Colin Lankshear *and* Ilana Snyder
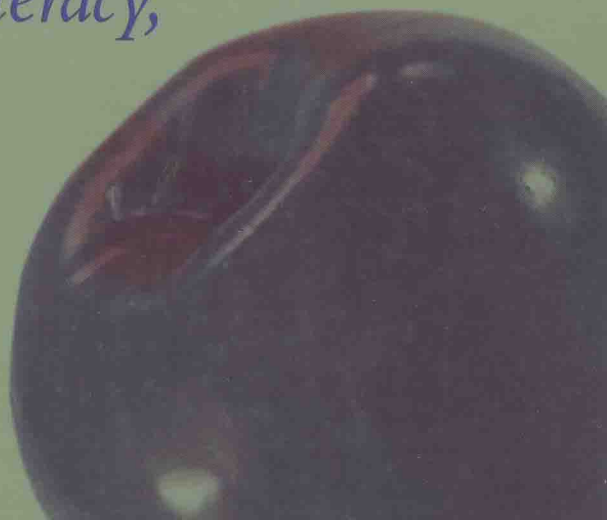## with Bill Green

Teachers
and techno-
literacy

Managing literacy,
technology
and
earning
in schools

Teachers and Technoliteracy

Managing literacy, technology
and learning in schools

Colin Lankshear and Ilana Snyder
with Bill Green

A note on authorship

This book has grown out of a research project funded by the Department of Employment, Education, Training and Youth Affairs (DEETYA) through the Children's Literacy National Projects Program. The research was reported as *Digital Rhetorics: Literacies and Technologies in Education—Current Practices and Future Directions* (Lankshear et al. 1997). The original project was undertaken by a consortium of researchers jointly led by Colin Lankshear (then located at Queensland University of Technology) and Chris Bigum (Central Queensland University). Ilana Snyder (Monash University) and Bill Green (University of New England) were members of this consortium. Other members were Cal Durrant (University of New England), Eileen Honan (Queensland University of Technology), Wendy Morgan (Queensland University of Technology), Joy Murray (New South Wales Department of Education & Training) and Martyn Wild (Edith Cowan University). In addition, Robert Bleicher, Michele Knobel and Ann McKenna were closely involved in the case study and final report write-ups. Researchers working in the several sites enjoyed admirable research assistance from David Baxter, Belinda Easthead, Paul Muirhead, Steve Roffe, Francy Ross and Colin Warren.

While this book draws considerably on the contributions of all the participants named here, it could not have been written by such a large group. From the outset, the consortium envisaged various

productions based on the research by combinations of writers as time, individual energies and competing commitments allowed. This book varies significantly in focus, orientation and emphasis from the project report, which was slanted heavily in the direction of being able to make finite and succinct recommendations to DEETYA, state education departments, teacher education providers and schools. Our emphasis here varies from *Digital Rhetorics* in two main ways. First, it aims to speak in a sustained manner to practitioners about how to go about 'doing' literacy and technology in schools. The school studies, policy analysis and theoretical insights are interconnected and cross-referenced in a form that we hope is easy to navigate and has clear meaning and application for busy teachers coping with the pressures and demands of day-to-day life in schools. This is a significant shift in specific focus, orientation and audience from the original report. Second, it reflects the personal emphases, styles and values of the present authors in ways that are not necessarily shared by all of the research participants.

Initially this book was to be written jointly by Colin Lankshear, Ilana Snyder and Bill Green. During the writing period, however, Bill's schedules and commitments limited his active writing role. He made available to us, in the best collegial manner, texts he had written that were germane to our shared vision for the book. He also read the manuscript, commenting as time permitted. Readers familiar with Bill's work will appreciate just how vividly his ideas and perspectives are present in this book. In the end, Bill decided, in his characteristically principled way, to resist our wishes to have him named as a full, joint author. We regretfully accepted Bill's decision, but at the same time want to acknowledge fully the depth and extent of his considerable intellectual contribution, for which we are most grateful.

