



**Developing Interprofessional Education in  
Health and Social Care Courses in the United Kingdom**

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**Developing Interprofessional Education  
in health and social care courses  
in the United Kingdom  
A Progress Report**

**Hugh Barr  
Marion Helme  
Lynda D'Avray**

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## Forewords

This report is an important contribution on a vital topic. As the 21<sup>st</sup> century progresses it becomes ever clearer that substantial changes in the education and training of professionals are required in order to meet the changing needs of the world's population. We see this both at the global and at the national level.

Powerful forces are bringing about change globally. We all recognise that political and economic power is shifting eastwards and that there are ever increasing connections and communications between the different countries and regions of the world. We can also see that in terms of health we are becoming more interdependent. We are vulnerable to the same global pandemics which can spread at the pace of air travel and to climate change and we depend on the same groups of health workers, medicines and knowledge base.

As countries grow richer they start to respond to the demands of their people for better healthcare and education. It is no surprise that India and China have both in recent years announced plans to develop national health systems that reach all their citizens and that many countries in Africa are doing the same. The *Arab Spring* has also led countries like Saudi Arabia to respond by improving healthcare and thereby improving stability and reducing the risk of rebellion in their territories. As these countries develop, however, they will not just copy western models of healthcare but create their own based on their own experiences and the best of the western tradition.

In Europe and America we built our health systems in the 20<sup>th</sup> Century to deal with the needs of the time. We created strong professions and robust systems which centred on hospitals and specialist knowledge and, in effect, created a self contained industry which had few links with other important determinants of health such as education, employment and the environment. The countries which are only now developing their health systems are better able to address the new needs of the 21st Century where non communicable diseases are fast becoming a global epidemic, where the behaviour of patients and the public are both part of the problem and part of the solution and where science and technology are offering new solutions. We can already see that many countries are creating systems which get rid of some of the barriers between health and other sectors, engage communities and train different groups of staff. We need, as I have argued elsewhere, to *Turn the World Upside Down* and learn from them.

Turning to the UK we now understand that the greatest demand placed on the NHS comes from people with long term conditions rather than acute ones. They need continuing help to look after themselves, manage intermittent crises and maintain their health. Despite many excellent examples to the contrary, the NHS is still a service that is geared more towards one-off episodes of treatment. It needs to change so as to adapt to the new reality and, most profoundly of all, we need to begin to treat the NHS as what it is – a part of the local infrastructure and services that we all rely on. It should not be seen as a completely separate activity or industry but part of the network of organisations and services locally that help elderly, disabled and sick people to get on with their lives, children to develop, our streets to be safe and our environment and workplaces clean and healthy.

Our systems and structures are geared towards the 20<sup>th</sup> Century world but so is the education and training of health and social care professionals. This, too, needs to be adapted to the 21<sup>st</sup> century as this Report argues so cogently.

It is now more important than ever to bring the education of health workers together both across the professions and with their colleagues in social care and other disciplines.

**Lord Nigel Crisp**

*Lord Crisp is an independent crossbench member of the House of Lords and works mainly on international development and global health. From 2000 to 2006, he was both Chief Executive of the NHS and Permanent Secretary of the UK Department of Health and led major reforms in the English health system*

As Director of the HEA Health Sciences and Practice Subject Centre I greatly value the contribution that this paper makes to the articulation of the development of Interprofessional Education in the UK since 1997; thus picking up the story where our previous Occasional paper (9) came to a close. The style is very readable and brings coherence to a field that is complex and, at times, rather messy. Learning and teaching are at the root of developing interprofessional facilitators and practitioners, translating research and transforming the applied reality. I believe the paper offers substantive arguments that will serve as a robust foundation on which to build IPE and collaborative practice so that services provided for individuals, families, and communities meet their needs efficiently and effectively. The reference list and bibliography provides an excellent source of pertinent literature and policy documents that set the current political and educational perspectives in the context of what has gone before. I would like to take this opportunity to express my gratitude to the authors, the reviewers and the Subject Centre team who have been very focused in preparing this text for publication. I hope you will find many things that are fascinating and/or helpful and will share your ideas and thoughts with your colleagues.

**Dr Margaret Sills**

**Director, Subject Centre for Health Sciences and Practice  
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## **Preface**

The turn of the Century was a watershed in the short history of interprofessional education (IPE) in the United Kingdom (UK) when the Labour government promoted “common learning” to be built in to the mainstream of pre-registration professional education for all the health and social care professions to help implement its modernisation strategy (Secretary of State for Health, 2000; Department of Health, 2004). The proposition was as seductive as it was simple: learning together would deliver not only a more collaborative but also a more flexible and more mobile workforce responsive to the exigencies of practice and the expectations of management. Reference to 30 years of IPE experience was conspicuous by its absence. The past was and past. New wine was not to be put in old bottles.

Interprofessional activists responded with difficulty as they struggled to reconcile government’s expectations with the interprofessional antecedents and searched for consensus between educational, professional and political perspectives within a coherent and credible framework. That is the story which we tell. It picks up where the previous historical review left off (Barr, 2007a) and revisits many of the issues raised as interprofessional activists engage with the changes ahead (Barr, 2002). The outcome is, however, more than a historical record of events during the past 15 years. It paves the way for another „chapter“ in the ongoing saga of IPE in the UK as newfound policies shape education and practice following a change of government. It is addressed to policy makers, managers, teachers and researchers who have travelled all or some of the same road to help them reappraise their experience, review the evidence, revisit the arguments and refocus; also to their colleagues who are relatively new to IPE to learn from others, obviate the need to reinvent the wheel and avoid some of the pitfalls.

Hugh Barr  
Marion Helme  
Lynda D’Avray

August 2011

## **Acknowledgements**

We have drawn on each other's and our own experience as interprofessional activists accustomed to working together on UK, European and international initiatives and those of colleagues with whom we have been fortunate to collaborate in the Centre for the Advancement of Interprofessional Education (CAIPE), the Higher Education Academy (HEA), the Journal of Interprofessional Care and at the universities of London (King's College and St George's), Kingston, Greenwich and Westminster, not forgetting countless other members of the interprofessional community at home and abroad who have enriched our understanding. We are indebted to them all.

## Boundaries and Definitions

We focus on IPE in the four countries of the UK – England, Scotland, Wales and Northern Ireland - whilst celebrating the contribution that interprofessional activists in each have made to its promotion and development worldwide. Priorities and policies determined by the Scottish Parliament, Welsh Assembly Government and Northern Ireland Executive differ in some measure from those for England in ways that we have been unable to take into account in a relatively short report which focuses on the unifying thrusts of interprofessional development throughout the UK.

We take CAIPE's IPE definition as our starting point:

“Occasions when two or more professions learn with, from and about each other to improve collaboration and quality of care” (CAIPE, 2002).

We refer throughout to „collaborative practice" rather than „interprofessional practice", as a more inclusive term which includes working relationships not only between professions but also between branches of the same profession, between professional, paraprofessional and non-professional personnel, and between organisations and practice settings.

We accord equal weight to IPE in university and practice, focusing on ways in which it has been introduced into uniprofessional and multiprofessional education. Reflecting the emphasis during the years under review, we concentrate on pre-registration IPE yet mindful of the implications for post-registration IPE as part of a continuum of professional and interprofessional learning.

We augment published sources by reference to the grey literature, access granted by the HEA and CAIPE to their records, whilst awaiting findings from a UK survey of pre-registration IPE being conducted at the Warwick Medical School with Jill Thistlethwaite and Georgia Leith as the second stage in this research programme and the preparation of case studies as the third stage.

1997 is our starting point, but the story takes off from 2000 onwards. From a historical perspective, 2010 would have been the natural cut-off point following the election of a new government, but that would have missed the opportunity to apply past experience to future prospects (Department of Health, 2010a).

## 1. Driving the Interprofessional Agenda

Long-standing, wide-ranging and mutually-reinforcing trends drove collaborative practice and IPE during the years under review, overlaid by the policies of successive governments. Professions continued to proliferate, as did specialties within them, in response to exponential growth in knowledge and technological advance. The network of potential relationships multiplied, rendering it impossible for any one profession to understand all the roles and powers of the others with whom it might be called upon to collaborate and heightening the risk of territorial disputes.

Professional „inflation“ accelerated. New nurses and social workers were to qualify as graduates (following in the footsteps of doctors and the allied health professions). Demarcations between professional roles and responsibilities became more blurred and more overlapping. Some professions extended their expertise, assumed greater responsibility and enhanced their academic credentials. Nursing, for example, developed extended and expanded roles while devolving less skilled tasks to assistants. If lessening status differentials between some professions augured well for improvements in mutual respect and collaboration in the long run, it could engender tension in the short run.

Practice continued to become more complex compounded by a cocktail of economic, social and demographic trends: extended life expectancy for people with chronic and disabling conditions reflected in the growing numbers of frail elderly people; attenuated family and community ties; diverse expectations and perceptions of health and health care in a multicultural society; and widening inequalities between rich and poor. By the end of the period under review, economic recession was affecting the lives of a growing number of individuals, families and communities to the detriment of their health and wellbeing (Townsend & Davidson 1979; Whitehead & Dahlgren 2007) and putting health and social care services under added pressure.

Interprofessional models of care proliferated as new treatments were introduced, for example, for cancer, cardiac disease, infertility, stroke, trauma, obesity and diabetes in rehabilitation, day surgery, out-patient, intermediate, community and hospice settings around care pathways and coordinated care management guided by practice protocols including National Service Frameworks (Department of Health 2002a). Growing problems associated with domestic violence, anti-social behaviour, mental ill-health and substance dependency demanded collaborations across health and social care, for example, in community mental health teams, children’s trusts, Sure Start and drug dependency units, while the threat of pandemics and the demographic time-bomb (Wanless, 2002) demanded joined-up thinking.

Rising consumer expectations from a better informed and media savvy public added further pressure. Laudable policies for patient empowerment, patient-centred care ([www.patientcenteredcare.net](http://www.patientcenteredcare.net)), user involvement and the notion of the „expert patient“ demanded better (and better-coordinated) care as the needs and expectations of individuals, families and communities multiplied beyond the capacity of any one profession to respond (Barr, Koppel, Reeves, Hammick & Freeth, 2005).

High profile enquiries revealing lapses in communication and collaboration, notably the untoward number of deaths during and following cardiac surgery for children in Bristol (Department of Health, 2001a), the death of two children resulting from sustained abuse in the same London Borough (Laming, 2003 & 2009) and failures in mental health care (Department of Health, 1994) drove home the continuing need to improve collaborative practice. A House of Commons Health Group report on patient safety concluded that there were “convincing arguments for interdisciplinary training to foster good teamwork skills across professional boundaries: those who work together should train together” (House of Commons Health Group Report, 2009; Pearson, Ashcroft & Buckle, 2009). The Department of Health commissioned the University of Salford to draw up a model of standards in relation to safeguarding children, which were “to be applicable to each occupational and professional group”. The report recommended a mandatory “core curriculum at each professional level and operational standards and competences for individuals and organisations including to consult, communicate and collaborate effectively with other practitioners” (Shardlow, Davis, Johnston, Long, Murphy & Race, 2004; Long et al., 2006).

