

## **Redefining Literacy for the 21<sup>st</sup> Century**

David Warlick 2004 Linworth Publishing, Worthington, Ohio  
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David Warlick's book is aimed at school personnel: the teacher, the principal, the director of technology, the technology facilitator, and the media specialist, but also the student and the parent. His premise is simple, that the traditional literacies of the school, that is, reading, writing and arithmetic, have, in a digital age, been superseded, or rather, have been transformed into new forms of themselves. His telling of it is enthusiastic and persuasive, imaginative yet reassuring. It is a narrative of the classroom which might be the future but could be today.

Indeed, that's where he begins, with what he calls "a work of future fiction" portraying the secondary school of ten years hence (or rather, ten years from 2004). And here is the first surprise: what we get is really a story. OK, it's also a crude vehicle to describe the classroom of the not-too-distant future, but the characters are real and are explored enough for the reader to be interested in the outcome of the events. The picture is also realistic because it's based on technology that already exists and a pedagogy that is plausible. The post-narrative debriefing examines the trends on which it was based, and Warlick's enthusiasm for the digital future is undeniable. But there's also an awareness that the technology serves the pedagogy and enables the teacher.

Because of the challenges of preparing today's children for a largely unknown future, it is time to stop forcing teachers to work harder, and start helping them to work smarter, giving them the time to create and craft relevant learning environments and experiences for their students. This is the best thing that we could do to help retool classrooms for the twenty-first century. The one constant that appears in almost all educational research is that the key to good learning is a good teacher, and there are many mediocre teachers who could become great teachers with more time for planning. (p. 13)

Warlick suggests that orientation to the future requires that we change the priority of the educational questions we ask, so that the current order of priority (1. How well are students learning? 2. How should they learn? 3. What should they learn?) is reversed, leading us to ask, first, what should students learn, second, how should they learn, and third, how well are they learning. It might seem that Warlick is putting content first, but his focus is more on curriculum than content, and indeed, about how the curriculum should be encountered. His concern is in fact with the core skills that underlie students' engagement with the curriculum.

The purpose of this book is to expand our notions of what it means to be literate in the twenty-first century. This book does not define additional information literacy, or digital literacy, but a redefinition of basic literacy, what we might call Contemporary Literacy. It reaffirms the essence and vital importance of reading, writing, and basic mathematics but refines them within the context of an information environment that is: digital, global, indexed, hyper-organized, multimedia, ubiquitous; and a future political, economic, and personal experience that is largely driven by that information. (p. 17)

He proposes to replace the 3 Rs with the 3 Es. Reading becomes “exposing information”, defined as “Exposing meaning from a global, in interactive, and a multimedia electronic cybrary” (p. 17). Arithmetic becomes “employing information”, defined as “Mathematics and computer skills applied to solving information challenges and constructing information products from digital information” (p. 17). And writing becomes “expressing ideas compellingly”, defined as “Digitally expressing ideas fluently and compellingly through text, image, animation, sound, and video to a broad and geographically diverse audience” (p. 17). The main part of the book is concerned with examining these three core elements of literacy, and to adding a further element, the ethical dimension.

The first of the 3 Es, exposing information, is concerned with accessing, evaluating, and organising information.

In the twenty-first century, literacy involves not just reading and comprehending the text in front of you, but a wide range of skills associated with acquiring, decoding, evaluating, and organizing information within a global electronic library. Almost all of the information that our students use in their future will be viewed with a personal information device (a computer), and it will come from a global electronic library that will be vast, largely unmanaged, and produced from a bewildering variety of perspectives. If all our children learn to do is read, they will not be literate. (pp. 20-21)

As a context to this statement, the emergence of the World Wide Web and the process of reading a hypertext document are explored.

Chapter 2 deals with exposing information. The foundation of exposing information is for each student to maintain a “personal information digital library”, that is, to organise bookmarks within folders in a structure which supports their own information needs. Links are given to software enabling web-based bookmark systems, thus accessible from any internet-connected PC. Locating information on the Web is considered, including sound advice on using search engines intelligently to home in on required information rather than blanket searches yielding thousands of results. The process is described as one of gradually refining the search terms until the resources can be harvested. Students are advised to keep detailed search logs and a template is provided for this purpose. The importance of evaluating information is stressed, with a good example given of a website on Martin Luther King claiming to be “A True Historical Examination”, but run by an extreme white supremacist group, with a description of how the apparently anonymous site was made to give up the secret of its authorship. Much useful information is supplied on checking out sites and an evaluation form provided. The chapter, as do the other central chapters, concludes with advice for directors of technology, media specialists, school technology facilitators, teachers, students and parents. If chapter 2 did not excite, this is because much of the information and advice is familiar from most good information literacy sources.

Chapter 3 addresses employing the information, and the creation of “information products”.

Traditionally, we have considered information to be the end product of the education process; if the student knew this body of information, then he or she was educated. Assuming a rapidly changing and information-driven future, what our children know will be less important than what they can do with it. Rather than being the end product, we must look at information as a raw material that students not only learn, but also use in some way. (p. 50)

Looking at textual data, Warlick gives a very neat example of accessing earthquake data and copying it into a spreadsheet, then selecting only the latitude and longitude from each item and then converting that into a scatter plot giving a map of the active tectonic boundaries. He then goes on to consider images, audio and video, in perhaps less detail than one might have wished.

