



UK **Council** *for* **Graduate Education**

The International Postgraduate:
Challenges to British Higher Education

Edited by Nicholas Watts

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FOREWORD

The UK Council for Graduate Education is an organisation established to promote the interests of graduate education in all disciplines in higher education institutions. The Council was established in 1994 and has over 127 institutional members.

This collection of essays arose out of a group convened by David Elliott when he was Director of Higher Education at the British Council and subsequently taken on by Nicholas Watts when David was appointed Director of the British Council's office in Israel. The other members of the group each contributed a chapter on an aspect of postgraduate work with international students, and the UK Council is very grateful to them for giving so generously of their time in preparing this Report for publication. The Council is confident that the issues raised here will contribute helpfully to discussions and debates about international students and postgraduate study.

Of course, the views expressed in these essays are those of their authors and not necessarily those of the UK Council. However, there can be no doubt that this is a particularly appropriate time for the Council to publish such a collection of essays. As the Prime Minister's recent comments witness, awareness of the contribution of international students to the health of British higher education has never been higher.

Professor R G Burgess
July 1999
Chair, UK Council for Graduate Education

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PREFACE

This report is intended as a strategy document, highlighting key trends and challenges in the recruitment and training of international postgraduates, and underlining the need to treat international postgraduates as a separate constituency from international undergraduates.

A number of key threads from the group's initial discussion are woven through the different sections of the report. Four demand special mention.

- First, changes in the mode of knowledge production and in the international competitive environment thrust the issues of partnerships and split-mode training to the top of the agenda.
- Second, the growth in recruitment of international postgraduates and the expansion of split-mode training requires that the costs and benefits to institutions and the national economy are clearly understood, implying fundamental improvements in the scope and availability of data on international postgraduates.
- Third, there also needs to be clarity about what international postgraduates need, and what they can expect from provider institutions, which highlights issues of marketing, publicity and quasi-contractual arrangements (service level agreements) with students and their sponsors.
- Fourth, areas where the UK is at a competitive disadvantage, such as difficulties with visas and work opportunities, require a response from government.

The main body of the report was written to David Elliott's initial outline, derived from consultation with the original members of the working group. I would particularly like to thank Dr Brian Lavercombe, the British Council, Dr Phil Harvey, University of Exeter and the late Steve Sharples, UKCOSA, for their contribution to these early discussions. The Introduction draws on discussions with David Elliott and Steve Sharples' original contribution on student care has been incorporated into Section 5 of the Report.

At the suggestion of reviewers of earlier drafts of the report, and of colleagues at UK Council workshops where international postgraduates have been discussed, we have added a section on available data regarding comparative trends and costs in recruitment, and appendices

- illustrating differences in promotion of international recruitment (Appendix 1),
- elaborating on the changes in the nature of knowledge production (Appendix 2a by Michael Gibbons),
- related examples identifying research training partnerships (Appendix 2b),
- listing a number of key bodies in international postgraduate education (Appendix 3), listing the main UK codes of practice for international postgraduate education (Appendix 4).

I think it is fair to say that the recommendations in the final section are supported by all members of the Working Group.

I should like to express my gratitude to colleagues on the Executive Committee of the Council, and especially to Alan Bower, for their detailed comments on earlier drafts of the report, and to colleagues who have contributed to discussions of international postgraduate issues at meetings of the UK Council for their feedback, as well as to the following for supplying advice or information to the group: Allan Barnes, Director, ECS; Dr Robert Paul Konigs, Deutsche Forschungsgemeinschaft: Referat Graduiertenkollegs; Clive Saville, Director, UKCOSA; Peter Syverson, Vice-President for Research and Information Services, US Council of Graduate Schools; Andy Walls, DffiE; Steve Daley and Jonathan Waller, HESA.

Responsibility for remaining errors of omission or commission is mine, and I look forward to readers' advice on these, as the Council's work on internationalisation of graduate education moves forward.

Dr Nicholas Watts
London, July 1999.

1. INTRODUCTION

Nicholas watts

International postgraduate students are highly valued by British higher education institutions. They make a vital direct contribution to the life of research teams and to income generation. When they return home, they can be important economic and scientific contacts for the UK, and are increasingly likely to continue playing a role in collaborative research from their home base. Yet their role in institutions, as a group distinct from international undergraduate students, is frequently too little understood and given insufficient consideration in long-term development strategies.

The UK Council's Working Group on International Postgraduate Students was established in a context of shifting regional economic fortunes, concern over the universality of quality standards, the internationalisation of English language-based graduate programmes, and pressures to harmonise qualifications across countries and regions. Data are now available to measure the overall impact of these factors on recruitment, though not to assess their separate effects. What has become clear is the risk institutions face if they become over-reliant on a single supplier country, without full awareness of their exposure. Moreover, UK host institutions face even greater risks if the supplying nations' policies are centrally controlled and therefore subject to major short-term policy shifts.

The expansion of provision for international postgraduate students has outpaced the development of means for monitoring the quality of their experience, or of their subsequent relations with their *alma maters*. Many institutions have habitually decentralised responsibility for dealing with international postgraduates; and this has repercussions not only for franchising operations, but also for data collection.

This report addresses a number of key issues institutions need to address as part of any strategic review of recruitment of, and provision for, international postgraduates:

- the simultaneous need to recruit the best international students to the research enterprise and to increase the volume of recruitment for income generation;
- the need to develop strategic, multivalent partnerships in training, research and development with overseas institutions supplying postgraduate students to the UK ;
- whether to specialise in Postgraduate Taught (PGT) or Postgraduate Research (PGR);
- the need to keep track of, and have an active strategy for developing, international networks;
- the need for the sector as a *whole* to improve its understanding of the motives of students and their sponsors in pursuing;
- their graduate education in Britain, and to monitor their satisfaction with the training provided;
- the roles and proprieties of distance-learning and split-mode postgraduate training, and the question of what added value accrues to the student from studying in the UK;
- the need to develop a transparent calculation of the costs and benefits to institutions of hosting international postgraduates, including awareness of whether, how and why places are subsidised;
- the role of research rankings and assessment of teaching quality in the overseas perception of postgraduate training in Britain.

In the following, we tend to focus on the research-student experience, how *this* may change, and the attendant demands on institutions. Postgraduate research students are most vulnerable to changes in the mode of knowledge production, as well as to the vagaries of global economic change. We have not engaged in a Survey of institutions (though our findings may imply the necessity for such a survey). We have,

rather, considered some medium to long-term strategic issues facing institutions and the sector as a whole, a sector whose system of postgraduate education developed to serve the UK's own economic, social and institutional needs. This, when applied to international students, may result in tensions and contradictions. International students may enrich our institutions, and our institutions may need to adapt in order to serve the students' needs. But we should know how, in either case.

Summary data on recruitment is presented in Section 2. This indicates that the UK has performed better in relative terms than the USA and Canada, but has lost some market share to Australia, especially in the key markets in Asia. Britain and Australia, in contrast to most of their competitors, enjoy the support afforded by a centralised system of higher education and associated promotion of their marketing by the British Council and Australian Education International respectively. However, as regional co-operative groupings of countries develop (eg University Mobility in Asia and the Pacific: [UMAP] in Asia, or Cooperation and Mobility in Postgraduate Research Training: [CMPRT] in Europe), it will be important for the sector as a whole, and for individual institutions, to keep these developments under review and to participate where possible and appropriate.

The competitive threat posed by institutions in countries which become committed to regional groupings for reasons of geopolitical advantage (especially the USA and Australia in UMAP) and which include our key competitors is compounded by the availability of English language delivery of taught masters programmes in a number of European countries, both Western and Central. While the threat from both clusters of initiatives is in early stages of development, and European institutions have yet to be subjected to the rigours of a UK-style research or teaching quality assessment, British institutions must be prepared to respond by developing bi- and multi-lateral partnerships (such as Universitas 21), and by ensuring that the particular needs of international students are directly and explicitly addressed. The time has come for the UK to lead the international field in offering, for example, service level agreements to international postgraduates, and in providing training for staff and research Supervisors on the needs and perceptions of these students.

The changing mode of knowledge production to an interactive, user-oriented process is addressed in Section 3. Research, and research training, is increasingly conducted outside the university in limited-duration research groups organised around themes which are transient and trans-disciplinary (such as the thematic priorities of the Research Councils), in the context of a wider community of knowledge which transcends traditional disciplines and the localised research context. This underlines the need for inter-institutional partnerships of substance at both national and international *levels*. So too does the Commonwealth Scholarships' shift to support of split-site PhDs; and this raises questions about how the needs of international postgraduate students can best be addressed in a shifting context.

Section 4 addresses the needs and interests of UK Higher Education. What are the costs and benefits to institutions, and to the nation, of international postgraduate recruitment? Is it helpful, or necessary, to speak of fee-paying customers, whose needs have to be met? Can HEIs demonstrate that they benefit financially? Should they be looking beyond the balance sheet; for example, at benefits in staff development? How are EU international postgraduate students to be accounted for, as the distinction between EU and other international postgraduate students diminishes with the introduction of fees? What support mechanisms should be put in place to counter the effects of global financial fluctuations? Do prices accurately reflect the costs of supervision across the disciplinary spectrum? While liabilities are clear, the asset side is less so. Is the international postgraduate student primarily a source of income, or a key resource for collaborative research projects?

Marketing the UK to international postgraduate students is the theme of Section 5. Issues here include the changing competitive environment, the image of UK-style postgraduate education, addressing the financial needs of international postgraduate

students through scholarships and work opportunities, and the merits of shorter course duration while maintaining quality. The chapter also considers what we know of the needs, motives and characteristics of international postgraduate students. Do they come to the UK to train for a traditional academic career at home, or for induction into cutting-edge research? How should we approach issues of social adjustment and the seniority or family status of many international postgraduate students? What are the differences between different groups of international postgraduate students, and between international postgraduate students and UK postgraduates, especially those with similar sociodemographic characteristics (eg mature or ethnic-minority students)? How do we ensure transparently fair treatment of international postgraduate students? Will adjustment to the needs of international postgraduate students also benefit UK students? Finally, this chapter addresses issues such as pre-competitive collaboration between institutions in promoting subject offerings on a national scale (the 'one-stop shop' approach).

Section 6 considers the repositioning of institutions and practices, after Harris and Dearing, and addresses the question of institutional specialisation in postgraduate research or postgraduate taught provision, and the need for a typology. Special attention is given to split degrees, collaborative programmes, mutual recognition, and trends in demand for mid-career postgraduate taught provision in the Learning Society, in contrast with the continuing concentration of postgraduate research.

The concluding Section 7 reviews the key trends highlighted in the Report, explores their implications, and identifies action required by individual institutions and the sector as a whole.

2. RECRUITMENT DATA

Nicholas Watts

This section compares the cost of education for international postgraduates in Britain with those in key competitor countries (the USA, Australia, Canada and New Zealand) and compares recruitment trends for the UK, USA, Australia and Canada. It then considers post-1994 trends in recruitment to the UK from non-EU and EU countries, and finally compares trends in rates of female participation in UK postgraduate education by UK nationals, EU and non-EU international students.

A number of limitations regarding the data on international postgraduates merit comment. First, there is one survey covering factors influencing international students' decision to study in Britain, a survey of 135 students at nine universities by the Careers Services Unit (CSU, 1995). Apart from this survey, there is a conspicuous lack of national data on the motivations, satisfaction and subsequent destinations of international postgraduates. Second, the data on recruitment of international postgraduates to the former polytechnic and colleges sector gathered prior to the setting up of the Higher Education Statistics Agency (HESA) in 1994 has yet to be integrated with the data for 1994 onwards. Third, HESA changed the reporting methodology from 1996 onwards, excluding students who spent the whole of their period of postgraduate study overseas although registered with a UK institution. As a result, the subsequent trend analyses cannot produce definitive statements regarding the impact on recruitment of either the South-East Asian economic crisis, or the quality control exercised by the Higher Education Quality Council (HEQC) in its 1996 audits of overseas courses. Given the economic and strategic importance of international postgraduates, improvements in the range and quality of data would be welcome.

Competitiveness on price

Except for private universities in the USA, which are markedly more expensive, British fees tend to be the highest; but these are offset by the lower cost of living in the UK, as well as by the shorter duration of most study programmes (see Table I). In 1996, average total costs per year for science postgraduates as calculated by the Education Counselling Service (ECS) were lower in the UK than in the US, Australia and New Zealand. In 1998, despite the strength of sterling, the USA remained more expensive for science and for other, non-medical postgraduate study, while Australia was marginally cheaper (around £300 per annum for science postgraduates, and around £10 per annum for others). For medicine, the UK is more expensive than its competitors, again with the exception of private universities in the USA.

Comparative recruitment

The international trend in recruitment shown in the comparative data from 1988 to 1997 (Table 2) indicates a peak in recruitment of international postgraduates in 1995, with only Australia continuing to increase recruitment and market share beyond this point. USA recruitment has been in slight decline since 1994. It appears that one dimension in explaining cross-national variations in recruitment may be international students' fears for personal safety in host countries. Across this period, the UK 1996 figure represented 310 *per cent* of its 1988 figure, compared with 119 *per cent* for the USA, and 287 *per cent* for Australia.

The growth in UK recruitment owes much to the vigour with which UK Higher Education is marketed abroad (for example, see Appendix 1, which indicates cross-national differences in promotional practice in Taiwan), as well as to the enhanced status of the new universities after the ending of the binary divide in 1992.