The Children’s Workforce Network (2009 [www.childrensworkforce.org.uk](http://www.childrensworkforce.org.uk)) drew up a statement of values and principles for working with children and young people. Ongoing developments were coordinated by the HEA Subject Centre for Social Policy and Social Work working with academics and practitioners from disciplines concerned with children and young people. The outcomes included a knowledge review of IPE in working with children and recommendations concerning interprofessional learning (Oliver, 2009; Taylor et al., 2008; Burgess et al., 2008).

Inquiries following the murder of patients at the hands of Harold Shipman (Smith, 2005) confirmed the need not only for mutual support between professions but also mutual surveillance. Government seized the opportunity to review the regulation of medicine, strengthening lay participation and public accountability.

Regulatory bodies for allied health, nursing and midwifery, and social care had already been reconstituted, but retaining the same demarcations between their respective professional jurisdictions albeit with a welcome and growing recognition of the need for collaborative practice manifested in requirements for IPE (see chapter 6).

Whither collaboration? The Conservative governments of Margaret Thatcher and John Major had created internal markets in health and social care, arguing that they would deliver greater efficiency and effectiveness, but creating a climate in which collaborative practice seemed alien and pitching IPE against the odds. The Labour government espoused partnership. Competition continued, for example, within the first generation of the foundation hospitals, but collaboration was now „the order of the day“. IPE, it seemed, was working with the grain until congruence between government policy and the interprofessional agenda came under strain as the implications of modernisation became apparent. Collaboration remained government policy, but was now secondary to the development of a workforce more responsive to the exigencies of practice, prepared, if necessary, to override pre-ordained professional demarcations to redraw the occupational map.

Modernisation was set to re-emerge in a different guise under the Conservative and Liberal Democrat coalition with the promise to reinstate autonomous professional

practice free from bureaucratic constraints. Privatisation, personalisation and localisation had arrived: privatisation of some public provision; personalisation of care with self-managed budgets; and localisation of services. Group practice seemed set to gain ground, while practices - uniprofessional or interprofessional – presented new challenges for collaboration. So did the prospect of greater reliance on assistants and volunteers, reassigning roles, reorienting relationships and reinforcing localisation under the pressure of budgetary constraints. This much was becoming clear: there would be a renewed emphasis on joint working with a closer affinity to community and local unpaid workers than had been customary.

Regardless of the political ideology of the party in power, recurrent reorganisation exacerbated the problems it was intended to remedy, destabilising working relationships as it debilitated staff thrown on to the defensive and rendered less likely to collaborate when it was most needed. Redefining roles, redrawing boundaries, redistributing power and realigning status differentials risked igniting rivalry and tension between the professions, reaffirming the need for IPE to preserve and sometimes repair relationships.

Yet the occupational map was redrawn less than might have been expected, reflecting the power of professional institutions to preserve the status quo and awareness of the need to restrict title, preserve professional demarcations and specify responsibilities to improve patient safety in the face of tragedies like those cited above.

## 2. Promoting Interprofessional Education

The progress made in promoting and developing IPE would have been impossible had it not been for favourable trends in higher, vocational and professional education, which had been gathering pace over many years. Time, energy and money were being invested to improve teaching and learning. Outcome led requirements were freeing up curricula. Multidisciplinary research was paving the way for multiprofessional teaching and learning. Liberalisation of knowledge was being driven by arguments for open access, open learning and electronic publishing. Broader-based university courses were enlarging market share as they attracted students from a spectrum of disciplines made easier by modularisation, while work-based learning became an increasingly important and growing element in undergraduate education. Many and varied opportunities resulted to introduce interprofessional learning.

The Labour government put education and training at the heart of its workforce strategy for health and social care (Secretary of State for Health, 1997). The emphasis at first was on continuing professional development to reconcile two objectives: the legitimate aspirations of individual health professionals; and the needs and expectations of services and patients. Lifelong learning would attract, motivate and retain high calibre professionals, managers and other health care workers in an increasingly competitive labour market. Higher education providers and local education consortia (succeeded by Workforce Development Confederations and later incorporated into Strategic Health Authorities) would be responsible for devising innovative approaches to work-based learning (Department of Health, 1998a). The Chief Medical Officer for England proposed “practice professional development planning” (PPDP) in primary care, taking into account uniprofessional and multiprofessional learning needs to encourage team working, adaptability of professional roles (where appropriate) and whole practice development as a human resource for health care (Department of Health, 1998b). These proposals went with the grain for IPE activists, reinforcing their established emphasis on work-based interprofessional continuing development and balancing the needs of the worker and the organisation.

Why the emphasis switched so abruptly to pre-registration interprofessional studies from 2000 onwards is unclear. Post-registration and work-based interprofessional learning continued, but cast in the shadows by the government-led drive to promote pre-registration “common learning”. The NHS Plan stressed the importance of collaboration between the NHS, higher education providers and regulatory bodies to make basic training more flexible, grounded in a core curriculum for common foundation programmes to promote partnership at all levels and to ensure a seamless service of patient centred care including communications skills and NHS principles and organisation. Those programmes, it was envisaged, would promote: teamwork; partnership and collaboration between professions, between organisations and with patients; skill mix and flexible working between professions; opportunities to switch training pathways to expedite career progression; and new types of workers (Secretary of State for Health, 2000). The reforms would give front-line staff the opportunity to think and work differently to solve old problems in new ways to deliver the improvements set out in the Plan (Department of Health 2001b).

Successive reports reinforced the message. All universities should put “multi-disciplinary education” at the top of their agenda for all health professionals who should expect their education and training to include common learning at every stage during pre-registration courses in the classroom and practice, and throughout continuing professional development (Department of Health, 2001c). The NHS Executive and the Committee of Vice Chancellors and Principals (now Universities UK) drew up an agreement “to provide a long-term, stable basis for the relationship between the NHS and higher education, including a shared commitment to the expansion and development of IPE” (Universities UK, 2003).

By 2004 the Department of Health felt confident in asserting that attitudes towards more flexible working were changing with “a significant appetite for developing new roles in the services”. In future, education, training and learning would be based on transferable, computer-based learning modules (anticipating the role of the ill-fated NHS University launched in 2001 and abandoned in 2005). Programmes like those funded by the Department, i.e. the four “leading edge” sites (see chapter 4), would achieve national coverage and “ensure that people learn together so that they may better work together in the NHS” (Department of Health, 2004a).

The Department backed its policies with financial support for the “new wave” sites for shared learning between the allied health professions (Department of Health, 2000a) and the leading edge FDTL4 projects based in selected universities: King’s College London with Greenwich and London South Bank; Newcastle with Northumbria and Teesside; Southampton with Portsmouth; and Sheffield with Sheffield Hallam (Barr, 2007b). Evaluation was built into each of the projects, but the Department of Health also commissioned a separate and overall evaluation led by Miller et al. (2006) which focused on the organisation and delivery of two years of the learning at the four sites.

Developments nationwide responded to the Department of Health lead. Universities, NHS Trusts, local authorities, voluntary and private organisations and Strategic Health Authorities came together to interpret the government’s blueprint in markedly different parts of the UK taking into account needs, opportunities and constraints in sparsely populated rural regions at one extreme to major cities and conurbations at the other. Two or more universities sometimes joined forces to provide the preferred mix of health and social care professions. The outcome was a UK-wide network of more or less discrete „schemes“.

Interprofessional educators became more politically aware in response to government policy but also more practice aware in response to pressures „bottom-up“ to improve care, services and patient safety, influenced by developments in the United States following the collapse of healthcare reforms under the Clinton Administration and mounting concern about avoidable medical error (Institute of Medicine, 2000).

Demands for evidence-based practice in professional and interprofessional education coincided with pressures to formulate competency-based outcomes. Numerous formulations of interprofessional collaborative competencies or

capabilities were published. The Sheffield Capability Framework was the most widely adopted for pre-registration IPE in the UK (CUILU, 2010)<sup>1</sup> (see chapter 3).

Pressure also mounted to introduce theoretical perspectives to illumine IPE and collaborative practice including a series of papers prompted and collated by the IPE study group of the HEA Health Sciences and Practice Subject Centre (Colyer, Jones & Helme, 2005) complemented by an overview by Barr et al (2005) and leading into a series of four workshops funded by the Education and Social Research Council (Hean, Barr, Borthwick, Carr, Craddock, Dickinson, Hammick, Hind, Miers & O'Halloran, 2009; Hean, Craddock & O'Halloran, 2009) followed by exploratory discussions to establish an ongoing international group.

The Journal of Interprofessional Care, which had been launched by the Marylebone Centre Trust in 1992, continued to be the conduit through which to exchange experience about IPE and collaborative practice at home and increasingly abroad, relocating to Canada in 2010 but with sustained and substantial UK support. Publishing houses responded positively to proposals for interprofessional books and series, complemented by occasional papers from the HEA including this report, as the UK-based interprofessional literature burgeoned (see Appendix B).

Pre-registration IPE stopped short of engineering the radical workforce that the Labour government envisaged, but it did foster interprofessional teamwork where members empowered and enabled each other to respond more readily and more effectively to the needs of service users, reducing duplication and claims on resources.

CAIPE backed up local and regional developments, defining IPE (CAIPE, 2002), enunciating principles (updated CAIPE, 2010), formulating outcomes and setting standards, and convening workshops for teachers as facilitators as it sought to instil coherence, consensus and consistency (Barr, 2009). The newly created Higher Education Academy, responding to a needs analysis completed by health sciences<sup>11</sup> teachers, gave the development of interprofessional teaching and learning high priority.

The Creating an Interprofessional Workforce Project (CIPW, 2007) funded by the Department of Health worked closely with CAIPE. The project developed an education and training framework for health and social care in England addressed to those commissioning, planning, delivering and evaluating (IPE) based on extensive consultations. Its contribution was noteworthy for reaching policy makers, service managers and commissioners alongside teachers. Recommendations called upon all parties to make IPE mandatory, assessed and evaluated within award-bearing health and social care education and training programmes delivered by teachers prepared for the task, identifying and encouraging good interprofessional practice.