We also want to mention the contributions to the original report of Chris Bigum and Jane Kenway, Cal Durrant and Joy Murray, Eileen Honan, Robert Bleicher, Michele Knobel and Richard Smith, who will see a good deal of their efforts reflected in these pages.

In the end, while much of the credit for whatever may be of value in this book belongs to our colleagues, we alone assume responsibility for any shortcomings.

Colin Lankshear, Mexico City
Ilana Snyder, Melbourne

Preface

This book is about how to 'do' literacy and technology in educationally effective ways, in classrooms, in countries like Australia, Britain, Canada, New Zealand and the United States. We do not suggest that teachers and schools must integrate new technologies into classroom work; at the same time, we recognise that resisting the pressure to take up technology is becoming more difficult by the day.

We believe, rather, that there are vital educational purposes and standards that must not be sacrificed to the technological dance or to the escalating corporatisation of education with which new technologies are so closely associated. If and where teachers and schools decide that they will integrate new communication and information technologies into curriculum and pedagogy, it is crucial that they keep these educational purposes and standards clearly in focus.

Right now, teachers are under enormous pressure to technologise learning. Similarly, individuals, families, businesses and institutions are made to feel that they are not keeping up if they have not wired their world to the web and linked their labours to a Local Area Network (LAN). While it is true that anyone who avoids, or is denied access to, acquiring facility with new technologies may be marginalised in the world beyond schools, nothing hard and fast follows as far as computers in classrooms are concerned. The fact that

owning and driving a car is regarded as the norm for 'our way of life' has not led to driving instruction becoming a part of the school curriculum. Any number of people—including one of the authors of this book—have opted for lifestyles in which owning and driving a car has no place and even makes little sense. What is more, the fact that mainstream life is becoming increasingly 'technologised' is not a necessary thing, let alone a good thing. From such perspectives we might well resent the almost inescapable coercion schools face with respect to taking up new technologies.

Yet, if there is something constructive to say about the intense pressure schools find themselves under to technologise learning, it is that it provokes anew important questions: What does educating young people require of us? What priorities do we have to recommit to, and preserve, as we set about educating under a new technological regimen? What, if anything, comes with the adoption of new technologies that might require us to pay close attention to the purposes of education? We cannot take these questions too seriously. Unfortunately, the incursion of new technologies into our educational lives coincides, by no means accidentally, with other things. These include an intensification of teachers' work, concerted attacks on teachers' conditions, and the openness with which interested groups conspire to undermine confidence in public schools by manufacturing successive 'crises' in school performance.

Currently, we are witnesses to a broad-based assault on schools which is designed to lay the ground for corporatising education and opening it up as a new frontier for business activity and entrepreneurship. Teachers should be in no doubt that their profession and occupations are under attack by unfriendly forces. Moreover, they need to be aware of the extent to which the push to technologise education is intimately tied up with interests most eager to undermine the tradition of public education.

In an important book, *No More Teachers, No More Books: The Commercialization of Canada's Schools*, Heather-jane Robertson (1998) amasses chilling evidence of the nexus between the computing industry, mass media, the corporate business world, supernational neoliberal organisations like the OECD, and neoliberal politicians, bureaucrats and 'advisers'. In concert, these interest groups are determined to give schooling a commercial 'make-over' and open it up to privatised provision. In the short run, this involves turning schools into renewed 'ideology machines' to promote the development of economically motivated, self-interested individuals. In the long run, it involves turning public schools into distant memories,

Acknowledgments

We thank the principals of the schools involved in the original study and those state department personnel in New South Wales, Queensland and Victoria who in various ways actively supported and facilitated the school-based studies.

For permission to reproduce diagrams, we thank the International Reading Association and Blackwell.