Table 1a. Postgraduate cost per year of study (in pounds sterling) 1996

	Average PG tuition fees per academic year			Average living costs per year (12mths)	Average total PG costs per year		
	Science	Medicine	Other		Science	Medicine	Other
UK	7622	14350	6267	5800	13422	20150	12067
USA (private)	11045	15723	11045	7724	18769	23447	18769
USA (public)	5928	6338	5928	7724	13652	14062	13652
Australia	7710	9353	5930	7114	14824	16467	13044
Canada	3389	3418	3389	6568	9957	9986	9957
New Zealand	9776	8955	6251	6985	16761	15940	13236

Source: Education Counselling Service. Conversion rate used: 1996 £1 = \$1.5535 US, \$1.9467 Australian, \$2.1262 Canadian, \$2.2557 New Zealand.

Table 1b. Postgraduate cost per year of study (in pounds sterling) 1998

	Average PG tuition fees per academic year			Average living costs per year (12mths)	Average total PG costs per year		
	Science	Medicine	Other		Science	Medicine	Other
UK	8200	15450	6303	6600	14800	22050	12903
USA (private)	12902	16482	12902	8940	21842	25422	21842
USA (public)	4340	7106	4340	8940	13280	16046	13280
Australia	7176	9137	5594	7300	14476	16437	12894

Source: Education Counselling Service. Conversion rate used: 1998 £1 = \$1.6 US, \$2.15 Australia

Table 2. Recruitment of international postgraduates by key competitors, 1988-97

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
UK	25000	26600	29100	30900	32400	36100	69844	82424	77729	81015
USA	122800	125100	132000	141300	152100	152500	149800	148200	146700	n.a
Australia	4937	6215	6860	7965	9123	10201	11711	13489	14145	16858
Canada	11900	13625	14859	15299	15800	15609	15411	n.a	n.a	n.a

Source: UK: HESA, DfEE; USA: US Council of Graduate Schools / Open Doors; Australia: DETYA; Canada: The Canadian Bureau for International Education.

Changes in sources of UK recruitment from non-EU countries.

A small number of South-East Asian countries have been the main cause of the drop in reported UK international postgraduate recruitment in the wake of the Asian currency crisis (Table 3). Between 1995 and 1997, the number of Malaysian postgraduates dropped from 4778 to 3380, or by 29 *per cent*. The respective figures for Hong Kong are 5537 to 2997 (46 *per cent*); for Singapore 2915 to 1584 (46 *per cent*); for Iran 1234 to 802 (35 *per cent*); Australia from 907 to 750 (17 *per cent*); Nigeria 855 to 686 (20 *per cent*); Libya 580 to 422 (27 *per cent*). While currency clearly plays a role, the countries listed here indicate the impact of political factors on recruitment.

By contrast, recruitment has grown in the period 1995 to 1997 significantly from India (from 1561 to 2137, up 37 *per cent*); Thailand (1277 to 2080, up 63 *per cent*); South Korea (1023 to 1542, up 51 *per cent*); Egypt (426 to 547, up 28 *per cent*). Among the countries sending smaller numbers of students to the UK, the percentage from Russia has risen by 25, Colombia by 57 and Poland by 46, while Sri Lanka has dropped by 15 *per cent* and Bangladesh by 11 *per cent*.

The overall downturn in numbers shown in Table 2 appear to indicate that countries sending fewer students to the UK are those sending a smaller total number of students to study abroad. The drop of 5269 students from three countries (Malaysia, Hong Kong and Singapore) represents a total loss of fee revenue of some £35 million at a conservative estimate.

If part of the downturn in reported recruitment from these countries may be attributed to the change in HESA methodology for data collection noted above, its impact would appear to be substantial. The need to be aware of exposure to particular markets could hardly be demonstrated more starkly.

Recruitment patterns from EU countries

In the period under review three new countries joined the EU on 1 January 1995: Austria, Finland and Sweden. Numbers for these countries jumped by 45 *per cent*, 36 *per cent* and 66 *per cent* respectively between 1994 and 1995 (Table 4). There are marked differences in patterns of recruitment across the remaining EU countries. Greece remains the major 'exporting' country with 7889 students (up 46 *per cent* over the three-year period) followed by Germany with 4095 (up 34 *per cent*), France with 3261 (up 40 *per cent*). Next comes the Irish Republic with 3061 (but down 8 *per cent* over the period), Italy 2116 (up 54 *per cent*), Spain 1685 (up 31 *per cent*), the Netherlands 1083 (down 10 *per cent*), Portugal 849 (up 21 *per cent*), Sweden 771 (up 64 *per cent* since joining the EU in 1995), Belgium 596 (no discernible change), Denmark 543 (up 28 *per cent*), Finland 466 (up 41 *per cent* since joining), Austria 265 (down 24 *per cent* since joining), and Luxembourg 118 (down 10 *per cent*).

Table 3. International postgraduates from the top 40 non-EU overseas countries, 1994-97.

Country	1994	1995	1996	1997
United States	3281	3750	3796	3844
Malaysia	4143	4778	4065	3380
Hong Kong	4732	5537	3189	2997
Japan	1711	2131	2195	2485
China	2072	2298	2235	2272
India	1276	1561	1714	2137
Thailand	851	1277	1617	2080
Taiwan	1635	2093	2042	2075
Canada	1723	2047	1908	1949
Singapore	2812	2915	1579	1584
South Korea	773	1023	1339	1542
Pakistan	1040	1164	1157	1217
Turkey	1284	1371	1356	1216
Cyprus	746	943	1014	1062
South Africa	798	829	570	981
Saudi Arabia	829	1010	957	930
Mexico	825	950	875	910
Brazil	954	948	901	849
Israel	411	807	750	826
Iran	1027	1234	1015	802
Indonesia	691	703	655	791
Norway	510	640	761	762
Australia	807	907	706	750
Nigeria	698	955	777	686
Kenya	514	606	647	674
Egypt	350	426	479	547
Switzerland	351	439	524	537
Hungary	467	435	658	526
Zimbabwe	305	444	397	432
Jordan	345	413	427	429
Ghana	319	386	404	426
Libya	533	580	513	422
UAE	322	397	442	416
Botswana	243	347	395	384
Sri Lanka	384	419	361	357
Kuwait	281	332	318	346
Bagladesh	370	384	358	340
Russia	205	272	307	340
Colombia	183	211	266	331
Poland	219	220	294	321
Total	42994	50077	45959	46952

Source: Calculated from HESA statistics.

Two factors may help explain this pattern of recruitment: the changing nature of domestic postgraduate provision (perhaps especially the availability of masters courses) and the significance of English language provision (available in the Netherlands and not an issue for the Irish). Figures are not available to indicate the proportion of EU postgraduate students who did their first degree in the UK, so at this juncture it is not possible to estimate the possible impact of the introduction of undergraduate fees on postgraduate recruitment. As EU students pay home fees at undergraduate as well as postgraduate level, the introduction of tuition fees may deter EU undergraduates from studying in the UK, with probable knock-on effects for postgraduate recruitment.

Gender and recruitment

Among PGR students, EU-based international students comprise a slightly higher proportion of women than do UK PGR students, but both groups are around 40 *per cent*, compared with non-EU international students, at around 30 *per cent* (Table 5). In PGT programmes, the proportion of female students rises dramatically for the UK, to over 50 *per cent*, with EU international students up to around 45 *per cent*, and non-EU international students up to around 42 *per cent*. The percentage of female students is growing steadily in all categories, but most rapidly among international PGT students. Traditionally, male-dominated disciplines (sciences, engineering, and business and administration) have been popular at postgraduate level for non-EU international students, so it remains to be seen whether the increased female representation is evidence of a trend towards gender equality, or of a change in the disciplines studied by international students, but the overall figures are quietly encouraging.

Table 4. International postgraduates from the EU countries, 1994-97

Country	1994	1995	1996	1997
Greece	5414	6634	7270	7889
Germany	3048	3764	3827	4095
France	2327	2803	3081	3261
Irish Republic	3317	4233	3175	3061
Italy	1372	1799	1934	2116
Spain	1288	1571	1571	1685
Netherlands	1192	1406	1143	1083
Portugal	702	846	834	849
Sweden	289	471	601	771
Belgium	619	816	629	596
Denmark	424	552	523	543
Finland	243	331	406	466
Austria	241	349	245	265
Luxembourg	131	153	105	118
Other	357	139		

*Austria, Finland and Sweden joined the EU on 1 January 1995. Source: Calculated from HESA statistics.

Table 5 Female participation rates (percentage figures), 1994-97

	PGR				PGT			
	1994	1995	1996	1997	1994	1995	1996	1997
UK nationals	37.3	38.6	39.9	41.0	50.6	51.5	52.3	53.9
International (EU)	39.1	39.3	40.7	41.9	40.1	41.0	44.5	45.6
International (non EU)	28.0	29.3	31.4	32.7	35.9	36.6	41.5	43.0

Source: HESA

From the above, it is clear that UK postgraduate education is competitive as far as total costs over the duration of a course are concerned. Also, the drop in reported recruitment from some key South-East Asian 'supplier' countries has in part been compensated by growth in recruitment in other countries in Asia. In international comparison, UK recruitment performance appears to be holding up well. It remains to be seen whether the post-1995 drop in reported recruitment figures is an artifact of the change in HESA's reporting methodology; a temporary dip as a result of the

South-East Asian economic crisis; an indication that international postgraduate recruitment may be about to 'plateau' as traditional supplier countries develop their own provision, either singly or in regional partnerships, or the result of a combination of these factors.

In conclusion, it would be helpful if statistics were available for the whole body of foreign postgraduates working in research in UK institutions (including post doctorates and contract researchers who may or may not be registered for higher degrees: see commentary in Section 4 below). It would also be useful to have data which would permit reliable trend analyses, so that the effects of both economic downturns and of recruitment drives could be evaluated. As things stand, a major economic activity, whether assessed in terms of direct fees paid to institutions, or in terms of the benefits that international postgraduates bring to the research enterprise, or as ambassadors for UK plc on their return home, is short of the data it needs to evaluate the effects of policy and performance.

3. RESEARCH AND GRADUATE STUDENTS

Michael Gibbons

The key issues and trends affecting the recruitment of and role played by international postgraduate students in the UK will be shaped by emergent changes in the mode of knowledge production. Universities intending to be major players in research will have to adapt to changes in the research environment in ways likely to have particular impact on opportunities for international postgraduates.

Research policy and research training

In the 1990s, British research policy has been increasingly driven by the twin goals of enhancing economic competitiveness and the quality of life. Research funding has been made accessible to a wider constituency of institutions beyond the universities, including research institutions and private companies in partnership with universities (see Appendix 2b). The objectives of research training have also expanded to include the development of transferable skills; for example, "communicating with specialist and lay audiences both orally and in writing; the techniques required to search the literature and learn for oneself; the ability when appropriate to work in a team, including an inter-disciplinary team; management skills including time management and prioritising; the importance of budget limitations and value for money; an appreciation of the commercial realities of work in industry and elsewhere; the exploitation of research, and similar skills." (The Royal Society, 1994). As a result, postgraduate research training now includes a major component of research skills and methodology, as well as an introduction to different epistemological perspectives (either the one-year MRes, or 60 *per cent* of the first PhD year in the case of ESRC), and the research councils are devoting an increasing proportion of their funding to support of training in industry-university cooperative partnerships (for examples, see Appendix 1 of Scottish Universities Research Policy Consortium, Feb 1997).

These developments have enjoyed widespread support because they simultaneously raise the public and political profile of research, and promise to increase its social and economic usefulness to UK plc. However, we know little about the extent which international postgraduates or their sponsoring governments understand, appreciate or assess the relevance of these changes. Given the heterogeneity of the constituency, supplier nationals will differ in their assessment. But institutions concerned to recruit the best international postgraduates must ensure that such training is both accessible and transparently relevant to these students; for example, we must make it clear that these shifts are not taking place to the detriment of curiosity driven, or "blue skies" research, and their applicability is greater in interdisciplinary and applied research, less in individual humanities research.

Two modes of knowledge production

We may conceptualise postgraduate training in terms of two, ideal-typical modes of knowledge production, which entail two different styles of research training. "Mode 1" would characterise traditional, discipline-based, apprenticeship-style research training; "Mode 2" a trans-disciplinary style of training for work in research groups focusing on research problems in flexible teams formed from inter-organisational partnerships (especially between universities and industrial laboratories) less deeply rooted in long-term commitment to a single university. (For a fuller exposition of the distinction between the two modes, see Appendix 2a.)

As a growing proportion of university research moves towards Mode 2, the consequent flexibilisation of the organisation and composition of research teams implies risks and opportunities for the international postgraduate student. This raises important questions about what motivates students and their sponsors towards UK-based study. For example, do sponsors prioritise the training of new academics, or the development of researchers with the skills to work in the international research

market? If the latter, international postgraduate research students may take on an important role in international collaborative research networks based on partnerships between universities and economic, social and governmental bodies across national boundaries. If the former, it will be important for recruiters to ensure that traditional opportunities for postgraduate training are safeguarded, Whether by institutional specialisation or by maintaining parallel tracks within single institutions.

Several key issues need to be addressed here. First, how will postgraduates function in the new mode? Second, what are the implications of the new research practices for the training of postgraduate students? Third, what are the implications of the new mode for those who supervise research students?

