

ROUTLEDGE REVIVALS

Common Knowledge

**The Development of
Understanding**

**Derek Edwards and
Neil Mercer**



Common Knowledge

First published in 1987, *Common Knowledge* offers a radical departure from the traditionally individualistic psychologies which have underpinned modern approaches to educational theory and practice. The authors present a study of education as the creation of 'common knowledge' or shared understanding between teacher and pupils. They show the presenting, receiving, sharing, controlling, negotiating, understanding and misunderstanding of knowledge in the classroom to be an intrinsically social communicative process which can be revealed only through close analysis of joint activity and classroom talk. Basing this analysis on a detailed examination of video-recorded school lessons with groups of 8 to 10-year-olds, they show how classroom communications take place against a background of implicit understanding, some of which is never made explicit to pupils, while there develops during the lessons a context of assumed common knowledge about what has been said, done, or understood.

This wide-ranging study makes an important contribution to the current debate about both teaching methods and the structure of education. It is essential reading for educationalists and developmental psychologists and has a clear practical relevance to teachers and teacher trainers.

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The Development of Understanding in the Classroom

Derek Edwards and Neil Mercer



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in the classroom

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and NEIL MERCER

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Preface and Acknowledgements

The research and theory that are the basis of this book are the outcome of a collaborative project on the nature of classroom education that has been in progress since about 1982, conducted in and between our host institutions at Loughborough University and the Open University. Many people have helped us in all stages of the work, from the initial formulation and conduct of the research, through to the critical reading of parts of the manuscript. We should like to thank the following people in particular.

The Education and Human Development Committee of the ESRC provided essential funding between 1984 and 1986 (award ref. no. C00232236). The funded project team consisted of the authors, together with Janet Maybin, project officer, who arranged visits to schools, conducted some of the data transcriptions, helped in the analysis of recordings, read the entire manuscript and wrote the appendix. Janet's influence is felt throughout the book, in the ideas developed in it as well as in the fact that the research got done. The fourth member of the team was our invaluable project secretary, Pat Stroud, located at the Loughborough end. Pat's work in transcribing video and audio recordings, apart from many other tasks willingly undertaken, surpassed what anyone could reasonably expect of a secretarial assistant. Others who have been of direct help in the general conduct of the research include Sue

Sheldon, who conducted some of the interviews with pupils, and Pam Powter, secretary in the School of Education at the Open University, who has provided such excellent secretarial support for our research since it began. We should also like to thank the ILEA Schools Television Unit for allowing us to use their materials, and the Audio-Visual Services at the Open University for their expertise in making our own video recordings.

Friends and colleagues who have read parts of the manuscript and provided useful comments include the following: Michael Billig, David Middleton, Douglas Barnes and Martyn Hammersley. Our thanks to them, and to the others whose views have shaped what is written here. Finally, we offer our heartfelt thanks to the teachers and children in London and Buckinghamshire who took part in this research.

Key to data transcriptions

Several of the chapters present sequences of classroom dialogue, together with contextual information, printed to the right of the speech, concerning what the teacher and pupils were doing at the time they were talking. The names of the children have been altered to protect their identity, and the teachers are identified by the single letter 'T'. Our aim has been to present these sequences of talk as accurately as possible, using some conventions for the transcription of discourse, but at the same time ensuring that they remain easily readable and comprehensible. Our purpose has not been to produce an analysis of linguistic structure, but to provide the sort of information that is useful in analysing how people reach common understandings with each other of what they are talking about. So, while commas are avoided, and certain conventions are used to indicate such things as pauses and simultaneous speech, we have retained the normal written uses of capital letters and full stops (periods) to mark the start and end of sentences.

Transcription conventions

(. . .) Words undeciphered

.
. Omitted discourse which is irrelevant to the issue being
. discussed

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. . . Sequence starts or ends within a speaker's turn

/ Pause of less than 2 seconds

// Pause of greater than 2 seconds

Bold type Emphatic speech

[Simultaneous or interrupted speech

Example:

SPEAKER 1: . . . that's very [interesting isn't it?
SPEAKER 2: Say if the string's . . .

(&) Continuing speech, separated in the transcript by an interrupting speaker

Example: speaker 1 continues talking without a pause, despite interruption:

SPEAKER 1: You think even if you stuck a ton on
[it wouldn't make any difference a ton?
(&)
SPEAKER 2: No/ no/ not even a ton.
SPEAKER 1: (&) it would still be about ten seconds . . .

1

Introduction

This book is about education as a communicative process. The research it describes is not about classroom language as such, and so cannot be called research in linguistics. Nor is it really about the nature and functioning of the education system, as might be the case for a piece of sociological research. And, although our research is probably best described as 'psychological', we are not concerned with the intellectual development or attainment of individual children, as are many psychological researchers.

