

INTERPROFESSIONAL EDUCATION

Today, Yesterday and Tomorrow

A review

**Commissioned by
The Learning and Teaching Support Network for Health Sciences & Practice
from
The UK Centre for the Advancement of Interprofessional Education**

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FOREWORD

This review of Interprofessional Education represents the first of a series of occasional papers commissioned by the Learning and Teaching Support Network (LTSN) Centre for Health Sciences and Practice. The role of the LTSN UK national network is to promote good practices in Learning and Teaching in Institutions of Higher Education.

An initial step in this endeavour is to establish what is known about current practices in a variety of aspects of learning and teaching, and about their successes and limitations. The majority of teachers and practitioners in the Health Sciences are keen to improve their approaches to these issues but are highly occupied with the content of their subject and have little time to investigate the educational literature on the delivery of that content.

A role of the LTSN is to provide easy access to that literature which could help inform the community about existing evidence (or lack thereof) concerning what works and in what contexts. At an early stage of the creation of the LTSN (started in January 2000) we conducted a needs analysis of the Health Sciences and Practice community. One of the most recurrent themes was that of Interprofessional Education. The impetus for development in this area therefore comes from the grass roots as well as from the NHS and other high level initiatives.

Who better to provide a document detailing the state of the art ‘today, yesterday and tomorrow’ than Professor Hugh Barr? Professor Barr is a distinguished leader in the subject through his manifold roles as Emeritus Professor and Visiting Professor of Interprofessional Education at the University of Westminster and University of Greenwich respectively, Editor-in-Chief of the Journal of Interprofessional Care, and Chairman of the UK Centre for the Advancement of Interprofessional Education (CAIPE). His contribution to our understanding of the current situation and priorities for future research and development is invaluable.

Professor Catherine Geissler
Director LTSN Centre for Health Sciences and Practice

We are very pleased that the LTSN Centres for Medicine, Dentistry and Veterinary Medicine and for Social Policy and Social Work have supported this paper as follows:

The **LTSN for Medicine, Dentistry and Veterinary Medicine** is pleased to welcome this timely report on Interprofessional Education. This will be an invaluable contribution to our mutual understanding of what must be, fundamentally, a shared concern among all those involved in delivering healthcare. Public policies, as outlined in the new NHS modernisation plans, are also challenging us to take up these issues. This report by Professor Hugh Barr, commissioned by the LTSN for Health Sciences & Practice, urges us to take stock of our current practices and attitudes toward educating teams of professionals, ultimately to ensure the best possible continuous care in our communities.

Those reading this report will, I believe, come away with a much clearer insight into the issues of the complex languages, evidence, goals and hopes surrounding our mutual need for Interprofessional education. We are grateful to the author and The LTSN for Health Sciences & Practice for producing this pertinent and provocative report.

Professor R.K.Jordan
Director, LTSN for Medicine, Dentistry and Veterinary Medicine

The **LTSN for Social Policy and Social Work (SWAP)** is pleased to welcome this report on Interprofessional Education, which will make an important contribution to the development of learning and teaching in this area. As connections between health and social care are gradually forged at practice, professional and organisational levels, education and training must reflect these changes, and in some areas help to shape them. Interprofessional practice is at the heart of social work (specified in the new draft National Occupational Standards), as effective working with colleagues in health, police, education, housing and many other fields is essential. It is a concern for social work academics, and a range of approaches to interprofessional education have developed at both qualifying and post qualifying level. Consideration of social policy is an important theme within interprofessional education, so academics from this discipline can play a role in defining and highlighting the issues; moreover social policy itself is concerned with the changing nature of professional activities, and the impact of shifting organisational and policy frameworks.

Whilst many educational initiatives have been taken to develop interprofessional education, both at qualifying and post qualifying levels, we are only beginning to understand the complexity of this as a pedagogic activity, and to develop notions of effective practice. This report represents an important building block in that endeavour. Whilst some sections can readily be used by academics and practitioners involved with interprofessional education to review their practice, the report as a whole might provide a springboard for further research and practice development in this area.

Hilary Burgess, Learning and Teaching Adviser, SWAP LTSN
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EXECUTIVE SUMMARY

The Learning and Teaching Support Network for Health Sciences and Practice commissioned this review from the UK Centre for the Advancement of Interprofessional Education (CAIPE) to help teachers² engage effectively in interprofessional education. The paper reviews arguments for shared learning for health and social care professions in the Government workforce and training strategy – collaboration, substitution and accelerated career progression – noting concern expressed by universities and their teachers to clarify ends and means.

Current issues are then approached from an historical perspective, tracing the development of interprofessional education since the sixties as one of several movements from which it is distinguished with difficulty. Developments that prompted interprofessional education include the formation of primary care teams, the introduction of care in the community, investigations into child abuse and, later, strategies to effect change and quality improvement. Examples are given of work and college-based interprofessional education before and after qualification designed to modify attitudes, secure common foundations and competency-based outcomes.

Application of adult learning principles leads into theoretical perspectives, which inform the choice of interactive learning methods. Theories from anthropology, social psychology and sociology help understand collaboration and obstacles that impede it. The re-framing of curricula is reported and moves to determine outcomes as occupational standards and benchmarks.

Surveys by CAIPE, the Committee of Vice Chancellors and Principals (CVCP) and others describe interprofessional education nationwide, complemented by reviews and systematic searches of the literature to assemble the emerging evidence base. Dimensions are identified, a provisional typology floated and principles formulated for interprofessional education.

Priorities identified for future research and development in interprofessional education include:

- Completing work to establish the evidence base, so far as practicable, from existing sources
- Setting and regulating standards
- Evaluating selected programmes
- Comparing experience of interprofessional education in different fields
- Preparing the next generation of teachers
- Weighing the implications of National Service Frameworks
- Building interactive learning into undergraduate interprofessional education
- Involving university teachers in work-based interprofessional education
- Designing a continuum of professional, multiprofessional and interprofessional education
- Relating objectives for shared learning to workforce planning

The paper focuses upon interprofessional education in the UK with reference to all four countries, but stopping short of discussion of policies and practices in each. An international review (Barr, 2000) can be found on the CAIPE website (www.caipe.org.uk) while the Journal of Interprofessional Care³ covers collaboration in education, practice and research worldwide.

² “Teacher” is used throughout this paper to include lecturers, clinical supervisors, practice teachers and tutors as appropriate.

³ An independent peer reviewed journal about collaboration in education, practice and research in health and social care worldwide published quarterly by Taylor & Francis in association with CAIPE. For further information see the CAIPE website www.caipe.org.uk

1. Introduction

Interprofessional education has been invoked ever more frequently during the past thirty years to encourage collaboration in health and social care to help improve services, effect change and, latterly, implement workforce strategies. Expectations have been raised and objectives added with each succeeding wave of development, introduced for other reasons unsupported by adequate argument and evidence and caught up in wider moves towards shared learning. Definition has been lacking, semantics bewildering, evaluations few and the evidence base elusive. Small wonder teachers are uneasy.

Determined efforts have, however, been made in recent years to define terms,⁴ unravel semantics, develop rationale, refine methodologies for evaluation and secure evidence and theoretical bases as reported below. CAIPE and its members, including universities and their teachers, have been heavily committed to these endeavours in association with the Interprofessional Education Joint Evaluation Team (JET), the Editorial Board of the Journal of Interprofessional Care and now the Learning for Partnership Network.

This paper is addressed to teachers who already have a working knowledge of interprofessional education and are ready to probe more deeply. It aims to help them build future developments on past experience informed, where possible, by theoretical perspectives and findings from research and alive to current issues. Sources tapped are often inaccessible, many coming from the grey literature. These are summarised for the benefit of readers who lack time or opportunity to consult the documents, while saying enough to enable scholars and researchers to judge for themselves which to consult in the original.

The story is told through the literature, resisting the temptation to gild the lily. Much remains to be done to build on the foundations laid.

Teachers new to interprofessional education may prefer to begin by reading introductory texts such as Barr (1994) and Low and Weinstein (2000).

⁴ Definitions

Multiprofessional education:

Occasions when two or more professions learn side by side for whatever reason.

Interprofessional education:

Occasions when two or more professions learn from and about each other to improve collaboration and the quality of care.

(CAIPE, 1997 revised)

For further discussion, see Section 8.

2. Policies and Purposes

The NHS Plan (Secretary of State for Health, 2000) calls for partnership and co-operation at all levels to ensure a seamless service of patient centred care. A “new core curriculum” will give everyone working in the NHS the skills and knowledge to respond effectively to the individual needs of patients with “new joint training across professions in communication skills and in NHS principles and organisation”. A “new common foundation programme” will “be put in place to enable students and staff to switch careers and training paths more easily”.

These propositions are spelt out in the NHS workforce strategy (Department of Health, 2000) which calls for education and training which is “genuinely multi-professional” to promote:

- Teamwork
- Partnership and collaboration between professions, between agencies and with patients
- Skill mix and flexible working between professions
- Opportunities to switch training pathways to expedite career progression
- New types of worker

Education and training, says the Department, should be developed in partnership between the NHS and providers to maximize the contribution of staff to patient care employing a holistic approach.

Responses from universities

The Committee of Vice Chancellors and Principals (CVCP, 2000) welcomed the document, but with reservations. The task of Higher Education Institutions, it said, was to provide a style of education (as distinct from training) that enabled health care professionals to broaden their perspectives beyond their own specialist area, and to learn to draw on the expertise and approaches of other specialisms and disciplines, as necessary. Team working, integration and workforce flexibility could only be achieved if there was widespread recognition and respect for the specialist base of each profession. The Committee noted the lack of a definition of “multi-professional education” in the workforce document. Whilst it had developed a policy statement for “inter-professional education” (CVCP, 1996) and regarded it as a priority area, it would be impossible for higher education to determine priorities until the definition had been settled.

Finch (2000) argued that universities must comprehend interprofessional education before they could embrace it. Definitions were unclear and objectives several. Universities needed a clearer view of what interprofessional working within the Health Service would really mean before they could develop pedagogical approaches to underpin it.

Was the object for students:

1. to know about the roles of other professions?
2. to be able to work with those others?
3. to be able to substitute for others?
4. to find flexible career pathways?

The first of these, said Finch, was the least threatening and could be incorporated readily into curricula. The second could be helped by education and training, in her view preferably after rather than before registration. The third challenged established working practices in the NHS; education could not lead lest students be prepared for a working world that did not exist. The fourth called for flexibility in education planning and provision, with which universities were familiar, but depended upon support from accreditation bodies. Each of these propositions carried

different implications for education and training. Universities should be invited to think laterally about how best to support NHS objectives once these had been clarified.