The changing relationship between teaching and research

Perhaps the most important implication for universities - and therefore for postgraduate students - lies in the changed relationship between teaching and research that Mode 2 implies. As Mode 2 develops, the structures that support undergraduate education will diverge from those that support research. Universities, as currently organised, are configured to carry out disciplinary research. Because this structure is also reflected in the undergraduate curriculum, academic faculty have access to a continuous stream of young researchers who can further develop the skills acquired during their undergraduate years. Much postgraduate training, currently, is devoted to transforming undergraduates into effective research specialists and training them to make contributions to their specialisms. This has been made possible through postgraduate awards and research grants provided by a research-council system which is also structured along disciplinary lines. Although some effort has been made to evaluate multi- and inter-disciplinary research, quality control via the disciplinary peer review process continued to dominate the most recent Research Assessment Exercise (RAE).

As the Mode 2 pattern of conducting research gains ground (and as the agendas of any research council will confirm), many academics are being drawn into teams to work on particular complex problems. They do this knowing that solutions may not be reducible to a particular disciplinary contribution; but they also recognise that the context thus established, and its channels of communications, will provide essential stepping stones to the next set of problems. Over time, leading academic researchers pursuing intellectually difficult problems in this way might be expected to drift further and further from their original disciplinary backgrounds, as they follow the challenges (and the resources) associated with trans-disciplinary problems. It might further be expected that leading researchers will begin to form looser associations with their universities, as their prime affiliation shifts to the collaborative, albeit transient, problem-solving team. Mechanisms will have therefore have to be found for guaranteeing the continuity of supervisors' commitment to their research students.

In this projection, postgraduate students will, in future, spend the formative parts of their training working collaboratively in teams of various kinds, more closely tied to a shifting task-centred context than to their original disciplinary training. This type of intellectual environment demands different things from them, for which, so far at least, there is little formal training, although the MRes represents moves in a relevant direction. For example, postgraduate students must be enabled to work 'creatively' in teams comprising individuals from very different scientific backgrounds, and they must become skilled not only at handling more than one intellectual framework but also adept in relating these to the current research problem. The implication for the international postgraduate is longer training (including the MRes component), and the need to develop social and communications skills appropriate to working in a team environment which extends beyond the student's immediate workplace.

Postgraduate training in the sciences is already occurring outside the universities, or in collaborative arrangements with organisations beyond higher education; for example the Co-operative Awards in Science and Engineering (CASE) scheme (see Appendix 2b), which is also offered by the Economic and Social Research Council (ESRC) for social scientists. Moreover, funding policy is splitting teaching from research funding for postgraduates; for example in HEFCE's two 'streams' for postgraduate research students. The implications for old faculty structures, and for the regrouping of faculties around themes perceived as relevant to the needs of research users, are therefore issues of growing concern. So is the question for recruiters of international postgraduates of how to develop structures appropriate to both modes of research training. This may, of course, be dealt with most efficiently within the context of the Graduate School.

Partnerships

British universities must rethink their position on collaborative research if they are to continue to attract the best international postgraduate students. It will then become evident not only that postgraduates will come to play a different role in their institutions, but also that they will require different training. To achieve high ratings for their research, universities must be able to maintain access to a number of problem-solving contexts in which the most intellectually challenging work is being done. These contexts increasingly involve the collaborative integration of a variety of skills; and that requires partnerships with other institutions for the simple reason that no single university can itself afford the full range necessary to be dominant in any particular field. Partnerships are essential, and the choice of partners is among the most important decisions that a university makes.

The key issue is identifying the partnerships in which an institution feels it can contribute effectively, given its resources. Universities now require a carefully selected range of institutional arrangements in which the exchange of international students forms one essential element. Rather than pressing governments to fund fellowships or exchange schemes for international postgraduates, or providing bursaries from their own resource as some universities are doing, they need to invest in institutional partnerships and exchanges as part of their research strategies. This would allow the development of more diverse international postgraduate research training opportunities, better suited to the career needs of the next generation of researchers. But split PhDs under which international students spend part of their time in their 'home' institution and part in another, perhaps receiving a degree from both, can work only if the participating institutions are in agreement about the aims of research collaboration. Similarly, sharing teaching modules will be more effective if this is seen to be part of a broader institutional culture intent on exploiting the possibilities of sharing resources.

Split PhDs and jointly-taught masters courses require as a pre-condition much closer institutional co-operation than the familiar exchange or scholarship. This might mean that international students will spend less time in their British institution, and attract less income to it, than their peers following conventional programmes at one university. However, the expectation of generating significant income by attracting international postgraduates is both inherently fragile and out of tune with the ways in which research is developing. It is fragile because it can only work so long as the research capabilities of the supplying nations remain below that of the UK; it is out of tune because the organisation of research is moving away from the traditional pattern.

And UK universities do need to invest in strong partnerships with overseas institutions, rather than merely signing memoranda of understanding with them, if they intend to maintain a flow of international students. Exchange schemes such as the Commonwealth Fellowship and Scholarship Plan can help, but they need to be made more flexible, perhaps by rewarding departments that build up robust institutional arrangements in particular areas with fellowships for a finite period. Such

arrangements would move the debate about exchange schemes from vague talk about the long-term economic benefits to the more easily identifiable practical gains from sharing resources with other institutions in which international students play concrete, clearly important roles. Partnerships with other institutions are necessary for British universities to help maintain this country's position at the leading edge of research. Scholarships and more flexible postgraduate research awards can facilitate this, but they cannot do so without strong institutional alliances to underpin them.

Funding in Mode 2

If the dynamics of contemporary research emphasise the use of shared human and physical resources between institutions, supervising postgraduates in collaborative environments will necessitate something more complex than the traditional 'one-to-one' relationship between student and supervisor within one institution. Initiatives such as the Department of Trade and Industry (DTI) funded Teaching Company Scheme (Appendix 2b) recognise both the benefits and difficulties of supervising collaborative research and there is much good practice to be disseminated from experience. At the same time, many conventional research council grants are not easily adaptable. For example, research council awards cannot usually be awarded to postgraduates from outside the EU, nor do they make sufficient provision for UK postgraduates to move internationally, except for brief periods; and the same constraints obtain in many other countries. Fortunately, the dynamics of research in Mode 2 also have their distinctive modes of funding. Funding for research into large, complex problems is usually brokered from a variety of sources, so it is often possible to overcome national restrictions, though such brokering can obscure the distinction between a postgraduate student and a 'contract' researcher who may also register for a higher qualification. This blurring carries with it the danger that postgraduate training will disappear as an identifiable activity appropriate to a particular stage in a scientific career, perhaps to be replaced by 'on-the-job learning' in the context of application.

Summary

Increasingly, postgraduates working in Mode 2 will need to learn how to work creatively on complex problems in teams. The pre-condition to the development of relevant skills lies in the ability of students actually to work in the environment of application. To support this process requires that universities rethink the way they do research. Universities need to recognise that if they are to play a part at the leading edge of their chosen fields of research they need to form alliances and partnerships within which postgraduate students will receive their training and accreditation as researchers.

As the balance of research and postgraduate training shifts from Mode 1 towards Mode 2, the challenges to universities wishing to integrate opportunities for international students in Mode 2 research teams begin to become apparent. They will need to develop collaborative research and training partnerships with higher education institutions in countries sending students to Britain for postgraduate study, especially where such study will be split mode. The British host institution will probably require a closer knowledge of the language and social skills of the candidate prior to admission. It will also be important for overseas governments to be clear about the implications of funding international students to come to Britain to work in this mode; for example, will developing countries wish to have postgraduates trained in this style, or will they also wish to retain an emphasis on disciplinary traditions in order to strengthen undergraduate teaching provision at home? And how will the shift to Mode 2 affect practice in the arts and humanities, or the distinction between Mode 2 and 'blue skies' research?

4. THE COSTS AND BENEFITS OF PROVIDING POSTGRADUATE EDUCATION FOR INTERNATIONAL STUDENTS *Antony Gribbon*

The extent to which international students cover their teaching costs and contribute, financially and otherwise, both to institutional funds and to the UK economy has been comprehensively explored in the Greenaway Report (Greenaway and Tuck, 1995). This chapter starts from the premise that international students bring many benefits to postgraduate education in Britain, but questions whether the sector takes sufficient note of the ambiguities and uncertainties within the ways these benefits are delivered, in terms of fee earnings, with or without subsidy, and other contributions to the national interest.

Setting fees

There are three, or even four, processes by which fees for international students are set by institutions. These bear little or no relation to each other, and present, overall, a picture that is confusing, both for prospective students trying to understand what they are paying for, and for any institution seeking to establish the real opportunity cost of provision for international students.

The traditional basis for setting fees for students from outside the UK and the EU - the three bands for non-laboratory, laboratory-based and clinical degrees - was introduced in the early 1980s to reflect the marginal cost of teaching students on courses otherwise funded centrally from government sources. Increases to take account of inflation were recommended annually by the Committee of Vice-Chancellors and Principals until 1994/5, when institutions were left to determine their own fees. Since then, there has been some movement away from national rates, but the old fee bands are still the predominant influence. There is not much evidence of individual institutions reviewing their reliance on costing principles established over 15 years ago.

Different principles apply to self-financed programmes, which appear to be an increasingly popular basis for funding postgraduate programmes primarily aimed at international markets. Their fee levels vary more widely than for traditionally priced courses, with some universities charging less than the old banded rates, others the same, and many providers of professionally-oriented programmes considerably more. There is no accessible evidence on how fees are calculated; but they must, given that these programmes do not receive central funding, at least cover directly attributable costs. It seems likely that 'pricing up' to the maximum level that the market will bear is a common practice.

Here it is worth recalling the extent to which the composition of the international postgraduate sector, which accounts for around one third of UK Higher Education's postgraduate population, has changed over the last five years. 31 *per cent* of the postgraduate sector's international students are now EU citizens and pay home fees (see Table 6). Unlike EU undergraduates, they do not take up places within a fixed quota, ie the Maximum Aggregate Student Number. EU postgraduates may consequently be admitted to a UK university on exactly the same basis as non-EU postgraduates, taking up a marginal place, but paying a very different fee. Receiving universities do not seem unwilling to take them (the number of EU postgraduates in UK Higher Education increased more than twelve-fold between 1991/92 and 1997/8) so it must be presumed that they are deemed to be covering at least marginal costs or to be making an equivalent contribution in other ways.

Table 6 Analysis of international postgraduate students in UKHE: 1991/92 and 1997/8

	Student Nos. (‘000)	Percentage of total	Student Nos. (‘000)	Percentage of total
	1991/92		1997/8	
EU	2.1	8%	26.8	33%
Non EU	23.0	92%	54.2	67%

Source: British Council ECS Statistics

Taken together, these three policies account for the funding of a sizeable portion of the postgraduate student body in the UK. Two-thirds of this portion pays 'full cost' fees, the other one-third being 'subsidised'. Conventionally, the distinction would be between overseas students, meeting the full marginal cost of their tuition, and home/EU students benefiting from a subsidy. However, the line is becoming blurred. Wherever the level of demand permits it, institutions are likely to 'price up' fees on self-financed principles. It matters not where the demand comes from: the distinction between 'full cost' and 'subsidised' students disappears and all, whether home, EU or non-EU, are charged the same fee. The new distinction is between high demand postgraduate courses and the rest. The postgraduate courses charging overseas fees on traditional marginal costing will become the courses where international interest is lowest.

Subsidy

The move towards self-financed fee levels removes some ambiguities, but creates other anomalies because it is piecemeal. Home/ EU fees for different masters programmes at the Warwick Business School, for example, vary by more than 250 *per cent* depending solely on whether the programmes are self-financed or not. In the light of pressure for postgraduate provision to reflect attributable costs more accurately, the level of 'subsidy' must diminish throughout the system, causing the old home fee to rise. As this process takes its course, the gap between the latter and the old overseas fee will diminish and EU students will become even more popular targets for recruitment and it is conceivable that the differentials between home and overseas fee levels might eventually disappear.

'Subsidy' is not normally an instrument of international fees policy. The Harris Report (HEFCE, CVCP and SCOP, 1995) summarises the processes by which institutions decide which postgraduate courses to subsidise as quite independent of any considerations about international fees. It may be the lack of a potential international market which determines the extent of subsidy and, as already argued, whether the marginal cost overseas fees should be charged. As the general level of postgraduate fees increases, however, and the number of programmes involving collaboration offshore grows, it is possible to imagine scenarios where available subsidies might be deployed in the opposite direction, towards attracting non-EU students.

For international recruitment to British universities, the impact of the 1997/98 Pacific Rim crisis was greatest on undergraduates, but a large number of institutions reacted by offering scholarships for both undergraduates and postgraduates. The UK government followed suit by launching a national scheme for matching scholarship funds. In consequence, a substantial group of students from the affected economies was able to follow post-graduate courses in Britain for tuition fees that were substantially lower than the marginally-costed overseas fee, and within range of home/EU fees in some instances. It is too early to assess whether the schemes have been successful in preserving market shares, which was one of their intentions. However, the government scheme will be repeated for 1999/2000 for postgraduate awards only and it is already clear that the deliberate gesture of one offering 'subsidy' in order to alleviate a problem has generated considerable goodwill. In these

circumstances, the difference between home and overseas fees might even reverse. To the extent that discounting is commonly practised outside the EU, whether in the form of commission payments, bursaries or group fees, this may already occur.

A clear policy towards 'subsidy' can also be applied usefully towards the fourth process for setting fees, which concerns research degrees. Bench fees are generally accepted as a legitimate way of recovering the direct costs of consumables, but the widely maintained practice of pricing the cost of research supervision at the same level as a taught masters degree has no obvious rationale. The effect is that the terms and conditions of British research degrees can be seen as too vague, with no clear relationship between the fee charged and access provided to supervisors, the ratio of supervisors to students, or other forms of student support. According to the Committee of Vice-Chancellors and Principals Survey of Tuition Fees for International Students 1998/9, some 30 *per cent* of UK institutions only differentiate between taught and research postgraduate fees outside the clinical field. The great majority of these are London institutions, or new universities that charge more for taught courses than for research. A small minority follow the opposite policy.

