Information Literacy?
Seeking Clarification

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This paper begins with a brief overview of the concept of literacy. It then focuses upon a series of definitions that deal with an expanding notion of literacies and finally refocuses on information literacy.

Introduction

Information literacy! One should be forgiven if one becomes confused when confronted with educational writing and discussion on information literacy. Research in the area of information literacy is plentiful if one accepts the multiplicity of terms that could define this phrase. However, one could just as easily come through the research and still be asking, "What is it I am trying to understand, let alone teach?" A plethora of writing and lectures about conceptualising, developing, and implementing information literacy fills whole conferences, and whole books and, indeed, adds significantly to the information traffic on the Internet.

Yet it is apparent that, like the elephant in the Indian parable about the blind men, information literacy is defined differently by various schools of thought. From where did this term emanate to occupy so much discussion? Is it a transfiguration, a concept that is age-old but given new clothes to fit in with the educational speak of the Information Age? Is information literacy merely an embellished view of the traditional understanding of literacy? Or has it become a full transformation of an educational tenet in the light of evolving understandings in learning theory?

Is it a concept or a process? Is it an embodiment of essential skills that have only had name changes over the decades? Or is it a new literacy that has been transformed from existing literacies to complement the emerging technologies for which the Information Age students must be skilled?

Why have not the understandings and skills that inform information literacy become embedded into the classroom practices of teachers and educational systems? Is it because information literacy is understood as something that is teacher-librarian oriented and not part of the general curriculum?

There is a growing body of literature on information literacy in its own right and as a pedagogical twinning to other educational topics such as preservice teachers (Candy, Crebert, & O'Leary, 1994; Bruce. 1996; Dow & Geer, 1996; Wright & McGurk, 1996), the information literate school community (Henri, 1988; Cooper & Henderson, 1994), independent learners (Stephenson. 1995; Mayer, 1996), and information technology (Johnson & Eisenberg, 1991; Eisenberg & Johnson, 1996; Mitchell, 1996; Mobley, 1996). The tying of information literacy as a concept to such educational issues should

alert all stakeholders in the education arena that a shift in educational thinking has occurred in that literacy is more than the ability to read and to write. It may also imply that information literacy is firmly embedded in the practices and outcomes of education in the Information Age. If this is so, then, intuitively, the concept of information literacy should be part of the natural discourse of teachers as they design and develop curriculum units or discuss pedagogical issues. However, it would seem that information literacy is capricious, defying a universal definition, and acceptance, of a place in the essential learning areas of compulsory education.

Perhaps its nature is more consequential, transforming as educational processes shift to acknowledge and incorporate emerging technologies? Holloway (1996:32-35) would agree with Lincoln (1987:6) and Henri (1995) in that the label (information literacy? information skills? study skills?) is fuzzy and that the teachers are not clear about what is meant by this term or how it relates to classroom practice. Holloway argues that the product, information literacy, is positive but that the process is unclear, which could result, at worst, in its being dismissed as a transitory trend in education. One could justifiably argue that the product is also unclear as evidenced by the variations (no matter how slight) in information literacy outcomes (Eisenberg & Berkowitz, 1990; Mayer, 1992; Behrens, 1994; Candy, Crebert & O'Leary, 1994; Doyle, 1994; Bruce, 1995; Owens, 1996).

Whatever information literacy reveals itself as, the literature is replete with a sense of urgency that essential learning areas include outcomes that ensure that all learners (be they in a workplace or in an educational institution) become information literate.

Information Literacy in the Education Arena

If one of the main aims for students is to gain control over the vast amount of information in its myriad forms and registers, then so too must we, as professionals in the information game, become literate in the field of information. Yet another term, information literacy, is thrown into the sea of educational change, along with critical literacy, or functional literacy or even environmental literacy. The list goes on! In secondary schools, teaching often becomes subject based, and changing approaches to teaching and learning tend to be taken up within specific disciplines. There is also an understanding that schools must develop literate and numerate students, emphasizing the importance of reading and writing skills at a functional level. Therefore, domains of teaching are unwittingly set up and when new ideas percolate through, they are often sectoralised. For example, the literature abounds with the idea that teacher-librarians are significant stakeholders, and sometimes infers the teacher-librarian as sole stakeholder, in the development of information literacy in students. On the other hand, schools of thought discuss whole language approaches to education and integrated teaching of skills (information skills) towards lifelong learning. Are we, as teacher-librarians, responsible for some distinct concept referred to as information literacy or are we a part of a whole, promoting literacy through the development and encouragement of an array of skills, which include information, and thinking?

Literacy: A Short History

John F. Kennedy (Vickers, 1988) avows that "the one unchangeable certainty is that nothing is certain or unchangeable." If we concur that literacy is central to education, and therefore a certainty, then we must also accept that literacy, as a concept, is changeable.

