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The role of communities of practice in building capacity for shared learning for development: the case of an online postgraduate programme in international primary health care

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ABSTRACT

In 2003 we established the first online Masters programme in international primary health care at University College London. Five years on we have successfully cultivated a vibrant global community of primary care practitioners working in development roles across Africa, Asia, Europe and North America. Within a carefully structured but flexible virtual learning environment, health promotion specialists, nutritionists, nurses, doctors and a wide range of other primary care professionals from the north and south come together to share information, build knowledge and support each other. Collectively, they demonstrate in very tangible ways the value of open and distance learning, not only for personal and professional development, but also for the development of primary care internationally. Many of our students are fully sponsored by a Commonwealth scholarship scheme aimed specifically at enabling Commonwealth scholars to become part of a wider community of practice and to achieve multiplier effects during and after their studies.

In this paper we outline the constructivist pedagogic principles and the communities of practice model of learning we have drawn upon in developing our course. We review what is known about the role of communities of practice in building capacity for shared learning, and describe the strategies we have developed for maximising learning in an online environment. We present case-studies to illustrate the linkages between academic study and the development work our students are engaged in to improve the quality of primary health care in the communities and regions in which they work. Finally, we reflect upon the key challenges we face in delivering an online postgraduate programme in international primary health care.

INTRODUCTION – PRIMARY CARE AND THE DEVELOPMENT AGENDA

Primary care is first contact health care, delivered by generalists, dependent on teamwork, and undifferentiated by age, gender, or disease modality. It encompasses general practice, nursing, pharmacy and other community-based health disciplines. It includes basic medical care for acute illness, but also chronic disease management, sexual health, prevention and surveillance (e.g. child growth), and health education. Conditions previously managed in hospital (such as diabetes, heart disease, tuberculosis and HIV infection) are increasingly managed entirely in primary care, and require sound administrative infrastructure (especially medical records and call-and-recall systems). Primary care is closely related to, but distinct from, public health, since it takes as its unit of analysis the individual patient or family rather than the population.

It has been said that the three most important things one can do to improve the overall status of a country are redistribute income, educate women, and establish a comprehensive system of primary health care. One of the toughest development challenges now facing many countries throughout the world is that of establishing primary health care and linking it to hospital and public health services in such a way that acute and chronic diseases are effectively and cost-effectively managed and hospital services are used most appropriately. In many countries, there is an explicit move away from building 'ivory tower' hospitals and towards re-skilling specialists to become generalists. (WHO, 2004)

As shown by the archives of international development agencies such as the World Health Organization, DFID (Department for International Development) and the World Bank, there is a wealth of material and know-how about how to deliver basic primary care services. However, few countries currently benefit optimally from such knowledge. This is partly because primary health care is by its nature fragmented and geographically isolated. Compared to the best-developed hospital specialties, it suffers worldwide from unacceptable variation in the quality of clinical care, unclear values and goals, inconsistent standards of training and supervision, underdeveloped service infrastructure, an absence of clear and coordinated academic leadership, and major deficits in both research and postgraduate training. Extreme work stress and poor recruitment and retention in primary health care are recurring themes in the international literature.

For all these reasons, many countries are currently struggling to develop capacity in primary care through an old system of education that was designed primarily for the improvement of hospital inpatient care. In such circumstances, change tends to be many years, rather than months, in gestation; there are multiple practical obstacles, often accentuated by resistance from professional and political hierarchies. Because of these complexities, measurable and sustainable improvements tend only to appear after a critical mass of well trained, motivated individuals have been developed within the local community. Individuals who share a common vision for primary care and are able to initiate, evaluate and sustain appropriate innovations in policy, service infrastructure, research and teaching are critical to success.

It is against this background that we established the first online Masters programme in international primary health care, designed for leaders and change agents across the world.

SHARED LEARNING IN INTERNATIONAL PRIMARY HEALTH CARE: OUR UNDERPINNING PRINCIPLES

Collaborative learning

When we set up our postgraduate training programme we drew on certain key principles and educational concepts that have underpinned and shaped its development, and we believe to be critical to its success.

