

NEW PERSPECTIVES ON LEARNING AND INSTRUCTION

Researching and Understanding Educational Networks

Robert McCormick, Alison Fox,
Patrick Carmichael and Richard Procter

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Researching and Understanding Educational Networks

The idea of networks is ubiquitous. The images and metaphors of electronic networks in particular permeate our thinking, including that in education.

Researching and Understanding Educational Networks extends the discussion of educational networks in a unique and novel way by relating it to teacher learning. Following an investigation of teacher and school networks in the United Kingdom, the authors found that theoretical perspectives taken from existing work on such networks were not adequate to provide an understanding of their potential, or to provide the basis for researching them in ways that reflected the variety of teacher experience.

This book presents analyses of the problems with existing theories of teacher learning, which for example draw on ideas of ‘communities of practice’, and explores what network theories can be brought to the problem of how teachers and schools create and share new knowledge about practice. Innovative networking theories discussed include:

- social network analysis;
- social capital theories;
- actor-network theory;
- investigations of electronic networks, including computer-mediated conferencing;
- how people learn at events such as conferences.

Researching and Understanding Educational Networks explores a new application of network theories derived from quite different fields of work, and extends it by being concerned about networks beyond organisations, and specifically about educational networks. Their application to educational networks, and to teacher learning in particular, is a unique contribution of the book. This enables it to be of interest to both researchers and those studying for higher degrees, including students who are professionals working in schools.

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Preface

In the twenty-first century, what could be more important than networks? Our society is awash with technology that enables us to communicate, to join all kinds of networks and, in the contemporary phrase, to engage in ‘social networking’. Such is the power of this technological influence that it is unsurprising that our thinking about networks is permeated with images and metaphors from electronic networks. This orientation may equally influence thinking about education, whether done by students or by teachers. Our concern is with teacher education, in particular their learning of new practices. Ideas of collaboration of teachers in improving classroom practice have a long history, and to this has been brought ‘network thinking’. Thus, images of software developers spread across the globe, sharing computer program construction in electronic networks, is an inviting one to bring to thinking about how teachers could work together and share practice. As researchers, we were influenced by these ideas and had in our various ways been working with groups of teachers in what had become known as ‘electronic communities’, particularly in computer-mediated conferencing. We had seen the power of teachers being able to exchange ideas and practices through this means. But this book is not about such networks, though we do discuss them.

Our interest in networks took shape in work on the Learning How to Learn (LHTL) project (2001–5), which was concerned with how schools learn about and develop classroom and school practices associated with assessment for learning (AfL). We were responsible for part of this large project that investigated how schools shared knowledge about, and the practices of, AfL. Other parts of the project looked *inside* the schools; our concern was with what happened *between* schools. (We will give details about the project later.) Our previous interest in electronic networks, and those of our colleagues in the project, led us to frame research questions focused on these networks. We felt well qualified to investigate them. However, as we conducted our initial fieldwork with those in schools, we realised that such electronic networks were unlikely to be very significant to teachers and schools. We therefore needed different ways of thinking about links across schools. So, we investigated more traditional ‘community of practice’ ideas. At that time, Hakkarainen *et al.* (2004) were finalising their book and we were privileged to have sight of the manuscript. This opened up a whole area of work that we thought could be used not just in commercial innovative knowledge communities but in education, and in particular with teachers.¹ It prompted and enabled a rethinking of our understanding of networks. As our fieldwork evolved, so did our understanding of the potential of network theory, and with it our analysis of the data we collected.

Teacher learning was the driving force for all our concerns, and this was the lens through which we interpreted network theory.

This book examines the way our thinking developed and the use of network theory to make sense of how AfL practices were, or could be, shared by schools involved in the LHTL project. We will present data from this project on the educational networks involved. But we will also explore different kinds of theory, network and otherwise, that give different perspectives on such data. Subsequent to the LHTL project we have all conducted projects that enabled us to investigate networks in other ways, and we will also use these.

