



ltsn
Learning and Teaching
Support Network

Bioscience

Transferable skills, Employability and the Practical Curriculum

Ian Hughes

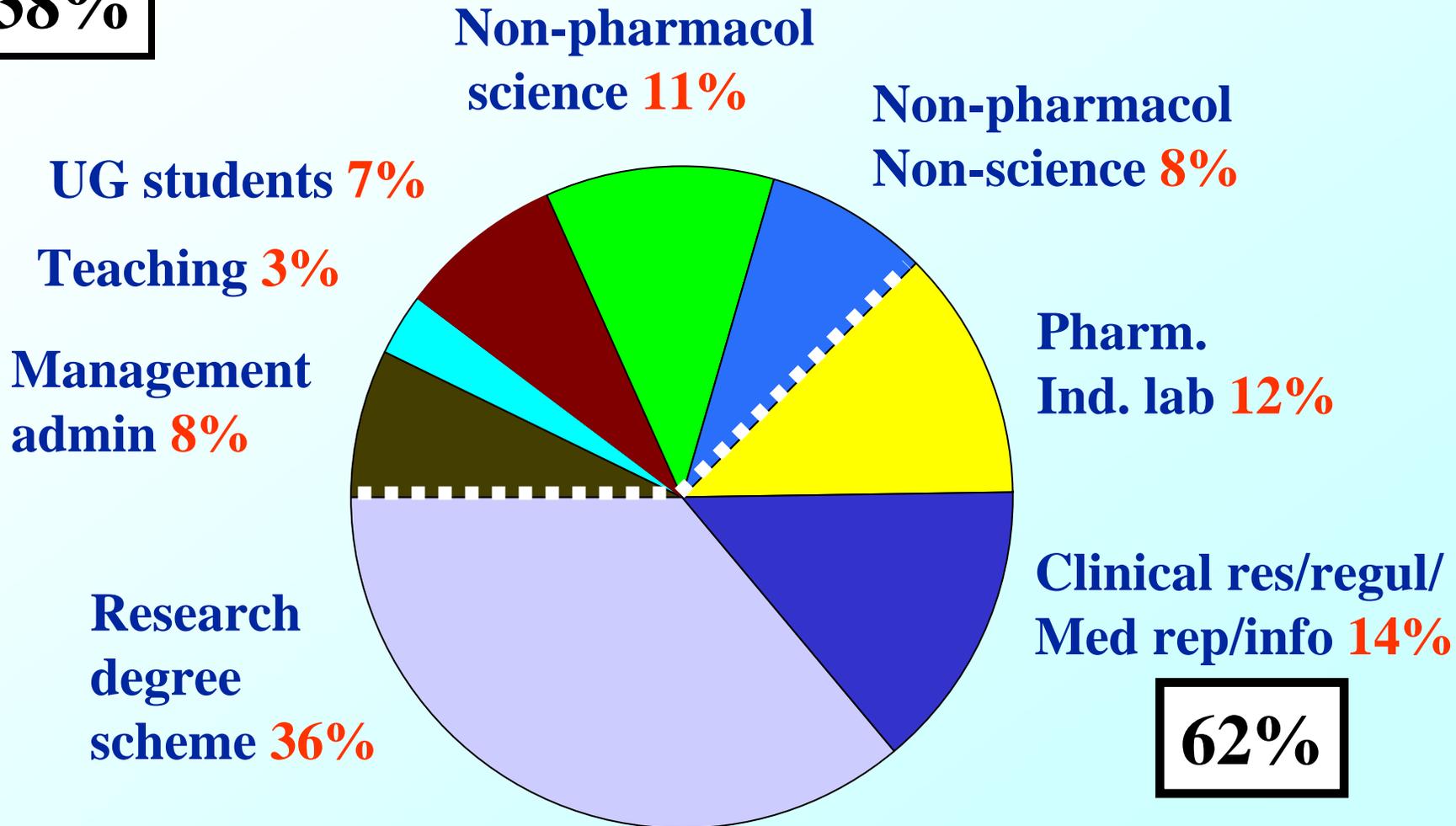
**LTSN Centre for Bioscience
School of Biomedical Sciences**

i.e.hughes@leeds.ac.uk

www.bio.ltsn.ac.uk

Who are the employers?

38%



62%

Who are the employers?