Finally, we thank Elizabeth Weiss of Allen & Unwin for believing in the potential of the original study and our ability to build on it in ways that might justify a wider readership than the original report could hope to reach.

in a world in which learning becomes a Microsoft-style 'anytime, anywhere' engagement. In the medium term, it means exposing schools to corporate influence and commercial activity—education for profit.

To set the scene for what we say in this book, it is useful to consider briefly the wider context in which curriculum and pedagogy are being technologised. We also need to keep in mind that trends that are rapidly becoming the norm in some countries may be less apparent in our own contexts but, nonetheless, well on the way.

Robertson (1998: 30) cites a ministry of education official in a Canadian province, who said: 'I think there are two essentials for kindergarten. The first is to get them ready for keyboarding. The other is to get these little kids to start thinking of themselves as "Me, Inc"'. In a similar vein, a high-profile North American education summit, set up in 1995 and co-hosted by IBM's chief executive officer, Louis V. Gerstner, focused on 'the need for world class academic standards . . . [to] provide an opportunity for governors and business leaders to understand and experience how emerging technologies can be incorporated into school restructuring' (cited in Robertson 1998: 34).

In a 1997 paper published in the *Electronic School*, 'Are corporate technology initiatives more PR than philanthropy?', Karen Southwick quotes the president of the IBM Foundation, Stanley Litow, who acknowledges that 'our strategic focus has been to figure out the ways you can use technology to systematically fix the flaws in the school system. We decided to treat education as if it were a very important and sophisticated business problem' (cited in Robertson 1998: 132). Robertson reports that by the early 1980s key participants in the New America Schools Development Corporation (NASDC) like AT&T, IBM and the American Stock Exchange had supported corporate-friendly school-reform projects to the tune of millions of dollars. In short, Robertson (1998: 161) concludes:

> Technology has been sold as an enlightened, inexpensive, and surprise-free tool that can lift students to personal excellence, moral certitude, and international competitiveness at the same time. The promise has all the credibility of a time-share brochure, and much of it is written in the same language.

This is a language that happily equates 'data' with 'information', and 'information' with 'knowledge' and 'understanding', making it that much easier to redesign education around information retrieval. Yet teachers have always known that an important responsibility

of education is to help learners understand how one moves from information to knowledge, and how to make critical judgments about the quality of information. One of the notable trends observed in the 'Digital Rhetorics' project—which provides the stimulus and resource for this book and which we revisit in later chapters—is the gap between recognising the distinctions between 'getting information' and 'assessing information' on the one hand, and 'seeking information' and 'coming to know something' on the other (Lankshear et al. 1997). The challenge for teachers is to build these distinctions into computer-mediated classroom work Failure to enact such distinctions plays directly into the hands of those who would reduce education to information pursuit and retrieval, and who would sell us the 'gadgets' to realise this dimunition of a key responsibility. Teachers do well to recall Theodore Roszak's (1996) observation that people who think 'education' and the 'pursuit of information' are synonymous have no understanding of either.

By the same token, the cautions we are sounding are not intended to establish a blanket case against the educational use of new technologies in schools. Not at all. We are in favour of pedagogical approaches and supporting technologies that serve educational ends and promote educational outcomes equitably and effectively, as well as efficiently. In Neil Postman's words, we are 'not arguing against using computers in schools . . . [We are] arguing against our sleepwalking attitudes toward it, against allowing it to distract us from important things, against making a god of it' (Postman 1996: 207).

In other words, we are not technology 'boosters' (Bigum & Kenway 1998), fixed on contributing to the hard sell of communication and information technologies to schools. We believe that teachers need to approach the technologising of literacy and curriculum with caution, understanding and wisdom. As we argue in a later chapter, we need to ensure that 'education remains the main game' and that technologies, new or old, remain faithfully in the service of that main game.