Following up the NHS Plan, the Department of Health (2001) affirmed its commitment to the development of “common learning programmes” for all health professionals by driving forward “multi-disciplinary education” which universities would be expected to put at the top of their agenda. All health professionals should expect their education and training to include common learning with other professions at every stage from pre-registration courses throughout continuing professional development. To that end, a partnership statement had been agreed between the NHS Executive and the CVCP (2000) “to provide a long-term, stable basis for the relationship between the NHS and higher education” including a shared commitment to the development and expansion of “inter-professional education”, “flexible pathways” and “joint careers initiatives”.

The workforce strategy is part of a package of reforms in education and training for health and social care. New regulatory bodies are replacing old. The Quality Assurance Agency (QAA) is taking responsibility for professional as well as the academic review of programmes, while workforce development confederations have replaced education consortia.

Reactions by teachers

“Multi-professional education” loomed large in the preliminary analysis of learning and teaching issues conducted by the LTSN for Health Sciences and Practice (2001). Respondents were worried about moves towards a generic health care worker (c.f. Schofield, 1995). Some questioned the motive for multi-professional education, suspecting that it was cost cutting rather than enhancing patient care through professions developing understanding of each other’s roles and thereby improving collaborative working. The emphasis should, they argued, be on learning in small groups enabling professions to interact with each other and share perspectives. Communication skills and teamwork were ranked highly as important cross-curricula themes.

Opinions differed about the optimum time to introduce shared learning. Whilst such learning could be beneficial during pre-registration courses, some respondents feared that this would undermine the development of profession specific knowledge bases and noted that curriculum requirements by professional and statutory bodies made it difficult to find space to incorporate additional shared modules. This, said respondents, was exacerbated by time tabling problems, especially to enable students following different courses to meet during practice learning. More research was needed, they said, about ways in which higher education institutions were implementing multi-professional education along with an evaluation of its effectiveness.

3. Motives and Movements

The interprofessional education movement in the UK began in the sixties. More precisely, a succession of discrete “initiatives” occurred which, with benefit of hindsight, can be seen to have been the beginnings of parallel interprofessional movements in different fields of practice with the same objective, namely to improve working relations amongst health, social care and sometimes other professions. To the extent that those movements have been drawn together, we may speak of the interprofessional education movement.

That movement is, however, one of several that brought, and continue to bring, professions together to share learning, movements from which interprofessional education can be distinguished conceptually, but operationally with difficulty.

Contributory movements

Health and social care workers enrol for programmes that cut across professions. Some programmes relate to academic disciplines and practice, e.g. gerontology. Others promote models of care, e.g. in mental health and learning disabilities. Yet others introduce new practice methods, e.g. counselling, or enable practitioners to transfer into another field, e.g. public health, education, management or research. Each can be seen as a movement contributing to different fields of professional education.

Collective movements

Four 'collective movements' can be identified in pre-registration studies. Two of these – for social work and nursing – drew related professions together to share all or part of their courses. The third – for the professions allied to medicine – drew them into a common regulatory and disciplinary framework with some shared studies. The fourth and most recent – for the complementary therapies – draws them into a common academic framework, again with some shared learning (Barr, 1999).

These movements have much the same motives - to improve practice and patient care, enhance professional status, gain collective strength and secure a place in higher education. Each benefits from the rigours of validation, the systematic assessment of students informed by the health and social sciences in universities, which have paved the way for the award of academic diplomas and degrees to complement professional qualifications.

The generic movement in social work was the first. It dates back to the fifties when a combined qualifying course for childcare and probation was launched at the London School of Economics. Others followed, generic courses becoming the norm in response to recommendations in the Seebohm Report (1969) and the subsequent formation of the Central Council for Education and Training in Social Work (CCETSW) (Younghusband, 1978). The driving force was to establish a corporate professional identity with a common value base, a common code of practice and a coherent repertoire of practice methods informed by the behavioural and social sciences and law as contributory disciplines.

Like social work, nursing was perceived as a semi-profession (Etzioni, 1969) intent upon enhancing its collective status in the eyes of other professions and the public by improving its education and strengthening its institutions (DHSS, 1972; Robinson, 1993). Project 2000 (UKCC, 1986) recommended that education should be separated from service and that pre-registration courses for the different branches of nursing be integrated and brought into universities.

While the social work and nursing movements brought together professions that had much in common, the third movement brought together a heterogeneous collection of small "professions allied to medicine" (PAMs). The object was not primarily to integrate courses (although some common learning resulted), but to establish a single regulatory framework under the Council for Professions Supplementary to Medicine (CPSM) to secure standards, improve practice, upgrade qualifications and advance collective status.

The fourth of these movements is still in its formative stages. The complementary and alternative therapies (CAMs), like the PAMs, comprise many small professions thrown together by accident of history. Their functions and identities remain distinct although they share more or less the same philosophy. Progress towards regulation differs. So do efforts to secure evidence bases for practice. Some are subject to regulation by professional institutions as they secure their evidence bases, move into the mainstream of higher education and enhance their status.

Each of these four movements in its formative stage resembles the interprofessional movement insofar as strengthening relations between the participant professions is critical to success. That stage has passed for the first two movements, as progress has been made towards establishing collective identities, a single profession for social work, twin professions for nursing with midwifery. Comparable integration is neither desirable nor feasible for the PAMs and CAMs, given the diversity of their functions and methods. Cultivating collaboration between the constituent professions is, however, high on the agenda for both of these movements. Each may therefore be regarded as 'a closed system interprofessional movement' in much the same way as the social work and nursing movements were previously.

While each movement remains preoccupied with relations between the participant professions and their collective self-interest, it lacks time, energy or inclination to cultivate relations with professions more widely. Readiness to build alliances with other professions depends upon first securing the goals set by the movement. Viewed thus, it is a mark of maturity that social work, nursing and midwifery and the allied health professions are now engaged in the wider interprofessional education movement.

Medicine, dentistry and pharmacy lie outside these movements, each having already established its professional credentials, knowledge base and place in higher education.

Whilst the collective movements were bringing other professions closer together, medicine was establishing ever more specialist fields in response to growth in scientific knowledge and technological advance. Time and energy, as one senior doctor explained to the writer, was necessarily absorbed in the maintenance of working relations between branches of the profession to the detriment of relations with other professions (Barr, 1994). Those professions created specialist fields to complement those in medicine, again taking time and energy for intra-professional relations at the expense of interprofessional relations. Whatever the many benefits of specialisation, the case became compelling for the rationalisation of the number of professions and specialties, and by the cultivation of better working relations between them.

Developments in general practice counterbalanced specialisation in other fields of medicine and became the point of reference for much of the development of collaboration with other professions. The Royal College of General Practitioners was noteworthy for the lead that it gave as it joined in conference with the other professions and published interprofessional reports (see, for example, Jones, 1986; Gregson et al, 1991). Distinguished members of the College were, and remain, prominent in promoting and developing the interprofessional education movement to which we now turn.

The interprofessional education movement

Interprofessional education was conceived as a means to overcome ignorance and prejudice amongst health and social care professions. By learning together the professions would work more effectively together and thereby improve the quality of care for patients. They would understand each other better, valuing what each brought to collaborative practice whilst setting aside negative stereotypes.

The need for this was more apparent in primary and community care than secondary care, primary care where many GPs had formed group practices and were recruiting other professions - district nurses, health visitors and sometimes social workers - into their teams, in community care as long-stay hospitals began to close.

Highly vulnerable and institutionalised patients were being discharged, whose survival in the outside world depended upon flexible, responsive and well co-ordinated support from community mental health and mental handicap teams. Rigid demarcations and hierarchical relationships which may have worked well enough in hospitals had no place in community-based services where boundaries between professions needed to be more permeable. As relationships became more flexible, risk of territorial disputes increased.

For mental health, efforts to improve collaboration went hand in hand with those to promote a new model of care. The same was true in mental handicap (as the field of learning difficulties was then called) where moves were afoot to retrain staff to be re-deployed from hospital to community and to replace nursing awards by social care awards (Jay, 1979). In these and other fields of community care, e.g. palliative care, HIV/AIDs and the care for the frail elderly in the community, interprofessional education contributed to efforts to improve the quality of long-term care.

Teamwork had arrived in both primary and community care, teamwork which could be either frustrated by rivalry and miscommunication or become a mutual learning experience through which each profession understood better what the others could contribute in a spirit of trust and mutual support.

Community and primary care were treated as one in the earliest reports about interprofessional education, but the distinction between them became an issue following the creation of social services departments in the wake of the Seebohm Report (1969). Conferences explored ways in which interprofessional education might help to heal the bureaucratic rift between GPs and social workers (see, for example, England, 1979; Barr, forthcoming).

Meanwhile, the enquiry into the death of Maria Colwell (Colwell Report, 1974), like others later, pointed to failures in communication between professions – health visitors, doctors, social workers, teachers and police officers – in reporting warning signs and acting soon enough to prevent abuse and sometimes death of children. Concern led to the creation of Area Child Protection Committees whose brief included the promotion of joint training to improve communication and collaboration. Local initiatives were complemented by nationwide programmes (Charles and Hendry, 2000).

Early “initiatives” in interprofessional education were isolated, reactive and often short-lived. Many were work-based and lost in the mists of time, but some are on the record. Jones, for example, reported on “novice days” in Devon where newly-appointed nurses, health visitors, social workers, GPs and therapists learned how to appreciate what each other brought to community-based practice (Jones, 1986). The first initiative took place in a medical setting and was built around log diaries. Outcomes were the opposite of those expected. Confidence expressed by the other professions in doctors’ ability to do everything reportedly increased. The doctors, however, placed less confidence in the other professions. Subsequent workshops were relocated to a nursing setting and the programme radically revised with reciprocal presentations. Feedback was more positive. Doctors, health visitors and therapists reportedly appreciated the roles and skills of social workers better, doctors also the roles and skills of nurses better and social workers those of health visitors.

Other initiatives were college-based, either before or after qualification. Conventional wisdom had long held that interprofessional education was better left until after qualification, by which time workers would have secured their professional identities and have experience to share. Joint qualifying studies were nevertheless reported during the seventies (Mortimer, 1979).