The book is aimed at helping those who would like to conduct research on educational networks, particularly networks associated with schools. Where we were not able to conduct specific kinds of apparently productive approaches, we give some ideas on them, in an effort to help those who will extend work in this field. It has been a rewarding journey, one which we hope you will share.

Inevitably, there is much we have to learn, particularly in a field that has in recent years expanded and developed in relation to education.

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Among the many people who worked on the project we would like to pick out Dave Ebbutt, who, as part of the work for LHTL, collected some of our network data.

Although the LHTL project team has already thanked the many schools and teachers who were our ‘respondents’ in its publications, we feel it is important to reiterate the acknowledgement. So, we thank the forty project schools and ten trials schools with which we worked, and the hundreds of teachers and pupils who have contributed in some way. Without them there would have been no study. We were constantly amazed at how willing they were to give of their time and expertise at a pressured period in educational history, including putting up with our requests to draw and elaborate maps of their professional relationships. We cannot name them for confidentiality reasons, but we are indebted to them and have learned so much from them. There is a sense in which we have not ‘discovered’ new knowledge but have been privileged to find out about, interpret and communicate the knowledge that teachers themselves create.

Like all researchers, we drew upon the ‘unseen’ services of those who staff the libraries of the institutions where we have worked: the University of Cambridge and The Open University. We are appreciative of those in The Open University library document delivery section, particularly Debbie Snook, who not only processed so many requests but also searched for those not available from conventional library sources.

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the whole manuscript, and for doing so with such helpful comments and grace. Any failings in the book are in spite of all these colleagues' best efforts and are entirely our responsibility.

Thanks are appropriate to the National College for Leadership of Schools and Children's Services (formerly the National College for School Leadership, the name we use throughout) for Figure 8.2 (the image is taken from the 'Leading from Practice – Learning about Leading' Research Associates event held at the National College for School Leadership on 16 March 2007). Thanks also to etc.venues for Figure 8.3.

Finally, we would like to thank all our families, who put up with so much during the time writing the book. Without their support we would not have completed this task.

Abbreviations

AAIA	Association of Achievement and Improvement through Assessment
AfL	assessment for learning
AIDS	acquired immune deficiency syndrome
AM	acquisition metaphor
ANT	actor-network theory
AST	advanced skills teacher
AT	activity theory
Becta	British Educational Communications and Technology Agency
CARN	Classroom Action Research Network
CPD	continuing professional development
DCSF	Department for Children, Schools and Families
DfES	Department for Education and Skills
DHT	deputy headteacher
FCL	fostering communities of learning
HEI	higher education institution
HT	headteacher
ICT	information and communications technology
INSET	in-service training
IU	Innovation Unit (within the Department for Education and Skills)
KMOFAP	King's Medway and Oxfordshire Formative Assessment Project
LA	local authority
LEA	local education authority (the original name for the part of a local authority concerned with education)
LHTL	Learning How to Learn
NAHT	National Association of Head Teachers
NCSL	National College for School Leadership (now the National College for Leadership of Schools and Children's Services)
NLC	networked learning community
NWP	National Writing Project
OECD	Organisation for Economic Co-operation and Development
PLC	professional learning community
PM	participation metaphor
QCA	Qualifications and Curriculum Authority
SATs	Standard Assessment Tests
SEN	special educational needs

SENCO	special educational needs co-ordinator
SMT	senior management team
SNA	social network analysis
SSAT	Specialist Schools and Academies Trust
TDA	Training and Development Agency for Schools
TLRP	Teaching and Learning Research Programme
TN	teacher network
VEAZ	virtual education action zone

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Educational policy and technological contexts

Introduction

The Learning How to Learn project sought to understand how teachers and their students could develop ‘learning how to learn’ practices (James *et al.* 2007). This was set in a world where ‘knowledge economies’ require lifelong learning and the need to respond to social and economic change. For those in schools, it asks that they focus students’ attention on their learning, and hence the popular term ‘learning to learn’. For teachers and those who support them, this orientation requires a new focus on their pedagogy. They too have to learn. But in the Learning How to Learn (LHTL) project we went one step further and wanted them too ‘to learn how to learn’. This was not a research project taking a passive view of its subjects, but had an agenda both to change practice and to investigate the issues that this raised. Any such undertaking brings with it a legacy of attempts to deal with teacher learning, on both intellectual and policy fronts. In this chapter we will attempt to explore these contextual factors.