The research is about the ways in which knowledge (and, principally, that knowledge which forms the content of school curricula) is presented, received, shared, controlled, negotiated, understood and misunderstood by teachers and children in the classroom. We are interested in what that knowledge means to people, and in how and to what extent it becomes part of their common knowledge, their joint understanding. The whole of our enquiry is based on the belief that all education is essentially about the development of some shared understanding, some mutuality of perspectives. Much goes on in classrooms besides education, and there is more to education than the sharing of knowledge. But, where and when education *is* taking place, then mutuality is always an issue. This is true for all styles and philosophies of teaching.

Now this may seem a contentious assertion. It might be objected that

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the most formal, traditional and didactic styles of teaching, which emphasize the acquisition of factual knowledge, accurate recall and 'right-answerism' (Holt 1969), are concerned not with developing a mutuality of perspectives but with imposing the teacher's knowledge on the blank slates of the pupils' minds. Like Mr Gradgrind in Dickens's *Hard Times*, some teachers may see children as 'little pitchers . . . to be filled so full of facts'. But even Gradgrinds pursue the goal of common knowledge. It is simply that the nature and scope of that knowledge is not negotiable, or open to question by the pupils. The intended end-product of the process is the pupils' acceptance and understanding of what their teacher already knows. On the other hand, a more progressive educational approach might well offer more opportunities for pupils and teachers to negotiate common curriculum goals, or at least for teachers to incorporate pupils' wider experience and interests into what is taught. But whether such opportunities are taken up, and whether they are successfully incorporated into teaching and learning, can be discovered only by observing what goes on in actual classrooms. The pursuit of shared understanding is problematical under any educational ethos, and we are not suggesting that it is easily, or often, achieved. We are suggesting that to look at how shared understanding is pursued, achieved, lost or even avoided in the everyday classroom talk of teachers and pupils will tell us more, not only about classroom education, but also about the communication of knowledge in a much broader sense. Indeed, we were surprised at the extent to which the relatively 'progressive' sorts of teaching that we examined were characterized by the overwhelming dominance of the teacher over all that was done, said and understood to be correct.

Schools serve many social and cultural purposes, from child-minding to the transmission of moral values; but their institutional *raison d'être* is always their function of passing on a part of the accumulated knowledge of a society, and evaluating children's success in acquiring this knowledge. Educational knowledge, as represented by the school curriculum, is a selection from all the knowledge of a particular culture. As Douglas Barnes (1982) reminds us, it is possibly never more than 'an arbitrary selection, sanctioned only by convenience and tradition' (p. 101). But it consists of much more than given 'facts'; it includes ways of operating on the world, and of making judgements. At best, it embodies useful ways of evaluating given information, of generating new information and creating new ways of thinking about, and acting upon, the world. At worst, it excludes much 'worldly' knowledge, practical skills and commonsense understandings, in such a way that it remains for ever peripheral, and in the great part dispensable, to most of the people to whom it is offered. Although educational knowledge has no well-defined boundaries, and merges with other kinds of social understanding and experience that children acquire during their school years, any analysis of educational

practice would not benefit from leaving it embedded in its broader cultural context. The boundaries of educational knowledge are continuously marked out, and reinforced, in classroom discourse. Schools have their own epistemological culture, and it is with the perpetuation of this culture that we are concerned here.

Sharing knowledge

What is the essence of the act of sharing knowledge? What are the minimum requirements of an interaction, which would allow it to be so described? Consider the proposition that such an act is 'that two people now know what only one knew before'. This minimal statement, in its apparent simplicity, conceals more than it reveals about a feature of human life which, perhaps more than any other, distinguishes us from other animals. It is now fully appreciated that the dominance of our species is largely due to our unique ability to avoid the 'genetic bottleneck' which restricts the quantity and quality of information that even the most intelligent of other species are able to pass on from one generation to another. Apes and monkeys pass on information and learn habits through observing each other's actions; what they do not do is share knowledge by symbolizing it out of context. They do not discuss, compare notes, exchange views or negotiate understandings of what they have done or seen. When two people communicate, there is a real possibility that by pooling their experiences they achieve a new level of understanding beyond that which either had before.

There is another flaw in our minimal statement. Two people may both come to know something, but not communicate it. They may both learn that the king is dead, but not appreciate that this knowledge is mutual. This is no philosophical pedantry; the roots of a serious misunderstanding, or the reasons for a choice of an inappropriate style of communication, are often to be found in speakers' misconceptions about what the other already knows.