Chapter 4 looks at expressing ideas. He argues that for this to be successful, the context must be realistic.

Traditionally, we have taught writing through avenues that are fairly artificial and specific to the academic arena. We have asked students to write essays, themes, and research papers. The fact is that outside of our classrooms, people rarely write essays, themes, or research papers. We write letters, reports, e-mail messages, and persuasive copy that are aimed at influencing other people. To teach students to write compellingly, we must give them compelling reasons to write. Students should produce authentic information products, aimed at real audiences, with meaningful goals in mind. (p. 65)

Examples of authentic student projects are given, along with advice on presentation of text. More space is devoted to presenting images, including reference to importance of “image reading” (i.e. visual literacy), and the value of a digital camera as a learning tool. Animation is addressed, including a simple way of presenting animated diagrams using *Powerpoint*. Video production and web publication are also covered.

In chapter 5 Warlick introduces an extra element of the literacy picture, a fourth E, that is, ethics. He rightly draws attention to the ethical challenges presented by the ease of access to vast amounts of information, and quotes the worrying case of a teacher who gave students fail grades for plagiarism from the Web on an assignment, only to be subjected to intolerable pressure from parents and the school system superintendent to back away from her gradings. Warlick argues that the best way to make students aware of questions of information ownership and copyright is to enable them to take ownership of their own information products, and to put copyright statements on them. Students’ work should be treated as their property rather than as material which the teacher can freely make use of. Students should also be encouraged to cite and then evaluate the work of others rather than copying or paraphrasing it. The other side of information ethics is the awareness of how digital information can be misused, and to be committed to respecting it. The ease with which information of any kind can be altered using digital tools makes this all the more pressing as an imperative, and to address this Warlick proposes a Code of Ethics for students and teachers, built around four key dicta: seek truth and express it, minimise harm, be accountable, and respect information and its infrastructure (pp. 92-93).

Warlick draws together the elements of literacy through what he calls “learning literacy”, a cycle in which the students moves from exposing information through employing information to expressing ideas, and then, as the tasks change or develop, back to exposing information and through the cycle again.

He finally considers the curricular context in which the literate student is engaged, and characterises a move from learning knowledge towards learning how to learn.

The increasing challenges of living in a rapidly changing and information-driven world will certainly increase. We need to change our picture of education from one that produces a finished product, an educated person, to one that produces people who are able, willing, and eager to continue to learn in order to set and achieve goals.

Education should identify the minimum knowledge that is required to build a context for the student and a foundation for further learning, and then facilitate the students' continued learning along desired and self-directed paths. (p. 96)

This development makes the boundaries between the school subjects less rigid as students, following their own learning needs and paths, draw upon them in more integrated ways. Warlick presents a spherical model of education in the twenty-first century, with the student at the centre, making use of the literacy elements to interact with the various subject areas as they become relevant to them. In working this way, the student learns how to learn, and literacy becomes a lifelong learning enabler. He/she also learns to collaborate and work in a team. In this situation the teacher and librarian become facilitators of learning, or learning consultants. Warlick concludes that the spherical model assumes three requirements in students:

1. Functional competence in twenty-first century literacy – the ability to find, access, decode, evaluate, manipulate, employ, and express information both digitally and in print.
2. Knowledge of the basic characteristics of our physical, social, and cultural environment both local and global to a degree that students are able to hold and convey a sense of who, when, and where they are in the world, how it impacts on them, and how their activities impact on it.
3. The ability to unlearn, self-teach, and make themselves experts in a variety of fields that the students find professionally and personally meaningful (pp. 100-101)

Where the book succeeds is as an accessible introductory discussion of the impact of the digital world on school education, with some good advice on what various school personnel might do. However, it does to some extent fall between two stools. Teachers might come away thinking that some more detailed case studies might have been useful, or more detailed instructions rather than hints to what is possible. Academics might like a more detailed discussion of the ideas put forward and their implications for education. The IT advisor might also feel more information on the hardware and software possibilities would be welcome.

A strong part of the book's appeal might be the associated website. When I first looked at it I was rather disappointed, as there seemed to be very little there, and even the files promised in the book could not be accessed. However, someone seems to be working on it even as I write, as when I looked later there was a lot more, including some useful links in the information ethics area. So I guess that's still in progress.

The way the book is packaged is a little puzzling. Its US letter format (slightly squatter than A4) makes it a difficult book to shelve, and to read on the train, to no obvious advantage, for there are no illustrations which require this size of page, and some which do use its width seem to have been unnecessarily enlarged to do so. For the price, I would have expected illustrations in colour; the black and white photos in particular give it a rather dated look. These would be minor gripes if the price were more reasonable. However, at \$39 (or £40 in the UK) for a 160-page paperback, even with a website, I'm not sure if any of the various groups at whom this is targeted would feel that it represented good value for money. At half the price I would have recommended it strongly.

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