Hasler and Klinger (1976) described a residential course for trainee GPs and student health visitors designed to introduce each group to the other, modify attitudes, increase knowledge of each other's work and induce a positive approach to teamwork. Most of the three days were spent in discussion in small groups augmented by guest speakers. Assessment took the form of questionnaires completed by participants including the identification of situations where each profession could help the other.

Teachers at Moray House in Edinburgh found that students entering qualifying courses in community work, social work and primary education already held prejudices about each other, prejudices reinforced by the time they finished their courses. They tried one interactive method after another to provoke exchange between the student groups in the hope that negative stereotypes would shift in a positive direction (McMicheal and Gilloran, 1984; McMichael et al. 1984 a&b) with variable success.

Two Moray House initiatives were evaluated. The first was a common course in psychology built around interactive workshops. Questionnaires before and afterwards compared attitudes held by the three professional groups towards each other. Only a quarter of the students reported any change in attitude towards the other groups. Student teachers became more positive toward student community workers and social workers, but this was not reciprocated. Staff attributed these disappointing findings to the limited duration of the learning together, the large group and the imbalance in numbers from each profession.

The second included the same mix of professions. Students worked in small groups where they discussed a video about communication problems, a case study, work priorities, a do-it-yourself collaborative project and the management of conflict. Student teachers developed greater awareness of how social workers could help them in their work, but this did not extend to community workers. For their part, student community workers and social workers remained critical of primary education, but became more aware of some of the teachers' frustrations.

In Bristol medical and social work students came together in one initiative, medical and nursing students in another, during the latter stages of their pre-registration courses (Carpenter 1995a&b; Carpenter and Hewstone, 1996; Hewstone, 1996; Hewstone et al, 1994). Learning during the first of these initiatives included joint assessments of patients and video case studies. Before and after questionnaires evaluated students' perceptions of the learning by their own group and the other. Medical and social work students started by being more positive about their group than the other, but attitudes towards the latter improved. Learning during the second initiative was again based upon a video, pairs from each profession discussing what they had observed and reporting back. Attitudes towards the other profession changed for the better during the learning, but those of nurses towards doctors did so more than of doctors towards nurses. Comparing the two projects, the researchers noted that the doctors had improved their academic rating of social workers, but not of nurses.

Practice learning came to be seen as a promising setting for interprofessional education, notably in Thamesmead (Jacques, 1986) where student doctors, health visitors and social workers on placement took part during lunch time gatherings in role plays, case discussions and games that simulated collaboration. Convinced of its importance, the Central Council for Education and Training in Social Work, the English National Board for Nursing, Midwifery and Health Visiting and the College of Occupational Therapists launched a rolling programme to prepare practice teachers and clinical supervisors (Bartholomew et al. 1995; Brown, 1993; Weinstein, 1997).

Exeter claimed credit for launching the first masters programme designed to cultivate collaboration, although the primary objective was to underpin practice for nurses and the allied health professionals with firmer academic and research foundations (Pereira Gray et al. 1993). Other masters courses followed where experienced practitioners from different professions were introduced to new models of care, practice methods and academic disciplines, but opportunities also developed for collaborative learning between professions to inform collaboration in practice (Storrie, 1992).

Interprofessional education was becoming less reactive and remedial, more proactive and preventive. The Health Education Authority (HEA), for example, mounted a travelling circus of nation-wide workshops attended by triads from primary health care teams, each of which chose a health promotion project to develop and implement subsequently (Lambert, 1988; Spratley, 1990a&b). The effect was not only to reinforce health promotion in primary care, but also teamwork. Many of the freelance trainers who ran the HEA workshops were hired subsequently by primary care teams to facilitate development.

Interprofessional education was being invoked to help effect change, to implement policies and legislation, for example, in child care and community care, as workers from different professions and agencies learned together about proposals and weighed implications for their roles and relationships.

Collective learning was reinforced in primary care by the Calman Report (1998) which recommended Practice Professional Development Plans to develop each primary care centre as a human resource for health care and to increase capacity for quality development. These provide a way to plan the integration of organisational development in general practice with the personal educational needs of team members (Carlisle et al. 2000)

None of the movements described would have developed as they did save for underlying trends in higher and vocational education working in their favour. Independent schools for the separate health professions were being integrated into the mainstream of higher education, as leadership in some passed from profession-specific teachers to generalist educational managers disposed to look for common curricula to rationalise programmes and gain economies of scale in cost-conscious times. Modularisation helped in remodeling curricula to combine common elements across professions. So too did open and distance learning materials whose production costs (save for nursing) could only be borne by attracting students from a range of professions and lay people. These trends were reinforced insofar as grants from the Higher Education Funding Council and Education Consortia (now Workforce Development Confederations) pursued organisational goals that cut across professions.

Interprofessional education has developed over the years:

- To modify negative attitudes and perceptions (Carpenter, 1995)
- To remedy failures in trust and communication between professions (Carpenter, 1995)
- To reinforce collaborative competence (Barr, 1998)
- To secure collaboration
 - to implement policies (Department of Health, 2001)
 - to improve services (Wilcock and Headrick, 2000)
 - to effect change (Engel, 2000)
- To cope with problems that exceed the capacity of any one profession (Casto and Julia, 1994)
- To enhance job satisfaction and ease stress (Barr et al. 1998; McGrath, 1991)
- To create a more flexible workforce (Department of Health, 2000)

- To counter reductionism and fragmentation as professions proliferate in response to technological advance (Gyamarti 1986)
- To integrate specialist and holistic care (Gyamarti 1986)

It has worked to restore equilibrium as working relationships have been destabilised, the unquestioned authority once enjoyed by the established professions challenged, hierarchies flattened and demarcations blurred, as new professions have grown in influence, consumers have gained power, and a better informed public has expected more

4. Content and Outcomes

Re-framing curricula

Glen (2001) made the case for integrated curricula. Szasz, she said, had voiced concern during the sixties about the adverse effects of separatist and competitive culture resulting from academically, and often geographically, separate health care education programmes (Szasz, 1969). He had advocated 'integrated curricula' to counter the compartmentalisation of knowledge (Cable, 2000).

Bernstein (1971) reported outcomes of moves towards an integrated curriculum, which created opportunities to make active connections between different subject matter in the interest of relevance to practice. Hammick (1998) demonstrated how Bernstein's distinction between 'singular discourses', such as biology and psychology, and 'regionalisation of knowledge', as in medicine and nursing (Bernstein, 1996), can be used to reframe professional into interprofessional curricula.

Beattie (1995) argued that integrated curricula could provide powerful opportunities to transcend the tribalism of the health professions, while Barnett (1999) saw the trend toward integrated curricula as vital to the cognitive development of students who would be required to respond flexibly to the needs of communities, families and individuals. A liberal conception of higher education could not be sustained amidst barriers to students' intellectual inclinations.

The aims of "transdisciplinary education", said Barnett, were:

Educational – offering a broadening dimension through integration of elements, developing relationships between learning and actual 'life' situations.

Epistemological – contrasting conceptual frameworks, truth criteria, level of objectivity and methodologies, creating a context for new kinds of thinking

Pedagogical – encouraging co-operation among education staff of different disciplines and exposing students to a wider range of teaching strategies

Normative – offering education as a vehicle which puts knowledge into service for political and social reforms

Rational – unifying reasoning around a particular theme to create a supra-rationality, for example, health

Critical – developing the capacity to challenge central suppositions and the interest to understand the structure of a particular discipline

Tope (1996) analysed the content of pre-registration programmes for 13 professions in South Wales - dental hygiene, dental technology, dentistry, dietetics, medicine, nursing, nutrition, occupational therapy, operating department practice, physiotherapy, podiatry, social work, speech therapy and radiography. The outcome was a list of 116 items, ranging from “ageing” to “writing reports” whose presence or absence was then charted for each programme. Some, such as “group dynamics”, “listening skills” and “verbal communications” were found in all programmes, others in the majority.

Invited to identify subjects suitable for “interdisciplinary learning”, 80% or more of the teachers included each of the following - psychology, sociology, ethics, law and practice, research methods, management, economics of health and social care, health promotion, study skills, quality issues, structural problems and computing skills. Headings were taken at face value without reference to the level at which subjects were taught, schools of thought favoured by one profession or another, or application to different fields of practice.

Outcomes and competency

There has been a shift of emphasis from re-framing content to formulating outcomes. National Occupational Standards drawn up for health and care professions provide a common language, assist dialogue, promote collaboration and inform interprofessional learning (Mitchell et al. 1998; Weinstein, 1998).

These included the following competencies deemed to be necessary for effective collaborative working (summarised by Barr, 1998):

- Contribute to the development and knowledge of others
- Enable practitioners and agencies to work collaboratively
- Develop, sustain and evaluate collaborative approaches
- Contribute to joint planning, implementation, monitoring and review
- Coordinate an interdisciplinary team
- Provide assessment of needs so that others can take action
- Evaluate the outcome of another practitioner’s assessment

Healthwork UK has published no fewer than 30 sets of National Occupational Standards for community work and health promotion and care (Healthwork UK 2001a&b). These and others in preparation would merit analysis to tease out implications for interprofessional education and practice.

Steps have been taken by the Quality Assurance Agency (QAA) to agree benchmarks, i.e. statements describing the nature and standards of study, for pre-registration programmes for nursing and midwifery, and for the professions allied to medicine following extensive and continuing consultation with stakeholders (QAA, 2001).

These statements are divided into key concepts deemed to be common to all health care professionals and profession specific statements for nursing, midwifery, health visiting, dietetics, speech therapy, chiropody/podiatry, prosthetics and orthotics, occupational therapy, orthoptics, physiotherapy and radiography. Statements referring to collaboration are listed in the Appendix.

The QAA has also published benchmarking statements for social work (QAA, 2000). These are described as academic standards (unlike those for the health professions which include practice standards) treating social work as an applied social science. Reference is made to work in hand by the Training Organisation for the Personal Social Services (TOPSS) to develop occupational standards for health and social care. Despite the strength of the link between academic and practice awards in social work, the benchmarking statements do not attempt to define professional competence, which, said the report, could only be undertaken in partnership with other stakeholders.

The statements acknowledge at the outset that social work commonly takes place in an inter-agency context and that social workers habitually work collaboratively with others towards interdisciplinary and cross-professional objectives. Programmes should therefore equip students with accurate knowledge about the respective responsibility of welfare agencies and with skills in effective collaborative practice between these. Again, statements bearing upon collaboration are listed in the Appendix.