IPE was strongly endorsed by the Higher Education Funding Council England (HEFCE) through its funding from 2005 to 2010 for the Centres for Excellence in Teaching and Learning (CETLs) to enhance learning and teaching. Following a competitive bidding process by universities, HEFCE awarded five years funding of

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<sup>1</sup> Capability as distinct from competence implies growth and development.

up to £4.5 million each to 74 CETLs, of which over one third concerned teaching and learning in health and social care. A significant number concerned IPE<sup>2</sup>

Direct engagement by the Department of Health in professional and interprofessional education had, however, by then been reduced following cuts in its staffing. Responsibility within the department for professional and interprofessional education was devolved to „Skills for Health“ which reinforced the emphasis put on common learning to further the modernisation of the workforce (Skills for Health, 2007). HEA subject centres were more actively engaged in supporting interprofessional teaching and learning, but their input was brought to an abrupt halt when they were scrapped following a 50% cut in 2011 in the Academy’s budget. That left CAIPE – a virtual organisation relying on its core team of dedicated volunteers and members’ subscriptions - as the only central body wholly dedicated to the promotion and development of IPE.

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<sup>2</sup> They included:

- University of Birmingham: Centre for Excellence in Interdisciplinary Mental Health, focusing on user involvement in teaching and learning
- Birmingham City University Centre for Stakeholder Learning Partnerships: Engaging the Wider Faculty, Realising the Wider Campus, focusing on working with multiprofessional agencies
- Coventry University Centre for Inter-professional e-Learning (CIPeL)
- University of Leeds Assessment and Learning in Practice Settings (ALPS)
- University of Leeds Inter-Disciplinary Ethics Applied (IDEAS) focusing on the teaching of ethics to interprofessional groups
- Middlesex University Centre for Excellence in Teaching and Learning in Mental Health and Social Work
- University of Newcastle upon Tyne Centre for Excellence in Healthcare Professional Education (CETL4HealthNE) focusing on practice learning
- University of Plymouth Placement Learning in Health and Social Care
- Queen Mary, University of London 4E CETL for Clinical and Communication Skills
- Queen’s University, Belfast Centre for Excellence in Interprofessional Education – CEIPE (NI)<sup>2</sup> focusing on the teacher-learner interaction
- University of Southampton Centre for Excellence in Interprofessional Learning in the Public Sector (CETL: IPPS) focusing on working with local child care agencies.

See also:

Helme & Phillips 2006 at [www.health.heacademy.ac.uk/rp/resources/cetl/CETLbookletL\\_final28.pdf](http://www.health.heacademy.ac.uk/rp/resources/cetl/CETLbookletL_final28.pdf)  
CETL Reports 2007 at [www.health.heacademy.ac.uk/doc/resources/report2007-38cetls.pdf](http://www.health.heacademy.ac.uk/doc/resources/report2007-38cetls.pdf)  
Saunders et al 2008 at [www.hefce.ac.uk/pubs/rdreports/2008/rd08\\_08/](http://www.hefce.ac.uk/pubs/rdreports/2008/rd08_08/)

### 3. Formulating outcomes

Looseness of IPE as a concept in its formative years invited an accretion of expectations, notably following the turn of the Century from the UK government to further its modernisation agenda, resulting in some confusion and obfuscation (see chapter 1). IPE (variously described in those years as multiprofessional education, joint training, shared or common learning) was at risk of being treated as the universal panacea for all manner of ills besetting health and social care, ranging from catastrophic failures in care to workforce deficiencies and inefficiencies. The years under review were, however, noteworthy for the progress made towards clarifying IPE as a concept, ironing out semantics and (as we review in this chapter and the next) formulating achievable outcomes to inform curricular design, content and learning methods much assisted by the widespread adoption of outcome-led and competency-based formulations throughout higher education nationally and internationally.

„Learning outcomes“ were replacing „learning objectives“ in the rubric of professional education. „Competence based outcomes“ gained currency. Competency based models demonstrated fitness for practice, an antidote to criticism that professional education had become too academic and too detached from the realities of practice (see chapter 4). Concurrent adoption in interprofessional and related professional education would help to establish bases for common learning and differences to inform comparative and interactive learning to “equip professionals for multi-dimensional collaboration” (Barr, 1998, 182) and promote a service that “is not a seamless garment of non-descript khaki but a colourful patchwork with strong seams holding the whole together” (Campion-Smith & Wilmott, 2001, 687; Heath, 1998).

„Outcomes“ and „competencies“ were, however, terms that could be employed less or more precisely; early IPE reports referred to the overall outcomes for projects, e.g. improving team working and increasing understanding of, or attitudes towards, other professions (e.g. Barr, 2000) leaving specific outcomes to be inferred or implied (Taylor et al., 2008). More precise competency-based formulations for professional education were criticised either for being inflexible straightjackets or too ambitious. According to some professional educators, they were inadequate for describing the skills, knowledge and values needed for complex and accountable professional practice (Leung, 2001<sup>3</sup>); mechanical, myopic, reductionist and ill-suited for grounding such practice in the exercise of judgement and discretion and to laying foundations for career-long development (Barr, 1994). Time was needed for resistance to abate before competency-based outcomes could be introduced and compared, not only within professional education but also pre-registration IPE.

A solution, promulgated by Plsek and Greenhalgh (2001), lay in framing capabilities. They challenged educators “to enable not just competence, but also capability” where education would offer an environment and process that enabled students to

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<sup>3</sup> Leung concluded, “Compared with the traditional approach, the competency based approach potentially leads to individualised flexible training, transparent standards, and increased public accountability. If applied inappropriately, it can also result in demotivation, focus on minimum acceptable standards”.

develop sustainable abilities appropriate for the constantly evolving organisations in successful health services in the 21<sup>st</sup> Century.

The same year saw the publication of *The Capable Practitioner* by the Sainsbury Trust - a framework of capabilities required for implementing the National Service Framework for Mental Health (Sainsbury Centre for Mental Health, 2001). The Trust preferred the term „capability“ to „competence“.

It defined capability as:

- A performance component identifying „what people need to possess“ and „what they need to achieve“ in the workplace
- An ethical component concerned with integrating a knowledge of culture,
- A component emphasising reflective practice in action
- The capability to effectively implement evidence-based interventions in the service configurations of a modern mental health system
- A commitment to working with new models of professional practice and responsibility for Lifelong Learning

Meanwhile, work was in hand to apply competency-based thinking to IPE. Barr (1997; 184) distinguished between „common“, „complementary“ and „collaborative“ competences:

- Common: competences held in common between all professions
- Complementary: competences that distinguish one profession and complement those which distinguish other professions
- Collaborative: dimensions of competence which every profession needs to collaborate within its own ranks, with other professions, with non-professionals, within organisations, between organisations, with patients and their carers, volunteers and with community groups

Barr (1998 & 2002) went on to list collaborative competencies as being able to:

- 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
- Learn from and be sustained by those other professions
- Facilitate interprofessional case conferences, meetings, team working and networking

Hammick et al. (2009) summarised „first-post“ competencies for being an interprofessional practitioner as:

**Knowledge:** understanding the role and working context of other practitioners and beginning to identify how these interrelate;

recognising the range of knowledge and skills of all other colleagues; and understanding the principles and practice of effective teamwork;

**Skills:** applying sound written and verbal communication methods with colleagues from other work settings; identifying situations where collaboration was helpful or essential; working collaboratively with service users and carers; and using interprofessional learning in work settings;

**Attitudes:** appreciating the value of interprofessional collaboration; and acknowledging and respecting others' views, values and ideas.

Sheffield Hallam University and the University of Sheffield preferred the term „capability“ in formulating the most comprehensive and widely used UK statement of learning outcomes from pre-registration IPE (CUILU, 2010), which they summarised as follows.

The practising professional should be able to:

- Lead and participate in the interprofessional team and wider inter-agency work, to ensure a responsive and integrated approach to care/service management that is focused on the needs of the patient/client
- Implement an integrated assessment and plan of care/service in partnership with the patient/client, remaining responsive to the dynamics of care/service requirements
- Consistently communicate sensitively in a responsive and responsible manner, demonstrating effective interpersonal skills in the context of patient/client focused care
- Share uniprofessional knowledge with the team in ways that contribute to and enhance service provision
- Provide a co-mentoring role to peers of own and other professions, in order to enhance service provision and personal and professional development

The authors of the Sheffield framework took into account composite benchmarking statements published by the QAA for the health professions (QAA 2006) (see chapter 6) and may well have been influenced by the refinement of the scale devised by Kirkpatrick (1967) by the Interprofessional Education Joint Evaluation Team (JET) (Barr et al, 2005) which provided a much needed framework for the evaluation of outcomes (see chapter 7).

Further indications of the onward march of competency or capability based IPE in the UK can be found in:

- The Leicester Model of Interprofessional Education (Lennox & Anderson, 2007)  
The ALPS Common Competency Maps [www.alps-cetl.ac.uk/maps.html](http://www.alps-cetl.ac.uk/maps.html). (Holt et al., 2010)
- The TUILIP Project Areas for Learning<sup>4</sup> (based on the CUILU framework)

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<sup>4</sup> Trent Universities Interprofessional Learning in Practice (TUILIP) Project Nottingham and Sheffield Hallam Universities NHS trusts 2005-2008

Meanwhile, debate continued about competence and capability. Capability prompted questions concerning disposition, attitude and authenticity: whether respect for other professions was „genuine“, whether knowledge and skills for working in one type of agency or team could be transferred to another. But identifying learning opportunities to assess capabilities was more challenging than for competencies where technology (see chapter 5) was being found helpful.

In the European context the Bologna Process (Froment, Eric; Kohler, Jürgen; Purser, Levis; Wilson & Lesley, 2006) focused on learning outcomes and competences towards improving comparability between qualifications with implications for IPE, but had little if any impact on IPE in the UK.

In the global context, the Sheffield formulation rewards critical comparison with others from Canada (Canadian Interprofessional Health Collaborative, 2010), Sweden (Wilhelmsson, Pelling, Uhlin, Dahlgren, Faresjo & Forslund, under review) and the United States (Interprofessional Collaborative Expert Panel, 2011). Vyt used experiences from European IPE programmes to draw up criteria for interprofessional collaboration (Vyt, 2007). Together, they promise to establish a broad based, culture and policy free consensus regarding outcomes from pre-registration (or pre-licensure) IPE.

Finch (2000) had called on the Department of Health and the NHS to explain their expectations of pre-registration IPE, clarifying between preparing students to:

1. *know* about other professions
2. *work* with other professions
3. *substitute* for roles of other professions
4. *move* across career routes in the NHS

The above formulations of outcomes during the years that followed suggest that IPE has focused more on one and two than on three and four.

## 4. Developing teaching and learning

Nationally, a tranche of organisations (many of which were new or reconstituted during the years under review) were responsible for setting and maintaining standards.<sup>5</sup> Regionally, the organisations included Local Education Consortia succeeded by Workforce Developments Consortia and then by Strategic Health Authorities (disbanded in 2011 by the Coalition Government) responsible for implementing government's workforce strategies and assigning resources and, locally, not only universities as the education providers, but also education, health and social care agencies - independent and statutory - as practice learning providers and potential employers.

Devolution of government to Scotland, Wales and Northern Ireland resulted in the creation of additional quasi-governmental, professional, education and other bodies with direct or indirect interests in IPE, each with its own policies and priorities.