Our overall teaching and learning approach is grounded in a constructivist epistemology, in which multiple perspectives and representations of concepts and content are presented and

encouraged, knowledge construction rather than reproduction is emphasised, and is enabled through social negotiation and collaboration. (Murphy, 1997) This constructivist approach is well suited to the needs of our learners, who are 'post-experience' learners, working as senior members of multi-disciplinary teams within complex, continuously evolving organisations, and seeking learning predominantly for its applicability to problems in the work environment – hence a key need is for transferable problem-solving strategies rather than competences per se – in other words, 'educating for capability'. (Fraser & Greenhalgh, 2001)

Our decision to develop the course in an online environment was partly pragmatic: our learners are busy health professionals needing convenient and flexible access to learning. But there was also a pedagogical reason. Web-based learning has been identified as offering the potential for students to engage in rich and effective construction of knowledge through collaborative learning processes. (Kaye, 1995; Mason, 1998) The value of collaborative learning is based on a number of assumptions, which can be linked to various theoretical perspectives (see Box 1).

Box 1: Theoretical assumptions and perspectives on collaborative learning (Kaye, 1995)

- Much significant learning and deep-level understanding arises from conversation, argument, debate, and discussion (often unplanned, sometimes structured) amongst and between learners, peers, colleagues and teachers; learning is essentially a communal activity involving the social construction of knowledge. (Bruner, 1984)

- Peer collaboration in learning can directly help to develop general problem-solving skills and strategies through the internalisation of the cognitive processes implicit in interaction and communication. (Vygotsky, 1978)

- The strengths of collaborative learning through discussion and conversation include the sharing of different perspectives, the obligation to make explicit and communicate one's own knowledge and understandings to others through verbalisation or writing, (Vygotsky, 1962) and the motivational value of being a member of a healthy group. (Rogers, 1970)

Communities of practice

Principles of constructivism and collaborative learning connect well with the concept of communities of practice. The concept was originally developed by Lave and Wenger as a way of understanding learning, and in recent years has been taken up enthusiastically as a model for learning in higher education. (Lave & Wenger, 1991; Lea, 2005) Wenger describes how communities of practice form when people mutually take part in a common enterprise, and how they develop shared resources and negotiated meanings around this practice:

> 'Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their understanding and knowledge of this area by interacting on an ongoing basis… As they spend time together, they typically share information, insight, and advice. They solve problems. They help each other. They discuss their situation their aspirations, their needs. They think about common issues. They explore ideas and act as sounding boards to each other…. they become informally bound by the value that they find in learning together'. (Wenger et al., 2002)

This definition of communities of practice describes well the vibrant community of primary care practitioners created by our primary care students, tutors and colleagues as we learn together, share information and build knowledge through the medium of an online course. Many of our students are working in geographically and professionally isolated environments and, as the quote from one student below illustrates, enthusiastically embrace access to and participation in such a group:

> *I really feel there is a sense of community, and a sense that we are learning together. I think there is a very collaborative effort… we are kind of building knowledge together. There is always somebody online every day, several times a day, that it is very conducive to building learning….. And the other really positive thing that this virtual learning does, is it puts you in contact with people from all over the world. And that is so phenomenal because we are all … you know, we all work in very different environments, but we are all facing the same problems. It is just mind boggling how similar some of our problems are. From developing world to developed world to everything in-between, we are all treating sick people, and even though the context is so different sometimes, there is a core element there that is just the same, so it really gives you a sense of fellowship with other healthcare professionals all over the world. (extract from evaluation interview with first year student)*

A sense of community is cultivated in many different ways on our course. We have a lively main bulletin board where students and tutors post information that they think others may be interested in hearing about, for example, news of a special global publication initiative bringing together articles on poverty and health, a new online database of patients' experiences of primary health care, or details of a forthcoming international conference (at which students and tutors sometimes have an opportunity to meet each other face-to-face). Throughout their studies students are interacting with each other and tutors in small online groups (called 'virtual seminars') to discuss and apply the course material to their own situations and learn from each other. For example, on a module on international comparisons in primary care, students work together intensively to analyse the strengths and weaknesses of a chosen country's health care system, by applying key principles covered in the required reading. Typically, a student from a developed country is paired with someone from a developing or transition country and produces a comparison at both 'micro' level (the patient experience) and the 'macro' level (funding of the healthcare system, strategic planning and so on).