Consultations are in progress at the time of writing to compare benchmarking statements for health, medical and social work professions. These may result in a greater degree of coherence in form and content with common statement applicable across professions within which those relevant to collaborative practice may be identified.

Work remains to be done to relate national occupational standards and benchmarking, and to decide whether to formulate competence-based outcomes (which many of the existing statements resemble).

Competence-based models of interprofessional education have been floated. Some formulated knowledge, skill and attitudes or values deemed to be necessary for collaborative practice (CCETSW, 1992; Jarvis, 1983; Kane, 1976; Stevens and Campion, 1994; Vanclay, 1996; Whittington et al. 1994), others competencies necessary to effect change (Engel, 1994; Rawson, 1994). Beresford and Trevillion (1995) called for skills in creativity, imagination and innovation, Spratley and Pietroni (1994) for a balance between flexibility and creativity, on the one hand, and skills in communication and group working, on the other. Hager and Gonczi (1996) regarded formulations like these as a 'richer conception' of competence which is 'holistic' not 'atomistic'.

Jones and Joss (1995) devised a cyclical model from the work of Kolb (1984), Gibbs (1988) and Schon (1987) to distinguish between types of competence required at experiential, reflective and conceptual stages. Others distinguish between competencies at different levels (Engel, 1994; Hager and Gonczi, 1996; Hornby; 1993). Based upon a European-wide Delphi study, Engel (2001) sets out competencies to be expected of newly qualified professional to adapt to and participate in the management of change.

Barr (1998) distinguished between:

Common competencies – those held in common between all professions

Complementary competencies – those that distinguish one profession from another

Collaborative competencies – those necessary to work effectively with others

Examples of collaborative competencies, Barr suggested, were ability to:

- Describe one's roles and responsibilities clearly to other professions and discharge them to the satisfaction of those others
- Recognise and observe the constraints of one's role, responsibilities and competence yet perceive needs in a wider context

- Recognise and respect the roles, responsibilities and competence of other professions in relation to one's own, knowing when, where and how to involve those others through agreed channels
- Work with other professions to review services, effect change, improve standards, solve problems and resolve conflict in the provision of care and treatment
- Work with other professions to assess, plan, provide and review care for individual patients and support carers
- Tolerate differences, misunderstandings, ambiguities, shortcomings and unilateral change in another profession
- Enter into interdependent relationships, teaching and sustaining other professions and learning from and being sustained by those other professions
- Facilitate interprofessional case conferences, meetings, team working and networking.

A project commissioned by the West Yorkshire Workforce Development Confederation (University of Leeds, 2001) drafted core competencies for clinical teams as follows, each of which is broken down into detailed statements:

- Establish and maintain effective relationships with patients and/or carers
- Establish and maintain team delivery
- Identify and understand others' concerns and modify own response to build credibility, mutual respect and trust
- Contribute to the process of continuous improvement in patient care

5. Theory and Practice

Reports on interprofessional education tend to be light on theory, theoretical perspectives coming from a limited number of sources whose wider adoption may lie in the future. Some of the theories inform the learning, others the practice for which the learning prepares the students and some both.

Adult learning

Interprofessional education is grounded in adult learning theory. According to Parsell et al (1998), many professional educators believe that learners need to become self-directed, critical thinkers and reflective practitioners, able to function as members of teams, good communicators, adaptable to change and continuing to learn throughout their professional lives. Towards those ends, interprofessional curricula had, they said, been strongly influenced by the ideas of Knowles (1975, 1985 and 1990), Boud (1988), Kolb (1984) and Schon (1983, 1987 and 1991).

Adult learners are intrinsically motivated. They learn more permanently and more deeply when knowledge has direct and early application to practice, and more effectively using a range of learning opportunities involving task-centred or problem-based approaches (Knowles, 1975). Adult learning occurs within an integrated four stage cycle (Kolb, 1984) including reflection. Reflective practice, as expounded by Schon, invites participants to observe and reflect employing intuition and experience, setting aside preconceived theory derived from their respective professional backgrounds and employing a common learning process. Interprofessional learning

involves co-reflection like a double mirror (such as hairdressers use) held up by another to see aspects of oneself that one cannot see directly in a single mirror (Wee, 1997).

Cable (2000) saw adult learning in interprofessional education as active (Bruner, 1966), experiential (Kolb, 1984), reflective (Schon, 1983 and 1987) and contextual (Coles, 1990) modeling good practice (Bandura, 1972; Belbin, 1993) and relating the personal to the professional (Ash, 1994). He applied theories of situated learning to interprofessional education and practice, learning which has as its focus the relationship to the social situations in which it occurs and takes place within a framework of social participation rather than the individual's mind. Learning and performance, said Cable, cannot be separated because learning is performance and the meaning of the activities that occur are a constantly negotiated and re-negotiated interpretation of those held by all the participants of the world in which they practice (Lave and Wenger, 1991; Elkjaer, 1999).

The 'contact hypothesis' (Tajfel, 1981) informed design and learning methods in early college-based initiatives in Edinburgh and Bristol (see page 11 & 12). It holds that people respond positively to those who are rewarding to them. Mere exposure (Zajonc, 1968) is not enough. Familiarity alone does not necessarily lead to liking; other factors may negate its positive influence (Berkowitz, 1980). Interprofessional education needs to create opportunities for rewarding interaction between students in their respective professional roles designed to improve mutual respect and understanding, and to modify negative stereotypes, in ways that may be transferable to others from the same professions.

Success depends according to Hewstone and Brown (1986) upon:

- institutional support
- equal status of participants
- positive expectations
- a co-operative atmosphere
- successful joint working
- concern for and understanding of differences as well as similarities
- perceiving other members as typical of the other group

Account must be taken of the possibility that contact with another profession may confirm reality-based negative perceptions that an isolated education experience can do little or nothing to change. No matter how good the interprofessional learning, assumptions, attitudes and practices in the workplace can frustrate interprofessional practice. Interprofessional education must therefore be part of a package of measures designed to improve working relations in practice.

Evaluating interprofessional masters programme in mental health at the University of Birmingham, Barnes, Carpenter and Dickinson (2000) found that attitudes held by the students changed little during the course. They attributed this to lack of opportunity to explore differences deemed necessary for the contact hypothesis to take effect. Whilst it would be unsafe to generalise from a small sample in just one programme, the implication is clear, namely that interprofessional education based exclusively upon common learning may fail to deliver improvements in reciprocal attitudes and perceptions conducive to better working relationships.

Theories such as these may lie behind teachers' preference (Barr, 1994) for interactive rather than didactic learning methods in interprofessional education, which have been classified as follows (Barr: 1996):

Exchange-based learning

These are methods that encourage participants to express views, exchange experience and expose prejudice, including debates on ethical issues, games to loosen up relationships and case studies to compare assessments, treatment plans and respective roles (McMichael et al, 1984).

Action-based learning

This includes *problem based learning* (Barrows and Tamblin, 1980) as commended by the World Health Organization (WHO, 1987) and widely adopted in interprofessional education in the UK, for example, at Salford (Hughes and Lucas, 1997), but extends wider. It also covers methods of investigation and co-working such as collaborative enquiry (Reason, 1994; Glennie and Cosier, 1994) and continuous quality improvement (Wilcock and Headrick, 2000) introduced to enable students from different professions to combine their expertise to investigate questions and effect change.

Observation-based learning

Drawing upon psychodynamic observation (Likierman, 1997; Hinshelwood and Skogstad, 2000), one example of such learning is joint visits to a patient or client by students from different professions, to make an assessment to be fed back to the group with opportunities to compare perspectives and perceptions facilitated by the teacher. Another is shadowing where experienced students, for example on part-time postgraduate programmes, visit each other at their regular place of work, again followed by feedback and de-briefing by the group (Reeves, 2000).

Models for the observation of babies and young children in training psychotherapists have been adopted and adapted to cover wider age groups as well as work settings, introducing psychodynamic insights and employing reflective practice (Adler and Adler, 1994).

Simulation-based learning

Role-play can enable relationships between professions to be explored as participants take different parts in imagined situations. Games have also been produced where students are assigned roles, competing and collaborating to meet stated objectives (see, for example, Rowley and Welsh, 1994).

Skills labs create life-like situations where students from different professions may learn together (Freeth and Nicol, 1998; Nicol and de Santiago, 2002; Studdy et al. 1994).

Some universities have introduced group-based experiential learning, for example, the University of Westminster has a weeklong module in conjunction with the Tavistock Centre and latterly the Tavistock Institute to simulate personal, group, inter-group and organisation relationships in working life (Stokes, 1992 & 1994).

Practice-based learning

A student from one profession may be placed with workers from another (Anderson et al, 1992). Two or more students from different professions may be assigned to the same community-based placements, although logistics can be problematic (Cook et al, 2001). Training wards have been established where students from different professions learn together as they share responsibility for day-to-day management (Fallsberg and Hammer, 2000; Fallsberg and Wijma, 1999; and Reeves and Freeth, 2002).

Didactic teaching has its place to provide structured inputs and systematic knowledge, but used sparingly to complement and reinforce interactive learning.

Attitudes and Perceptions

Hind and his colleagues (Hind et al. forthcoming) introduced three theories from social psychology to help understand the complexity of interprofessional relations in health care. Realistic conflict theory (RCT) (Brown et al. 1986; Spears et al, 1997) predicts that groups holding divergent objectives will have hostile and discriminatory inter-group relations whereas groups with common objectives will display conciliatory behaviour. Social identity theory (SIT) developed by Tajfel, Turner and colleagues (Turner 1999; Ellemers et al, 1999) proposes that part of a person's self-concept is based upon identity as a member of groups to which he or she belongs. Self-categorization theory (SCT) builds upon SIT retaining concepts of self and group, but not as bipolar (Turner, 1999). Hind and his colleagues give examples of the application of SIT and SCT to study interprofessional education and practice, including their own work.

Meads et al (2000) employed 'relationship profiling' to capture reciprocal perceptions between health authorities and primary care organisations as a focus for reflection about relational strengths, weakness and developmental needs. Lead personnel in each organisation completed a profile questionnaire based upon five themes:

- Commonality – valuing similarity and difference
- Parity – use and abuse of power
- Multiplexity – breadth of knowledge
- Continuity – shared time over time
- Directness – the quality of the communication process

Values and ethics

Interactive learning deals in reciprocal attitudes and perceptions that express underlying values rooted in differences in gender, income, social class, education, practice autonomy and public esteem between professions (Carrier and Kendall, 1995 citing Braye and Preston Shoot, 1995; Rogers and Pilgrim 1996). These differences feed stereotypes (Pietroni, 1996), which impede working relations and result in lack of confidence, trust and willingness to share information, endorsed when one profession is perceived to have a weaker professional code and disciplinary process than another.