First we will look at the specific change we wanted to bring about, namely ‘assessment for learning’, an idea that at its core tries to focus students and their teachers on learning. As our concern is with teacher learning, we will explore some of the antecedents for our particular interest within the project in networks within education, some of which use different conceptions, most notably ‘professional communities’. Some of these antecedents have had ambitious visions of the role of networks of schools and teachers, and we will explore one in particular that saw them leading as it were to an ‘epidemic’ in education, such could be the impact of these networks. Whatever academics do in universities or through policy think tanks, in the end the education system needs to find ways of enabling *all* institutions to engage in the visions or theoretical models of how networks can improve what is done in schools and colleges. We explore some of these, not with a view to seeing if they were effective, but to understand just what constituted networks and their processes.

All of these are the starting point of the LHTL project’s interest in networks. But we brought one more, the role of technology. Although few of the antecedents of educational networks had any concern for technologies, in our contemporary society they are ubiquitous. Our personal interests and skills drew on an understanding of electronic networks, and this was reflected in the research questions the project set itself. All these considerations set the scene for the rest of the book, and in particular for the need to understand the nature of networks and of the teaching learning they seek to enable. First, we return to the specifics of the project and what we were trying to investigate.

Background

The LHTL project started from the base provided by assessment for learning practices with which many of the research team had been involved: research on specific aspects of assessment for learning (AfL) (reviewed by Black and Wiliam 1998a), or projects that worked intensively with teachers (e.g. the King's Medway and Oxfordshire Formative Assessment Project [KMOFAP]; Black *et al.* 2003). In the KMOFAP, secondary school teachers and university academics developed new practices of AfL (also referred to as formative assessment) over a long period of time and involving some twenty days of support through group meetings. The LHTL project wanted to see how ordinary schools could build on this previous work and develop it into methods of learning how to learn, without the kind of intensive support provided in KMOFAP. The teachers had to learn new classroom methods in situations for which no such methods existed for their specific teaching situation. Thus, a technique such as questioning used by secondary science teachers had to be developed by those in the early years of schooling for, say, literacy work.

The LHTL project was therefore concerned with some basic questions about professional knowledge creation, and took as its starting points these key research aims (among several):

- to investigate what characterises the school in which teachers successfully create and manage the knowledge and skills of learning how to learn;
- to investigate how educational networks can support the creation, management and transfer of knowledge and skills of learning how to learn.

The project built upon a wealth of evidence about the importance of teachers and schools taking more responsibility for their professional development and their practice, and about how development should take place. Such an approach has a long history with school-based curriculum development in the 1960s and 1970s (Skilbeck 1976) and, perhaps more profoundly, the 'teacher as researcher' ideas of the 1970s (Stenhouse 1975). Stenhouse, in particular, saw the creation of professional knowledge as the fundamental task of the teacher, who would investigate his or her classroom and build a professional understanding of practice. These early approaches took classroom-based inquiry as an essential element of the development of professional practice.¹ This approach was updated in the 1990s as a view of the teaching profession where a 'new professionalism' was moving away from individual teacher development to institutional development, and a collaborative culture was developing (Hargreaves 1994). Another strand included critiques of educational research, and here David Hargreaves (1996) saw teachers taking more control over the research agenda and with less of a division between researchers and teachers in the production of evidence as the basis for professional practice. Hargreaves (1999) developed this further through his concept of the 'knowledge-creating school', where he outlined four elements of such schools: audits of professional working knowledge, management of the process of creating new knowledge, validating the professional knowledge created and dissemination of the created professional knowledge. The first (audit), second (management) and fourth (dissemination) are of particular interest to the focus of this book and we will examine them later in the chapter.