# Developing Disciplines, the programme and the experience

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### Disciplines

The idea of the discipline is the lifeblood of higher education. Behind the teaching and research work of universities and colleges, which form the visible face of the system, the driving energy is the belief that there are “disciplines”: bodies of knowledge, linked to ways of understanding the world, and exploring it, which have a coherence, and which must be developed and transmitted in special, and sometimes unique ways. Not only do chemists work with a different knowledge base from geographers or lawyers, they also think differently from their colleagues in other disciplines, and with a unique value system. Academic staff see themselves as contributing, through research and teaching, to the development of this body of knowledge, to its unique processes and values, and helping to transmit it to a new generation who will join them in the enterprise.

This sense of ownership of the discipline is one of the distinctive characteristics of higher education. In other areas of education and training, the core activity is transmitting what is already known, but in higher education the core is the creation of new knowledge and the induction of new practitioners into its development. It is this which links disciplines in the university to the professions. Both own, protect and develop peculiar bodies of knowledge and values, and their power has been documented for the academic disciplines by Becher (1989) and for professions notably by Schon (1990).

The continuing survival of individual disciplines shapes much of the culture of higher education. If pressed, most academics would probably claim a primary allegiance to their discipline, rather than to a particular institution. Even those who are not “active researchers” in the formal sense subscribe to the underlying ideology, which permeates all institutions and disciplines, and makes them resistant to more managerial institutional structures, and external intervention. Thus the definition and value systems of Biochemistry is owned by Biochemists in higher education, not by the educational institutions in which they happen to work, and the most powerful structures in higher education are those based around groups of people working in what they perceive to be a common field, joined by ideas and knowledge as much as by institution. Nor are these communities merely national: conferences, journals and the Internet bring together academics around the world, and the influence of key ideas, thinkers and teachers can be seen rippling outwards in teaching, in research approaches, in professional associations and societies.

However, disciplines themselves are in constant evolution. Old ones go into decline (though rarely die), while new ones spring up, driven by social or technological change, or new interactions with their neighbours. Computer science as we know it was technologically inconceivable as a discipline a generation ago, while most major pillars of the system, like English literature, have an independent life of less than a century. Cross fertilisation brings new formations, and three of the “disciplines” contributing to this volume are of this kind - economic psychology, coastal sciences, and childhood studies - brought about through interaction between traditional disciplines.

### Disciplines and a changing higher education

To continue to play its distinctive role in maintaining and developing knowledge, higher education needs the disciplinary framework. But it is increasingly in tension with other imperatives, and especially the pressure for economic relevance. The needs of a high skilled economy, driven as much by trading in knowledge and ideas as by the production of physical goods, call for more highly qualified people, and student numbers in British higher education system have expanded rapidly in response.

However, it is not clear that what is needed is more graduates of the same kind, and how far the old disciplines are appropriate to the economic needs. There are two reasons for this. Firstly, the relationship between the skills and knowledge of graduates and the employment which they enter after graduation has always been indirect. A curriculum designed, properly, to disseminate and maintain the discipline’s unique knowledge base and ways of understanding the world will never align directly with the needs of employment, even in vocational fields like Law or Town Planning, let alone ancient history or pure mathematics. Secondly, a volatile labour market makes it increasingly difficult to predict the precise skills and knowledge required for continuing employability. Many of the networks described in this book have wrestled with the difficult issues of “what employers want”, begging the question of whether they do, or can, know. One can see this at work in the case of computing, where the two largest national skills shortages in 1998 were in two programming languages which did not exist four years before, while skills shortages were also growing in languages which are technically obsolete, but still in use in many major computer systems (Clarke 1998).

These uncertainties, and the tensions between higher education as a place where, on one hand, the discipline is developed and maintained, and, on the other, a place which produces generic knowledge workers, provides the context for many of the major reports and debates about higher education in the late 1980s and 1990s. There were many such reports: some like the report of the Dearing Committee (1997) seeking to address the broad shape of HE itself, others like the Roberston report on credit systems (HEQC 1994) tackling specialist but sector wide issues; and yet others the needs of particular groups, like adult learners in HE (NIACE 1993).