Interprofessional education provides a forum where values and ethical issues can be debated (McMichael et al, 1984). It has also begun to secure its own value base written into ground rules that respect differences in age, race, religion gender and sexual orientation, and accord parity of esteem - however wide the status differences may remain in the workplace (Weinstein, 2000).

Work in progress from Presidents and Chief Executives of Health Regulatory Bodies says that all health care professionals are personally accountable for their decisions and actions (UKCC, 2001a). To that end, they must be:

- Open with patients and clients and show respect for their dignity, individuality and privacy, and for their right to make decisions about their treatment and health care
- Justify public trust and confidence by being honest and trustworthy
- Act quickly to protect patients, clients and colleagues from risk of harm
- Provide a good standard of practice and care
- Co-operate with colleagues from their own and other professions

Steps have also been taken to establish an ethical code to which all health and social care professions may come to subscribe (Berwick et al. 1997) developed by an Anglo-American interprofessional group around the following principles (Berwick et al 2001):

Rights – people have a right to health and health care

Balance – care of individual patients is central, but the health of populations is also our concern

Comprehensiveness – in addition to treating illness, we have an obligation to ease suffering, minimise disability, prevent disease and promote health

Cooperation – health care succeeds only if we cooperate with those we serve, each other, and those in other sectors

Improvement – improving health care is a serious and continuing responsibility

Safety – do no harm

Openness – being open, honest and trustworthy is vital in health care

Teamworking and networking

Theoretical perspectives have been introduced into interprofessional education to inform understanding of collaborative practice.

Gregson and her colleagues (1991) adopted a five-stage taxonomy from Armitage (1983) - isolation, encounter, communication, partial collaboration and full collaboration - to analyse degrees of collaboration in primary care. Critical variables, they suggested, were physical proximity, social proximity and positive motivation. Collaboration, they said, was a fuzzy term, while teamwork had become a linguistic tool employed in ways that obscured the variety of its meanings.

Ovretveit (1996) selected five characteristics to describe teams - degree of integration, extent of collective responsibility, membership, client pathway and decision-making, and management structures. West and Field (1995) introduced perspectives from organisational psychology to understand processes in teamwork – problem solving, decision making and team building - as well as personality factors (see also West and Pillinger, 1996; West and Slater, 1996). In the United States, Drinka and her colleagues demonstrated how different behavioural types affected performance in teams (Drinka et al, 1996; Drinka and Clark, 2000), while Schmitt (2000) contributed a wide-ranging critique of evaluations of teamwork in health care.

Networking may more aptly describe collaboration across agencies and working settings, although the notion is less defined and less tested than team working. But Engestrom questioned whether many collaborative activities fit standard definitions of team working or networking, as commonly understood within relatively stable structures. Given that many working relationships were constantly changing, they might be described more accurately as “knotworking” - tying, untying and retying otherwise separate threads of activity, which could not be reduced to any specific individual or fixed organisational entity as the centre of control. The centre did not hold. The locus of initiative changed from moment to moment. The knot needed to be made the focus of analysis (Engestrom, 1999a).

This metaphor draws upon “activity theory” and “expansive learning” (Engestrom, 1999b&c). The latter, said Engestrom, challenged the proposition that acquisition of knowledge or skill was stable and well defined in the hands of a competent teacher. It recognised that people and organisations learned all the time in ways that were neither stable nor predetermined. Expansive visibilization was the processes by which work was made visible in both linear and socio-spatial dimensions using a cyclical model (c.f. Cable, page 17).

Systems, cooperation and social exchange

General systems theory (Bertalanffy, 1972) is one of three introduced by Loxley (1997) to help understand collaborative practice. It shifts perception from separate parts to processes of interaction through which they can be related. The whole is more than the sum of its parts, the combined benefits of intervention by the professions more than their separate contributions. The same goals can be achieved from different starting points either by health or social interventions (Clare and Corney, 1982). Systems thinking, said Loxley, informs the bio-psycho-social model (Engel, 1977) in physical and psychiatric care and, in interprofessional work, family therapy and behaviour modification.

Co-operation theory, said Loxley, seeks to establish the conditions that make co-operation possible between self-interested parties to make the optimum choice of strategy between conflicting interests to ensure the survival of the species (Axelrod, 1984). It assumes that the parties will co-operate for their own benefit and mutual gain. It carries the implication that the client should be an active, not passive, participant. Ideas from this theory can be found in the taxonomy of collaboration formulated by Gregson and her colleagues (Gregson et al, 1991).

Social exchange theory, said Loxley, holds that exchange is more than barter. It carries meaning beyond market value - reciprocity, obligation, indebtedness, self-interest and calculations of cost and benefit, all of which help in understanding collaboration as a medium of exchange that is more than co-operation.

Psychodynamic perspective

Understanding of organisational and group behaviour associated with Bion (Obholzer, 1994a&b) and developed by the Tavistock Centre and Institute has been introduced into interprofessional education.

Psychodynamic theory contributes insights into ways in which anxiety and stress result in rigid and defensive behaviour liable to impede collaboration when it is most needed. Recent work has underlined the relationship between 'task' and 'culture' in organisational life, i.e. the idea that the nature of an organisation's task profoundly influences the culture that forms and prevails within it (Hinshelwood, 2001). It can be discerned in working environments in health and social care, as clinical psychologists found when teaching of psychotherapy to junior doctors by clinical psychologists (Blackwell and Rimmer-Yehudai, 2001), but is often easiest to identify in high stress working environments such as acute or community-based psychiatry (Hinshelwood, 1998).

Hornby (1983 & 1993) explored how agency boundaries are protected when practitioners face anxiety and uncertainty about their capacity to cope with clients' needs as much as by suspicion entertained about the practice of their opposite numbers. Anxiety and conflict reinforces "socially organised defences" in the working environment which find expression in adherence to administrative and technical procedures, establishing attitudes, roles and relationships (Jacques, 1951 & 1955; Menzies Lyth, 1970). Anxiety was also central to the study by Woodhouse and Pengelly (1991) of the nature of working partnerships between practitioners working with the same clients with particular reference to conscious and unconscious interactive processes in marital counselling in a transference relationship where practitioners, like partners, become the objects of projection.

Professionalisation

Carrier and Kendall encapsulated the whole in a critique of the professionalisation process (Carrier and Kendall, 1995 citing Evetts, 1999; Freidson and Krause, 1996). Professionalisation, they said, was positive when driven by concern to improve service to clients, negative when driven by pursuit of privilege underwritten by questionable claims to exclusive expertise. Motives were mixed – to provide service and use knowledge for economic gain. Esoteric knowledge and social distance reinforced virtuoso roles and impeded collaboration. From the left the professions were represented as middle-class or, worse, as integral parts of class dominance and inequality, from the right as conspiring to escape the liberating forces of the free market.

Formulating a theoretical framework

Diverse theoretical perspectives have been introduced into interprofessional education from a range of academic disciplines, in much the same way as diverse practice perspectives from a range of practice professions.

A general theory of interprofessional education may one day take shape. Meanwhile, its components may be identified thus:

the application of principles of adult learning to interactive, group-based learning that relates collaborative learning to collaborative practice within a coherent rationale informed by understanding of interpersonal, group, inter-group, organisational and inter-organisational relations and processes of professionalisation.

6. Parts and Players

As conceived, the chief stakeholders in interprofessional education were the professions, whose needs to understand each other better were central. They remain the key players, but experience warns against a model of interprofessional education that may be too inward looking. That danger has been countered by moves towards a practice-led and patient-centred model where relationships between the professions are addressed in the context of problems to be resolved, changes to be made and improvements to be gained.

Patients and clients

Much lip service has been paid to involving patients and clients, or “service users”, as co-participants and in the design, delivery and evaluation of professional and interprofessional education, but reported examples are few. Professional education stands accused by Beresford and Trevillion (1995) of discrimination against service users and carers by excluding them as trainers and practitioners. They offer a systematic approach to involve them in community care. Barnes and her colleagues (2000b) break new ground in their evaluation of ways in which services users and carers were involved in designing a programme and its evaluation. The UKCC (2001b) asserts that the time has come to write patient participation into the definition of interprofessional education.

Professions

The professional mix differs, depending upon the field in which collaboration is deemed to be necessary. Child protection, for example, includes police officers and schoolteachers as much as health visitors, GPs, paediatricians and social workers, mental health psychologists as much as nurses, psychiatrists and social workers, and juvenile justice probation officers and youth workers. Clergy, community workers, housing officers and lawyers are just some of the other professions involved as occasion demands.

A working boundary must, however, be drawn (in reviews such as this) lest the subject becomes unmanageable. One criterion is the inclusion of at least one of a number of named health and social care profession.

Evaluations of interprofessional education frequently report differences between the participant professions in attitude towards each other and to the programme. This, however, tells us nothing about attitudes towards interprofessional education in general held by those professions. In the absence of systematic evidence, it seems reasonable to assume that such attitudes differ as much within as between professions.

Suggestions that doctors and medical students are reluctant joiners are not born out by the facts. Two national surveys found that they were well represented relative to their overall numbers (Shakespeare et al, 1989; Barr and Waterton, 1996). A more searching analysis might find them engaged more often in work-based programmes, in settings where they are in positions of leadership; less often in university-based programmes, especially those in new universities where they have not studied previously. Some may also be discouraged from signing up for such programmes if they anticipate being a small minority and being expected to learn on equal terms with others during a time when their profession is especially under stress.

Nurses comprise the single largest groups of participants and may have most to gain at a time when their roles are being expanded. Social workers have also been well represented relative to their overall numbers, but it would be timely to check whether this is being sustained as a percentage as interprofessional education expands. The allied health professions (for reasons explained above) are most often involved in programmes with each other. So too are complementary therapists. Dentists and pharmacists are least likely to be involved (Shakespeare et al, 1989; Barr and Waterton, 1996), but keen to be if organisational constraints can be obviated (Owens et al, 1999).

Professional institutions

Royal Colleges and other professional institutions differ in their commitment to interprofessional education. Support from the Royal College of General Practitioners has been noteworthy (see page 10), as has that from Royal Colleges and professional associations for nursing, midwifery, service management and social work.