This book is written for teachers who find themselves committing, or are already committed, to the integration of new technologies into learning, but who are searching for ways to ensure that this integration serves educational ends. It is written for teachers who want to do all they can to ensure that their profession is not reduced to the status of a servant to the corporate world, to the military–industrial complex, or to a neoliberal ethos dedicated to policy

directions that have spurred the dramatic growth of the gap between rich and poor. It is for teachers who believe that literacy is more than the capacity to encode and decode—to grasp meanings inscribed on a page or a screen, or within an established social practice. It is for teachers who believe that being literate also involves the capacity and disposition to scrutinise the practices and universes of meanings within which texts are embedded. It is for teachers who believe that being literate entails the capability to enter actively into creating, shaping and transforming social practices and universes of meanings in search of the best and most humane of all possible worlds.

In opposition to reductionist and mechanistic views of literacy and learning, we argue that education must enable learners to become proficient with what we call the 'operational', 'cultural' and 'critical' dimensions of literacy and technology. We explain what we mean by these three dimensions and how they might be useful in providing teachers with a framework within which to think about the day-to-day demands and challenges associated with the use of the new technologies in classrooms.

Becoming proficient with the 'operational', 'cultural' and 'critical' dimensions includes understanding how contemporary economic, social, technological, administrative, organisational and political changes are affecting the social practices of literacy, technology and learning. It also includes understanding how these changes are altering literacy, technology and learning and the relationships among them. Further, it incorporates understanding how current changes are placing new 'premiums' on literacy, technology and learning—raising them to new heights of urgency. Most importantly, becoming adept with the 'operational', 'cultural' and 'critical' dimensions suggests ways in which teachers may be able to respond effectively to the new demands associated with technology use.

Our aim is to speak directly to teachers about the practical aspects of taking on literacy and new technologies in schools. Doing this, however, involves more than simply taking account of practical matters. It requires the support of useful ideas and evidence from research and theory, as well as reference to the larger context within which classroom practice takes place. We connect and cross-reference school studies, policy analysis and theoretical insights in ways that teachers should find meaningful amid the everyday demands of school life. We draw on the experiences of real teachers and offer suggestions about how to pursue effective learning practices in classrooms under conditions that are often difficult.

The book is informed by emerging theories of literacy, technology and learning that we attempt to make explicit and accessible. The fact that the theories are developing should be seen not as a weakness, rather as an appropriate, even inevitable, response to the rapidly changing, dynamic qualities of new information and communication technologies and the new literacy practices associated with their use. In the age of the internet, we need to formulate theories that are as dynamic as the technologies themselves, but that are also critical and reflexive. These theories need to be responsive to the rapidly changing conditions that now govern the world. The theories we present and discuss are evolving: they are theories in the making.

This book is also informed by the activities and efforts of real teachers and students in real classrooms. We present stories of teachers, students, learning, technology and change. Each story is unique, but together they demonstrate a number of patterns that have helped in identifying a set of educational principles intended to guide the integration of new technologies into classroom teaching and learning. The identification and explanation of these patterns and principles, built on important and illuminating work by Chris Bigum and Jane Kenway (1998), is a key component of the book, and underlies the practical suggestions we advance in the final chapter.

We hope this book will be of interest and value to literacy teachers first and foremost, but also to several other groups: teachers in different subject areas, who remain concerned with the literacy needs of their students when new technologies are used; school administrators interested in educational change; academics and students focused on literacy, technology and learning issues; and people more broadly concerned with educational theory, policy and reform. We have tried to present our arguments in a way that will be relevant and useful to all these groups. The proof of this, one way or the other, must lie in the reading.

Before we begin the main text, a final point needs to be mentioned. *Teachers and Technoliteracy* is informed by teachers and students who took us into their classrooms in good faith and with much trust. Such a research situation creates opportunities that have the potential to contribute to the enhancement of educational practice. It also generates certain risks. Foremost among these is the risk of demeaning or slighting classroom work.