There is a fifth and increasingly significant area of international postgraduate education: remote delivery, and both taught and research degrees offered collaboratively with institutions overseas. Here fee levels appear to vary widely, depending on whether a project is self-financed or whether it is subject to institutional fee regulations. A distance-learning programme is one example of the former, and a split PhD of the latter. Despite the rapid growth of interest in projects of this nature, very little work has been done to establish either the principles on which fees are set - which include high volume now margin, premium pricing and marginal costing - or on the extent to which experience has demonstrated them to be well founded or otherwise. Institutions may include overheads and other indirect costs in calculating how much income they need to generate from their involvement, but they are not subject to the more rigorous national policies that apply to the pricing of other services such as undergraduate fees for home students or overheads in research contracts. The area invites further investigation into the questions that have already been raised about other aspects of international postgraduate education: the extent to which in-country projects are genuinely covering their costs or to which they actually rely on 'subsidy'.

The number of international registrations has shown rapid and sustained growth, notwithstanding the recent hiatus (see Section 2 above), and the internationalisation of postgraduate education shows no signs of diminishing. From this point of view, there is a certain equilibrium about international fees policy; but the lack of any clear pattern in the way institutions set their fees suggests that it is an equilibrium arrived at through the circumstances of the last 10 or 20 years rather than the product of innovative or experimental thinking.

International fees policy should be an instrument for achieving more than the tactical objectives of garnering marginal revenue or helping some departments to cover the attributable costs of particular degree programmes. It can help to meet a variety of more strategic aims, such as shaping an international student body, or releasing subsidies from one area in order to deploy them more effectively in another. Every institution claims to have an international strategy, but there is little evidence that it extends to setting fee levels. The economic crisis in the Pacific Rim, which raises (among many other issues) the question of how local provision for academic development can be enhanced substantially within a short period of time, may be just the sort of agent that is needed to stimulate institutions into examining what they really want to gain from international education, and how their pricing of postgraduate education fits into their wider strategic planning.

National interest

No one would pretend that financial arguments alone are a sufficient way of measuring the value of international postgraduate education. There are clearly other benefits, both institutional and national; for example, the cultural enrichment of campus post-life, the advance of international understanding, and the cultivation of long-term trading relationships. The Greenaway Report (Greenaway and Tuck, 1995) touched on these as Complementary benefits of international student recruitment generally, but did not consider what might be called the infrastructural argument that applies particularly to the postgraduate sector. This concerns how far the interests of the political economy can be served by UK Higher Education's ability to sustain a substantial and potentially influential international postgraduate community. Its most important application *should* be collaboration between universities and industry. Substantial numbers of researchers working in the UK are from countries all over the world. Although we do not know which of them came to this country on short-term assignments, and which took their research degrees here, it is likely that many are among the latter and do not remain in academic research for ever. Whatever the case, they represent a valuable resource for strengthening links between the UK and the rest of the world, not only between universities and international research projects, but also through applied research networks. In both respects, they are 'a national interest' in terms of technology transfer, their contribution to the UK research base, and as a factor in inward-investment decisions. Yet despite governmental interest in promoting UK research as an international asset, little has been done to explore the contribution to it made by the international student community.

We need to ask why international research assistants, post-doctoral students and other contracted researchers are not included in discussions about postgraduate education as readily as students on taught masters and PhD programmes. The reasons are probably functional; 'research' *is* often dealt with as a separate constituency, so researchers are appointed through channels that have little or no connection with 'other' postgraduate recruitment, and they are administered by different processes. There are no data on the size of the community, *their* occupational areas or whether, even though they may not be PhD students they continue to receive further training as researchers, general interests, let alone their learning interests, are nor excluded from considerations about the international postgraduate community.

As part of this wider picture, it would also be useful to review what is known about the industrial/commercial role of international postgraduate and post-doctoral students in university agencies not concerned with international postgraduate recruitment (ie industrial liaison and research offices). There maybe scope for greater collaboration between universities, government and industry to ensure that the UK maximises the potential for more closely harnessing its profile as a home of high-quality research to the cause of inward investment, and for linking success in attracting international industry to the recruitment high-quality international researchers.

The extent of the British Government scholarship scheme another dimension to the infra-structural argument. Chevening Programme and Jointly Funded Schemes, in particular, affirm the value of the international postgraduate sector long-term asset. The sector also successfully serves a great variety of inward, external and post-experience programmes funded by British or international agencies. Each programme is mainly reviewed by its sponsor (for example, the recent reviews of the Overseas Research Students Awards Scheme [ORSAS] and the Committee for International Cooperation in Higher Education [CICHE] Links Programme), but UK Higher Education provides no overview of its own to demonstrate the extent of its involvement and the opportunities created to port other aspects of the national interest. The habit of the undergraduate and postgraduate education as one subject most discussions about their international impact ten obscure specific benefits that relate to the latter only. There is a deficit in awareness of the extent to which international graduate education, as a specific activity or industry, serve UK. The

sector has a specific interest that is reliant on policy in other domains. Were it to come under scrutiny, what evidence could UK Higher Education produce to demonstrate the non-economic value of an externally subsidised international postgraduate activity; for instance teaching a Chevening scholar or a student funded under a EU programme? How much is known about the contribution these individuals make to the country's interest, or to the UK 's part in a broader EU interest, after completion of their postgraduate courses?

It comes back to the question of cost. If a balance sheet could be drawn of the liabilities and assets of international postgraduate education, the liabilities would be straightforward. They would include the obligations to teaching, training and research, and to delivering non-economic and infrastructural benefits. The asset side is less clear. This includes fee income and subsidies but, due to present pricing policies and other anomalies, the liabilities are not clearly matched. It is difficult to be sure why some should be paid for while others are subsidised. Moreover, it is still less clear whether the non-economic and infrastructural liabilities are met by real assets, or by subsidies, or by a mixture of the two. As UK Higher Education moves inexorably towards a fees-based teaching system and the subsidies are stripped away, these questions need answering.

5. MARKETING BRITAIN TO POTENTIAL INTERNATIONAL POSTGRADUATES

Iain Bride

'It is a truth, universally acknowledged, that an international student in possession of finance must be in search of a course', as Jane Austen might have said. What was a wry irony about Austen's world is a brute reality for today's universities. Such a student now seeks his or her destiny world-wide; and if we are to succeed in attracting suitors for our courses, we must recognise that they can find a suitable course in an ever-increasing number of countries.

British postgraduate education is in direct competition not only with the US, Australia, Canada and many Western European countries, but also increasingly with countries such as Russia, India and the Czech Republic. In this intensely competitive marketplace we must be aware of our perceived advantages and drawbacks to ensure that we capitalise on the former and minimise the latter.

The principal attractions of UK postgraduate education are generally held to be

- its quality
- that English is the medium of instruction
- the short duration of its courses
- international recognition of the qualifications they offer

While the principal drawbacks are generally held to be

- the cost
- the lack of scholarships, teaching assistantships and research assistantships
- overseas students' inability to work in paid employment during the period of study, under Home Office regulations
- the extreme difficulty of finding employment in the UK on completion of the course, including post-doctoral work.

Quality

The perception overseas that the UK offers high-quality postgraduate education is based to a large extent on the fact that many of the senior figures in government and industry were educated in the UK in the days when postgraduate education was based in a small number of 'elite' universities. These days are long past, and we face the dual dangers that many of the new generation of overseas countries' leaders have been educated in countries other than the UK, notably the US, and that the recent rapid expansion of the UK university system has undoubtedly led to the inference that this implies a diminution of quality.

However unjustifiable the latter may be in general, there have certainly been well-publicised cases where the provision has been of poor quality and, as always, one bad experience is remembered far longer than many good ones. It is essential that all universities recognise the damage which can be done to the reputation of the system as a whole by poor quality provision, that they adhere to the various Codes of Practice (such as those produced by the British Council and CVCP: see Appendix 4), and that cases of malpractice are identified and rectified promptly by the system as a whole. British higher education is perhaps too willing to avoid confronting instances of malpractice, arguing that the adverse publicity which this would bring is a greater threat. Nevertheless, more could and must be done in a discreet manner, to bring pressure on the few who abuse the system, whether it be franchised courses with inadequate (or no) quality control, the admission of students to courses for which they are not suitably qualified, or misleading promotional materials and advertisements. Advertising standards in some instances leave much to be desired and it is perhaps only a matter of time before the more litigious international student seeks redress for the non delivery of programmes as advertised.

The existence of the RAE is now well-known throughout the world and it is totally counter-productive to suggest, as some do, that it should not be taken seriously. Although it is inevitable that 'league tables' will exist (they are commonplace in many countries), it is to everyone's advantage to recognise that individual research strengths exist in almost all universities; at every opportunity should be taken to ensure that the RAE is interpreted correctly and that the full documentation (not just league tables) is widely available. The majority of overseas government agencies, sponsors and universities are well aware of this broader context and prospective students should be encouraged to identify strong research groups from whom they can obtain further information in order to select the most appropriate university for their particular research interest.

English language

It may appear self-evident, that the English language is an attraction of UK education. However, that attraction is shared by other countries, including Britain's two principal competitors and many non-English speaking countries are now introducing postgraduate courses in English in order to attract international students or to retain their own nationals.

What is perhaps less evident is that the UK does attract a large number of students to English Language Units and that in some instances this provides a major marketing opportunity for a university, particularly if the Language Unit is based in that university. An integrated two-year programme combining a period of intensive English Language study followed by a taught masters degree can be very attractive to both students and sponsors from countries where English is not a major second language, when compared with alternatives in the US and elsewhere.

UK postgraduate courses

The British system for postgraduate education is different from that in many other countries, and in promoting the opportunities to prospective international students and sponsors it is important that the ways in which it may be perceived are recognised.

In general, British programmes are seen as being very narrow and specialised. A PhD, for example, is seen as providing no breadth of advanced study and so is regarded as being less appropriate than a US training for a young academic who may be required to teach a range of advanced courses. Against this is the recognition in many countries that the UK graduate is more likely than their US counterpart to continue his or her research on returning home, owing to the emphasis in the UK on developing the individual rather than team-based research skills.

One criticism levelled at many research projects offered to international students has been that they may provide them with a stimulating experience but are of no relevance when he or she returns home, whether it be to a university or to industry or to business. Most universities have recognised this problem and do consider the background of students and their individual needs, but there are still too many instances of students being offered a project in an area which suits the supervisor rather than the student,

Recent changes in the UK system, including advanced courses and the recognition of the importance of transferable skills as part of the research training, have, it is hoped, addressed the criticisms without diluting the benefits. The introduction of 'professional doctorates' (DEng, EdD, ClinPsyD, etc) and programmes with a greater emphasis on applied research are attractive to many international students. It is likely that these will become increasingly popular, particularly if the nature of the research is of direct and immediate benefit to the student when he or she returns home. These changes do, however, require to be clearly presented in the international market.

One type of course which can be very attractive is the 12-month taught masters degree. This can provide either a preparation for research or be regarded as a means in itself of providing specialist training in some discipline. It is important to ensure that the content of the course does match the claims made in publicity material, particularly as pressure on resources has resulted in modules being dropped at short notice from some courses, resulting in justifiable criticism from students.

The relatively short duration of UK programmes is sometimes viewed with some reservation, as implying lower standards. It may be necessary to stress the relative intensity of the programmes, the fact that students are expected to work for virtually every day of the year, and the individual level of supervision which is provided.

On the other hand, once the quality of the programme is accepted, the shorter duration is a very attractive factor to both students and sponsors. Not only does it reduce the total cost as compared with many competitor countries, it also means that the student is able to commence work at an earlier date. These are aspects which should not be ignored in promoting courses in the UK, though it is, of course, essential that these claims are justified. There is a dangerous and increasing tendency for some supervisors to allow (or even encourage) international students to carry out more research than is necessary and so to delay the submission of their thesis. This is a tendency which must not be allowed to occur if the claim for a shorter duration of studies is to be sustained.

Student care

It is undoubtedly the case that a student who returns home pleased with his or her experience in a British university is the best ambassador and represents a powerful means of attracting further students. The way in which British universities take care of their international students is therefore an essential aspect of marketing.

As compared with the US and many European countries, the UK is felt to take a more personal interest in individual postgraduate students. This perception should be highlighted, and care must be taken to ensure that it is justified within each university, emphasising that those who study for a PhD in the UK in general continue to be more active in research than those who study in the US. Examples of the contacts maintained between graduates and their former supervisors are also valuable.

Perhaps most important is the need to recognise that there is no 'typical' international postgraduate student and that many factors affect an individual student's requirements. In the case of sponsored students there may be a conflict between the requirements of the sponsor and those of the student. Unless this is addressed from the outset, the possibility of dissatisfaction of one party or the other is considerable. International students on taught masters programmes are here for a relatively short period, often on vocationally oriented courses with well-defined structures. This shorter stay may limit problems of cultural adjustment, while students on less structured, longer programmes may find transition to life in Britain more difficult.

Students will also differ in several other dimensions. Their financial circumstances will vary, according to whether they are on a government scholarship or self-financing. They will again differ in the utility they can expect to derive from their programme of study. This should obviously be greater for students of masters programmes oriented to the overseas market. Some students may have difficulties in working with supervisors of the opposite gender as a result of their cultural background. Other cultural norms, regarding excessive deference, reliance on rote learning, the mastery of factual knowledge, and sharing work, all cause difficulties in adjusting to UK postgraduate education. Students may also be used to different norms about plagiarism and heavy guidance from supervisors versus working independently.