Support from such institutions has widened markedly during the past year following the formation of the 'Learning for Partnership Network'. This brings together representatives of Royal Colleges, other professional associations, validating bodies and training organisations at UK and national level to maintain open channels of communication on matters interprofessional and to engage in joint activities, working closely with CAIPE. Further information can be found on the CAIPE website (www.caipe.org.uk).

Validating bodies

Universities seeking approval for interprofessional programmes have been known to complain that they must satisfy different and sometimes incompatible requirements made by different validating bodies, while unresolved differences between officers get played out during the approval process. Whatever the substance behind these complaints, some validating bodies, notably for social work and nursing, took steps to draw up agreements (see, for example, GNCs/CCETSW, 1982&1983).

Universities

From the university perspective, combining professions in the same programmes may have had more to do in the early days with rationalising the use of resources, widening student choice and enlarging market share (Barr, 1994). But they are increasingly attuned to the need for collaborative practice in response to greater control of funding by employers through Workforce Development Confederations and partnerships with many of them.

Employing agencies

While interprofessional collaboration is clearly important to employing agencies, they invariably put it in the wider context of collaboration between occupational groups and between organisation (Barr, 1994), to which interprofessional education has increasingly responded, and workforce planning as discussed at the beginning of this paper. Agencies, not universities, are the major providers of work based interprofessional education whether continuing professional development or practice learning for university programmes.

7. Surveys and Reviews

Three UK surveys

In the first of two surveys for CAIPE, Shakespeare et al. (1989) found 695 examples of interprofessional education in Great Britain. Only 2% were at undergraduate level, 18% during post qualifying training and 83% during continuing professional development. Most were brief. Over half lasted less than a day, over a quarter between two and four days, leaving very few that were longer. Topics covered included child abuse, teamwork, AIDS, mental health and learning disabilities.

The second survey by Barr and Waterton (1996) was designed, in part, to replicate the first, but this was frustrated by a lower response rate. It found 455 examples of interprofessional education in the UK. Three quarters of these were at the postqualifying stage. Most were two to five days long, but a third lasted less than two days. Topics covered were life stages from maternity to palliative care, chronic illnesses, collaboration, community care, counselling, disabilities, education and training, ethics, management and mental health. Most were instigated and run jointly by Health Authorities or Trusts in association with either colleges or universities or local authorities. Participants per initiative ranged from eight to fifty. Community nursing groups made up the largest category followed by medicine, professions allied to medicine and social work in that order. Learning was assessed in over half of the 200 initiatives lasting more than two days, almost always individually. Satisfactory completion often carried credit towards certificates, diplomas and degrees. Nine tenths of respondents reported that their initiatives had been evaluated, nearly half involving an independent assessor, but only a quarter had been written up and even fewer published.

These surveys solicited information from respondents thought likely to know of interprofessional education initiatives. Neither canvassed all relevant university departments and training agencies, which would have been impracticable with the resources available. Each painted an illuminating

picture of interprofessional education, but was unable to estimate the overall incidence of interprofessional education, in view of the methodological constraints. Examples reported were mostly freestanding interprofessional education. Interprofessional learning woven into professional education or during everyday working could not easily be picked up.

The CVCP reported in 1995 that 54 of 77 higher education institutions with courses for health professions offered teaching and learning across professions, 30 at both undergraduate and postgraduate level, 13 at undergraduate level and 11 at postgraduate level. Twenty-four institutions had plans to expand shared teaching and learning, many in response directly or indirectly to the expectations of NHS purchasers. Twenty institutions were influenced by the need to prepare students for teamwork. This was supported frequently by statements that shared teaching and learning developed understanding of, and respect for, the work of other professional groups, broke down barriers and improved communication. Nine were planning modules in interprofessional skills including communications, which brought them within the scope of interprofessional education as defined in this paper. Twenty-five regarded shared teaching and learning as more cost effective, but others the reverse. Problems reported included time tabling; reconciling requirements of professional bodies, different abilities and academic levels; large classes and lecture theatres; and clinical placements. Joint validation had proved to be problematic, which made interprofessional education easier at the post-registration than pre-registration stage. But seven institutions made positive comments about the attitude of relevant professional bodies (CVCP, HPC/97/5).

Two local surveys

Shaw (1995) followed up shared learning reported in the first CAIPE survey in two English counties and compared it with the use made of such learning by 240 service units. Sustained commitment to such learning was impressive, but the difference between provision and perceived use was stark. Much of what was called shared learning by providers seemed not to be recognised as such by service agencies, even though two or more professions took part. Many were better described as common learning emphasising acquisition of information rather than interactive learning emphasising learning about each other.

Owens et al (1999) administered a postal survey to over two thousand practitioners from 24 health professions in Devon to ascertain the number of occasions during 1995/96 when they had taken part in continuing professional education or training events where two or more health professions were present together. Nearly three quarters (73%) reported that they had been involved in such education or training during the specified period, but the percentage from each profession varied widely. Health visitors most often reported participation in such education (94%), with other nursing groups also ranking high – school nurses (86%), district nurses (86%), practice nurses (85%), community psychiatric nurses (81%), midwives (79%) and hospital nurses (74%). Lowest participation rates were reported for dentists (25%) and pharmacists (22%).

Less than a quarter of all respondents thought that learning with members of their own profession alone was more worthwhile than learning with other professions, while three quarters thought that there should be more opportunities for such learning. No attempt was made to isolate occasions when learning together constituted interprofessional education as defined in this review.

Six UK reviews

Shaw's survey was one of three parts of a review of "shared learning" conducted by the University of Nottingham for CAIPE. Barr (1994) interviewed sixty opinion leaders. Against a background of competing agendas, he traced trends in education and service agencies and their

impact on shared qualifying and post-qualifying studies. Priorities that emerged included the need to involve service users in planning, teaching, assessing and monitoring courses, to encourage reflective and interactive learning and to build in common and comparative learning. Barr and Shaw (1995) searched the literature for evaluations of shared learning. They found 19 between 1984 and 1994, summarising each with a commentary.

The Department of Health, the Welsh Office, the ENB and the NHS Executive each commissioned a review with a similar brief.

- The Department of Health commissioned the Scottish Council for Research in Education with the universities of Dundee and East Anglia to ascertain the extent of “multidisciplinary education” throughout the UK, perceptions of it and factors that facilitated or inhibited its development.
- The Welsh Office commissioned CAIPE in association with City University to identify the way forward for interprofessional education in Wales based upon a review of current interprofessional education activity and an analysis of factors that promoted or impeded effectiveness.
- The English National Board for Nursing, Midwifery and Health Visiting (ENB) commissioned Brighton University to map the extent of “shared learning”, analyse factors influencing the roles of nurses, midwives and health visitors in teams, evaluate outcomes of learning in relation to effectiveness in teams and identify implications for pre- and post-registration education.
- The NHS Executive commissioned Tope to review interprofessional education programmes in the South West of England.

Pirrie and her colleagues undertook the study for the Department of Health (Pirrie et al. 1997, 1998a, 1998b). They employed qualitative methods to explore perceptions of “multidisciplinary education” in health care. Interviews were conducted with organisers and students from ten interprofessional courses and practitioners in two contrasting settings. Both teachers and students reportedly found it difficult to hold the tension between retaining unique areas of skill and knowledge, on the one hand, and sharing overlapping areas of knowledge and skill, on the other. Moving nursing into higher education had encouraged professional aspirations thought to run counter to the integration of learning with other professions. The breaking down of barriers was not universally welcomed.

Nevertheless, many of the course organisers interviewed saw a direct correlation between a satisfactory experience of learning with other professions and working together effectively as a team. Evidence from the study suggested that “multidisciplinary education” enhanced personal and professional confidence, promoted mutual understanding between professions, facilitated intra- and inter-professional communication, and encouraged reflective practice. Respondents thought, on balance, that such education had more impact at the post-registration than the pre-registration stage. Logistical factors inhibited multidisciplinary courses, especially at the pre-registration stage. Initiatives were often ad hoc. An “overarching strategic vision” was critical to sustain developments in the long-term.

CAIPE and City University undertook the study for the Welsh Office in four stages: the identification of plans for interprofessional education; an analysis of the perceived effectiveness of interprofessional courses; issues affecting students and staff; and testing options for future development. Methods included a questionnaire to NHS Trusts, social services departments and CAIPE members to identify interprofessional courses. Seven case studies of interprofessional programmes were based upon analyses of records, interviews and focus groups. Courses included

were anonymised by prior agreement. Findings focused upon ways to improve the delivery of interprofessional education with calls for longitudinal research to evaluate outcomes (Freeth et al, 1998; Tope, 1998).

Miller and her colleagues undertook the study for the ENB. Data were collected from case studies of clinical teams, surveys of higher education institutions with shared learning and interviews with Trust managers. Whereas the above studies focused upon interprofessional education, this one focused upon collaboration in practice and its implications for such education. The research found that “very little multiprofessional education in universities addresses interprofessional issues”. Most was not designed for that purpose. Common curricula were established to reduce duplication, as opposed to utilizing and valuing professional differences, to inform collaborative working (Miller et al. 1999). Unlike Pirrie and her colleagues, Miller and her colleagues stressed the importance of interprofessional education during pre-registration courses to prepare students to work in teams.

Tope (1999 and 2001) reviewed seventeen interprofessional education courses in nine projects in South West England for the NHS Executive. Courses were university based, all but one being for qualified health and social care professionals. Duration ranged from less than a day up to three years part-time. Evaluation concentrated upon structure, content and recruitment rather than outcomes.

Research methods included analyses of curricula, development of course profiles, interviews with project leaders, course directors and student groups, and questionnaires administered to practitioners and their patients. Whilst most teachers and students thought that the courses had “achieved excellent results”, there were problems in recruiting enough students to sustain viable courses. Most were nurses, midwives and health visitors. This limited scope for interprofessional learning.

The Standing Committee on Postgraduate Medical and Dental Education (SCOPME, 1999) convened a working party to conduct a three-stage review in an attempt to answer at least some of the most urgent questions about “multiprofessional education”. During the first stage, the working party invited comments on the task in writing, orally and during two workshops. During the second stage, it distributed some 3,500 copies of a working paper with an accompanying questionnaire to which some 400 responded. During the third stage, it researched three examples of multiprofessional learning and working.