### The DfEE’s intervention[[1]](#footnote-1)

In the mid 1980s the Department of Employment (now, significantly, part of the Department for Education and Employment) began to take an active interest in the relevance of higher education to the labour market, and launched the major Enterprise in Higher Education programme (EHE). This invested about £1 million in each of 56 HE institutions, for activities designed to make higher education more relevant to the world of work. The programme was unusual in that institutions were invited to propose work which they thought would be relevant to the broad agenda, and the Department did not seek to prescribe what approaches or models would be relevant or effective in a given context. As a result a very wide range of approaches emerged, some of which emphasised development within disciplinary contexts. However, the central thrust of EHE was institutional, with the aim of creating institution wide strategies for change.

Around the same time, the Department sponsored some 70 individual development projects around four themes: access: work based learning; credit, assessment and personal transferable skills; and HE/FE links. Each addressed particular system wide issues in the context of particular institutions or groups of institutions. Some supported work already in hand, as with projects on credit systems, linked to the work of the Council for National Academic Awards. Other cases explored new and emerging issues, which have subsequently become prominent across the whole system, like the role of guidance in higher education or the description of degree programmes in outcome terms,.

In retrospect, a striking feature of all this work was its focus on institutional, system wide and specialist topics, and that it addressed disciplinary issues only incidentally. This partly reflected the natural caution of a Government Department in approaching content issues in HE, where notions of academic autonomy and hostility to government intervention are at their strongest (and at this time debates about national curricula, and national qualifications systems were vigorous in schools and further education). However, it probably also reflected a failure to understand the place of the discipline to the cultures and values of HE. The significance of the omission only became clear gradually, as some institutional strategies for embedding the lessons of EHE proved less robust than had been expected.

As a result, early in the 1990s the Department considered a small scale programme specifically aimed at disciplines. In 1994 grants were made to three small projects, and bids were then invited for funding under a Discipline Networks programme, offering £15,000 for one year to national and regional groups. After the first year the initial round projects were invited to bid for a further year’s extension, and a new second round of two year projects was commissioned. In all 46 projects were funded, and in the light of evaluation a third round, rather more tightly focused, and involving National Training Organisations, was commissioned in 1998.

#### Purposes of Discipline Networks

Disciplines are very varied, in culture and history. Some have elaborate formal structures, seen most clearly in elite professions like Medicine, Law and Engineering. Here, the professional bodies have statutory responsibility for controlling aspects of their field, though not always a strong interest in teaching and learning issues. Some of these have origins which stretch back for decades or centuries. Others, especially the more academic, have less formal structures based on meetings and journals and the occasional project. In yet other fields there is no formal structure, and groups seek to support work on a purely voluntary collaborative basis, perhaps underwritten by their home institutions. In new and emerging fields work often rests with a few committed individuals, sometimes working against the grain of their individual “home” discipline.

Disciplines also differ in their involvement in the world of employment. The professional bodies often control the right to practice, and sometimes also the curriculum of the courses which lead to qualifications in HE. Some of these have elaborate schemes for supporting the continuing professional development of their members. Some, but by no means all, have an interest in the education of their recruits, and foster close working relationships between members in HE institutions and employers. In many cases, however, this relationship is more “arms length”, with a national body defining and controlling standards centrally, and less involvement at local level. On the other hand some applied disciplines like Business, exert influence in their occupational field without any formal control over qualifications, entry or right to practice. Their influence is through example, dissemination, debate and publication and through discussion around work placement and consultancy. Many of the more academic disciplines have no direct involvement with the labour market, nor to they have a clearly identifiable group of employers to talk with. Their influence over what is taught and how, rests with publications and conferences. Finally, by definition, emerging disciplines have yet to establish authority, but in some cases, like Coastal Sciences and Childhood Studies in the current volume, they come together partly because of pressures from the world of work.

The Discipline Network programme contributed to changing this picture in several ways. In some cases, like Economic Psychology or Humanities, it provided funding for the first time to bring colleagues together. In others, like Building Management, Medicine and Computer Science, it enabled existing networks to devote attention systematically for the first time to issues of teaching, learning and assessment, in fields where professional networking on other issues was already strong. Most importantly, from the perspective of the DfEE, it helped create groups concerned with teaching and learning, and with general employability issues in disciplinary and professional communities which had previously focused mainly on research or professional standards. The Town Planning chapter below notes that these were “issues many in the profession were aware of, but for which no organisation claimed responsibility”.