The European postgraduate population is growing. Its difficulties of social and cultural adjustment may be less since many European postgraduates (though not all) share a similar cultural heritage. Indeed, they may find studying easier here, insofar they appreciate the pastoral traditions and support services in UK universities. On the other hand, they may face greater language problems than many students from Commonwealth countries.

International postgraduates tend to be older with many in mid career development. In many cases the 'student' in the UK is member of staff in his or her own country. They may have perhaps five years teaching experience and be used to access to good laboratory and office facilities including telephone, fax, photocopying and perhaps secretarial support. Confronted with a corner of a laboratory and few support facilities, such a student very likely to be disillusioned with UK provision. Such differences foreground status sensitivities, and students enjoying positions of authority at home may take offence at the lower status accorded them in the UK. Some institutions find appropriate titles such as 'Postgraduate Fellow', which can help compensate for the loss of status implied in a return to the student role. Whether or not a university is able to make special provision for such students must be decided locally, but it is certainly the case that such a gesture would create a much more positive image overseas.

These students are more likely to be married and accompanied by spouse and family. Whether or not a university provides suitable and reasonably priced accommodation for international students is one of the questions most frequently raised overseas. Any university which is able to provide a guarantee of satisfactory accommodation is at a marked advantage. Some universities now guarantee international undergraduates (usually unmarried) a place in campus accommodation for all three or four years of their course, but few have tried to make a similar commitment for even single postgraduates, let alone the more difficult case of those who are married or have young families looking for child care facilities and language and social support for partners. Waiting lists for places in university nurseries - especially for babies - can also be a problem. The shift to split degrees, with part of the course or research carried out in the student's own country, may reduce some of these difficulties, but it raises other problems such as the question of adequate overseas supervision and ensuring that there is no conflict between research and routine employment requirements.

Recognition of the distinctive needs of international postgraduates should begin with orientation programmes - many under-graduate activities during this period are totally inappropriate - and ideally finish with preparing students for re-entry to their own country; for example in dealing with possible resentment from colleagues at home and the reluctance of the latter to adapt to new ideas from abroad.

During the period of study there are many problems facing international postgraduates which are additional to those facing British students. For example, the difficulties of obtaining a visa to visit a third country, in order to attend a conference or present a paper, and ensuring re-entry to the UK can be considerable, as can the difficulties faced by friends and relatives in getting access to the UK to visit them. International students may view the system for dealing with complaints as being very strongly weighted in favour of the university in that those involved in hearing cases are themselves part of the system, and it may be harder for international students to accept the concept of impartiality. Universities should ensure that students are given clear guidance in such matters and should provide a source of expert advice in such technical aspects as immigration.

The current growth in centralised provision and monitoring of graduate students in UK universities, through the introduction of graduate schools or at least research and graduate student offices, is likely to prove of particular value to international graduate students. University-wide policies on graduate education are vital, but student links are often forged with and effectively contained within the department. Departments

must therefore actively embrace institutional policy, and supervisors, or tutors should be prepared for the issues involved in supervising international postgraduates such as providing required detailed progress reports to the sponsors. This may even extend to active selection, where possible, of supervisors who are particularly suited to provision of the support that such students need, above and beyond the needs of UK postgraduates.

Funding

The single greatest criticism of the UK system is that it is expensive and there are few sources of funding. Against the charges cost, it can be argued that, when compared with universities comparable standing in almost any other country, the total cost of UK postgraduate education is reasonable (see above, Section 2). However, it is much more difficult to refute a second charge that few scholarships are offered, particularly when we are compared to some of the more prestigious American universities which offer full funding in order to attract the most able international students.

One major problem is that the majority of UK scholarship are in the gift of, or administered by, the British Council or Commonwealth Secretariat, and not the universities themselves. From the universities' point of view (and, moreover, for the over all image of UK postgraduate education) this is unhelpful when a university representative is overseas promoting his/her university and is asked how many scholarships it offers, the answer is invariably "only two or three full scholarships and few partial scholarships: you should go to the British Council and ask them for support". In comparison with the US University offering substantial numbers of scholarships, teaching assistantships and research assistantships, this places the US University at a disadvantage.

The reality, however, is that the same university may have in an year a substantial number of scholarships - perhaps 10 Commonwealth Scholarships and 25 Chevening Awards - but it does not itself award these and so cannot use them as a marketing tool. Even in the case of ORSAS awards, which are selected for nomination by the university, the number is not definitely known in advance and the award to an individual cannot be guaranteed, even if the university may expect 30 such scholarships. The impact of that university being able to state truthfully that it had 10 full-cost scholarships (Commonwealth) and 55 full-fee scholarships (Chevening and ORSAS enhanced by the university) would be immense. Moreover, as ever more strategic academic links are being formed, it is becoming possible to identify truly first-class students who would help to strengthen international collaboration on a long-term basis, whereas at present many scholarship holders do not contribute to such a strategic objective and in some cases are not of the highest quality.

While recognising that many scholarships are funded within the framework of British government aid programmes with a view to influencing overseas leaders of the future, some way of reconciling the two distinct aspirations should be sought if UK universities are to compete with those of the US in attracting the most able students. Some form of partnership should be developed between the British Government's funding bodies and the research-led universities which currently receive the majority of such students. Failure to do this will inevitably mean that we continue to see many of the most able students going to the American universities that are able to respond more positively and directly to individual enquirers. A single source of information about all central UK scholarships should be produced in a form which presents the international student with all the possible options and offers a simple way of applying for those which are appropriate to his or her circumstances.

It is also the case that whereas many international students are funded by the universities themselves through industrial research contracts, this information is rarely used in the promotional context. Such funding is by its nature transient, as it derives from individual contracts, although for many universities the total amount may be both relatively large and relatively constant. It would undoubtedly be advantageous to

develop a system within any university whereby such funding could be aggregated and used for promotional purposes alongside other scholarship provision.

Collaborative programmes

In the past few years many overseas sponsors have come to demand that research students, particularly those studying for a PhD degree, should do so on a 'split-degree' basis, with the student spending perhaps a total of one year in the UK and the other two years in a university in his or her country, and the supervisor visiting the overseas university on a regular basis. The reasons are twofold: on the one hand the sponsor sees a saving in the total cost, particularly of foreign currency; on the other, the overseas university benefits both from not losing the student for three years and from having the visiting supervisor as a consultant for research.

The advent of electronic mail, videoconferencing and the like has undoubtedly made it much easier to develop such arrangements and there are many disciplines where such research training is feasible. Indeed, there are instances where such collaborative arrangements are eminently desirable - for example where fieldwork in the overseas country is necessary - but it must be recognised that if the student does not spend a substantial time in the UK, he or she loses the benefits of working with fellow researchers and having access to libraries and other facilities. Moreover, in many areas of engineering and science it can be difficult to ensure a coherent programme of study without guaranteed access to particular equipment. It is essential that there is careful planning and a full commitment by the supervisor if such programmes are to succeed. If they do not, the damage to the university's image is considerable.

It is also by no means certain that such arrangements are at all cost-effective to the UK university (compare Section 4, above). Several universities are currently pursuing split-site schemes with great vigour, and offering substantially reduced fees, often in an attempt to establish themselves in a market where they are not known. However, unless this leads to some other benefit, it is difficult to justify this policy. Split-degree students do not make a major contribution to the UK university's ongoing research, are likely to attribute publications and research benefits to their home university rather than the British one, and if the supervision time is fully costed, the fee income rarely covers even the direct costs. Clearly if the investment leads to major research collaboration or to the recruitment of full-time postgraduate students it is eminently justified; but many of the present models are unlikely to yield such benefits and should perhaps be regarded with caution.

Publicity

The cliché that any publicity is good publicity does not apply to higher education. In certain countries, notably Malaysia and Singapore, any critical comments in the British press are reported the following day in the local press. The natural desire of universities to bring pressure on the Government to provide additional resources through domestic press articles criticising the underfunding of laboratories is interpreted overseas as being indicative of an educational system in decline. There is little that can be done about this, although the writers of the original articles should at least reflect on the possible interpretation of their righteous wrath overseas. A far greater effort should be made to lobby government at every opportunity and to convince it of the vital role of international postgraduates, both to the universities themselves and to the country's economy as a whole.

On the other hand, good publicity is also more likely to be reported overseas than it is at home. It is therefore surprising that many universities fail to capitalise on success stories. When an international student wins a prestigious prize or gains an outstanding result, local papers overseas are all too willing to publicise his or her success if they are provided with a good photograph and copy detailing both the local background of the student and details of his or her success. The British Council

invariably have good contacts with the local press and too few universities provide them with appropriate material, often because they have not anticipated the requirement and the student has returned home, making it difficult to obtain the information.

There is much to be said for universities sharing a common interest to collaborate in producing publicity material and, indeed, in taking part in joint promotional activities. For example, a brochure giving an outline of all taught masters programmes associated with, say, the oil industry, could be sent to oil companies throughout the world, which would have a far greater impact than individual university leaflets, especially if it offered a simple way to identify the most suitable training courses for their staff. This is perhaps a role for the relevant professional bodies.

The value of alumni should not be overlooked. Many senior positions in other countries both in politics, academe, business and industry are held by those who have studied in the UK. They can have a significant influence both in encouraging younger staff to look to the UK for their postgraduate training and also in providing invaluable contacts for British export initiatives. Every effort should be made by universities to maintain their international alumni databases and to encourage senior alumni to revisit their old university when they are in the UK.

Work opportunities

One of the most widely encountered criticisms from potential students of UK postgraduate education is that there are few opportunities for them to obtain paid work during or after the course. (Sponsors on the other hand may see the fact that students are unable to remain in Britain on completion of their study as a positive advantage.) The US, in particular, allows students to spread a masters course over an extended period and provides ample opportunities for reasonably funded part-time employment to finance their study. It is also relatively easy in the US, and to some extent in Australia, for a good MSc or PhD graduate to obtain employment on completion of the course. This is undoubtedly one of the great attractions of these countries, and it appears unlikely that UK regulations will change in this regard; but steps should be taken to provide a framework for students to have access to some work opportunities, perhaps on campus. The only positive response to such criticism is to point out that the shorter duration of the UK courses allows the graduate to begin earning at an earlier date and that the truly international recognition of UK degrees means that his or her qualification opens up the opportunity to work in very many countries of the world.

Opportunities for students to obtain teaching assistantships or research assistantships should be stressed where these are available, although it should be ensured that these are genuinely being offered to international students.

One of the more innovative projects of the past few years was the Professional Involvement Project (PIP), funded jointly by the Department for Trade and Industry and British Council. This programme gave international students the opportunity to work in an appropriate UK company for perhaps six months during, or on completion of their studies. The companies and students each expressed their requirements and these were then matched. The advantage for the student was the paid work experience. For the company, the student provided a direct link to the country on his or her return home, which could be invaluable in developing export opportunities. PIP has proved its value in several instances but unfortunately the DTI has withdrawn its support and chosen to fund a new scheme, BOND (see Appendix 2b), which is not intended for international students. As a result universities have lost a valuable marketing edge, British companies have lost the opportunity to develop links with outstanding graduates and the international students have lost the opportunity to see the best of British industry. It is to be hoped that the reintroduction of the PIP scheme, which cost very little, will be considered by a government committed to attracting international students.

Conclusion

Britain still retains a reputation for high-quality postgraduate education and there is a demand for places in its universities from students throughout the world. Although this demand will continue, it is likely that the numbers willing and able to pay that experience will diminish in the coming years.

Many countries which were the traditional markets for students now have established universities, and also many universities have graduate schools, offering their graduates an alternative to studying overseas. Although these are still in their infancy their impact will steadily grow.

If UK universities are to sustain their reputation, they succeed in attracting the most able international research students. To achieve this they will have to decide how to compete in the market, and fundamental to this is the question of how. Academically outstanding students will certainly be offered funded research training by universities in many countries. To compete for these students it will become necessary to charge no tuition fees for PhD research and in many cases to provide funding for maintenance. It seems unlikely that there will be sufficient increase in scholarship provision by either government or industry. Those universities which wish to attract students will thus have to find resources for research or teaching assistantships. Particularly in science and engineering, it can be argued that the work done by the research student may be essential to the success of the entire research project and, as such, the student should be fully funded; but this would require a significant change of attitude in most universities as to the real cost and value of postgraduate education.

Nevertheless, those universities which do provide funding and so to attract the most able students from other countries will not simply maintain their image but by so doing they will also attract other international students who are able to secure other forms of funding for postgraduate study.

6. INSTITUTIONAL POSITIONING FOLLOWING THE HARRIS AND DEARING REPORTS

J Drummond Bone

The following section provides an overview from the institutional perspective of developments in the postgraduate education market, and possible responses to these developments in the context of the Harris Report (HEFCE/CVCP/SCOP, 1995) and the Dearing Inquiry (National Committee of Inquiry into Higher Education, 1997). The four most significant factors are felt to be the growth of the mid-career post-graduate taught (PGT) market, the continuing concentration of research funding, the international requirement for balanced and free trade in education as in other goods and services, and the current confusing nature of the services offered.