Students and tutors also collaborate online outside the formal virtual seminars, on areas of specific interest. For example, there is a virtual journal club, where interested students identify a paper they would like to discuss with others in depth. In some instances, this has led to a group of students writing collective responses to papers that have been published in academic journals. Our Ugandan students have recently set up their own online forum to discuss issues of specific relevance to health care in their country. And each year we have a virtual debate, open to all present and past students and more widely to academic colleagues throughout University College London. The debate topic emerges from discussion among students and this year the motion debated was 'This house believes that politics are more important than medical science in determining the health of a nation'.

Underpinning all this activity are certain fundamental principles about the nature of knowledge incorporated in the communities of practice concept:

- Knowledge is not an abstracted entity, but is embodied in human understanding. Communities of practice serve as a 'living repository for knowledge'.
- Knowledge is tacit as well as explicit – tacit knowledge is knowledge that has a personal quality about it, making it hard to formalise, and is best shared through informal conversations of the kind that communities of practice foster.
- Knowledge is social as well as individual – though our experience of 'knowing' something is individual, the process of building a body of knowledge is a communal act. (Wenger et al., 2002)

The community of practice model recognises that people are invariably part of different communities and networks, and uses the term 'boundary spanners' to describe the pivotal role of individuals who are in a position to share knowledge across communities. Many of our African students are supported by a scholarship scheme run by the Association of Commonwealth Universities, and this scheme understands the importance of supporting not only personal professional development, but also the development of communities of practice,

promoting 'multiplier effects' of their funding beyond the individuals they support into the organisations and regions in which students work and live.

Evaluation findings have indicated the wide range of benefits our students perceive from being part of a community of practice (see also Box 2 below):

- A supportive environment in which to share problems, seek advice and take risks,
- Increased confidence to act and implement changes because of support of the community
- Access to a wide range of perspectives on possible solutions to problems
- An understanding of different professional and cultural perspectives
- Access to expertise and up-to-date knowledge
- Quick answers to questions from people who share similar concerns and experiences
- New contacts and partnerships
- Know-how as well as know-what knowledge
- Friendships

Box 2: Building capacity for shared learning for development: students' stories

Here we draw on the experience and words of two of our current students to illustrate the linkages between academic study and the development work students are engaged in to improve the quality of primary health care in the communities in which they work.

Kate Sherry (occupational therapist) and Ben Gaunt (chief medical officer) are colleagues at the deeply rural Zithulele Hospital in the Eastern Cape province of South Africa. The local community, most of whom have no source of income, are extremely poor and suffer the full spectrum of disease that is common in developing countries. HIV and TB predominate amongst adults, while children contend with malnutrition, gastroenteritis and pneumonia. Disability rates are high.

In 2006 they heard about the MSc in an online rural discussion group and applied for bursaries through the Association of Commonwealth Universities. They were successful, and since August 2006 they have both added the role of MSc student to those of clinician, manager, trainer, administrator and general solver of problems that make up their day-to-day jobs.