### What Happened

The 46 funded networks can be broadly classified in three ways: as either academic or vocational; as traditional single discipline or cross disciplinary networks; and by broad subject area. The tables below show the balance on these three dimensions.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Traditional** | **Cross Disciplinary** | **Total** |
| Academic | 20 | 4 | 24 |
| Vocational | 13 | 5 | 18 |
| Total | 33 | 9 | 42 |
|  | **Traditional** | **Cross Disciplinary** | **Total** |
| Science/Maths/ Engineering | 12 | 2 | 14 |
| Social Science | 6 | 1 | 7 |
| Arts & Humanities | 4 | 1 | 5 |
| Applied | 11 | 5 | 16 |
| Total | 33 | 9 | 42 |

Seven networks were explicitly regional, including Childhood Studies in the Anglia/North Thames Health Region, and Coastal Sciences in the North East. Four had a specific theme or focus: Law focusing on Personal Transferable Skills, Physics on group working techniques.

The Discipline Networks Prospectuses which the DfEE issued to invite bids for funding were not prescriptive about the topics to be addressed, or the approach to be pursued. Drawing on the experience of Enterprise in Higher Education, groups were invited to bid for work which they believed would support the employability agenda in their particular context. As a result, a wide range of approaches were adopted by different networks.

### Key and Personal Transferable Skills

Perhaps the strongest common theme of the networks was the place of key, and personal transferable, skills within the disciplnary context, and the like to the notion of graduateness, at that time under active study by the Higher Education Quality Council. Geography points out that the traditional notion that students develop transferable skills as a by product of their disciplinary work in HE without this ever having been explained to them, may never have been true, and is certainly no longer tenable. Surveys by several networks confirmed that students, employers and the wider public expect these things to be made explicit, and demonstrable.

Maths, MADEN, Law and Business all made the development of personal transferable skills a central focus. Maths found that current restrucutring of the curriculum was not having the desired effect of providing space for the development of such skills. MADEN identified, in consultation with relevant interests, a set of core competences in Medicine, and disseminated these through seminars and meetings. Law noted the danger that the development of personal transferable skills may come to be associated in students’ minds with those who fail to find employment in Law(the large majority), and thus with low status work and unsuccessful students. The Law network explored these issue in some detail, becoming involved in the HE Quality Council’s project work on “graduateness”, and identifying three distinct ways of approaching the issue. Business noted the danger that some applied disciplines become too instrumental in their approach to employability. Meanwhile, Economic Psychology noted that many employers are indeed more interested in the generic qualities assumed to be owned by graduates, than the specific subject of the degree, let alone its detailed content.

Meanwhile, Childhood Studies developed a generic model: a “Framework” which could be used as a basis for curriculum planning across a wide range of related disciplines which make up their field, enabling different disciplines to talk effectively together.

#### Employers

Involving employers in higher education curriculum issues has always been problematic, and is especially so for discipline based work. Where there is a close match between discipline and employment, typically in the professional or very highly skilled fields, it is possible to find individual employers who are happy to participate in discussion about specific requirements. In Building Management the professional body itself held the contract for the network, and provided central impetus for the work, while Town Planning successfully involved a number of key employers, and the Royal Town Planning Institute, in much of the activity. In this way, the results of their surveys of employers were fed rapidly back to the profession through journals and meetings of the Institute. Coastal Sciences used employers effectively in seminars to reflect on the experience of placement students in the workplace, and the kinds of issue which new graduate have to tackle there.

However, as John Bell notes, the majority of graduates in virtually all disciplines go into unrelated employment, and it is much more difficult to involve such employers. For them the benefits of participating are much less evident and direct, and the danger is of “charitable” participation, or repetition of the familiar lists of generic skills and prejudices on both sides. This is perhaps the most intractable, and arguably the most important, issue which the networks addressed, and none claim major success.

### Outcomes

The project documentation indicates that, by the end of the second round contracts the Discipline Network programme had resulted in at least the following:

|  |  |
| --- | --- |
| 80 workshops | 62 published documents |
| 40 newsletters | 30 national conferences |
| 19 electronic mailgroups | 17 surveys - employers, alumni or students |
| 10 handbooks | 12 Websites |
| 8 curriculum maps or schemes |  |

Other activities are known to have taken place. At least 50 academic journal articles were accepted for publication, on issues like teaching and learning within the discipline, on the place of key skills or assessment, and on employer and alumni views of the curriculum, although many of these were not yet in print when the projects formally finished.