The UK context

The Harris Report predicts an increased demand for postgraduate places, to come mainly from those in mid-career. Dearing and notably Garrick posit a continuity of credit arrangements from Advanced School to Doctoral Level. Both analyses are to some extent driven by an understanding of what is in the national economic interest and suggest that institutions should be considering postgraduate expansion. This comes on top of Harris's estimate that postgraduate numbers increased from 13 *per cent* of the university student population in 1979 to 21 *per cent* in 1994/95. Harris recommends that Postgraduate Research (PGR) funding be targeted more closely than heretofore (to departments achieving a score of 3 or above in the RAE), which will lead to a greater concentration of postgraduate students in fewer institutions unless new market initiatives redress the balance¹. These initiatives are liable to come from mid-career post-graduate work, which is likely to be PGT in nature, and from 'conversion' PGT courses, either immediately after an undergraduate degree or as a later part of career development. Such courses are likely to be modular in nature, and to provide a new market for departments not currently active in POR work.

Moreover, initiatives as a whole may well concentrate either on the PGR market or the PGT market, rather than on both. For those institutions with a strong research record, PGR provides labour for research projects, is a factor in the RAE rating, and is also a significant multiplier in Quality-related Research (QR) funding (see CVCP/HEFCE/SCOP 1995: 103-104) at least in the 'core' years two and three of study². Those same institutions might well see PGT as a distraction from research activity, and in the sciences certainly, the market price is seen as at best marginal in terms of cost recovery (particularly where 'extra' tuition may be required, as in the case of non-anglophone students). On the other hand, institutions prepared to be flexible in the provision of modular PGT courses tailored to particular market demands, where costs can be spread over relatively large numbers of students in a spectrum of courses taught by a specialised staff core, are likely to find expanding markets not only overseas, but also in commerce and industry within the UK.

The segregation of the expansion of the two kinds of postgraduate students into different institutions would have a complicating effect on the recruitment of PGT students as a route to PGR. In a number of science disciplines even the full-cost overseas fee plus the QR funding multiplier is not felt to make the PGR student financially worthwhile, were it not for their involvement in research work. In these circumstances the PGT student is unlikely to be sought even where later conversion to PGR might be thought desirable. There can be difficulties over the ownership of intellectual property between a student and an institution, and the increasing use of PGR students in contract research makes the question of ownership of intellectual property a seriously fraught issue. Student sponsors and the sponsors of research programmes may find themselves with directly conflicting interests. Even where this is not the case, students may understandably feel that they have a right to the exploitation of at least a substantial part of their work in order to launch their own

career. In considering the allocation of recruited students to research teams, these are issues which need to be considered at the outset of a student's programme, and they should be part of any recruitment policy.

Arguably the segregation of postgraduate students will lead to a transfer market among institutions in which high quality PGT graduates are the targets. The alternative model of a modular *PGR* doctoral structure (loosely thought of as the American model) with early exit points either tailored to the needs of the student or to provide an escape route, does not fit the UK financial system easily for the reasons mentioned above; namely, the concentration of the QR funding in years two and three and the need to have teachers available who are not being 'distracted' from research (in financial terms, it is not of much concern to the institution whether this research is RAE or commerce driven). Intensive teaching at the front end of the PhD may, in short, deflect effort on the part of both student and staff away from favoured research projects.

Though there is considerable logic in envisaging a seamless progression for students from PGT to PGR, in terms of both the needs of the mid-career student and the flexibility needed to cope with the input of different academic levels and different cultural backgrounds, it is perhaps doubtful if individual institutions within the UK will move in this direction. The current system in many institutions in the USA with a high percentage of 'T' in doctoral level programmes is in this regard clearly advantageous. The British equivalent is the MRes, in which a year is prefixed to the doctoral programme, or those science and engineering programmes where a fast-track masters degree is available as a lengthened undergraduate degree, which can lead directly on to a doctoral programme. The MRes certainly provides flexibility, and the opportunity for a certain amount of useful screening of potential students, en route to a research degree, but it also adds to the fee burden, particularly for over-seas students, who might otherwise be obvious beneficiaries. It is not often suitable for the mid-career student, either. The MMath and MEng degrees and their variants cater to a high-flying cohort, and the integration of the 'transitional' phase from undergraduate to postgraduate work into the undergraduate degree is the very opposite of modular flexibility, since one is looking at a 4 (or in Scotland 5) year package in advance of 'real' postgraduate work.

If PGT and PGR do grow apart, there would be considerable advantage to institutions who set up articulation agreements with partners so that a properly harmonised and seamless service could be given among the group. This is analogous to Dearing's recommendations that schools and Colleges of Further Education should establish well-founded articulation agreements with Higher Education Institutions (HEIs). HEIs might well find it advantageous to concentrate either on PGT or PGR (and this 'concentration will almost certainly vary across an institution's menu of disciplines), but also to 'partner' its activities with a same-region 'mirror' institution.

The international context

Whatever their slant on postgraduate work, all institutions will have to come to terms with the increasing internationalisation of the postgraduate market as part of the liberalisation of world trade. The World Trade Organisation (WTO) has made it clear that beyond recognition of professional accreditation (in which the EU is already concerned and GATS 2000, the General Agreement on Trades and Services will be) education in general will be a free trade issue. Two international concerns coincide at this point; financial concern for a broad balance of trade between economic regions (EU, NAFTA, ASEAN, MERCOSUR) and the political (though also financial) concern for free access to markets. This coincidence requires mutual recognition of educational qualifications across international boundaries, and a broad educational balance of trade. The UK currently enjoys both a significant trade surplus in education, and arguably a protected trade position. Economic, together with political, considerations make it hard to see the former continuing even in the medium term in some areas (South East Asia in particular) while the maturing of the educational

systems in developing countries makes it unlikely that the 'protection' afforded by the validation, franchising, and control of international professional accreditation by the 'West' can be maintained, and certainly not in the face of pressures from the WTO. Moreover, more and more non-anglophone countries are teaching in English, which challenges a crucial market advantage for the UK.

The consequences of the above are similar to the situation described within the UK. The alert institution will seek long-term partnerships with overseas partners which are mutually advantageous, and which recognise that access to sophisticated doctoral level education is not 'controlled' by the home UK institution. These arrangements may well involve packages which go beyond postgraduate recruitment and exchange and which balance PGR student flow to the UK with co-operation on research projects driven by the overseas institution, or network the participating institutions' links with industry to provide an expanded base for student placements/internship, or develop future research contracts (developments very much in the spirit of Dearing and of Section 3 above). The internationalisation of standards (as proposed by the Global Alliance for Transnational Education [GATE] or the very large group of research universities meeting in Hong Kong in April 1999, to give but two examples), while likely to broadly favour the UK's competitive edge through our experience of assessment of teaching quality, should not be confused with 'ownership' of these standards by the developed countries. To do so would be to ignore a fundamental market reality, and the WTO might well not allow the benefactors the luxury of indulging this assumption for much longer.

Quality issues

The satisfaction of stakeholders (sponsors, students and employers) is closely related to an accurate perception of the service being offered. Clarity in the promotion of the type and level of postgraduate service being offered is at the moment seriously lacking. This often leads to concerns over 'standards' which are not really concerns over standards at all, rather over the nature of the service. The Harris Report insists on a clear typology of postgraduate qualifications, and the development of such a typology by the unified Quality Assurance Agency for Higher Education (QAA) requires the full support of institutions.

The November 1998 Consultation Paper from the QAA lays out three possible models for postgraduate typology. It also lays out recommendations for the maximum 'undergraduate' content (25%) acceptable in work leading to postgraduate qualifications, and crucially distinguishes 'conversion' masters from what it perceives as 'true' masters course (4.4.XVII). It is therefore essentially output rather than process based in its view of 'conversions', while being process rather than output based in its strictures on undergraduate 'level' work contained within postgraduate degree programmes (which seems to contradict at least one of its stated fundamental principles as stated in 4.2. V:ii). It also distinguishes an enabling training qualification (say the MRes) from a 'true' masters level qualification, though typological models differ in the way this distinction is treated. However, the attempt to provide both coherence and transparency is in itself the inevitable next stage in the process begun by Harris. Regardless of 'level' there is a major concern over the confusion of conversion-masters with value-added-masters and the level of c~ the 'R' component in mixed-mode degrees. The question of 'absolute' or 'gold' standards is a distraction from the relatively mechanical task outlined by Harris which could only benefit both the students in UK postgraduate education and the marketing of that education. The assumption made by many institutions, that the aims and levels of their postgraduate degrees are either transparent or globally known, would be ridiculous were it not so widespread. The newer the market, the more crucial it is to ensure transparency in the selling of the service. This is as true for the complex mid-career market as envisaged in both the Dearing and Harris reports as it is for overseas markets. It should also be noted that the difficulty of establishing a nationally agreed nomenclature should not be allowed to delay the implementation of a national

typology. Any expansion of postgraduate education should be predicated on a nationally agreed typology, as brokered by the QAA.

Conclusion

Though institutions (or sections of larger institutions) may probably focus on specific kinds of postgraduate provision, they should co-operate where possible with partners to provide flexible provision from modular taught course to research thesis at doctoral level. Institutions should seek overseas partners to provide the same kind of flexible service internationally, and should be mindful of the added value of arrangements which package student recruitment with faculty exchange, research co-operation, industrial networking and the like as seen in the Universitas 21 group, for example. Finally, the national typology for postgraduate education, brokered and subsequently monitored by the QAA, will form an essential element in provision of the requisite transparency of institutions' offerings in postgraduate education.

¹ RAE ratings are on a 7 point scale, (1, 2, 3b, 3a, 4, 5, 5*) with 5* the highest, requiring international excellence in the majority of sub-areas of the subject (Unit of Assessment), with 3b requiring a majority of sub-areas to attain standards of national excellence.

² QR funding is distributed to institutions on the basis of quality (according to the RAE rating) and volume of research, whereby each research active member staff is weighted as 1.0 ~ each PGR student is weighted as 0.15. The PGR student multiples are calculated as 1.75 in the second and third years of PhD study only (*pro rata* for part-timers, ie 0.875 in years 3 to 6).

7. EMERGENT TRENDS AND RECOMMENDATIONS

Nicholas Watts

From the above, the key trends affecting UK provision for international graduate students may be identified as

- the changing nature of the research training environment
- competition, especially from international and domestic (ie Third World) providers
- the growth in mixed-mode provision .
- the changes associated with developments in communications and information technology and the 'virtual university'
- the internationalisation of standards, credit transfer and the 'portfolio postgraduate'
- the need for reciprocity, ie for more British students to study abroad

Further to these, we may wish to consider the implications of the UK's new approach to foreign and development policy: the 'virtuous university'. All these trends have implications for the universities as providers, for the students, and for supplier governments.

The research training environment

As more research 'springs free' from the university, students' research training is increasingly delivered from a triangle of research, training, and practice, involving multiple stakeholders in the context of regional or international consortia. This implies both opportunities and constraints for international students. The opportunities are in the form of exposure to flexible arrangements for training which may be better able to respond to the student's needs by drawing on the expertise and resources of a wider range of institutions, and in the exposure of the student to 'cutting edge' processes of research. Possible constraints for students arise from the demands on them in terms of language ability and on possible discontinuity in support, for example when research centres with fixed-term funding close, and key researchers move on. The latter problem could be addressed by the development of integrated consortia in which responsibilities for students are shared between institutions.

Competition

International agencies, notably the Commonwealth of Learning, based in Vancouver, are developing distance learning postgraduate taught programmes in such popular fields as business administration and public administration. These offer striking savings in costs compared with moving students from their home environments. A distance-learning MBA under this programme can cost as little as US\$ 600 per student. The attractiveness of consequent savings raises the question of what the aims of international students are. Distance provision does not offer the social and professional support such as international contacts for future career development to be gained in a UK graduate school.

National governments in a number of countries are also striving to offer domestic provision, sometimes, as in the case of India, with a view to establishing regional centres of provision. Similarly, the establishment of a 'common educational space' in the Commonwealth of Independent States (CIS), with compatible educational standards and mutual recognition of degrees, may enhance the mobility of graduate students within the CIS (notwithstanding the current absence of several former CIS states from the agreement). Both these developments -in inter- national and domestic provision -could mean a reduction in student mobility to the UK, or they could mean a shift of UK- based training to the more advanced level of research degrees, where the local infrastructure may not be adequate to support such training in developing countries.

The UK's traditional competitors for international students, namely the US, Canada and Australia, will also be changing their approach. The Australians especially are shifting towards a policy of sending more Australian students to Asian countries, as well as maintaining a strong corporate marketing effort. Canada, while offering clear benefits to students in terms of low fees, lacks the national capacity to promote graduate education in a unified way (education is organised on a provincial level) and individual institutions lack a financial incentive to recruit international students as long as there is a large untapped domestic market for postgraduate education. The result is that elite institutions in Canada will have an advantage in recruiting the cream of postgraduate students but the overall size of the intake may not change much. There is no sign presently of a major shift in US recruitment policy.

There is also the prospect of new competition from the EU, in the form of English language-based taught courses at masters level. These have been promoted in the context of the Tempus Phare programme, and the Dutch and German governments have now moved towards recognising the masters degree, and promoting its provision. The British advantage of offering completion of the masters in one year, and the PhD in three or four, is therefore under threat, especially as continental European universities usually charge no fees, or substantially lower fees than the UK. Competition within the UK may also change shape. Regional consortia such as RESIN (Higher Education Support for Industry in the North), with graduate training in engineering: validated by all five partner universities, still compete fiercely on an individual, institutional basis for international students. However, given the impetus, following Dearing, for the establishment of consortia of multiple stakeholders, and the QAA's support for enhanced self-regulation of higher education institutions, such consortia may be able to present a 'one-stop shop' for international students who, with the prospect of flexible provision to suit their needs, and the persuasive resource of a portable studentship, would probably find such an opportunity attractive.