Our explicit purpose of identifying ways to enhance practice involves identifying not only instances where we think things have

been done well, from which we can learn, but also instances where we think things could have been done better, from which we can also learn. There is no point in researchers undertaking this kind of work if they cannot and do not identify limitations as well as strengths. The point, however, is always to do such work constructively, sensitively and respectfully. And this we have endeavoured to do.

Where necessary, we have disguised examples superficially, while trying to preserve the features relevant to the issues we wish to raise. As one of our colleagues from the 'Digital Rhetorics' project reminded us: 'Teachers are committed people, who spend all their time and energy devising new and exciting ways for their kids to learn. But, like the rest of us, they're learning too and this is where they've reached in their own journey right now'. Indeed, many of the teachers whose classrooms we observed had reached their points in the journey under highly 'unpropitious' conditions. This needs to be acknowledged.

Where we focus on what we think are limitations in classroom work, we do so in full recognition that these are not reflections of personal shortcomings of teachers and learners. Rather, they go to the heart of important issues that include: the conditions under which teachers learn to be teachers; policy directions and directives; resourcing decisions; and administrative and political agendas. These agendas construe 'devolution' in terms of concentrating power and decision-making at the centre, and pushing down to teachers at the front line the responsibility for working miracles on shrinking budgets. Moreover, these agendas are being implemented in the face of social, economic and demographic conditions: 'schools have never had to deal with so many students who couldn't care less, and who have so little reason to care more' (Robertson 1998: 32).

Just as we tried to carry out the research constructively, sensitively and respectfully, we have strived to write up the descriptions of the schools and classrooms with care. Where we fail, we apologise. Where we succeed, it is no more than the due of the exemplary teachers who accepted us unconditionally into their classrooms. In every instance, we had the privilege of watching these teachers offer everything they had, with enthusiasm and a passion for the welfare of their students. We hope that some of the things we say will speak to these teachers and their colleagues in ways that will help them work the miracles they are called on daily to achieve.

PLAN OF THE BOOK

Chapter 1 gives a taste of our school-based research and identifies some issues and themes emerging from portraits of three schools. Such portraits, and the issues and themes they stimulate, give at least a preliminary sense of the challenges that face literacy teachers at present in the context of current technological change. These issues and themes are developed and enlarged, and additional ones are introduced, in the chapters that follow.

In chapter 2 we look more closely at literacy, technology and learning in ways that help us understand current practices and anticipate future directions for classroom work involving new technologies. We begin by examining literacy, technology and learning, then consider how we might move toward an integrated view of all three constructs.

In chapter 3 we look at the policy dimension of teachers' work. As education is now very much a policy-driven sector, teachers cannot escape engaging with policy. We identify the main functions of policy and the key policy roles teachers need to play in their professional lives. Next, we briefly describe a selection of national and state-level policy documents that apply directly to the interface between technology, literacy and learning. We then consider their implications for developing policies helpful in translating curriculum and syllabus requirements into effective classroom programs. The chapter concludes with an example of teacher policy development that exemplifies many of the qualities and procedures we believe make for the creation of useful school-level policies covering literacy, technology and learning across the curriculum.

Chapter 4 adds to the picture of current practices sketched in the portraits presented in chapter 1. In studies from further sites and classrooms, key features are identified, added to those of the three portraits in chapter 1, and brought together as a summary statement of what the site studies have collectively told us about current classroom learning practices involving literacies and new technologies. These studies provide an information base from which to develop ideas, strategies and plans for building on existing strengths and addressing current shortcomings in pedagogy, policy and professional understanding at the literacy–technology interface.

In chapter 5 we advance a framework of patterns and principles we believe are useful for thinking about what we have found. These patterns and principles provide a basis for developing systematic, coherent and informed approaches to furthering literacy education

in an age where information and communication practices are increasingly mediated by information and communication technologies.

Chapter 6 translates this framework into concrete suggestions, recommendations and guidelines designed to assist those whose job it is to provide a sound literacy education in the so-called 'information age'.