%)			3533
Balance (25%)			5888
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TOTAL (100%)			23553
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$$\begin{aligned}\text{Area per MNW} &= (23553 - 1500) / 1781 \\ &= 12.38 \text{ m}^2\end{aligned}$$

Assumptions (GK, cf DN33 & DN50)

Space Type	Av. Area per workplace (inc % storage)
General purpose	2.0
Specialist	6.0
Studio	3.9
Resource centre	4.0
IT	3.1

UTILISATION



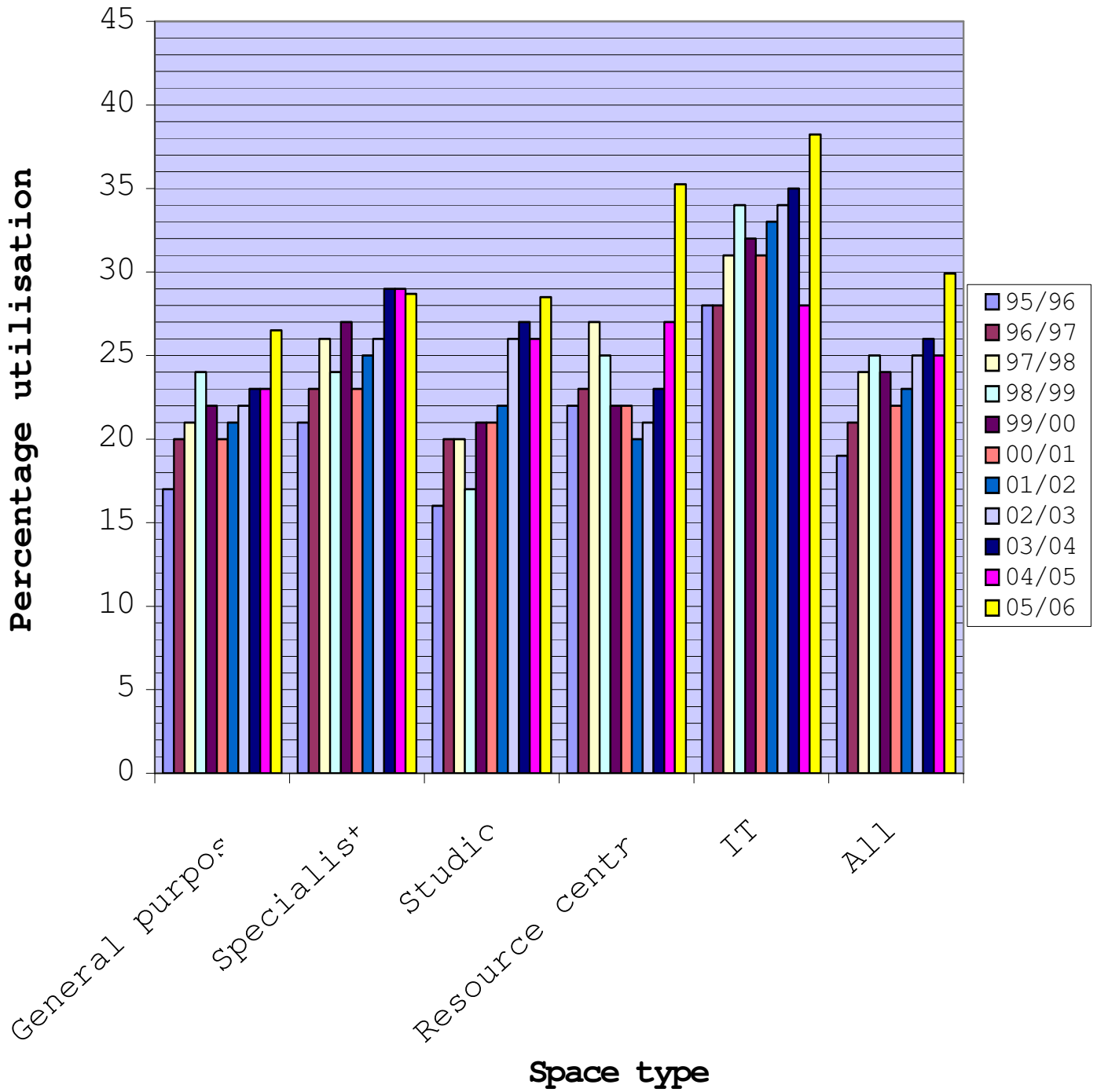
Frequency = $(10+10)/40 = 50\%$ RFF

Average occupancy = $((80 \times 10) + (60 \times 10) / 20) / 100 = 70\%$ SOF

Utilisation = $50\% \times 70\% = 35\%$ UTIL

EXAMPLE (trends)

Utilisation over 11 years



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