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Historically, literacy was interpreted as a basic ability to read and write and comprehend. The arrival of print technology, centuries past, heralded the need for skills in reading, writing, and comprehension. Unfortunately, as information was perceived as knowledge and knowledge was power, an elite group developed, a literati of society! However as society's needs evolved, literacy became a universal right. The world view endorsed UNESCO's 1950s interpretation of literacy as being the ability required to use print to function in everyday life (Harris & Hodges, 1995, p.142), and in 1959, the United Nation's Declaration on the Rights of the Child: Principle 7, in part, declared that "the child is entitled to receive education which shall be free and compulsory, at least in the elementary stages." Consequently, school curriculum concerned itself essentially with developing literate and numerate clients. Breivik (Booker, 1993, p. 26) reminds us that at one stage in human endeavour, "if you could just write your name you were considered literate." Certainly there is no doubt that literacy, in the first instance, defined the process skills of reading and writing, a signature (Kaplan, 1995) or alphabetic (Diepenbrock, 1997) literacy!

Transformation of literacy

The needs of society at any point in time determine how a society interprets a concept. Breivik and Gee (1989, p. 22) affirm that just as the "social and individual purposes that literacy serves have broadened" so has the scope widened "from the religious and scholarly elite to include the whole population." They confirm this ideal through their reasoned belief that literacy is in an evolving state that "mirrors the expanding information needs of society." Thus, by extension, literacy has become a dynamic concept.

Carol Collier Kuhlthau (1995) supports Breivik and Gee. She reminds us that, even as late as the 1970s, the library media program was well recognised as reading incentive programs and library skills, that is, how to use the library through the concepts and principles of bibliographic instruction (Doiron, 1992, p. 9-16; Lenox & Walker, 1994, p. 61). Through her concern for her students' unease with research, she challenged the rather pragmatic interpretation of literacy by introducing the importance of attitudinal behaviours towards information seeking. She affirmed that to be literate was to not only recognise when information was required but involved the ability to construct one's own knowledge through a process that gave meaning and self-interest to the notion of learning throughout a lifetime.

This idea that literacy is connected with expressing the thoughts and attitudes of people is reflected in Ross and Bailey's (1994, p. 32) understanding of literacy as literacies. They defined four eras of literacy and referred to the third era as bibliographic, that is, the era that was heralded by Gutenberg's technology, through to a world consciousness that endorsed the basic human right to read and write, or as Ross and Bailey (ibid) state "to code and decode symbols....to translate symbols into meaningful messages." Candy (1993, p. 281) strengthens Ross and Bailey's notion of eras of literacy. He supports Breivik and Gee's assertion when he argues that the definition of literacy 150 years ago and even fifteen years ago will not be satisfactory any more: the concept of literacy really depends on the information needs of the society of the time. Indeed, the International Literacy Year ended with a policy paper (1990) that defined literacy as a functional literacy. Functional literacy was revealed to be the ability to read and use written information, to write appropriately in a range of contexts, and to recognise numbers and basic mathematical signs and symbols, demonstrating support for the age-old definition that informed school curriculum. However, this same policy statement widened the accepted view to include in the definition the integration of speaking, listening and critical thinking (skills) within reading and writing and to state that literacy

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develops throughout a person's lifetime. The world view of literacy broadened to accept that literacy was evolving, that there was a continuum of skills associated with literacy, and that literacy itself was taking on differing forms, in fact transforming from a functional literacy through to a set of literacies tied to advances in technological society.

Literacy or Literacies

For a learner or a teacher, this defining and redefining of the concept of literacy could result in a state of confusion or frustration or scholarly indifference. The literature reveals statements and discussions about emerging literacies such as technological, critical, business, traditional, network, basic, scholarly, environmental, library, electrographic, cultural, moral, e-literacies, digital, information and even new basic literacy. It is easy to sympathise with Philip Candy (1993, p. 280) as he testily observes that we are being "bombarded by other concepts of literacy: functional, visual, media, computer, political, information." On the other hand, scholars like Chloe Diepenbrock (1997) maintain that literacy is an act of semiosis. Therefore, if literacy is merely an act of semiosis, then every act that records symbols of human communication outside of the human body is a type of literacy. Every act of communication evolves around the encoding and decoding of information in its many and changing forms and registers, be it textual, visual, gestural, social, or digital. One could deduce from this that literacy is fuelled by information and hence all literacy is information literacy! Diepenbrock develops this notion of the changing concept of literacy, thereby giving support to Ross and Bailey's pluralisation of literacy, by stating that literacy once referred to the act that was dominated by the chief technologies of literacy: that is, the written word/symbol. She refers to this as alphabetic literacy or the ability to read, write and understand. She categorises literacies according to an hierarchy which includes, not only those listed, but literacies such as personal, multicultural, academic, ethical and electronic (and this she further divides into two kinds!).