The outcome was definition of multiprofessionalism as “a team or group of individuals from different disciplines with different and complementary skills, shared values, common aims and objectives”, putting the emphasis upon the shared values. Learning multiprofessionally took place through working multiprofessionally. The two could not be separated. The working party had been told that effective multiprofessionalism would be inhibited by lack of specific instructions in, and assessment of, skills, but concluded that this was unfounded. Autonomy in a climate of equity and mutual respect would, according to the working party, enable practitioners to develop their own ways of effective working and learning together.

Five systematic searches of the literature

The Interprofessional Education Joint Evaluation Team (JET)⁵ has completed one worldwide review and is well advanced with a second. Its self-appointed task is to establish, so far as practicable, the evidence base for interprofessional education from secondary sources.

The first review has attracted most attention so far, but produced least. It was conducted under the auspices of The Cochrane Collaboration and confined to evaluations of interprofessional education based upon Randomised Controlled Trials, Controlled Before and After Studies or Interrupted Time Series Studies and outcomes that directly affected the organisation and delivery of care for patients. None were found that met both criteria after an exhaustive search of Medline and CINAHL, but the team was at pains to make plain that absence of evidence that interprofessional education ‘worked’ must not be taken to mean that it does not work (Zwarenstein et al. 1999 and 2000).

Evaluations were, however, coming to JET’s attention that, albeit falling short of the Cochrane criteria, shed light on the relationship between process and outcome in interprofessional education. JET decided therefore to conduct a second review taking into account a wider range of research methodologies – qualitative and quantitative – and a continuum of outcomes developed from work by Kirkpatrick (1967).

These were:

- Learners’ reactions
- Modification of attitudes/perceptions
- Acquisition of knowledge/skills
- Changes in individual behaviour
- Changes in organisational behaviour
- Benefits to patients

(Barr et al. 1999).

An exhaustive search of Medline from beginning to end (1968 to 1999) found 3,372 abstracts that seemed to be relevant, of which 282 articles were selected for systematic evaluation as a result of working in pairs with built-in quality checks. Of these, 163 were included in the sample. A similar re-run of CINAHL is in progress. Other databases will also be searched.

Preferred methodologies were before and after studies or simple follow-up studies employing quantitative measures. Control groups were unusual and randomised controlled trials absent with two exceptions. Evaluations of the learning process employed qualitative methods, but they were relatively few and the methodology relatively underdeveloped. Presentation often left much to be desired making it hard to relate findings to learning experience. Too often JET had to reject evaluations for lack of adequate information, even though access to original data might have justified inclusion.

Preliminary findings provide empirical confirmation of the typology suggested by Barr (1996) (see page 32). The most telling highlights differences in outcome in relation to location. Positive outcomes reported from evaluations of interprofessional education based in higher education

⁵ The group for the Cochrane Review comprised Dr Merrick Zwarenstein of the South African Medical Research Council, Jo Atkins and Dr Marilyn Hammick from Oxford Brookes University, Scott Reeves from City University, and Professor Hugh Barr and Dr Ivan Koppel from the University of Westminster. The Group for the two subsequent reviews included Dr Della Freeth of City University. Dr Zwarenstein and Jo Atkins stood down.

were overwhelmingly reactions to the learning experience, changes in attitude or perception and the acquisition of knowledge and/or skills. Positive outcomes reported from work-based interprofessional education also included changes in the organisation of practice and effects on patients or clients.

Programmes invariably employed interactive learning methods, but reports provided too little information to relate them to the classification suggested in this paper, still less to evaluate their relative effectiveness.

Nearly all of the evaluations included were from the United States (90%). Application of findings from US studies to the UK calls for caution unless and until sufficient similarity can be demonstrated between the form and purpose of interprofessional education. A third review conducted by JET is helpful here. Commissioned by the British Educational Research Association, it comprised a critical analysis of methodologies to evaluate 19 UK interprofessional education programmes with a summary of each (Barr et al, 2001). Questions addressed, methodologies employed and outcomes reported were similar to those in the United States.

Reeves (forthcoming) conducted a related review of data on the effects of interprofessional education on staff involved in the care of adults with mental health problems. He searched Medline, CINAHL and Psychlit. Nineteen papers qualified for inclusion, but quality was generally poor.

Cooper and her colleagues (Cooper et al 2001) conducted a similar search of interprofessional education at undergraduate level. They found 141 relevant research studies, 30 of which were included in their analysis. The researchers concluded that outcomes from “interdisciplinary education” primarily related to changes in knowledge, skills, attitudes and beliefs. Effects upon professional practice were not discernable. This confirms findings by JET.

The emerging evidence suggests that interprofessional education can, in favourable circumstances and in different ways, contribute to improving collaboration in practice. Caution must, however be exercised given the small number of evaluations so far included and bias in the selection of articles for publication by journals and criteria for the inclusion of journals in databases.

8. Unity and Diversity

Readers will be painfully aware by now that they have stumbled into a semantic quagmire (Leathard, 1994) where terms are used interchangeably or with seemingly precise but strictly private meanings. Academics marry prefixes (inter-, multi-, cross-, trans-) with adjectives (professional and disciplinary) and nouns (education, training, learning and studies) in seemingly endless permutations. Policy makers and practitioners prefer more prosaic (and less elitist?) terms such as “joint training”, “shared learning” or “common studies”.

Activists in the UK have generally adopted “interprofessional education” to describe learning designed to improve collaborative practice. Multiprofessional education is, however, preferred by those universities which take their lead from the World Health Organization (WHO, 1987) and link with the Continental European tradition where that term has general currency (see definitions on page 6).

Steps or characteristics

Harden (1999) suggested eleven steps from isolated to integrated learning between professions, perhaps better treated as characteristics to be combined and introduced in different orders rather than along a continuum.

They may be summarised as follows:

1. Each profession organises its own teaching unaware of what is taught by other professions
 2. Teachers are aware of what is covered by professions, but with no formal contact
 3. Consultation about teaching programmes between teachers from different professions
 4. Teaching relating to the work of other professions is included
 5. Time tabling is arranged to permit to schedule the same learning experiences
 6. Joint teaching in part of otherwise separate programmes
 7. Sessions scheduled for multiprofessional consideration of topics
 8. Multiprofessional and uni-professional teaching runs side by side
 9. The programme emphasises multiprofessional learning, each professional looking at themes from its perspective
 10. Each profession looks at the subject from its own perspective and that of the other professions
- Multiprofessional education is based upon experience of the real world

Dimensions of interprofessional learning

Barr (1996) argues that interprofessional education has many dimensions:

Implicit or explicit

Interprofessional learning probably occurs unrecognised during everyday work when practitioners from different professions communicate in one-to-one exchange, during committees, team meetings and case conferences, and so on. It may also occur during multiprofessional education even though the learning is not designed to further collaboration. Such implicit learning may be consolidated and verified when it is made explicit, although that may be the exception. Explicit interprofessional learning more often occurs during courses, workshops and conferences designed to promote collaboration.

Discrete or integrated

While interprofessional education may be freestanding, i.e. designed exclusively to improve the quality of care through better collaboration, it may also be integrated into multiprofessional or uni-professional education as a dimension or emphasis. The issue then becomes compatibility of aims with reference to the design of programmes, including content and learning methods.

All or part

Interprofessional education may comprise all or part of a programme. It can never be more than part of an undergraduate programme (allowing for profession specific requirements), but may characterise the whole of a post-qualifying or continuing professional development programme.

General or particular

Focusing upon collaboration for particular user group, practice method or work setting, or more broad-based.

Positive or negative

Learning between professions may be positive, improving relationships and laying foundations for effective collaboration in practice, as interprofessional education sets out to do, or negative, reinforcing prejudices, stereotypes and misunderstandings, which sometimes happens despite best laid plans.

Individual or collective

Interprofessional education may focus upon individual learning and assessment or collective learning where participants undertake joint assignments, for example, analysing problems, improving services and effecting organisational change. Where such learning is assessed, individual contributions may need to be distinguished from corporate contributions.

Work-based or college-based

Interprofessional learning may occur in the workplace, informally or during in-house training, in college or a combination of the two. College-based interprofessional education typically includes practice placements or work-based assignments as the test bed for collaboration.

Shorter or longer

Interprofessional education may be brief – during a working communication, an agenda item for a team meeting or a lunchtime gathering – or extended during a course lasting weeks, months or years.

Sooner or later

Interprofessional education may be introduced at any stage in undergraduate education or subsequently at any stage throughout lifelong learning.

Common or comparative

Curricula may be built around learning needs deemed to be common across the professions included, or comparative learning to facilitate understanding about respective roles and responsibilities, powers and duties, and perspectives and perceptions to inform collaboration in practice.

Interactive or didactic

Teachers typically introduce interactive learning methods in small groups to enable the different professions to explain themselves to each other and to exchange experience, using didactic methods sparingly.

A provisional typology

Barr (1996) took these dimensions into account in formulating a provisional typology of interprofessional education. This related objectives, content and learning methods to the stage which participants have reached in their professional education, the length and location of the learning, the number of professions included and the field of practice.

He floated the following propositions.

The earlier the interprofessional learning in participants' experience, the less they are in a position to share and the more the teacher needs to provide. The later the learning, the more the participants would be able to set their own agenda and call upon their own resources.

Objectives for interprofessional education before qualification might be preventive - mitigating the risk of developing prejudices and negative stereotypes, and preparatory, laying foundations for subsequent interprofessional learning and practice. Objectives for interprofessional learning after qualification might be more ambitious – effecting change and improving services.

The shorter the initiatives, the more selective the content would need to be and the more intensive the learning methods. The longer the initiative, the more diverse could be the content and the less intensive could be the interactive learning methods.

Work-based interprofessional education would be more task-specific, with more immediate impact on practice and more direct benefit to patients than university-based learning, which might be more wide-ranging and more reflective, impact on practice being more diffuse and longer-term.

The smaller the number of professions involved, the greater would be the opportunity to focus upon their roles and relationships; the larger the number, the greater the opportunity to develop a rounded view of a field of practice from multiple perspectives.

Parsell et al. (1998) (citing Loxley, 1980 and Funnell et al, 1993) suggest that factors favouring effective interprofessional education are:

- balanced membership between professions
- an attractive programme for the participants
- pre-event information
- clear learning outcomes
- interactive learning methods
- a physically and psychologically comfortable learning environment

All but the first of these should be hallmarks of any educational programme, but the need for balanced membership, interactive methods and comfortable surroundings merit reinforcement in interprofessional learning.

Principles of interprofessional education (CAIPE, 1996; Barr, 1997) call for revision in the light of the above discussion along the following lines.