These are some of the many documents generated, which indicated the trend towards policies across professions and which were pregnant with implications for IPE:

- The National Service Frameworks (2000 onwards) setting out requirements for care
- The Single Assessment Process for older people (Department of Health, 2001);
- National Occupational Standards setting out competencies for the health and social care workforce
- The Knowledge and Skills Framework (Department of Health, 2004b) for NHS staff
- Working Together to Safeguard Children

Investigating when, where and how such policies and guidelines were brought to bear in the planning and delivery of IPE is beyond the scope of this report.

### Teaching and facilitating

While the rhetoric since 2000 reasserted the case for interaction and exchange in IPE to cultivate closer collaboration between professions, developments on the ground tried to marry such comparative learning with common learning commended by government. Common learning was taught in those subjects deemed to be applicable to the needs of all or some of the constituent professional groups, e.g.

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<sup>5</sup> They were:

- The Quality Assurance Agency for Higher Education (QAA) (see chapter 7); whose benchmarking statements made learning outcomes and assessment explicit (Yorke, 2002) and included reference to interdisciplinary learning (Davison, 2009);
- New and reconstituted regulatory bodies which adopted policies for IPE and collaborative practice (see chapter 7);
- Royal colleges and other professional associations some of which adopted similar policies;
- Sector Skills Councils (Skills for Health and Skills for Care) determining the structure and content of vocational qualifications for employers to ensure fitness for purpose;
- National Institute for Clinical Excellence (NICE) whose guidance on clinical practice carried implications for education; National Patient Safety Agency (Department of Health, 2000).

basic sciences, clinical skills, ethics and professionalism (Mitchell et al., 2004), promising economies of scale and optimum use of faculty, accommodation and other resources, off-setting the relative cost of the interactive learning. Interactive learning was facilitated to enable students from the different professions to appreciate each other's roles and responsibilities with the aid of case studies, simulation exercises, enquiry based/problem based learning and practice learning (Ponzer et al., 2004) as they surmounted misunderstandings and honed their communication and collaborative skills.

Barrett and her colleagues were the first to publish their response to the government's blueprint. They recalled the logistical, curricular and operational challenges encountered when introducing IPE across programmes for ten health and social care professions at the University of the West of England (Barrett, Greenwood & Ross, 2003).

They saw the following as essential:

- To preserve and, where possible, enhance the identity of each profession
- To build competence and confidence for interprofessional and interagency collaboration
- To resolve differences in structure and academic level

The outcome was:

- Discrete pathway modules for each professional group
- A variety of shared learning modules
- A compulsory interprofessional strand for all the students

Although interprofessional strands were not always compulsory for all student groups this broad structure was reflected in much subsequent IPE. Interprofessional learning was integrated sometimes, but not always, into the discrete professional pathway modules. In addition, practice placements created opportunities to complement pre-determined scenarios in the classroom with real-life cases. But working across more than one site and organising intakes often totalling 700 or more into interprofessional groups without one group outbalancing the others was challenging.

O'Halloran and her colleagues in the New Generation Project distinguished between „common learning“ (as an umbrella term), „learning in common“ (where students learnt the same subjects but in separate groups) and interprofessional learning (as defined by CAIPE where students from the different professions learnt together interactively). The interprofessional learning included experiences outside students' professional field, distinguishing between guided discovery learning and collaborative learning (within and between professions) (O'Halloran, Hean, Humphris & Macleod-Clark, 2006).

Group exercises integrated these three learning approaches:

- Providing students with a productive learning experience
- Generating genuine interdependence
- Fostering differentiation and mutual intergroup differentiation
- Allowing equal contributions

Students were expected to achieve the learning outcomes through exposure to learning experiences involving their fellows from other professional groups and constructing learning conditions to support collaboration and learning. This curricular process was underpinned by a model of learning and teaching known as Facilitated Collaborative Interprofessional Learning (FCIL) which combined three pedagogies: guided discovery learning, collaborative learning and interprofessional learning (Humphris & McLeod Clark, 2007).

Common learning and interactive learning both had their merits: the former offering economy of scale and shared understanding of basic knowledge across curricula; the latter providing experiential opportunities for discussion about roles, responsibilities and patient care. Good team working for future practitioners depends on all these elements.

### **Learning methods**

Numerous learning methods were introduced into IPE schemes, some face to face; others mediated by technology (see chapter 5). Interactive methods included discussion, debates, problem-based and case-based learning and small group work. Common learning included lectures and large group seminars. Placements provided opportunities to practice in interprofessional student teams as well as service audit, shadowing members of other professions, observing and participating in team meetings and interviews with service users and carers. Opting for only one method would have been needlessly constraining failing to respond to the range and diversity of students' needs and learning styles. Problem based learning (PBL) featured less in UK IPE than might have been expected given its commendation by the WHO as the cornerstone for interprofessional learning (WHO, 1988). The University of Salford was alone in modelling its approach explicitly on the advice from WHO drawing on pioneering work in Adelaide (Australia) and Linköping (Sweden) (Davidson & Lucas, 1995) although others, such as St George's University of London and the University of the West of England, also introduced similar enquiry and problem based methods.

The range of methods introduced into IPE exemplified the "new pedagogy" drawing on constructivist theory (Cullen et al., 2002), grounded in expository, interactive, conversational and experiential practice-based methods where the learners actively construct knowledge for themselves from an array of experiences rather than focusing on knowledge-based subject matter transferred from the teacher to the taught (Bruner, 1966). The adoption of this constructivist epistemology and adult learning principles led to a shift in interprofessional teaching and learning towards more experiential (Kolb, 1984) and more reflective (Schön 1987) styles where learning was "situated" within "communities of practice" (Lave & Wenger, 1991; Wenger, 1998) informed by role-modelling theory where students identified with examples of positive practice (Bandura, 1986). Students were adult learners (Knowles 1973, 1985) responsible not only for their own learning but also that of others as a collective and collaborative responsibility (Barr, 2002; Hammick et al., 2007; Oandasan & Reeves, 2005).

The application of constructivist theories to interprofessional learning may have been more comfortable for students following more humanistic professional courses, which allowed more room for difference and debate, than for those following more scientific professional courses with more emphasis on handing down evidence-based knowledge. Nor was it clear for some students how such learning would

prepare them for knowledge-based examinations. Such theories were more obviously relevant to facilitated rather than taught learning (as distinguished above).

### **Learning in the classroom and on placement**

Some schemes put more emphasis on interprofessional learning on placement rather than in the classroom. The Newcastle and North East of England pilot scheme, for example, built on students' self-directed and enquiry based learning during their practice placements focusing on clients with complex health and social problems to develop, implement and embed innovative interprofessional practice (Pearson et al., 2007).

Inspired by the Swedish innovation (Wahlström, 1998), a partnership between local universities and care delivery in Southwest London developed and established an interprofessional training ward in rehabilitation (Mackenzie et al., 2007). Its success was followed by a second student training ward in a local hospice (Dando et al., 2011). Learning in both wards was practice-based, involving mixed student teams working with real patients (d'Avray & Forrest, 2010). An earlier interprofessional training ward had also been piloted in East London (Reeves et al., 2002, 2003).

### **Shifting emphases**

Emphases in pre-registration IPE shifted during three phases in the years under review.

The first phase focused on creating opportunities between student groups to explore reciprocal attitudes and perceptions in the belief that interaction and exchange subject to specified conditions would improve intergroup relations and be transferable into working life. Some teachers took their cue from Carpenter and McMichael and their fellow social psychologists (Barnes, Carpenter & Dickinson, 2000; Carpenter, 1995 a&b; Carpenter & Hewstone, 1996; Dickinson & Carpenter, 2005; McMichael & Gilloran, 1984), others from Patrick and Marilyn Pietroni from psycho-dynamic perspectives (Pietroni & Pietroni, 1996).

Group relations were to remain a salient emphasis in IPE, but there was growing awareness that improving reciprocal attitudes alone was not enough to equip students for the complexities of collaboration. Knowledge and skills were as important for team working and wider spheres of collaborative practice. The case for competence-based IPE was being made (see chapter 3); a case which needed perspectives from cognitive, behavioural and organisation psychology more than from social psychology.

The most recent emphasis has been the impact of widespread concern about patient safety, the need to improve interprofessional communication and collaboration to improve care and reduce the risk of medical errors, and the implications for IPE. Emphases on relationships and the development of competency remained highly pertinent, but IPE was now at the sharp end of life and death collaborative practice. Analyses of preventable errors (Pronovost & Vohr, 2010) pointed to the need for students to acquire not only systemic understanding but also capacity, confidence and credibility to intervene in malfunctioning situations and critical team working. Earlier perceptions of collaborative competence were being stretched.

### **Assessing learning**

It became clear over the years that students valued IPE less when it was not assessed. Learning from interprofessional experience provided evidence for inclusion in assessed portfolios, written examinations and OSCEs, but, in the absence of summative assessment and credit towards qualification, it was accorded lower priority by students and teachers. Assessing IPE summatively and consistently across the different professional curricula was, however, problematic. The same learning was sometimes given different credit weighting for different courses and seen as unfair. „Tomorrow“s Doctors“ (GMC, 2003 & 2009) set the example, but assessing specific interprofessional outcomes and ability to work collaboratively on qualification have yet to be adopted by other regulatory bodies (see chapter 6). Meanwhile, IPE was generally assessed formatively.

### **Applying principles**

The need for broadly accepted principles to guide IPE became increasingly apparent. CAIPE revised its statement (CAIPE, 2011) [www.caipe.org.uk/resources/principles-of-interprofessional-education/](http://www.caipe.org.uk/resources/principles-of-interprofessional-education/) complemented by one from the NHS Education for Scotland (2009)

## 5. Invoking educational technology

Electronically-enhanced learning in pre-registration IPE increased rapidly in scale and scope during the years under review. In the 1990s it was little more than an adjunct to distance learning; by the end of the first decade of the 21<sup>st</sup> century few if any of the pre-registration courses in health and social care had yet to implement e-learning strategies which permeated almost every aspect of their classroom and practice-based teaching. The challenge for students and teachers had become to learn *with* the technologies as cognitive tools as well as to learn information *from* them (Herrington et al., 2010). Echoing trends in IPE teaching and learning discussed in the previous chapter, constructivist epistemologies have also underpinned models developed for learning and teaching with technology (Mayes & Fowler, 1999; Laurillard, 2002).

### Funding nationally

Health and social care education benefited from Government's technological investment in higher education, for example, the Joint Information Systems Committee<sup>6</sup> (JISC) set up in 1993 and funded by the four UK post-16 education funding councils and the Association for Learning Technology (ALT). Grants ranging from £250,000 to over £5 million testify to the scale of the investment.

Between 2002 and 2006, the Development for Teaching and Learning (FDTL) programme of the Higher Education Funding Councils Fund (HEFCE) (Hodson & Segal, 2009) included projects (many of them interprofessional) to support innovations in e-learning in health and social care<sup>7</sup>.