Growth in mixed mode provision

Recognition by supplier governments of the costs of sending students to the UK for three years has promoted a trend to mixed mode provision, with students spending about one third of their time in the UK; one example is the partnership between the University of Newcastle and the Institute of Technology, Surabaya, Indonesia. This has the advantage of saving money: compare the cost of a student visit to the UK, or a supervisor visit to the student at around £1000 to £1200, even for countries as distant as Brazil or India, with the cost of spending a year in Britain. Other advantages include producing research output of direct relevance to the supplier country, minimising social disruption for the student (who could even continue in employment if adequate arrangements were made for supervision in the workplace), and substantially increasing the likelihood that the graduate will remain in the country after completion, so that the investment in training will benefit the national economy. The limited number of such arrangements so far established may grow substantially if relevant funders (such as the Association of Commonwealth Universities) decide to maximise the numbers of beneficiaries of their grants by promoting such mixed-mode provision, and providing UK HEIs' analysis of the real costs of making mixed-mode provision does not hinder its expansion (see Section 4 above).

The 'virtual university' and the new technologies for teaching and learning

Mixed-mode provision and the growing numbers of part-time PhD students based overseas rely on the use of the new communications and information technologies to maintain links both with the host institution in the UK and between study groups of students. As yet, anecdotal evidence suggests that some arrangements are working well, particularly those that ensure verification of the quality and quantity of supervision. This, however, implies both a change in the nature of the supervisor-student relationship in the event of any dispute, and may require a service level agreement to which both parties agree.

The introduction of videoconferencing facilities in addition to email could support a globalisation of admissions systems currently under review by the Universities and Colleges Admissions Service (UCAS), whereby UCAS would help third countries develop their own admissions systems, and institutions could interview students via videoconferencing facilities.

The internationalisation of standards, credit transfer and the 'portfolio postgraduate'

Different national governments in Europe are contributing to "the promotion of international credit transfer and the 'portfolio' postgraduate". The German education ministry, in particular, has been campaigning to promote the international equivalence of standards for graduate educational provision and qualifications. Given the substantially longer study times at both undergraduate and postgraduate level in Germany, and the associated extra costs to the public purse, it is of obvious interest to government to ascertain whether extra time implies better quality, and, if so, how to get this recognised internationally. If not, the pressure to reduce the overall study time becomes irresistible, as the 1997 Higher Education Reform Act in Germany indicates (Otte, 1998). The Commonwealth of Learning is promoting a scheme to validate individual modules of graduate education provision. Initially this will apply to distance-learning modules, but it will not be restricted to these, and the developing scheme will give an incentive for any institution to seek international accreditation of its specialist, high-quality modules as part of an international market of modular graduate training.

Such pressures to achieve international equivalence of standards for either the individual module, or the degree as a whole, will require some form of institutionalisation in an international agency to assure quality. The British experience in devising acceptable, explicit quality audit and assessment arrangements which apply uniformly across the whole HE system should contribute to the remit and organisation of such an agency.

Reciprocity and the need to persuade more British students to study abroad

Graduate debt resulting from the new funding regime in the UK, coupled with the pressure to complete PhDs within four years, combine to present an already reluctant student population with a persuasive rationale for not venturing abroad in pursuit of knowledge. The relatively intense period of study at undergraduate level is also cited as an explanation for students' lack of 'zest' for study abroad after graduating. Yet there are countervailing pressures. Employers, especially in the tourist industry and in multinational corporations, value overseas experience and foreign language skills. The governments of supplier countries, especially in South-East Asia, are becoming ever more reluctant to endure the imbalance in resource flows in graduate training; and more British students going abroad as part of their graduate training would help to redress this imbalance. Australia is already promoting such studies in Asia, in order for Australia to integrate into the region, and may gain substantial goodwill as a result. A national initiative to promote British students' outward mobility may, in the long term, serve to protect the sector's interests and keep a free market in student mobility open as supplier governments increase their demands for increased reciprocity. Such an initiative should prove compatible with the new style of British self-presentation abroad, and could also enhance students' employability in industry, commerce and HE.

The UK's new approach to foreign and development policy and the 'virtuous university'

In the context of an explicit commitment by the British Government to an ethically conceived foreign policy, and a development aid policy targeted at the elimination of poverty through sustainable development, it may be that institutions need to pay more attention to what courses they are providing, for whom, and to review the economic

gains from international students in terms of the ultimate benefits to the population of the students' country of origin. If such considerations were built into the selection process for the Overseas Research Students Awards Scheme (ORSAS) and the Association of Commonwealth Universities' (ACU) scholarship schemes, for example, this might shift the pattern of awards and spread them more equally across the full range of HEIs. The 'virtues' of a university might also be expected to include the requirements of ethical practice and the upholding of academic freedoms, as well as implementation of international statements of principle on the role of higher education as brokered by the United Nations Educational, Scientific and Cultural Organisation (UNESCO 1998), for example.

The impact of trends on the international student

If growth in provision by UK HEIs for international postgraduates is to continue, the balance will necessarily shift to mixed mode and home based provision. This shift will place stringent demands on the supervisor-student relationship. Overseas based graduate students also require continuing local support from an institution or, preferably, a recognised local advisor. This again will require the providing institution, or individuals within it, to be familiar not only with the subject matter, but also with local academics. The development of any supervisor-student bond needs to be supplemented with a relationship of trust between the UK supervisor and the local advisor.

Such a trend towards overseas based study also raises the issue of the relative importance to students and supplier country alike of the substantive content of their training, and the social component. The latter not only includes the student's absorbing elements of British culture, with the prospective benefit for the UK national interest that the UK might be held in favourable regard by graduate students on their return home; it also covers the issue of the student's socialisation into the discipline, by attending conferences, co-authoring papers with the supervisor, and becoming part of an international group of students brought together in one place for a limited period, but establishing enduring collegial relationships. Alumni of leading international business schools frequently cite the contacts made during their training as one of the key benefits. How does this work in an email workgroup? What are the 'risks' to the student, and UK plc, of students taking a purely instrumental approach to their graduate education? Forestalling those risks might suggest a model of distance learning supplemented by intensive group meetings, or conferences, at intervals throughout the course.

Students will also need access to adequate levels of equipment and technical infrastructure if they are to study at home. These will be easier to provide in the humanities and social sciences, than in the natural sciences and engineering, except where the regional-consortium model can be extended to include collaboration with HEIs and businesses in the student's country of origin.

Recommendations

In developing a strategy to support and enhance the role of; international postgraduate education in both the academic life and economy of individual institutions and in the political economy of the UK, HEIs need to address the following:

I. improving the institutional and the national data on international postgraduate students through

- motivation surveys
- satisfaction surveys
- destination surveys

- information on content and quality of competing offers (eg English language Masters offered in continental Europe)
- surveys identifying the size and composition of the whole international postgraduate community in the UK

2. inter-institutional co-operation through

- collaborative marketing (regional consortia, subject-based groupings)
- including international postgraduate students in international inter-institutional research networks (ie links with over- seas institutions need a focus in research collaboration)

3. improved student provision through

- supervisor sensitisation to international postgraduate needs
- centralised support services
- service level agreement/ ombudsman
- institutional recognition of international postgraduate needs (eg titles such as 'Fellow', accommodation, preparation for return home)

4. rigorous analysis of costs and benefits

- to the institution (eg split degrees, specialisation in PGT or PaR)
- of EU international postgraduate students compared with other international postgraduate students
- in 'goodwill' to the nation (cf Greenaway)
- of the infra structural role (in international research net- works)

5. funding through

- studentship provision (at institutional level)
- tying British Government sponsored studentships to institutions for marketing purposes
- enhanced work opportunities (including permits) for international postgraduate students

6. harmonisation and transparency of standards and levels, and sector-wide adoption of the typology currently under development by QAA

7. how to secure Government support for

- easing access for international postgraduates to the UK (especially visa requirements)
- provision of employment opportunities during and after the period of study
- reintroduction of the Professional Involvement Project.

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Professor Michael Gibbons has been an advisor and consultant to various science and technology boards including Special Advisor to the House of Commons Science and Technology Committee since 1993; Consultant to the Organisation for Economic Co-operation and Development (OECD) since 1979 member of the Economic and Social Research Council (ESRC) since 1977 and of their Research Priorities Board, which he currently chairs, since 1994.

He was Dean of the Graduate School and Director of the Science Policy Research Unit (SPRU) at the University of Sussex, 1992-96, and has been chair of various organisations, including founding director of Policy Research in Engineering, Science and Technology (PREST) 1979-92. He has been a visiting professor at University of California, Berkeley (1992), Ecole National des Ponts et Chaussees, Paris (1990) and Universite de Montreal (1977-81). Professor Gibbons was appointed Secretary General, Association of Commonwealth Universities in June 1996.

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Following his first degree in PPE at Oxford, Antony Gribbon followed a career in the Foreign and Commonwealth Office, and since then mainly in international educational publishing and marketing. He has been Director of the International Office at the University of Warwick since 1989 and has built up Warwick's international marketing team from 7 to over 20 people as international income has grown.

Dr Nicholas Watts

Dr Nicholas Watts read German and Psychology at Keele, Russian (PGDip) and Environmental Psychology (MSc) at Surrey, and Political Science (DPhil) at the Free University Berlin. He has taught at Bristol Polytechnic, University of California, Davis and the Free University of Berlin; was a Senior Research Fellow at the Science Centre Berlin (WZB), then director of research at the Anglo-German Foundation for the Study of Industrial Society. He has been a visiting fellow at the Max Planck Institute for Education and Human Development, Berlin, the universities of Strathclyde, Warwick, Lancaster and University College London, and is presently Principal Lecturer in the School of Social Sciences at the University of North London. Dr Watts is a member of the Executive Committee of the UK Council for Graduate Education.

APPENDIX 1: Staffing and activities in four national education offices in Taiwan

	USA	Japan	Australia	UK
Reference library & full counselling service	Yes	Yes	Yes	Yes
Major education exhibition	No Some private parties run occasional small scale exhibitions	No	Yes 2 per annum involving about 60 institutions	Yes 1 per annum involving over 120 institutions
In-house presentations by visiting academics	No	No	Yes About 10 per year	Yes Over 35 per year
Annual Chinese language educational guide	No	No	Yes One volume sent free to all Taiwan Institutions	Yes Three volumes sent free to all Taiwan Institutions.
Regular Chinese language education specific magazine	No	No	Yes Quarterly sent to all Taiwan Institutions	Yes Monthly sent to all Taiwan Institutions
Staffing details	13 Only 5 full-time 12/13 Chinese All studied in USA	3 2/3 Chinese Non-Japanese have not studied in Japan	7 All Chinese 4 have studied in Australia	12 6 British, 6 Chinese Chinese Counsellors hold UK Masters. British Counsellors hold degrees in Chinese.

Source: The ATEC (Ang10-Taiwan Education Centre) Handbook 1995-96 Edition, Taipei: ATEC, p.52.

Note: At the time of writing, the number of staff in the UK (now British Council) Education Office in Taiwan has risen to 25.

APPENDIX 2A: A NEW MODE OF KNOWLEDGE PRODUCTION

Michael Gibbons

We can distinguish between two modes of research, the traditional, discipline-based apprenticeship model, here called Mode 1, and an emerging, problem-based and team-oriented style, here called Mode 2. Key differences between them lie in the processes used to identify research problems, to accredit suitable candidates to work on these problems, in the organisation of research, and the style of its dissemination. In Mode 1, scientists working within a single discipline determine the research problem. Accreditation is via apprenticeship to a senior researcher. The long process of selection of suitable researchers culminates in recognition through peer review of the individual's capacity for setting their own research agenda. This discipline-based structure carries with it a well-articulated and rigorous quality control system. As professors and research directors seek suitable recruits, whether in the domestic or inter-national arena, this disciplinary structure makes the search process relatively self-contained, predictable and dependable. With the caveat that there remain issues of international harmonisation of quality controls and standards, evidence of prospective research students' possession of the required skills can be demonstrated in undergraduate performance.

In Mode 2, research is seen as a more interactive and collaborative activity in which researchers work in trans-disciplinary teams on complex problems which are deformed in relation to the needs of the economy and society. This implies changes in the philosophy and practice of identifying and training postgraduate students. Rather than being mere members of localised teams built around a particular supervisor, international postgraduates now need to be recognised as important links in international problem-solving networks. Many of the next generation of postgraduate students will learn the techniques of their trade in essentially transient groups, in changing problem contexts. They will be less likely to work in academic institutions, as collaborations between universities, commercial firms, voluntary organisations, other groupings which hitherto have not been participants in research, become more common. Universities that wish to remain in the front line of research will need to maintain their linkages with these problem-solving networks, and to understand fully the rules that are now guiding scientific research and the role of postgraduate training within it.

In Mode 2, a broader set of criteria is brought to bear on problem definition and the conduct of research. First, knowledge is produced in the context of application, under the imperative that it be useful to stakeholders in industry, government, or society more widely. Knowledge thus produced is subject to continuous negotiation, to ensure that stakeholder interests are accommodated.

Second, the consensus on appropriate cognitive and social practice that guides enquiry (eg epistemology, ethics and appropriate research skills) is predicated on application and evolves with it. This requires the integration of different skills in a framework of action, and the solution. will normally transcend the contribution Individual disciplines. It will be trans-disciplinary.