The visible products of the programme are many and varied, and many are illustrated in this volume. Humanities produced a directory of members’ interests to encourage networking, and has been engaged in negotiation to create a new academic journal as a means of establishing a continuing identity. Law produced a set of illustrative materials, showing how personal transferable skills might be embedded and assessed in the Law curriculum. Town Planning is one of a number of networks which used its events as the basis for publications, either as conference proceedings or using the event to discuss and refine drafts. LISTEN focused specifically on the Continuing Professional Development of librarians, surveying graduates working in the profession, and developing a “Learning Support Tool” for them. Many networks generated resource collections or directories, and this was perhaps particularly important in emerging disciplines, as Economic Psychology (the only network which reports producing a video) points out.

Surveys played an important role in the programme. In many cases views were being sought for the first time, from employers, students or alumni or academics. In the first round both Politics and Social Anthropology conducted major survey work, establishing a picture for the first time of how teaching and learning was being done across their disciplines nationally. Employer surveys were not always as successful, in some cases adding little to the findings of many previous reviews of “what employers want”, although MathSkills reports on a survey which established for the first time a profile of how employers see the specific strengths and weaknesses of Mathematics graduates. Some especially interesting results were obtained from involving alumni. Geography identified elements over and under provided in degree programmes, and particularly the need to consciously develop transferability of skills, an issue also noted by Law. Town Planning invited alumni to events, to provide direct input about the changing experience of graduates in the workplace.

One indication of the importance of networks is the involvement of senior staff. Law comments that the number of Heads of Department attending meetings rose to 10 in the second year. The status of key figures is also reflected in the fact that two key members of the MathSkills network became Pro Vice-Chancellors during the life of the network, while Exeter University created the first UK Chair of Economic Psychology for the coordinator of that network.

#### Network Processes

At an informal level, networking is a familiar activity for academics. However, formalising it into a way of working over a period across institutional, and sometimes professional boundaries, and involving employers and others requires thought and planning. Some networks saw a “democratic” mode of operation as essential, either because of resource constraints (requiring everyone to help out) or on ideological grounds (Humanities stressed the importance that the network was a group of peers, operating voluntarily, not as part of a formal status hierarchy). However, maintaining these principles against the resource pressures on individuals and institutions proved problematic for some. MathSkills found the need, as work developed, to concentrate work with a small core of colleagues, while LISTEN decided to appoint a research assistant to help carry the burden.

The role of key individuals was clearly vital to most, if not all, networks. Town Planning commented on the importance of good personal relationships, and Geography benefited from a core group who knew each other well, and had worked together in the past, though now dispersed. Hugh Matthews notes the need to use the network and its events to identify people to ensure that the core group is regenerated.

Some networks made profitable use of research assistants: providing someone with an understanding of the discipline, who could devote undivided attention to the network. However, timing can be difficult, and Economic Psychology, which began two years’ of work in the middle of an academic year, had to use three assistants, losing time and continuity as a result. Members did not always understand the need for work to support the infrastructure and stimulate debate: as Humanities noted, much vital work is invisible to most members.

Steering, management and direction of projects has sometimes proved problematic in DfEE funded projects, and in 1997 the Department published guidance on some of the roles of project Steering Committees. Some networks created formal Steering Committees, to involve all the stakeholders, including managers, employers as well as practitioners. Law involved non-legal employers in its Steering Committee, to try to address the needs of all those law students who do not go on to practice law. Ellie Chambers notes the Committee’s role of “acting as a check on the exuberant ambitions of the core network team”.

The DfEE, conscious that the role of network coordinator can be an isolated one, and that coordinators could usefully learn from each other, set up regular meetings for them to share ideas and problems. Meetings also provided an opportunity for feedback from networks to the DfEE, and it was there that the preparation and format of the present book was discussed and agreed. Sally Fincher comments on the network of networks in her chapter, which also discusses the role of the “Metanet”, which provided a website and mailgroup to encourage inter-network networking.

#### Technology

The period for 1994 to 1998 coincided with an explosion in the use of information and communication technologies (ICTs) in British universities, and they featured in many proposals, offering powerful tools for improving communication among geographically dispersed members. Sally Fincher, who led the Computer Science Discipline network and visited and interviewed the leaders of all the first round projects, discusses some of the issues in her chapter. At the beginning, although most academics had notional access to the national JANET network, many practical problems remained, and few staff had any significant experience of using email or Websites as a tool of networking. By the end at least 19 of the networks had websites, several projects had sought to use mailgroups actively to promote dialogue between members, and probably all were using email for one to one dialogue. However, the process was not always easy, and the LISTEN network is only one of a number who found that setting up mailgroups and websites was a more time consuming exercise than anticipated.