'Sharing knowledge', in the sense we mean here, is an activity which pervades the whole of human social life. When people are not intent on communicating information to others, they are often intent on preventing it being shared too widely. People share knowledge in many places other than in school, and we might well have chosen to study the phenomenon in one or more of those other locations where it has prime significance: in the mass media, counselling and other client-professional relationships, in business organizations, or even in the everyday conversational exchange of memories (see Edwards and Middleton 1986). We have more than one reason for having chosen to study it initially within the education system. One is simply that it was through our own involvement with education that our curiosity about these matters was aroused. We

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spent our 15,000 hours of childhood in compulsory schooling, and quite a few hours more as volunteers. In adulthood, teaching and learning have long been part of our daily occupations, and we have spent some of this time teaching other teachers. We wanted to know more ourselves about what we had been doing, and why it had succeeded or failed. Secondly, as psychologists specializing in the study of language, we have inevitably been intrigued by the many profound, and still largely unresolved, issues involved in understanding the relation between language and learning in children. Moreover, these issues are often at the heart of pedagogy; one of the ways in which teaching methods vary is in their typification of the child as learner, and another is in their conception of the most effective ways for teachers and learners to communicate. Unresolved conflicts between different teaching styles and methods represent, to some extent, our lack of knowledge about such matters. There was thus the attractive possibility that our research might yield findings of practical educational value.

Given these various factors, and all the other practical considerations which constrain researchers, it seemed appropriate to limit ourselves in our empirical research to observing one age group in one educational setting. We therefore chose 8–10-year-olds in mainstream junior schools in England. This age group falls within that slightly broader band which has been given particular attention by developmental cognitive psychologists, and so we have the opportunity to relate and compare our findings to an existing body of research (albeit one largely based on a different, experimentalist tradition). It also comprises children who have been in the school system long enough to have acquired some general understanding of how schools work, in terms both of their function as social institutions and of the nature of particular educational activities. They are children who are not naïve about school, and most of them will have acquired basic skills in literacy and numeracy. However, they still have much to learn about matters that educated adults will normally take for granted. Finally, British junior schools were attractive to us as locations for this research because of their freedom from the constraints of examination syllabuses which, coupled with their generally ‘progressive’ ethos, allows teachers and children good opportunity for varied styles of interaction, some negotiation of curriculum content, and some flexibility in the rate at which it is tackled. It is perhaps important to emphasize that it was the variety of styles of interaction, rather than the opportunity to observe any particular style of teaching, which appealed to us. Moreover, we wanted to observe experienced teachers who were confident in what they did and who felt that they could carry on teaching while being recorded. Unlike some other observers of classroom processes, we were not planning a taxonomy of discourse structures (see Sinclair and Coulthard 1975), nor conducting a survey of teaching styles and ways of

organizing classrooms (see, for example, Galton, Simon and Croll 1980; Bennett 1976), and this freed us from some of the sampling constraints that they would encounter.

Furthermore, we felt that any attempt to code and categorize the phenomena that we were interested in would subvert one of the most important points we wished to make. Coding and counting schemes rely on the assumption that particular categories of speech mean the same thing each time they occur. In [chapter 5](#) we discuss the notions of 'context' and 'continuity', which involve a process whereby the meanings and the communicated content of what people say inevitably change as they proceed. Things said at the ends of lessons carry a wealth of shared and implicit understanding, established during the lesson, that they could not carry at the start. And, since the raw data of speech are lost in the process of coding, it then becomes impossible to reconstruct the way in which that 'common knowledge' was created.

Discourse and the development of shared understanding

Although most substantial examples and illustrations will be drawn from observations of junior classrooms, we do not wish our consideration of the development of common knowledge to begin and end there. As we have at least partly explained above, those classrooms represent one of many possible locations for exploring such matters, and the nature of some of the issues involved may be best understood by stepping out of the classroom and considering other kinds of social setting, and the dialogue that takes place there.

Take, for example, the idea that (as it is sometimes put) Britain and the USA are two nations divided by a common language. An American says, 'I'm mad about my flat', and means that they are furious about their punctured tyre. An English person (southern, upper-middle-class variety) might well use the same phrase to mean they adore their new apartment. These two hypothetical individuals might thus seem to be bound to misunderstand each other's use of this particular phrase. But, in reality, how likely would such a misunderstanding be? To know this, we would need some additional information. Are the talkers aware of each other's nationalities, and so perhaps sensitive to each other's variety of English? Do they know each other well (do they know, for example, that one of them is particularly inept with automobiles, or that the other has recently moved house)? Is this phrase being used within a continuing conversation which has already established the matters under discussion? It would seem that, the more relevant common knowledge these two people have, the less probable it is that they will misunderstand one another.

But there are yet more eventualities. Perhaps because the speakers do

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know each other so well, they erroneously assume that some things are common knowledge. It may be, for example, that the English person thinks that she has previously mentioned moving house, but has not. Or she did, but the American was temporarily distracted. They may clarify any misunderstanding immediately, by asking a couple of questions. Or they may not. The plots of many successful farces, and of more serious dramatic works, have revolved around persistent, unresolved misunderstandings arising in the course of ordinary conversations. The establishment of mutual understanding is an everyday matter; but so too is the creation of misunderstanding.