Between 2005 and 2010, HEFCE funded Centres of Excellence for Teaching and Learning (CETLs) in England two of which contributed directly to developments in IPE:

- The Centre for Interprofessional e-Learning (CIPeL) (University of Coventry in association with Sheffield Hallam University) which generated a rich fund of interprofessional learning objects [www.cipel.ac.uk/](http://www.cipel.ac.uk/)

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<sup>6</sup> JISC supports and inspires United Kingdom post-16 and higher education and research by providing leadership in the use of ICT (Information and Communications Technology) in support of learning, teaching, research and administration through networks, research and publications and consultancy ([www.jisc.ac.uk](http://www.jisc.ac.uk)).

<sup>7</sup> Projects included:

- Interprofessional medical training by means of a virtual hospital ward to develop web and third generation mobile-phone based interactive case studies, requiring active participation of a team, comprising medical, nursing and pharmacy students (University of Manchester)
- "Creating the balance in the nursing profession" to collect real patient case studies and develop them as teaching resources, aimed at preparing nurses for providing high quality care to their patients, subsequently developed for interprofessional learning about recording practices (University of Huddersfield).
- Students on-line in nursing integrated curricula to develop and evaluate web-based, resource-enriched scenarios to support problem-based learning (PBL) within pre-registration nursing curriculum (University of Central Lancashire)
- Making practice-based learning work to promote practitioner effectiveness in supporting and supervising students in the workplace across a range of healthcare disciplines (through e-resources) (University of Ulster)
- Web-based interprofessional learning to develop systems and methodologies for initiating and supporting online learning (University of Sheffield).

- Assessment and Learning in Practice Settings (ALPS) (University of Leeds) which included the use of mobile technologies for assessment and learning, common competency maps and assessment tools [www.alps-cetl.ac.uk/](http://www.alps-cetl.ac.uk/)

A further tranche of funding has released Open Educational Resources for interprofessional learning.<sup>8</sup>

### Overlapping technologies

Five overlapping uses of technology enhanced interprofessional learning:

1. access to information through the internet
2. virtual learning environments and tools to enhance reflective learning such as e-portfolios
3. use of e-communication tools to enable synchronous discussion
4. electronic simulation
5. „Web 2.0“ technologies and social networking

Of these, the first has had most impact. Digitalised learning materials have been accessed through the internet and private restricted access intranet by students and others. They include online journals whether written or not for internet access, taking into account research and principles for digital accessibility and presentation. All or some of the learning material for a course could then be accessed on line, for example, case studies, questions for exploration, information, principles etc., papers, assessment criteria, as text, audio or video material. Material either stood alone, e.g. a set of resources on Social Care Institute for Excellence (SCIE) website [www.scie.org.uk/publications/elearning/ipiac/index.asp](http://www.scie.org.uk/publications/elearning/ipiac/index.asp), or complemented other types of learning. These developments included the global trend towards Open Educational Resources (OER) and reusable learning objects (RLOs),

OERs were “digitalized materials offered freely and openly for use and reuse in teaching, learning and research” including learning content, software and implementation resources made freely available with as few as possible technical, legal or price restrictions on use and reuse (Yuan, 2008; Klemke et al., 2010). Two tranches of funding from HEFCE developed repositories of Open Educational

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<sup>8</sup> They included:

- Public Health Open Educational Resources in the University Sector (PHORUS) (2009-2010) (<http://phorus.health.heacademy.ac.uk/>) to identify and release good quality OER in public health
- Organising Open Educational Resources (OOER) ([www.medev.ac.uk/ourwork/oer/OER\\_Phase\\_II/](http://www.medev.ac.uk/ourwork/oer/OER_Phase_II/)) phase 1 to identify and release OER concerning patient and non-patient consent; phase 2 to (a) increase the sharing, repurposing and utilisation of OER for PG Certificate clinical education programmes and (b) deliver a substantial number of OER in medical and healthcare education
- Social Policy and Social Work Open Educational Resources (SWAP-BOX) (2010-2011) ([www.swapbox.ac.uk](http://www.swapbox.ac.uk)) to bring together open educational resources from the disciplines of Social Policy and Social Work
- Transforming Interprofessional Groups through Educational Resources (TIGER) (2011) ([www.northampton.ac.uk/info/200267/pedagogic-research-and-scholarship/961/externally-funded-projects/11](http://www.northampton.ac.uk/info/200267/pedagogic-research-and-scholarship/961/externally-funded-projects/11)) to collect, developing and sharing reusable, customisable OER designed for Interprofessional Education in Health and Social Care between the three institutions, academics, their existing communities of practice, employers and the wider community in line with expressed sector requirements

Resources. Funded projects in health and social care education which have released good quality interprofessional learning materials were listed in the previous chapter. Increased „tagging“ of material, i.e. associated with specific terms (e.g. key words such as „interprofessional“) and sophistication of search engines made it easier to find material although assessing currency, relevance and quality of sources challenged both teachers and students.

Leeder, Wharrad and Davies (2002) defined an RLO as a web-based multimedia digital resource based on a single learning objective or goal, comprising a standalone collection of four components: presentation, activity, self-assessment, links and resources. RLOs contained data – the content - and „metadata“ – the organisation of the content. Advantages of RLOs were seen to be that the content could be readily adapted and updated and „reused“. The ELSIE project (e-learning support for interprofessional education [www.uce.ac.uk/elsie/default.html](http://www.uce.ac.uk/elsie/default.html)), and Wharrad and Windle (2010) subsequently, demonstrated how content creation workshops and interprofessional teams could develop interprofessional teaching and learning.

JISC defined virtual learning environments (VLE) as “the components in which learners and tutors participate in 'online' interactions of various kinds, including online learning”. A VLE is a „software platform“ also known as Course Management System or Learning Management System. A JISC survey in 2005 found that 97% of pre-1992 universities and 90% of post-1992 UK universities reported using at least one type of VLE, but there was wide variation in subject area usage (Jenkins, Browne & Walker, 2005 confirmed by Moule, Ward & Shepherd, 2007). VLEs for interprofessional learning included integrated suites of learning materials with access to other types of e-learning, discussion boards and mediated forums. Oxford Brookes University developed a VLE in 2005 to enhance interprofessional learning across eight health and social care professions included links, „e-tivities“ (on-line tasks), discussion topics for students and staff, moderated on-line discussion groups, facilities for posting assignments and evaluation (Sharpe & Pawlin, 2008). VLEs became ubiquitous in a market dominated by a commercial software platform product „Blackboard“ and an open source software product „Moodle“ but were increasingly criticised for being inflexible and monolithic (Styles, 2007).

In terms of the third way of using technology, use of the internet to enable asynchronous and text based communication continued to develop between students from different professions. This required specific skills of tutors, as did the facilitation of face-to-face and synchronous technology-mediated discussion. Use of technological tools to promote real time or synchronous communication between students from different professions in different geographic locations, for example, team working and interviewing service users, was relatively new and has increased as the technology has developed and costs have fallen. An FDTL project in 2005 found that medical, nursing and pharmacology students learning together to prescribe medications became emotionally involved with the progress of virtual patients through quantitative data via mobile technologies<sup>9</sup>, while students from

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<sup>9</sup> Interprofessional Medical Training by Means of a Virtual Hospital Ward to develop web and third generation mobile-phone based interactive case studies, requiring active participation of a team, comprising medical, nursing and pharmacy students 2002-2006. Project Leader: Dr Larry Gifford, University of Manchester.

different professions at Coventry University used webcam and microphone to interact with service users with disabilities (Epstein, Ali, Ward & Awang, 2009).

Simulations, the fourth way of using technology, ranged from interactive case studies to „virtual wards“ and „virtual communities“ where students' individual and collaborative decisions determined the presentation of information in „immersive worlds“ using patient simulators with clinical functionality and realistic anatomy for team training. Queens University Belfast used a high fidelity paediatric simulator to provide experiences of clinical scenarios to medical and nursing student teams, followed by debriefing sessions to provide feedback to the students on their interprofessional management of the scenario (Stewart, Kennedy & Cuene-Grandidier, 2010). Bournemouth University developed a virtual community - „Wessex Bay“ - to provide a wide range of scenarios for students to explore (Quinney et al., 2008). Although almost all UK universities used Second Life, a free on-line virtual world created by Linden Labs in 2003 (<http://secondlife.com/>) in their teaching, there were few evaluated examples of its use for interprofessional learning. Messer (2010), however, described the creation of multi-layered interprofessional health care scenarios in second life which were well evaluated by students at the University of the West of England. CIPEL also used second life for interprofessional learning to create virtual interprofessional team working experiences for students (Clarke, 2010). Simulation has demonstrated not only how it provided a safe learning environment in which students can practice, but also provided opportunities for synchronous and asynchronous communication between students and with their tutor, and feedback for the students on their „performance“.

Attempting to define Web.2.0 technologies, Anderson (2007) wrote that:

„The short answer, for many people, is to make a reference to a group of technologies which have become deeply associated with the term: blogs, wikis, podcasts RSS feeds etc., which facilitate a more socially connected Web where everyone is able to add to and edit the information space. The longer answer is rather more complicated and pulls in economics, technology and new ideas about the connected society.“ (p. 5)

Many of the attributes of Web 2.0 technology identified by Anderson, for example an „architecture“ of participation, openness, the creation of networks and user generated content, align with the principles of IPE (CAIPE, 2011) and contemporary philosophies of learning and teaching. Blogs encouraged reflective learning; wikis produced collaborative content; social networking promoted all levels of communication. But there have also been risks, for example sharing information on Facebook was at odds with professional standards of confidentiality; students and teachers have felt discomfited at using gaming technologies for discussions about patients or social networking for formal learning (Moule et al., 2007 & 2009).

### **Weighing the advantages**

Interprofessional educators found e-learning helpful in obviating logistical problems in bringing students together for sufficient periods of time within the constraints of timetabling, room availability and practice placements patterns. It also enabled both collaborative and personal learning which, given the diversity of students in health and social care, was a significant advantage. Students were able to learn

collaboratively at the same time, but also to access material and revisit discussions and collaborative work to meet their own learning style and pace.