50%

**Non-pharmacol
non-science 15%**

**Non-pharmacol
science 17%**

Pharm ind lab 8%

UG student 8%

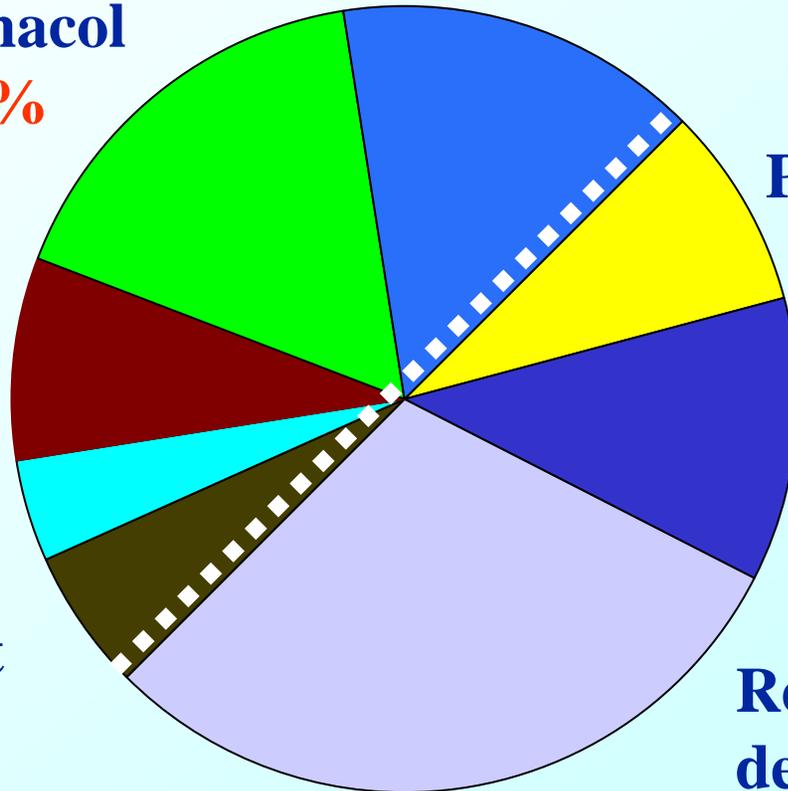
**Clinical res/regul/
med rep/info 12%**

Teaching 4%

**Management
admin 6%**

**Research
degree
scheme 30%**

50%



What do employers want?

ASKED: Lab science (Zeneca); Clinical science (Pfizer); Regulatory affairs (Pfizer); Management (Nestle, Zeneca); Law (Shook, Hardy & Bacon); Accounting (KPMG Peat-Marwick)

PRIORITIES IN ORDER:

- 1. communication (oral & written)**
- 2. design and carry out tasks to answer questions**
- 3. think, learn and apply knowledge**
- 4. IT skills (words, data, info)**
- 5. team player (group skills, time management, flexibility)**
- 6. job related knowledge and skills**
- 7. leadership**

Good DISCIPLINE knowledge is assumed

What do employers want?

Broader constituency (biology and non-biology) :

Rating of what they need:

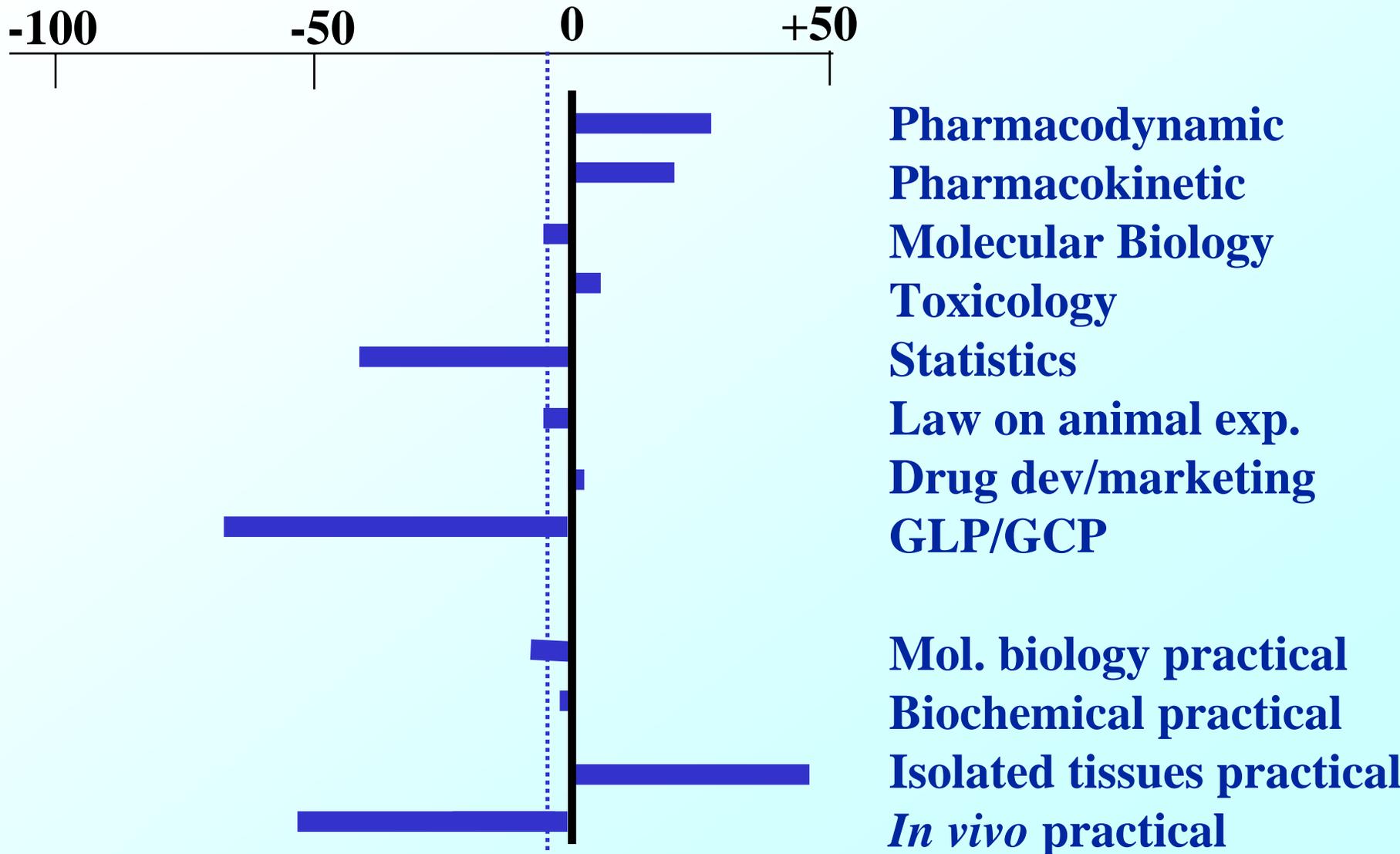
- 1. communication (oral & written) 77%**
- 5. team player with self motivation 75%**
- 2. solve problems by designing and carrying out tasks 62%**
- analytical skills (data and situations) 59%**
- 5. flexibility, time management 58%**
- 3. learn and apply knowledge new knowledge**
- 4. IT skills (words, data, info)**
- 6. job related knowledge and skills**

Good DISCIPLINE knowledge is assumed

Are graduates well prepared for first employment?

- **Survey of 370 recent pharmacology graduates:**
- **To what extent have the knowledge and skills itemised below been required in your current job?**
- **How did the provision for these in your University course match what is required in your current job?**
- **Three most and three least satisfactory elements of your course in relation to job requirement.**

Needs vs. provision - subject specific



Needs vs. provision - communication skills



Oral (1 to 1)