That people recognize the importance of establishing communication on the basis of shared experience is without question. We will all have noticed how, even in relatively superficial social encounters, people quickly use effective heuristic techniques to discover if they have friends, family background, occupational interests, etc., in common. Moreover, people are able to demonstrate their mutuality in ways other than by direct and explicit reference to factual information. We may refer an acquaintance to a shared area of experience by modifying our speech to include more technical terms, jargon or slang expressions, or by a choice of dialect, accent or language. We may also, of course, demonstrate it in non-linguistic ways, by visibly performing some action.

There are some basic elements of the process of establishing a shared understanding, of building an ever-expanding foundation of shared knowledge which will carry the weight of future discourse. These are the offering of new information, reference to existing past experience, requests for information, and tests or 'checks' on the validity of interpretations of information offered. It would be misleading to represent these in some 'ideal type' model of the process (as is sometimes done for more general 'models of communication'), for they follow no necessary sequence, and their relative occurrence is strongly influenced by the particular kind of discourse in which they are used.

By the use of these elements, or mechanisms, two or more people can construct through discourse a continuity of experience which is itself greater than their individual experience. Its existence as a referential framework may become taken for granted by the participants, so that they do not strive to be as explicit as they might for an uninitiated newcomer. They may construct it well, or badly. They may use this mutual knowledge to good effect, or squander it. Later in this book, we may learn from the examples of the teachers and pupils we observed.

The themes of the book

There are six main themes in the book, each of which could in itself provide a good starting point for a discussion of the development

of common knowledge. Each is like a sketch, from one particular perspective, of a partially glimpsed object. These sketches, or themes, relate and overlap. But they are not reducible to a single perspective view. And, although, when combined, they offer the beginnings of a three-dimensional description, our knowledge of the whole is still so incomplete that constructing a model must involve a good deal of speculation.

These themes are: (1) educational ideology and practice; (2) educational ground-rules; (3) context and continuity; (4) principled and ritual knowledge; (5) the control of knowledge by teachers; and (6) the handover of competence to children. The meanings and implications of these themes will become clearer as each is developed. Each of the first five themes has a chapter to itself, while the sixth recurs throughout. But the chapters are not self-contained. Each takes as its focus a different aspect of the same whole process. Each draws upon the same essential phenomenon – the development of shared understandings in a series of video-recorded classroom lessons. The major source of data, though supplemented by interviews and other researchers' work, is the set of transcripts of talk and action taken from those video recordings.

In [chapter 2](#) we discuss the range of contexts that have informed our own theoretical perspectives – including linguistic, psychological, sociological and anthropological approaches to discourse, shared knowledge and education. [Chapter 3](#) examines the particular educational ideology that appeared to be the basis of all of our teachers' approaches to their job: an ideology of essentially 'progressive' education based on the value of 'learning by doing', learning through activity and experience rather than from didactic instruction. [Chapters 4–7](#) then take up the remaining themes of the book: the foundation of shared understanding in a set of implicit understandings (ground-rules) about the nature of classroom talk and of educational knowledge; the importance of context and continuity in the development of shared knowledge; the distinction between procedural ('ritual') and principled knowledge, and the ways in which the former is created through characteristics of classroom talk; and the nature and implications of the teacher's control of the discourse, and of what comes to count as common knowledge. [Chapter 8](#) summarizes the earlier ones and attempts to draw together their overall implications. The appendix, written by Janet Maybin, provides information about our research project, and especially the recorded lessons and interviews which are the main empirical basis for the ideas developed in the book.

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Approaches to classroom knowledge and talk

A multidisciplinary army of researchers has gathered data in schools over the years. Represented in its ranks are not only teachers and other educationalists (i.e. researchers with a practical interest in curriculum content and teaching methods) but also anthropologists, psychologists, linguists, and researchers from a number of different schools of sociological thought. Despite all this activity, however, until recently, little interest was shown in the observation and analysis of classroom talk. The 1960s ended with very little being known about the particular and peculiar characteristics of educational discourse.

Since then, different groups of social researchers have become involved with classroom talk for a variety of reasons, not all of which are relevant to our concerns here. We shall consider these different disciplinary approaches in turn, to the extent that they inform our basic concern with the establishment of common knowledge. In doing so, we knowingly take the risk of oversimplifying a complex area of research, and of 'pigeon-holing' researchers too neatly as 'linguists', 'psychologists', and so on. Many research endeavours in this field are characterized by a genuinely interdisciplinary perspective, and by a combination of both 'pure' and 'applied' interests. Moreover, different methodologies are used within particular disciplines. Nevertheless, disciplinary traditions – which are still an important influence on researchers – do embody certain