Oliver (2010) found the following logistical advantages of e-technologies for interprofessional learning in the literature:

- Supporting discussion, for example where time and location make it impossible for students to meet face to face or to provide additional opportunities for learning with from and about students from professions not taught at their university
- Making inter-institutional programmes feasible, e.g. for medical students from one university to join with nursing students at another
- Making discussions more fluid and enabling participation while students in the same learning group are on placement in different locations and at different times
- Giving students more flexibility in the way they make use of resources

E-learning can also:

- deliver IPE to large numbers of health and social care students;
- provide opportunity for students to learn collaboratively using e-resources (Orvis & Lassiter, 2007)
- provide a safe learning environment for students to explore their respective stereotypes
- supplement and complement practice based learning on placement, for example, by providing opportunity to learn about other professions and provide source material about good practice
- enable the patient's perspective to be presented without the patient having to be there in person (obviating ethical and logistical issues)
- enhance interprofessional cooperation in the teaching team, including educational technologists, during the preparation of learning materials

Almost all pre-registration IPE combined on-line and face-to-face learning often described as „blended learning“, which has been criticised since it implies there is such a thing as „unblended“ learning, given the multitude of types of learning opportunities and modes to which students have access. The term referred to the delivery of courses rather than the students' learning (Oliver & Trigwell, 2005).

### **Meeting the challenges**

Challenges for interprofessional learning included choosing the appropriate technology and materials, the authenticity of those materials and of the learning experience, the risks of communication mediated by technological hardware and software and preparing students and teachers to develop the necessary skills to make the learning experience effective. The divide persisted between the digital „haves“ and „have nots“ (Melville, 2009) Students were increasingly familiar with the technology, some so much so that they may have prioritised e-enhanced learning to the detriment of other means. Teachers may have been less familiar with the technology and needed to learn new skills such as e-moderation (Salmon, 2000). Efforts were being made to develop an e-pedagogy for interprofessional learning. The model developed by Gordon, Booth and Bywater (2010) drew on the principles of adult learning, constructivist theory, „scaffolding“ and communities of practice to

show how students created new interprofessional knowledge from interactions based on representation of authentic real life service user scenarios.

Communication – synchronous and asynchronous – is mediated by the technology. Early use of video-conferencing and Voice over Internet Protocol (VOIP – such as Skype) was fraught by breakdowns and feedback. Students and teachers needed access to hardware and internet and although e-learning technologies considerably improved in quality and reliability, systems still „went down“ occasionally. There may have been a disruptive time lag in communication if students and tutors were not on-line at the same time. The demands of authenticity required a combination of different technology tools, which students and teachers needed training to use with differing degrees of effort and interest.

Although the quality of open source software improved and costs of commercial programmes fell during the years under review, developing and updating e-learning resources still required substantial investment in staff time. Some perceived a risk that e-learning was in danger of becoming a substitute for face-to-face learning between students from different professions with the attendant risk that e-technologies would determine course content and delivery. As the technology, and the language in which it was described, became more complex and esoteric, e-learning was in danger of becoming less, not more, accessible for both students and teachers, more so when control was taken by technologists rather than by the interprofessional teaching team.

Despite the widespread interest that educational technologies prompted, from a survey of e-learning in health sciences and practice in UK universities in 2006-8, Moule et al. concluded that existing technologies were under-exploited and under-developed. From his research into how technology could help universities find new ways to achieve aspirations, Bradwell (2009) found that it was most important – for learners and teachers - to get the relationship and policy between the institutions and the technology “the right way round”. Technology may have the potential to be so powerful in IPE that it is driving the agenda. We trust not; like Oliver (2010) we prefer the metaphor of the weathervane, indicating the direction and the force of the trends in interprofessional teaching and learning.

## 6. Regulating and assuring quality

Pre-registration IPE was and continues to be subject to separate regulation within each of the professional courses in which it is embedded. Satisfying two or more sets of requirements is complex, time consuming and sometimes frustrating. Attempts to resolve some of these problems date back to the 1980s (English National Board for Nursing, Midwifery and Health Visiting & Central Council for Education and Training in Social Work, 1992). The years under review saw the development of broader-based understanding and collaboration between regulatory bodies.

The Department of Health brought together interested parties including the Health Professions Council (HPC) and the Nursing and Midwifery Council (NMC) to develop the „Partnership Quality Assurance Framework“ (PQAF) to carry forward work which it had started with the then English National Board. The exercise focused on the role of Strategic Health Authorities in commissioning award-bearing programmes of learning for nursing and midwifery and the allied health professions in England, taking into account the role of the QAA and its benchmarking statements (see below).

The PQAF fed into a review of non-medical regulation (Department of Health, 2006a), which focused on ensuring proper protection for the public. Regulators should, said ministers, be more consistent with each other about the standards they required for persons entering their registers for the first time. Revalidation was necessary for all professions, based on the Knowledge and Skills Framework<sup>10</sup>, which implied a degree of standardisation across professions. There were substantial areas in which common standards were said to be desirable. Statutory regulation would be extended to include new roles, such as that of medical care practitioner (physician assistant), but work remained to be done to decide whether this should be the responsibility of a single regulatory body or several with a “lead regulator”. These and other decisions introduced a greater degree of control over the regulatory bodies, but arguments for their amalgamation were set aside (save for the two bodies responsible for pharmacy). Further harmonisation was, however, to be kept under review including the possibility of a further reduction in their number. A parallel review by the Chief Medical Officer dealt with the regulation of medicine (Department of Health, 2006b).

The General Social Care Council, the HPC and the NMC broadly reaffirmed their predecessors<sup>11</sup> commitment to IPE and collaborative practice in line with the General Medical Council (GMC)<sup>12</sup>.

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<sup>10</sup> The Knowledge and Skills Framework (Department of Health, 2004b; NHS Modernisation Agency, 2004) was designed to support personal development in post, career development and service development, as well as to ensure transferability of roles, for all types and grades of NHS staff. Its subsequent development rested with „Skills of Health“ under whose auspices it provided a backdrop for discussions about the organisation and regulation of the health professions. Skills for Health published national occupational standards (NOS) and national workforce competences (NWC) to provide statements of competence and good practice and measure performance outcomes ([www.skillsforhealth.org.uk](http://www.skillsforhealth.org.uk)) to be taken into account when designing higher education programmes.

<sup>11</sup> The Central Council for Education and Training in Social Work, the Council for Professions Supplementary to Medicine and the UK Central Council for Nursing, Midwifery and Health Visiting and its four related National Boards.

### **The allied health professions**

Standards of proficiency for all professions regulated by the HPC required that registrants understood the need to build and sustain professional relationships both as independent practitioners and collaboratively as members of teams, and were able to contribute effectively to work undertaken as part of multidisciplinary teams (Department of Health, 2000b; HPC, 2005), but guidance for the conduct of visits to programmes injected a note of caution. Profession specific skills and knowledge had to be adequately addressed when interprofessional learning was included.

Prompted by the belief that it might be difficult to offer interprofessional learning because of factors beyond providers' control, the HPC did not require it, but did include it in its standards of proficiency, conduct, performance and ethics (HPC, 2008).

### **Nursing and midwifery**

Proficient practice, said the NMC, must reflect collaboration with other members of the care team. Standards set for nursing were not separate and insular professional aspirations, but linked to the wider goals of achieving clinical effectiveness within health care teams and agencies. It was therefore necessary that nursing standards of proficiency encompass the capacity to contribute to this wider health care agenda. Newly registered nurses should demonstrate an understanding of the role of others by participating in interprofessional practice, establishing and maintaining collaborative working relationships with members of the health and social care team. Furthermore, they should contribute to the learning of those others by sharing knowledge and experience. Programmes had to ensure that students had the opportunity to learn with and from other health and care professions in practice and in academic settings where possible and find creative ways for interprofessional learning to take place throughout the programme so that students could develop the skills they need to work collaboratively with other health and social care professionals (NMC, 2002, 2004, 2008 & 2010).

### **Social Work**

Pending publication by the GSCC of quality assuring the social work degree, the Department of Health (2002b) issued requirements, underwritten in the National Occupational Standards for Social Work (2002), for assessing competence in practice. Providers had to demonstrate that all students undertook learning and assessment in partnership working and information sharing across professions and agencies, were competent to work in multidisciplinary and multi-organisational teams, networks and systems, to develop and maintain effective working relationships, agree goals and objectives and deal constructively with disagreements and conflicts. These requirements will be subject to review following the impending incorporation of social care into the HPC.

### **Medicine**

The GMC required its graduates to "know about, understand and respect the roles and expertise of other health and social care professionals" and to be "able to demonstrate effective team working skills". "Medical schools should explore and,

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<sup>12</sup> See [www.caife.org](http://www.caife.org) for a comparative critique of requirements made for IPE by the HPC, the NMC, the GSCC and the GMC.

where appropriate, provide opportunities for students to work and learn with other health and social care professionals”.

Boundaries between health care professions were increasingly shifting towards more overlap in skills and responsibilities, accompanied by recognition that many tasks previously carried out by doctors were being performed by other health care workers (GMC, 2003, 2009). Effective relationships needed to be developed beyond specific teams to include also individuals beyond the health care professions. Medical schools were responding positively to the need to prepare students for effective interprofessional practice.

Doctors, said the GMC, should:

- Establish and maintain good relationships with patients and colleagues
- Formulate plans for treatment – in partnership with the patients, their relatives or other carers, and other health professionals as appropriate
- Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening sharing and responding
- Respect all patients, colleagues and others
- Understand and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi-professional team
- Understand the contribution that effective interdisciplinary team working makes to the delivery of safe and high-quality care
- Work with colleagues in ways that best serve the interests of patients, passing on information and handing over care, demonstrating flexibility, adaptability and a problem solving approach
- Demonstrate ability to build team capacity and positive working relationships and undertake various team roles including leadership and the ability to accept leadership by others

(GMC, 2009 par. 20-23)

### **Formulating Benchmarking Statements**

The QAA invited representatives from royal colleges and other professional associations for nursing and midwifery and for the allied health professions under the leadership of Professor Dame Jill McLeod Clark and the late Professor Michael Pittilo respectively to participate in a series of working groups to draw up benchmarking statements to set standards for their pre-registration programmes.

These statements would provide:

- An external point of reference when designing and developing programmes
- General guidance for articulating programme outcomes
- Bases for variety and flexibility in programme design
- A focus on client and patient perspectives
- Creativity regarding learning in both academic and practice settings
- Information for internal and external quality assurance

- Information for prospective students
- An explication of the general academic characteristics and standards of awards across the UK

They were adopted by the constituent professional organisations (QAA, 2001). Common benchmarking statements were then formulated and agreed to illustrate the shared context within which programmes were organised to complement the profession-specific statements for nursing and midwifery, health visiting, dietetics, speech therapy, chiropody/podiatry, prosthetics and orthotics, physiotherapy and radiography (QAA 2004). Other statements were prepared for social work (QAA, 2000) and medicine (QAA, 2002a) and dentistry (QAA, 2002b).

The QAA (2006) then published a statement of common purpose for health and social care professions based on the deliberations of a steering group chaired by Pittilo including, in addition to representatives from the range of nursing and midwifery and allied health professions, others from the complementary therapies, dentistry, medicine, pharmacy, psychology and social care plus the Department of Health, Skills for Health, health authorities and universities. This breadth of representation added much to the authority of the resulting statement and the contextual understanding in which it was presented.