Furthermore, the maintenance of Websites can be problematic. As Sally Fincher says, “you can write a book once, but not a Website”. Material dates, and while it is not always difficult to find an enthusiast to create a site: it may be much more difficult to find the resources to maintain it as an up to date source. This problem is compounded by the rapid development of Website technology and design, which makes constant updating of (another set of) skills important if the site is not to look antiquated and uninteresting. Nevertheless, Networks did use their sites successfully for promotion, and for the posting of documents and materials to a wide discipline community.

A similar issue arises with mailgroups, which appear a trouble free way of stimulating discussion. Some took off with enthusiasm, but others have languished, sometimes with hundreds of members, perhaps interested in what is posted, but not contributing to a debate which gradually peters out. Computer Science’s strategy of “seeding” debate with regular questions, and producing regular summaries clearly helps, but even there momentum was not always sustained. Hugh Matthews, on the other hand, is more optimistic about the moderated GeogNet group, which has been enriched by the addition of archiving and indexing. In terms of continuation of work after the end of short term funding, such groups may prove one of the more sustainable strategies for sustaining a network.

Several projects used Websites, or other approaches, to the creation of databases. These included the Psychology in the North East network, which created an online database of reviews of materials, and MADEN created a database of individual teachers’ experience. Economic Psychology assembled a physical collection of teaching materials, reading lists and information about sources of support, to assist anyone planning to develop courses or modules in an emerging discipline, whose practitioners are thinly distributed and can be very isolated. Coastal Sciences assembled a review of resources for field work in the region, encouraging sharing of ideas and access, and collaborative working.

### The future?

In 1997 the DfEE commissioned a review of the Discipline Networks programme (HEQE 1997). This suggested that, from the Department’s perspective, the programme had been a success, seriously addressing the agreed agenda and representing good value for money, with few failures[[2]](#footnote-2). As a result the Department commissioned a third round of projects, rather more sharply focused, and with partnership with National Training Organisations as a requirement.

Disciplines continue to be a powerful, and valuable, force in higher education, and their significance has been recognised in the decision to fund a third round of projects, rather more tightly focused by requiring bidders to involve both HE partners and National Training Organisations from the relevant occupational area.

Other disciplinary developments are in hand, of which the HEFCE Fund for the Development of Teaching and Learning is the most significant. Five of the FDTL projects grew out of Discipline Networks, and the scale of HEFCE funding enables them to embark on more ambitious, and perhaps more sustainable, work.

The boundaries between higher education and the workplace are becoming increasingly blurred. Technological and social change is making lifelong learning a necessity, and the development of a knowledge based economy is increasing the amount of high level learning and assessment taking place in the workplace. At the same time, most traditional full time undergraduates engage in the world of work, through paid employment or unpaid placement, during vacations or term time. The Dearing report stressed the importance of work experience for traditional undergraduates, and DfEE has mounted a programme of projects designed to explore new approaches to the management of work experience, including ways of managing and accrediting the learning of students in part-time jobs. The fostering of dialogue between employers and academics becomes increasingly important.

Debate about the relationship between HE and employment will continue. It is a characteristic of a disciplinary culture that all conclusions are provisional, open to test and modification through dialogue. Without such debate the discipline ossifies, and ceases to be useful to its members or society at large. Discipline Networks have brought a wider group into these debates, and helped to shift their emphasis, paying more attention to the underlying skills of graduates, and how they can be developed and measured, and above all helping people from both sides to understand the complexities of the issues. There are no simple permanent answers to the questions “what do employers want?” or “what should students learn?”. The following chapters explore, through the voices of the people who coordinated thirteen of the networks, what was achieved, and the issues which arose. It is a contribution to the ongoing discussion about the place of the discipline in higher education, and to higher education and employment.

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1. The history of titles and roles of Government Departments in this field is complex. The work described here stems originally from the Manpower Service Commission, later merged into the Employment Department, which in turn merged with the Department for Education into the Department for Education and Employment. For simplicity the last of these is used in this book for all. [↑](#footnote-ref-1)
2. The general conclusions of that report appear as Appendix 1 [↑](#footnote-ref-2)