Ben fulfils a dual role of clinician and manager of the clinical services. He explains: *"As a hospital based doctor working with the full range of undifferentiated problems seen in primary health care, I may one minute be resuscitating a newborn baby, the next manipulating a fracture, doing a Caesarean section, stopping a severe nose-bleed or simply persuading a patient with high blood pressure that they should take medication. As manager I assist the growing multi-disciplinary teamwork towards an expanded and improved service through a process of protocol development, training, auditing and leadership."*

Kate adds her perspective: *"Rehabilitation services were unheard of in this community until I and a physiotherapist colleague began work at the hospital last year. Our service now includes two junior therapists and two assistants, and our activities range from wheelchair services, outreach clinics, and workshops to train caregivers of disabled children, to supervision of HIV counsellors and working with schools to promote inclusive education. We are constantly looking for ways to provide more appropriate and accessible services, and research, strategic planning, staff training and management are all part of my role."*

Both avowed generalists by nature, and both carrying multiple roles, Ben and Kate say they *"thrive on the skills and information opened up to us by the MSc."* Traditional training and knowledge is often insufficient for the unusual challenges they face. Above all, Ben and Kate have found that they need the skills to locate and use information from elsewhere in the world, at the same time developing an understanding which allows comparison and analysis.

As Kate expressed it, *"Far from being a luxury or alternative career path, we find academic skills a critical foundation for the very practical day-to-day realities of our tasks, whether we are researching best clinical practice or looking for some anthropological light on culturally shaped health behaviours,"*

The diverse challenges of rural health in a developing context call loudly for a multidisciplinary team approach. Our small team is fortunate in that as we live, work and socialize together, traditional professional boundaries and hierarchies are broken down, and we find ourselves with a far better understanding of each others' roles and strengths. This allows for exploring new ways of working together.

The MSc course promotes lively interdisciplinary discussion between doctors, nurses, pharmacists and rehabilitation therapists. These online discussions have allowed Ben and Kate to develop their skills in communicating about their work. One of the highlights for them both is the interaction with people from all over the world. They describe the variety of perspectives and experience as *"unbelievably enriching."*

Living and working in a remote area and service, they have little opportunity to discuss with and learn from anyone other than a few immediate colleagues, or to keep up with new developments. It's easy to get swamped by the realities of the context, but the distance learning program provides a different perspective and a new source of ideas and stimulation.

The insights and knowledge they've gained have also proved useful in their involvement in a non-profit organization, the Jabulani Rural Health Foundation which provides support for the hospital and development in the surrounding community. The broader perspective gained through academic study of primary care is allowing them to identify interventions outside the hospital itself which can improve health in the community.

Ben concludes, *"Academically stimulating, practically useful, focused on communities and promoting links between health care practitioners in all corners of the globe, the MSc is a fantastic opportunity for carers everywhere to develop their academic skills in a relevant way."*

KEY CHALLENGES IN DEVELOPING ONLINE COMMUNITIES OF PRACTICE

In the final section of this paper we briefly reflect upon some key challenges we face in delivering an online postgraduate programme in international primary health care. First, despite the theoretical and practical benefits of online collaborative learning identified above, our own experience and that of others suggests that not all students find participation straightforward. This may be for very practical reasons, for example inexperience in using the online environment effectively and confidently, (Salmon, 2000) or perhaps because of poor online connectivity. Secondly, it is clear that for some students constructivist approaches to learning are an enormous leap from the educational approaches they have been accustomed to in their earlier learning experiences.

Perhaps most importantly, it has been suggested that in order to understand the complexities of participation in online communities we have to consider how identity is constructed and negotiated in online communities. (Hughes, 2007) Hughes puts forward the concept of 'identity congruence', and argues that congruence occurs when an individual's social identities are consistent with the topics and patterns of communication and associated discourses of identity that are made available by an online community. She argues that where there is identity congruence, we can expect an individual to be more likely to participate fully in a group than where there is incongruence. Thus it is crucial that those involved in developing online communities endeavour to address the difficult tension between supporting students in becoming acculturated into the established academic community and listening responsively to the subtleties of our learners' expressions of their diverse identities.

CONCLUSION

The online environment offers enormous potential for building capacity for shared learning for development. It allows students to simultaneously interact with and learn from not only their teachers and the educational materials provided by a course, but also a community of fellow students developing primary care in different parts of the world, and enables them to apply their learning from these interactions to their own local development contexts and practice.

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