Interprofessional education:

1. ***Puts service users at the centre***
Involve patients and clients in designing, teaching, participating and assessing programmes.
2. ***Promotes collaboration***
Apply learning to collaborative practice, collaboration within and between professions, within and between organisations and with communities, service users and their carers.
3. ***Reconciles competing objectives***
Harmonise, so far as practicable, the aims and methods of interprofessional education with those for multiprofessional and uni-professional education.
4. ***Reinforces collaborative competence***
Reach beyond modification of attitudes and securing common knowledge bases to ensure competence for collaborative practice (see pages 15 to 18).
5. ***Relates collaboration in learning and practice within a coherent rationale***
Give reasons why interprofessional learning improves interprofessional practice grounded in theory.

6. ***Incorporates interprofessional values***
Be inclusive, equitable, egalitarian, open, humble, mutual, generous and reciprocal.
7. ***Complement common with comparative learning***
Include comparative studies to facilitate learning from and about each other, to enhance understanding about respective roles and responsibilities and inform co-working.
8. ***Employs a repertoire of interactive learning methods***
Avoid over-reliance on any one method.
9. ***Counts towards qualifications***
Assess interprofessional education for awards to add value.
10. ***Evaluates programmes***
Subject interprofessional education to systematic approval, validation and research.
11. ***Disseminates findings***
Inform other developments in interprofessional education.

9. Directions and Development

The following priorities emerge from this review.

Securing the evidence base

The existing evidence base will soon be in place as JET completes its second systematic review of worldwide sources, exposes findings to critical appraisal by fellow researchers, enlists their help in filling gaps and formulates methodology for future evaluations.

Setting and regulating standards

CAIPE is preparing a statement of standards in terms designed to be helpful to confederations, universities and the QAA variously engaged in funding, approving, validating, monitoring and reviewing interprofessional education. Benchmarking is being taken into account in formulating outcome criteria and good practices in formulating process criteria. CAIPE is also accrediting experienced interprofessional teachers and trainers to advise on the development of programmes and to serve on committees, panels and reviews.

Evaluating selected programmes

Most programmes are already subject to quality control, assurance and improvement as interprofessional education enters the mainstream. Only some can be subject to more rigorous evaluation, given resource implications. Priority might well be given to those responding to new needs, employing new learning methods, introducing new professions or in new settings. JET is preparing guidelines for prospective evaluation, based upon a critique of methodologies employed in previous programmes included in its reviews.

A further tranche of funds promised by the Department of Health is welcome, not simply to evaluate selected programmes one-off, but to embark upon a coordinated strategy using the best available expertise to support evaluation teams for those programmes, to ensure cross-fertilisation of learning along the way and collate findings.

Comparing experience of interprofessional education in different fields

Despite opportunities created by organisations like CAIPE, there are few occasions when teachers engaged in different fields of interprofessional education meet to compare experience. Yet different traditions, for example, in child protection, primary care and learning difficulties, might gain much from such encounters.

Preparing the next generation of teachers

The number of teachers engaged in interprofessional education is increasing rapidly. More therefore needs to be done, not simply to hand on past experience, but to demonstrate how principles of adult learning can be developed and applied to interprofessional learning informed by the evidence and alive to changes in practice.

Preparation for experienced teachers might well be modeled upon workshops run by CAIPE. These introduce teachers and trainers to the rationale for interprofessional education to design, deliver and evaluate programmes. Participants, singly or with colleagues, then work on their proposals in their university or service agency, reporting progress at a recall day and planning further developmental work with the support of tutors and fellow participants. A learning pack is used before, during, between and after the workshops for individual and group study.

Similar learning might well be woven into the postgraduate certificate programmes for newly appointed teachers in health, social care and related fields to provide an interprofessional dimension.

National Service Frameworks

Interprofessional education needs to be informed by evidence about best collaborative practice enshrined in National Service Frameworks (NSFs) and complemented by findings from clinical governance. Account is already being taken of NSF reports on the care of old people (Department of Health, 2001) and the mental health (1999) and similar documents (e.g. Sainsbury, 1997). A comparative critique is needed of NSF reports, as they come on stream to determine their cumulative implications for professional and interprofessional education.

Undergraduate interprofessional education

Models need to be devised and tested for the introduction of interprofessional dimensions, emphases or strands into professional programmes. A major constraint may be the development of placements exemplifying good collaborative practice. Another is the feasibility of including interactive learning in small groups for large numbers of students within budgetary constraints. Without this, interprofessional education may fail to contribute to better collaboration. Peer group learning is being suggested to make small groups practicable, while containing costs and claims on staff time, but may need to be preceded by teacher-led group learning. The relative effectiveness of teacher-led and student-led learning calls for comparative evaluation, taking into account different methods and different ways in which staff can stimulate, steer and support learning directly and indirectly.

Continuing interprofessional development in the workplace

While undergraduate interprofessional learning lies primarily within the domain of universities, many employers see continuing interprofessional development as their province. The evidence suggests interprofessional learning in the workplace does more to effect change and improve services, while some university-based postgraduate programmes fail to recruit viable numbers (Tope, 1999 and 2001).

There is a danger that the split between university-based and work-based interprofessional learning will widen. Universities may retain responsibility for programmes catering for workers wanting to study outside their workplace, if necessary in their own time at their own expense with an eye to career progression, employers taking responsibility for continuing professional development.

Some universities may be content to concentrate upon making their distinctive contribution although their market share may shrink. Others are keen for their teachers to help design, deliver and evaluate work-based learning in partnership with employers supported by Workforce Development Confederations. If so, credibility depends upon teachers demonstrating their understanding of reforms in service delivery, implications for workforce and training strategies and the development of group and organisational learning as much as individual learning.

A continuum of learning

Formulation of a continuum of learning is overdue, interweaving professional, multiprofessional and interprofessional elements throughout lifelong learning in universities, the workplace and both. Only then can each element be designed to complement and reinforce the others and partnerships between employers and universities operate within a coherent framework.

The workforce and training agenda

Competing expectations of shared learning may be reconciled within that framework, including those in the workforce and training strategy (pages 6 to 8).

Meanwhile, the following observations may help. Collaboration involves give and take between colleagues from different professions as circumstance demands. Substitution goes further. It prescribes circumstances where one profession may undertake responsibilities normally reserved for another. Subject to agreement with the profession affected, substitution should encourage informal give and take in collaborative practice within predetermined limits. Without such agreement, collaboration may be jeopardised and interprofessional education made more difficult.

Agreements regarding substitution presuppose that members of the profession undertaking the additional responsibilities have received education assessed to a comparable level to that for the profession relinquishing those responsibilities. The same applies where qualification studies for one profession count towards qualification for another. It need not apply to learning intended to improve collaboration where appreciation of different levels of skill and knowledge attained by different professions may inform co-working.

Common studies designed to further substitution and accelerated career progression may also need to be more extensive than those designed to further collaboration, with the attendant risk that comparative studies deemed essential to learning for collaboration will be squeezed.

These complications do not arise when programmes are mounted exclusively to improve collaboration, but that is now the exception. It falls to teachers more often to reconcile different objectives in relation to structure, content, methods, standards and assessment.

Conclusion

Experience and evidence, like warp and weft, are woven into the unfinished fabric of interprofessional education. Broken threads, loose ends and frayed edges there are many, for which I take responsibility insofar as they may have been found in this paper, yet mindful of the current state of the art. For much remains to be done by the rising generation of teachers as they contribute from their experience, reading and research in the same spirit of mutual exchange and support that has come to characterise the interprofessional education movement and speaks volumes for the values that it espouses.

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Appendix

Benchmarking Statements

Statements for health care referring to collaboration between professions in health care say that each award holder should:

- Participate effectively in inter-professional and multi-agency approaches to health and social care where appropriate
- Recognise professional scope of practice and make referrals where appropriate
- Work, where appropriate, with other health and social care professionals and support staff and patients/clients/carers to maximise health outcomes
- Draw upon appropriate knowledge and skills in order to make professional judgements, recognising the limits of his/her practice
- Communicate effectively with patients/clients/carers and other relevant parties when providing care
- Assist other health care professionals --- in maximising health outcomes
- Contribute to the well-being and safety of all people in the workplace
- Show an understanding of his/her role within health and social care service
- Communicate effectively with the client/patient, (and his/her relatives/carers), group/community/population, about their health and social care needs
- Recognise the place and contribution of his/her assessment within the total health care profile/package, through effective communication with other members of the health and social care team
- Work with the client/patient, (and his/her relatives/carers), group/community/population, to consider the range of activities that are appropriate/feasible/acceptable, including the possibility of referral to other members of the health and social care team and agencies
- Plan care within the context of holistic health management and the contribution of others
- Educate others to enable them to influence the health behaviour of individuals and groups
- Motivate individuals and groups in order to improve awareness, learning and behaviour that contribute to healthy living
- Have effective skills in communicating information, advice, instruction and professional opinion to colleagues, patients, clients, their relatives and carers; and, where necessary, to groups of colleagues or clients

(QAA, 2001)

Comparable statements for social work say that graduates should:

- Recognise and work with powerful links between intra-personal and inter-personal factors and the wider social, legal, economic, political and cultural context of people's lives
- Work in a transparent and responsible way, balancing autonomy with complex, multiple and sometimes contradictory accountability
- Exercise authority within complex frameworks of accountability and ethical boundaries
- Negotiate goals and plans with others
- Implement plans through a variety of systematic processes
- Make effective contact with individuals and organisations for a range of objective
- Clarify and negotiate the purpose of such contacts and the boundaries
- Act co-operatively with others, liaising and negotiating across differences such as organisational and professional boundaries and differences of identity or language

- Develop effective helping relationships and partnerships with other individuals, groups and organisations that facilitate change
- Act with others to increase social justice
- Act within a framework of multiple accountability
- Challenge others when necessary, in ways that are most likely to produce positive outcomes

Understand:

- the relationship between agency policies, legal requirements and professional boundaries in shaping the nature of services provided in inter-disciplinary contexts and the issues associated with working across professional boundaries and with different disciplinary groups
- the current range and appropriateness of statutory, voluntary and private agencies providing community-based, day-care, residential and other services and the organisational systems inherent within these
- the significance of interrelationships with other social services, especially, education, housing, health, income maintenance and criminal justice
- factors and processes that facilitate effective inter-disciplinary, inter-professional and inter-agency collaboration and partnership

(QAA, 2000)

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