The statement focused on students' learning to meet the needs of clients and patients within an environment that required effective team, interprofessional and inter-agency working and communication, as well as expert care, and encouraged shared learning between students from a range of health and social care disciplines, both in practice and in classroom-based activities. It encouraged shared learning between students from a range of health and social care professions, but was not to be regarded as a national curriculum for such learning.

Common ground for the education of health and social care professions should include:

- values in health and social care practice
- the practice of health and social care and knowledge
- understanding for health and social care practice

Many changes, said the QAA, had occurred since the development and adoption of the "the emerging framework" in 2004, including "considerable development" in IPE, suggesting that the benchmarking statements were in need of significant revision and re-casting. Cross-professional benchmarks and statements of common purpose underpinned trends towards increasingly integrated service delivery. The challenge was not to subsume one discipline or professional activity into another but to integrate perspectives in a manner that maximised the synergies and distinctive contributions of each.

## 7. Triangulating the evidence base

Pressure to assemble evidence to support claims made for IPE had built up during the late 1990s at a time of mounting concern to establish the evidence-base, not only for professional practice, but also for professional education (Hargreaves, 1996). The first of five international conferences entitled *All Together Better Health* held in 1997 seemed an ideal opportunity to focus on the effectiveness of interprofessional practice and IPE as a means to promote it.

Two propositions were put:

- that IPE improves collaborative practice
- that interprofessional practice improves the quality of care

Distinguished scholars were invited from both sides of the Atlantic to address these propositions (Leathard, 1997). Outcomes fell short of expectations which, with benefit of hindsight, were naïve although some progress was made in reframing questions and mapping territory. The answers, it became painfully clear, were going to be more complex than the propositions. There would be no „quick fix“.

Most UK IPE initiatives had reportedly been evaluated (Barr & Waterton, 1996), but documentation was sparse and publications lacking, while a few rigorously conducted evaluations were cited repeatedly. Overviews of IPE developments were illuminating, but invariably stopped short of providing examples that might have augmented the small pool of published evaluations.

Tracking down isolated evaluations was not enough. Sustained and systematic searches were needed to collate evaluations that would provide a baseline for future policy, pointers for future evaluations and verify or vitiate claims made for IPE. Systematic reviews were beginning in healthcare practice, notably under the auspices of the Cochrane Collaboration. These developments prompted UK researchers to explore the application of that methodology to determine the efficacy of IPE. An approach to Cochrane elicited an encouraging response and a review group was established under its Effective Practice and Organisation of Care Group (EPOC) with Merrick Zwarenstein (then with the South African Medical Research Council) as mentor. Criteria for the review that followed focused narrowly on direct benefit to patients attributable to an IPE intervention evaluated by a randomized controlled trial, a controlled before and after study, or an interrupted time series study. None were found despite an exhaustive search of over a thousand abstracts from electronic databases and scrutiny of 89 papers (Zwarenstein, Reeves, Barr, Hammick, Koppel & Atkins, 2001). The group faced a choice, either to abandon its search or to renew it after an interval in accordance with its obligation to the Cochrane Collaboration. In the event, the review was updated following Cochrane practice, searching the same and additional sources from 1999 to 2006. Six studies were found which met the same inclusion criteria as before. Four out of the six reported a range of positive outcomes (Reeves, Zwarenstein, Goldman, Barr, Freeth, Hammick & Koppel, 2008).

Whilst the group was willing to honour Cochrane’s expectation to update its review, most members felt cramped and cramped by its linear and positivist approach. Their own research had heightened their awareness of alternative paradigms – qualitative

as well as quantitative – for the evaluation of education. They determined to conduct a further systematic review taking into account a continuum of outcomes and a range of research methodologies. The group was reconstituted as the Interprofessional Education Joint Evaluation Team (JET), with some changes of membership, and a new review undertaken.

Its report (Barr, Koppel, Reeves, Hammick & Freeth, 2005) was built around the 107 robust evaluations found, which met quality checks for presentation and rigour. A third of the studies came from the UK and over half from the United States with the remainder widely spread. Evenly divided between community and hospital based care, two thirds related to chronic conditions. Four fifths were post qualification and typically work-based workshops. Almost all had been published since 1991.

Reported outcomes were classified and collated as follows (with multiple coding):

- reactions to the interprofessional learning 45 (42%)
- changes in attitudes/perceptions 21 (20%)
- acquisition of knowledge/skills 38 (36%)
- changes in behaviour 21 (20%)
- changes in organisational practice 37 (35%)
- benefit to patients 20 (19%)

The first three outcomes spanned pre- and post-registration IPE; the last three referred invariably to work-based continuing interprofessional education where service improvement was an explicit objective.

The inference was clear, albeit derived from only a few studies. Pre-registration IPE could lay foundations for collaborative practice in attitudinal change and enhanced knowledge and skills; work-based post-registration IPE was needed to build on those foundations before impact on practice and patient care would be apparent. At issue was whether subsequent pre-registration IPE interventions would develop the capacity to meet the higher order outcomes or whether the constraints, e.g. the immaturity of the student group, would render such expectations unrealistic.

A follow up study (Hammick, Freeth, Koppel, Reeves & Barr, 2007) imposed a higher threshold and analysed data from 21 of the studies by precept, process and product of educational delivery (Biggs, 1993; Dunkin & Biddle, 1974). Findings confirmed that IPE was generally well received, enabling knowledge and skills necessary for collaborative practice to be learnt.

Along the way, the same group conducted a UK review under the auspices of CAIPE and funded by the British Educational Research Association (Barr, Freeth, Hammick, Koppel & Reeves, 2000). Less systematic than the three reviews reported above, it benefited from the team's intimate knowledge of IPE initiatives in the UK. The outcome was the presentation of 19 qualitative case studies with a commentary. The earliest of these cases dated back to the 1970s. Evaluations had been conducted mostly by the teachers with uneven rigour, limited impact and without reference to other such evaluations. There were, however, signs that these defects were being remedied. More evaluations were being conducted in the UK, more often published, with more cross-communication and more rigorous methodology. Ongoing monitoring by JET confirmed that the number of robust

evaluations of IPE was slowly increasing and improving in quality assisted by the publication of guidelines drawing on the JET work (Freeth, Reeves, Koppel, Hammick & Barr, 2005a; Freeth, Hammick, Reeves, Koppel, & Barr, 2005b).

Meanwhile, Cooper, Carlisle, Gibbs and Watkins (2001) had conducted a systematic review of IPE for undergraduate students in the health professions including qualitative and quantitative paradigms. They found more “evaluative literature” than “research data”. Half of 141 studies which they included were in the UK, Thirty (21%) met one or more of the following inclusion criteria:

- increasing interprofessional understanding and co-operation
- promoting competent teamwork
- making effective/efficient use of resources
- promoting high quality, comprehensive patient care

Students had benefited from interprofessional learning regarding changes in knowledge, skills, attitudes and beliefs.

Limited though the findings were from the JET and Cooper reports, they went some way towards putting to rest recurrent criticism that claims made for IPE lacked evidence. Positive findings were corroborated by the first-hand experience of the growing number of interprofessional activists. Findings from the second and third Cochrane reviews, on the other hand, gave renewed credence to arguments by diehard critics that progress in securing the evidence base for IPE remained marginal.

Whichever methodology was adopted, systematic reviews were a major advance on less systematic reviews (e.g. Barr & Shaw, 1995), but they shared a recurrent weakness, namely the time lag between evaluations being completed, accepted for publication, picked up to be considered in the reviews and included in their published findings. However frequently reviews may be replicated, and however expeditiously they may be conducted, the time lag can never be wholly eliminated. Findings need to be checked and updated against those from more recent evaluations.

Given that the number of research-based IPE studies is only growing slowly, we question exclusive reliance on them to establish the evidence base. Extending the catchment beyond the narrow confines of Cochrane was a step towards inclusivity, but a small one. The net needs to be cast yet wider. Overviews to establish the credibility of IPE in the UK might well be taken into account (e.g. Barr, 2000; Pirrie, Wilson, Harden & Elsegood, 1998; Sharland & Taylor, 2007) subject to quality checks. Account might also be taken of observations about IPE made during reviews conducted internally by universities and externally by regulatory and professional bodies, the QAA and commissioning bodies, again subject to quality checks. The regulatory bodies and the QAA hold such data (see chapter 6), but information is lacking regarding the means by which they are interpreted and applied.

The following summary in the QAA Annual review of trends for 2004-05 (paragraph 27) suggested that visiting panels were according IPE considerable attention:

“Interprofessional learning/education (IPL/E) appears to be well established in some disciplines, but there is considerable room for improvement in others.....the quality of IPL/E provision can frequently vary across placements and programmes offered by the same provider. Particular difficulties noted are: problems in achieving IPL/E in busy clinical placements; limited or insufficiently exploited opportunities for developing IPL/E within the curriculum; and a lack of sharing good practice within or across schools or faculties within the same institution. In some programmes, students felt that IPL/E was introduced too early in the programme, before they were established in their own discipline. The reviewers questioned the assumption that working in multidisciplinary settings or teams was synonymous with interprofessional learning and working.” (QAA, 2010)

More encouraging observations were, however, included in a three-year QAA review of reports for 2003 to 2006:

“Towards the end of the cycle there are fewer weaknesses relating to interprofessional learning as it has been widely developed. Reports refer more to operational difficulties such as larger disciplinary groups dominating small ones, or unequal student experiences across different placement settings” (QAA, 2007).

The same report encouraged teams to work interprofessionally in conducting the reviews and writing their reports.

Debates about the relative weight to be accorded to evidence meeting criteria for the Cochrane and the JET paradigms need to give way to a broader-based debate embracing these other sources. Ranking them to form a hierarchy of evidence will be unhelpful unless and until criteria and procedures for each have been refined to optimise its credibility and utility. Including findings from internal and external reviews depends critically on establishing the consistency and transparency within each system. There is a persuasive case for earmarking some research funds to subject the evaluation of IPE within these systems to independent and comparative review. Only then will this veritable mountain of undigested data qualify as evidence.

## 8. Preparing the teachers

Growing emphasis on the quality of teaching in higher education, following publication of the Dearing Report and the government white paper on The Future of Higher Education (DES, 2003), prompted the establishment of the UK Professional Standards Framework for teaching and supporting learning in higher education in 2003 and professional recognition scheme maintained by the HEA. To the best of our knowledge, none of the requirements for those teaching health and social care education included an understanding of interprofessional learning. Regulatory and professional organisations in health and social care promoted and accredited post qualification training for student supervisors, but separately for each profession although there had been consultation with other professions in allied health. Teachers were, however, becoming aware of their learning needs to engage effectively in IPE as it gained momentum.