Oral presentations

Preparation of posters

Summarizing papers

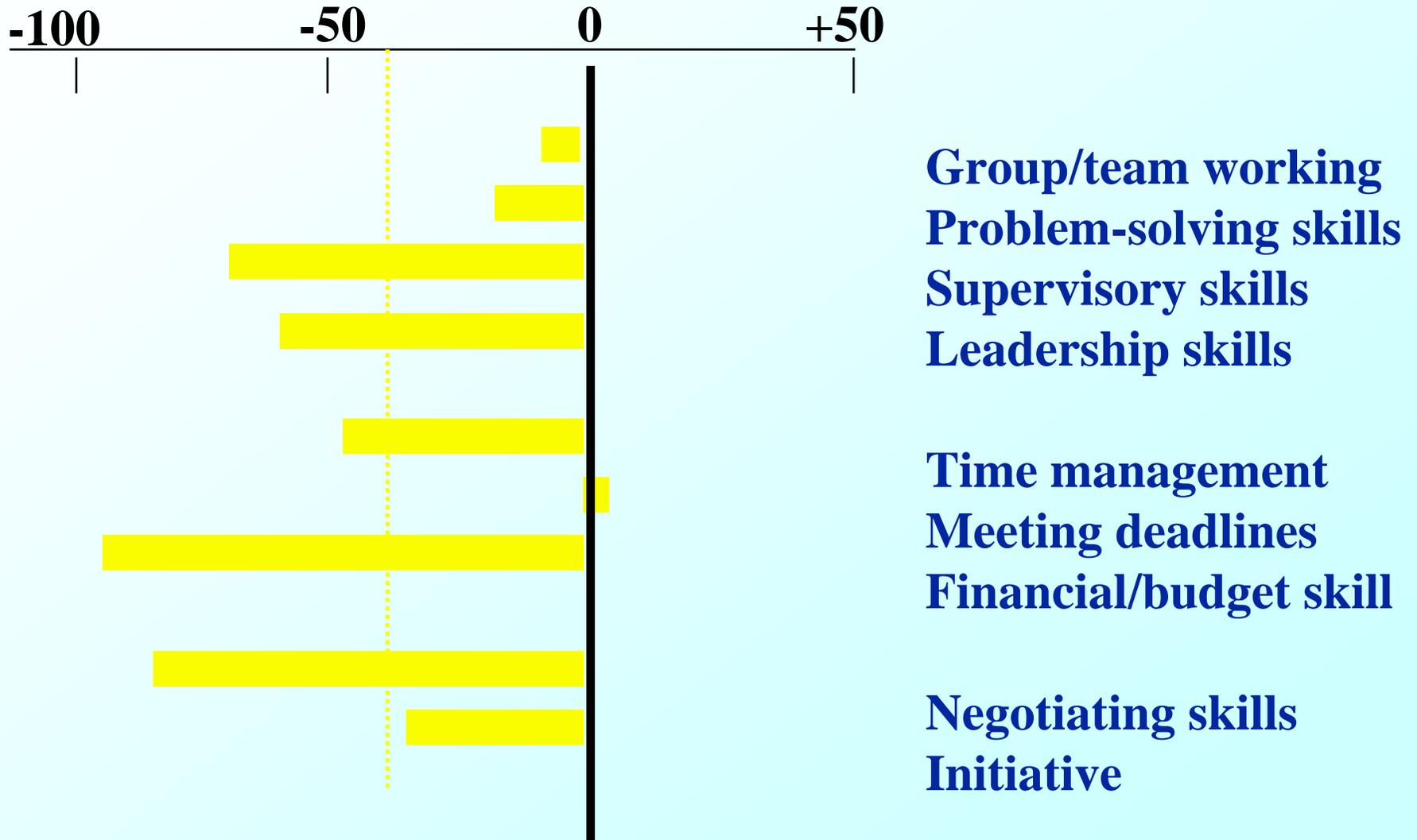
Editing

Proof reading

Report writing

Infomatics

Needs vs. provision - management skills



Where is the best place to teach transferable skills?

- **Communication skills course** - 5 minutes on themselves + 5 minutes on 'my best holiday'; students floundered on data, science, questions
- **Group working course** - artificial task (build bridge from straws); short term; not represent reality of long term, multiple tasks and hierarchical
- **Statistics** - 450 >> 85; student knowledge in discipline module exams was dreadful - average 24.6% on short notes; course rating 1.2 out of 5

In context of the discipline - often in the practical curriculum

Resource issues and the practical curriculum

- Can we afford the same practical curriculum for everybody?
- Resources are too expensive to put where they are not needed
- Horses for courses - what is needed for the job they want
- How do students who choose little practical work get transferable skills?
- Can the students demonstrate an enthusiasm, an appetite and an aptitude for practical work?

Skills mapping

- **More necessary because of modularisation**
- **Some skills are acquired outside the curriculum - need to be recognised**
- **Skills mapping of acquisition AND exercise of skills**
- **Need to be able to say where skills demonstrated**
- **In the rush for skills don't forget discipline knowledge is a MUST for discipline based jobs**

Take Home Messages: Transferable skills, Employability and the Practical Curriculum

- **Diverse employers** - do you know who they are for your students and what they want?
- **Graduates in first employment** - are you meeting their skills needs?
- **Are skills addressed within a discipline context?**
- **Do students know their skills** - can they demonstrate where they used them?
- **Aptitude** - enthusiasm, appetite for practical work

DON'T forget DISCIPLINE KNOWLEDGE



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Data presentation

Skill	Current Job	Course Provision
X	Requirement	
	percentage respondents in each category	
	[1] [2] [3] [4] [5]	[1] [2] [3] [4] [5]
	% x category/100	-2 -1 0 +1 +2
	(1 to 5)	% x score (-200 to +200)
	1 Not needed at all	1 Grossly underprovided
	2 Occasionally needed	2 Underprovided cf need
	3 Average need	3 Provision matches need
	4 Above average need	4 Overemphasised in course
	5 Vital, used all the time	5 Grossly overemphasised