Trans-disciplinarity entails an evolving framework to guide problem-solving efforts which is not reducible to component disciplines. Its contribution to knowledge will comprise both empirical and theoretical components which are not necessarily disciplinary knowledge. Dissemination of results occurs through communication between participants in the research team as : they participate, and subsequently as they move on to new problem contexts, rather than in the traditional mode of reporting results at conferences and in journals. And trans-disciplinary knowledge tends to be held in relatively stable communication networks, or epistemic communities.

Mode 2 is further characterised by the heterogeneity of skills and experience brought to research, and by its organisational diversity. The number of sites where knowledge may be produced is increasing, as is the rate and variety of interaction between those sites through networks of communication, whether electronic, organisational, social, or informal. At these sites, fields and areas of study are differentiated into ever sharper and finer specialities, with new sub-fields recombining to form the bases for new forms of useful knowledge. In Mode 2, flexibility and response time are the crucial factors, and new types of organisation have emerged which reflect the changing and transitory nature of the research problems addressed. Research teams are temporary, and the experience gained takes the form of transferable competencies which can be redeployed in new teams around new problems; and as Mode 2 knowledge is created in a variety of organisations and institutions, its patterns of funding exhibit similar diversity.

Research in Mode 2 is required to be socially accountable and reflexive, as public concern with the impact of science on society and the environment has grown. It is also required to define problems from the point of view of all stakeholders. Thus, teams will draw on the natural and social sciences, as well as the humanities and relevant professions, in order to ensure the relevance, ethical accountability and workability of solutions.

Quality control in Mode 2 introduces additional criteria of competitiveness in the market, cost effectiveness, and social acceptability, reflecting a broadening of the review system to include a range of stakeholders beyond disciplinary specialists. This implies an emphasis on issues of research process and outcome, as much as substantive contribution to a discipline.

(For further elaboration, see Gibbons, M. et al., 1995)

APPENDIX 2B: SELECTED POSTGRADUATE TRAINING SCHEMES BASED ON PARTNERSHIPS

CASE Studies – Cooperative Awards in Science and Engineering

Collaborative PhD studentships in partnership with industry. For example, the Biotechnology and Biological Sciences Research Council (BBSRC) 1999/2000 allocation is for 239 Quota studentships and 107 CASE studentships. The Economic and Social Research Council (ESRC) has also been offering CASE studentships since 1994.

Industrial CASE studentships

A three-year BBSRC studentship allocated to industrial companies in the first instance, with the companies defining the research topic and taking the initiative in establishing a link with an eligible host institution. In 1998-99, 28 awards were made.

Integrated Graduate Development Scheme

Masters level training for science, engineering and technology graduates in the early stages of their careers in industry, with each course run in collaboration with groups of sponsoring companies from the same industrial sector, supported by BBSRC.

LINK Programme UK 4

Government's principal mechanism for promoting partnership in research between industry and the research base.

<http://www.dti.gov.uk/ostllink>

LINK (EFH) Programme: The Link Programme in Eating, Food and Health

Jointly sponsored by ESRC, BBSRC, MAFF and the Department of Health, to support multidisciplinary projects and meet one of the infrastructural priorities of the Foresight Panel on Food and Drink that there should be greater 'collaborative planning and management of research on food science and technology and more interdisciplinary research eg on diet and health.'

<http://www.esrc.ac.uk/prog/linkefh.htm>

PIP - Professional Involvement Project

Jointly funded by the Department for Trade and Industry and British Council, this programme gave international students the opportunity to work in an appropriate UK company for up to six months during or immediately after their studies. The programme ran from the late 1980s, and was superseded by the British Overseas Industrial Placement (BOND) Scheme in April 1998. The BOND Scheme, by contrast, recruits more senior professionals directly from twelve emerging export markets, to gain experience of working in UK companies for a period of up to twelve months.

PTPs - Postgraduate Training Partnerships

Jointly supported by DTI and EPSRC, PTPs involve eight selected Research and Technology Organisations (RTOs), each in partnership with a university, with annual recruitment into each partnership of up to 10 postgraduate students (PTP Associates), most of whom are supported by an EPSRC Industrial CASE award and register for a PhD, undertaking industrially relevant research projects in an RTO under the joint supervision of academics and RTO staff.

<http://www.dti.gov.uk/supportlptp.htm>

TCS - Teaching Company Scheme

Managed on behalf of nine government and Research Council organisations, sponsored by the Teaching Company Directorate (TCD) (<http://www.tcd.co.uk>). Postgraduate and postdoctoral scientists (TCS Associates) work in a company on an R&D project vital to the competitive success and continued development of that company, with TCS Programmes supervised by academics and company staff.

<http://www.dti.gov.uk/support/tcs.htm>

APPENDIX 3. KEY BODIES IN INTERNATIONAL POSTGRADUATE EDUCATION¹

I. Global

International Network /or Quality Assurance Agencies (INQAAHE)

Established May 1991, 63 full members, 41 associate members. Its aim is to enable members to share information about the maintenance, evaluation and improvement of higher education, and to disseminate good practices in the field of quality assurance.

<http://www.cse.c1/inqaaeng.htm1/>

Global Alliance/or Trans-national Education (GATE)

A co-operative venture between the corporate sector (especially Jones International Ltd. and its subsidiary, Jones Education Company, which specialises in the delivery of education programmes in electronic media (<http://www.jec.edu>) and higher education. GATE focuses on trans-national education, producing (in partnership with the Centre for Quality Assurance in International Education, CQAIE) a database of national academic standards, quality assurance processes and institutional information, including details of trans-national education entities; and it is concerned with developing principles of good practice and recognition for quality international education and training. GATE offers its own certification process on the basis of a self-review report, a panel visit to the home (i.e. provider) institution, and at least one location abroad (a process which can be initiated by providers or receivers of transnational education).

<http://www.edugate.org/>

The Centre for Quality Assurance in International Education - CQAIE

Is located in the National Centre for Higher Education (Washington, DC). It deals with trade issues, higher education and the professions; globalisation of accreditation; regional and global academic and professional mobility; a Foreign Policy for US Higher Education; quality issues for credit-bearing educational programmes abroad; and international projects with non- Western European national systems of higher education.

Email: cqaie@aacro.nche.edu

The Commonwealth of Learning - COL

is based in Vancouver. COL's remit includes brokering distance courses and programmes across the Commonwealth, including masters courses in business administration, public administration and distance education.

<http://www.col.org>

The Association of Commonwealth Universities

2. Europe

CEPES-UNESCO: The European Centre for Higher Education, Bucharest

Is a "bridging" organisation between Western, Central and Eastern European countries.

CMPRT- Cooperation and Mobility in Postgraduate Research Training

An initiative founded in a Memorandum of Understanding between the research education ministers of Belgium, Denmark, France, Germany and the Netherlands in November 1992, with the objectives of achieving a more cohesive system of postgraduate research training and developing research schools or networks to

¹ The web site of a majority of these bodies are provided as an aid to readers and to indicate the source of the description.

promote co-operation and internationalisation. <http://www.dfg.de/foerderlgrako/cmppt.html>

European Technology Transfer and Training Network (T3net)

Is funded by the European Commission's Innovation Programme. It offers TCS and PTP Associates the opportunity to spend up to a year in another T3net country (Austria, Denmark, France, Germany, Ireland, Norway, Sweden) working on a technology transfer project.

The European Community Course Credit Transfer System (ECTS)

Promotes a code of good practice based on three core elements (information, mutual agreement and use of ECTS credits) and the use of three key documents (the information package, the application form/learning agreement, and the transcript of records) which serves as a tool to create transparency and facilitate international academic recognition.

<http://193.43.16.5/ortelius/eup/ects/>

NARIC- (National Academic Recognition Information Centre) organisations

European NARIC organisations offer advice on comparability of qualifications and information on education and training organisations.

<http://www.namss.org.uk/naric.htm>

Netherlands Organisation for International Co-operation in Higher Education (NUFFIC)

Founded in 1952 as an independent organisation to stimulate, support and improve international cooperation in education and the international exchange of people and ideas.

Ortelius -The Data Base on Higher Education in Europe

Aims to supply information on higher education in Europe and thus to help promote mobility through a network of national agencies.

http://193.43.16.5/ortelius/info_main.html

3. Asia and the Pacific

University Mobility in Asia and the Pacific (UMAP)

Set up in 1991 as a programme to increase mobility (staff and student exchange) in the region, initiated by the Australian Vice-Chancellors' Committee (AVCC), with the support of the Australian Government. By the end of 1998, UMAP had held six international meetings. So far, it has run trial programmes jointly co-ordinated by AVCC and Japanese Association of National Universities pending establishment of an international secretariat. UMAP has one contact person/organisation per participating country, and aims to increase bilateral and consortium co-operation, student exchanges of sufficient duration to permit language acquisition and acculturation, to encourage supportive government action, to foster institution and business enterprise relationships including international work placement as part of an accredited course, and to establish an appropriate organisational structure.

<http://www.avcc.edu.au/avcc/internat/umap97.htm>

Asia-Pacific Higher Education Network - APHEN

Set up in 1993 and backed by UNESCO, with a secretariat provided by the Australian Vice-Chancellors' Committee. This internet-based network of 12 countries is dedicated to staff and student exchanges, research discussion and establishment of 'harmonised and internationally recognised' postgraduate programmes. (Times Higher, 14' August 1998)

<http://www.mq.edu.au/Aphen>

Association of East Asian Research Universities (AEARU)

was 'Established in January 1996 ...as a forum for leading research-oriented universities in East Asia to: exchange faculty and students, develop common curricula and transferable credits, share facilities, information and materials, cooperate on research projects, sponsor workshops and international events, and conduct other mutual academic endeavours.'

<http://www.postech.ac.kr/association/aearu>

4. UK

The British Council Education Counselling Service (ECS)

UKCOSA -The Council for International Education

a national, independent charity providing information and advice for international students in the UK and for professionals who work with them.

<http://www.britcoun.org/eis/ukcosain.htm>

ORSAS- Overseas Research Students Awards Scheme

is run by CVCP and funds, for exceptional postgraduate overseas students, the difference between the home and overseas level of tuition fees. Awards do not cover maintenance expenses.

APPENDIX 4: CODES OF PRACTICE AND GUIDANCE NOTES

The British Council Education Counselling Service (1998) (December) *Code of Professional Standards and Ethics*. Manchester: ECS

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The Quality Assurance Agency for Higher Education (1998) *Code of Practice for the Assurance of Academic Quality and Standards in Higher Education: Postgraduate Research Programmes*. Gloucester: QAA

GLOSSARY

ABRC	Advisory Board for the Research Councils
ACU	Association of Commonwealth Universities
AEARU	Association of East Asian Research Universities
ASEAN	Association of South-East Asian Nations
BBSRC	Biotechnology and Biology Sciences Research Council
CASE	Cooperative Awards in Science and Engineering
CDP	Committee of Directors of Polytechnics (until 1992)
CEPES – UNESCO	The European Centre for Higher Education, Bucharest
CICHE	The Committee for International Co-operation in Higher Education
CIE	The Council for International Education (see UKCOSA)
CIS	Commonwealth of Independent States
CICHE	Committee for "International Cooperation in Higher Education
ClinPsyD	Doctor of Clinical Psychology
CMPRT	Cooperation and Mobility in Postgraduate Research Training
COL	The Commonwealth of Learning
ICQAIE	Centre for Quality Assurance in International Education
CSU	Higher Education Careers Services Unit
CVCP	Committee of Vice-Chancellors and Principals (includes former CDP)
DEng	Doctor of Engineering
DfEE	Department for Education and Employment
DTI	Department of Trade and Industry
ECS	British Council Education Counselling Service
ECTS	The European Community Course Credit Transfer Scheme
EdD	Doctor of Education
ESRC	Economic and Social Research Council
EPSRC	Engineering and Physical Sciences Research Council
EU	European Union

GATE	Global Alliance for Transnational Education
GATT	General Agreement on Tariffs and Trades
GATS	General Agreement on Trades and Services
HEFCE	Higher Education Funding Council for England
HEFCW	Higher Education Funding Council for Wales
REI	Higher Education Institution
HEQC	Higher Education Quality Council
HESA	Higher Education Statistics Agency
RESIN	Higher Education Support for Industry in the North
INQAARE	International Network for Quality Assurance Agencies
LINK	Partnership in research between industry and the research base
LINK (EFR)	The Link Programme in Eating, Food and Health
MERCOSUR	The Southern Common Market Argentina, Brazil, Paraguay, Uruguay; associates: Bolivia, Chile
MChem	(undergraduate) Master of Chemistry
MEng	(undergraduate) Master of Engineering
MRes	Master of Research
NAFTA	North American Free Trade Association
NARIC	National Academic Recognition Information Centre organisations
ORSAS	Overseas Research Students Awards Scheme
Ortelius	The Data Base on Higher Education in Europe
OST	Office of Science and Technology (UK)
PGR	Postgraduate research
PGT	Postgraduate taught
PIP	Professional Involvement Project
PTP	Postgraduate Training Partnership
QAA	The Quality Assurance Agency for Higher Education
QR	Quality-related Research
RAE	Research Assessment Exercise
SCOP	Standing Conference of Principals

SHEFC	Scottish Higher Education Funding Council
SRHE	Society for Research into Higher Education
SURPC	Scottish Universities Research Policy Consortium
T3net	European Technology Transfer and Training Network
TCS	Teaching Company Scheme
UCAS	Universities and Colleges Admissions Service
UKCGE	UK Council for Graduate Education
UKCOSA	The Council for International Education
UKHE	UK Higher Education
UMAP	University Mobility in Asia and the Pacific
Universitas 21	An international network of research universities
UNESCO	United Nations Education, Science and Cultural Organisation
WTO	World Trade Organisation

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