Soon after its inception in 2001, the Subject Centre for Health Sciences and Practice, later to become part of the HEA, conducted a survey of UK academics in health care subjects to ascertain the areas in which they most saw the need for support in their teaching. The top three were:

- Developing and supporting IPE
- Placement education
- Educational research and its application to Health Sciences and Practice ([www.health.heacademy.ac.uk/aboutus/what-we-do/strategic/OperationalPlan2002-2003.pdf/view](http://www.health.heacademy.ac.uk/aboutus/what-we-do/strategic/OperationalPlan2002-2003.pdf/view))

In response, and reinforced by findings from subsequent needs inquiries, Health Sciences and Practice, with two of the other subject centres – one covering medicine, dentistry and veterinary medicine and the other social work - accorded interprofessional teaching and learning high priority from 2002 onwards. Research was commissioned including funding for over 25 small research projects in multi and interprofessional education since 2001, and joint projects including Mental Health in Higher Education and Integrated Children's Services in Higher Education. (Occasional papers are listed in Appendix A). An IPE Special Interest Group was convened which has met a minimum of three times a year since 2002, hosted by different universities to debate issues of interest and concern, complemented by workshops and conferences on interprofessional teaching, assessment, theory and evaluation. A one-year project, TRIPLE, explored practice and needs of those involved in interprofessional teaching and learning through a data base of IPE work, interviews, workshops, networking events, brokerage between IPE activists and reports [www.health.heacademy.ac.uk/doc/resources/triplereport2004](http://www.health.heacademy.ac.uk/doc/resources/triplereport2004), (accessed 10 June 2011)

Concurrently, Buckinghamshire Chilterns University College, Oxford Brookes, Reading and Thames Valley universities formed a consortium to explore in depth the processes involved in teaching complex and diverse interprofessional groups, preparing facilitators, developing curricula and furthering inter-institutional collaboration. The project – „Promoting Interprofessional Education“ – better known as PIPE - ran from 2002 to 2005. The outcome was a series of theoretical perspectives, frameworks and models to inform IPE teaching (Howkins & Bray, 2008).

CAIPE convened two-day „split“ workshops to help participants to plan IPE programmes. Applications were invited in pairs drawn from universities and service agencies. The first day included an introduction to principles, objectives, content and learning methods in IPE leading into preliminary discussions between each pair to select a relevant and realistic initiative to work on together during the six weeks or so pending the recall day when each pair would present its outline proposals for critical review by the group. The second day ended with a critical appraisal and a review of the resources – journals, occasional papers, further workshops etc. - on which participants and their colleagues might well call to progress their IPE proposals. CAIPE organized similar workshops commissioned by universities, service agencies and IPE schemes, tailored to respond to their particular requests.

Post registration Masters degrees, focusing on or including interprofessional teaching were developed, many of which have not been sustained, including courses at the University of Derby and Oxford Brookes University,

Meanwhile much of the preparation for university and practice teachers was being provided locally, taking into account context, cultures, logistics and politics. Short sessions, for example at King’s College London and St. George’s University of London focused on the nuts and bolts of interprofessional learning to equip teachers for managing the students through a particular interprofessional learning exercise. The range of interprofessional opportunities; teaching and facilitation methods (see chapter 4); learning outcomes and assessments meant that IPE teachers and facilitators needed to be flexible and able to teach/assess in a variety of ways.

Some courses focused on the facilitation of interprofessional learning; facilitation which enabled students from different professions to enhance each other’s learning in safe and supportive small group settings; sensitive to the perspectives, perceptions and particular needs of each individual and profession; able to turn conflict into constructive learning; and aware of ways in which their own attitudes and behaviour can impact positively or negatively on students’ experience (Barr & Low, 2010 citing Anderson, Cox & Thorpe, 2009; Freeman, Wright & Lindqvist, 2010; Howkins & Bray, 2008).

The need for such preparation was self-evident. Most university and practice teachers lacked firsthand experience of interprofessional learning from their student days and hence of facilitation; many lacked confidence; some were anxious about working with students with a different body of knowledge and being expected to answer questions beyond the purview of their own profession, coping with prejudiced, denigrating, competitive or conflict-ridden behaviour. Facilitation was outside their comfort zone. They needed to learn how to devise strategies to bring groups together who had had no prior contact or awareness of each other’s courses and to empower less confident students to participate. Above all, they needed help in recognizing difficult situations, not as problems but as opportunities for interprofessional learning to reflect back to the students as such; recognizing too how their own positive and negative interprofessional encounters impacted for better or worse on their facilitating. Preparation yes, but ongoing support was as vital to sustain commitment, learn from experience and counter isolation (Anderson et al., 2009; Freeman et al., 2010; Rees & Johnson, 2007).

Preparation for university teachers and practice teachers has been provided both together and separately. While their facilitation roles were similar and mutually reinforcing, additional factors had to be born in mind in work and classroom settings. Account needed to be taken in the workplace of direct encounter with service users, carers, practising professionals and other staff mindful of agency function, policy and procedures, and, above all, safety. Learning facilitated in the classroom could be more critical, more comparative and less constrained.

It must be born in mind that IPE facilitation was only one role amongst many carried by university and practice teachers. It was best understood in the context of their other responsibilities in the context of the facilitator's employment in a university or a service agency.

## 9. Taking stock

The widespread support that IPE has come to enjoy in the UK owes much to the build-up of a critical mass of positive experience amongst students and teachers relayed to their respective institutions and rehearsed in the fast-growing interprofessional literature, conferences and workshops. Involving the Royal Colleges and other professional associations in formulating composite benchmarking statements was critical in winning their support, underscored by requirements made by the regulatory bodies for IPE in pre-registration programmes. IPE became more credible, more scholarly, less evangelical and less threatening. Pockets of resistance persisted in all the professions, but challenged within their own ranks.

Some at least of the residual resistance can be traced back to the way in which the case for common learning was presented with insufficient heed to the sensibilities of the professions and to the distinctive contribution which each must make for collaborative practice to succeed. Imputations that professional institutions were impeding the advance of IPE were counterproductive and unjustified as this paper confirms. Official recognition of their leadership would do much to consolidate the progress made.

More headway has been made locally and regionally than nationally in institutionalising relationships between the stakeholders. Universities, employing agencies and others jointly planned, delivered and evaluated pre-registration IPE, establishing a patchwork of schemes covering all regions of the UK. Comparable structures were conspicuous by their absence nationally to bring together government departments, local government associations, educational and professional institutions, the HEA, CAIPE and other interested parties to review progress, pick up policy implications and back up developments on the ground. The need for such an overview in each of the four countries and at UK level became more pressing as the implications of IPE for education and service delivery became more evident. But such an overview has become much more difficult following staff cuts in government departments and statutory bodies, the succession of policy and regulatory changes (see chapter 2), the decision to cut the CIPW programme from three to two years and to withhold funding for CAIPE to follow up its recommendations, and truncated opportunities to engage service agencies and Strategic Health Authorities more closely with universities and professional institutions in partnership to reconcile workforce and collaborative agendas. CAIPE, now the one remaining dedicated point of reference, has neither the authority nor the resources to convene and service the much-needed coordinating machinery.

IPE became more sustained and more secure as local partnerships were established, but remained vulnerable where new appointees to senior academic posts set other priorities. Cuts in education budgets (up to the time of writing) had had less impact on IPE than we had feared. The danger, it seemed, was less the survival of IPE per se than the maintenance of resources for the small group and interactive learning. Earmarked central funding, however, which had driven many of the developments in pre-registration IPE, dried up to be replaced with difficulty from diminishing local and regional sources.

Further observations about the current state of the art would be premature pending the analysis of findings from our survey to be published with the case studies. Once all three stages are complete, we shall make evidence based recommendations addressed to all interested parties as bases for consultation between them towards setting the agenda for the next phase in promoting and developing IPE and collaborative practice.

Generalisations, meanwhile, are best made with caution. It remains to be seen how universities and their partner agencies are interpreting and applying the IPE „blueprint“, taking into account different perceptions, priorities, resources and circumstances. The case studies will highlight similarities and differences in markedly different catchment areas. Ongoing work will also shed light on ways in which universities and their partner agencies are preparing teachers, especially for their facilitating role. As IPE spreads, such preparation needs to be built in part of induction and orientation for all university and practice teachers in health, social care and related fields, including award bearing courses.

We have focused throughout this paper on IPE developments in the UK, mindful throughout of the impact of the international movement of which they form part. The future lies in ever closer partnership not only in the UK, but also in Europe and beyond by improving channels for communication and exchange, and strengthening interprofessional institutions. Relations with interprofessional activists in Australasia, Canada, continental Europe, Japan and the United States were well established during the years under review. The need for equally strong relations with poorer countries was coming into sharper relief by the end of the years under review as the implications of the global health agenda were driven home for professional and interprofessional education (Crisp, 2010; Frenk, Chen, Bhutta, Cohen, Crisp, Evans, Fineberg, Garcia, Ke, Kelley, Kistnasamy, Meleis, Naylor, Pablos-Medez, Reddy, Scrimshaw, Sepulveda, Sewadda & Zurayk, 2010).

Responsibility for the promotion and development of IPE is, and must in our view, remain local, but within a framework of national and international cooperation and understanding to which this paper, if we have succeeded in our task, contributes.

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## Appendices

### A. Some UK interprofessional institutions during the period reviewed

**CAIPE:** founded in 1987, the Centre for the Advancement of Interprofessional Education is a charity and company limited by guarantee which promotes and develops interprofessional education with and through its individual, corporate and student members, working with like minded organisations in the UK and overseas, to promote the health and wellbeing of individuals, families and communities ([www.caipe.org.uk](http://www.caipe.org.uk)).

**CIPW** – the Creating and Interprofessional Workforce Programme - originated within the Department of Health with a view to mainstreaming the development of IPE across the Strategic Health Authorities in England following on from the four Common Learning Pilot Site Projects. It was led by the Devon and Cornwall Workforce Development Confederation (DCWDC). In collaboration with DCWDC entered into a collaborative arrangement with CAIPE. Outcomes were fed back into the continuing work of CAIPE.

**HEA** – The Higher Education Academy is a UK-wide independent organisation funded by grants from the four UK higher education funding bodies, subscriptions from higher education institutions, and grant and contract income for specific initiatives. It was established in 2004 from the merger of the Institute for Learning and Teaching in Higher Education (ILTHE: to improve and regulate teaching quality), the Learning and Teaching Support Network (LTSN: to support and enhance teaching at discipline level), and the TQEF National Co-ordination Team (NCT). Activities towards the aim of enhancing student learning in higher education include projects, events, publications and research at institutional, discipline and individual level. Until 2011 it included 24 subject centres based in UK universities working in specific discipline areas. Those involved in promoting interprofessional education included Health Sciences and Practice (HSAP), Medicine, Dentistry and Veterinary Medicine (MEDEV) and Social Policy and Social Work (SWAP).

**JET** – the Interprofessional Education Joint Evaluation Team comprising five researchers from five fields – general practice, sociology, social work, nursing and radiography – conducted systemic reviews of the evidence base for IPE.

## B. A bibliography

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