It is little wonder that Candy (1993, p. 280) asks the question, "Is this simply lexical inflation, or do all these terms betoken something new and important?" In a similar vein to Candy, Cavalier (1993, p. 19) candidly criticises the term literacy as an all purpose noun, "a hurrah word, which denotes that the inherent is well-versed in the adjective attached." Breivik (1993, p. 26) deepens the argument by reflecting on the frustration felt by the American Library Association Presidential Committee during her defense of the notion of information literacy: "We are going to change the term, we hate this term, it is no good. There are all these other literacies..." She continues by supporting the fact that the definition of literacy has changed over the decades and that the Australian definition of literacy may, in fact, be the best: to be able to function well in society. This entails the ability to read, use numbers and to find information and use it appropriately. Breivik (1993, pp. 6-18, 26-7) strongly believes that literacy, as an Industrial Age concept, has transformed to include affective as well as cognitive understanding, within the culture of the Information Age.

More confusion occurs! Bill Wresch (1997) simply states that the "concept of information literacy is relatively new" while Henri (1992, p. 5) considered information literacy as the "buzz concept in education" throughout the 1980s. Todd (1996a) understands, from Lazarus and Lipper's report on America's children and the information highway: a briefing book and national action agenda, that information literacy has outlived its buzzword status and is now part of the status quo. In a later paper, he affirms Wresch by stating that information literacy is an emerging field of intellectual inquiry (Todd, 1996b)! Practitioners in professional dialogue on OZTL_NET have referred to information literacy as a philosophy, a phenomenon, and a mere frolic with semantics. Candy (1996, p. 141) sums up this confusion when he states, "...there are several different

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and...incommensurable understandings of information literacy...yet we use the same term in our communications with one another."

Despite some scholarly tilting, or lexical inflation, of the nomenclature revolving around literacy, there is considerable support for viewing literacy as a continuously evolving concept allowing for a more liberal understanding, and hence development, of the initial ideal of the universal right to be able to read and to write. Literacy depends on information. Information is expanding at exponential rates. The mere ability to read and to write is being translated into the ability to read, write, and to develop the capacities to understand, absorb, assimilate, and digest the images being transmitted electronically with the added capacity to communicate these images electrographically (Ross and Bailey, 1994, p. 32-3).

The various hurrah words exploding within the information literacy scene attest to the multifarious nature of literacy itself. The question is begged. Just how is information literacy defined? In terms of skills (Taylor, 1979), behaviours or attitudes (Kuhlthau, 1993; Doyle, 1994; Bruce, 1995)? Is information literacy about learning library or research or study skills (Irving, 1985; Kirk, 1987) or perhaps learning to think critically (McGregor, 1995; Lenox & Walker, 1994)? Is it process or content-oriented? Pinned to a methodology such as resource-based learning or inquiry learning or the Big Six (Gawith, 1991; Eisenberg & Berkowitz, 1995)? Does it relate to an isolated subject such as social education or is it an isolated subject in itself? Is it an independent notion? Is it an umbrella phrase with many parts which, when meshed into a pedagogical framework, contributes to the holistic development of an individual? Does it provide a pathway for the individual to function well in society, to be empowered to learn independently and interdependently (Owen, 1996; Kuhlthau, 1994)? Is it a new literacy tied to changing technologies (Ross & Bailey, 1994) or is it still the basic literacy mirroring the expanding information needs of society (Brevik, 1994)? Judging by the variation in definitions, information literacy appears to be defined depending on what part of the elephant one is experiencing.

A Working Definition

This confusion reveals the complexity of this notion within educational circles. Christina Doyle (in Booker, 1996, p. 40), Professor of Technology in Learning at Northern Arizona University, realised that the ideas and practices of developing in her students an independence in defining and solving their information problems could be drawn together under an umbrella concept referred to as information literacy. Information literacy appears to be a relational idea (Bruce, 1997), and, according to Doyle (in Booker, 1996, p. 39-48), requires an educationally sound contextual base from which educators can develop the understandings and skills within a framework that has national acceptance and validation. Following on from her research, Doyle developed a set of rubrics for information literacy. She integrated the ALA's (1989) analysis of the concept to define information literacy as the ability to access, evaluate, and use information from a variety of resources, to recognise when information is needed, and to know how to learn.

If the benchmark for understanding information literacy is Doyle's (1994) set of rubrics then other definitions can be analysed in reference to this standard. In the first instance, Doyle is careful to establish that information literacy is a concept that has been shaped by academics, business, and government. Certainly the Australian Federal Government (Finn/Mayer Reports, 1992) was instrumental in developing a set of key competencies expressed in educational outcomes, some of which parallel Doyle's rubrics in terms of information literacy. Doyle further develops the definition of information

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literacy to acknowledge that inherent in this concept is the attainment of skills which relies on a process; that is, information literacy is an applied concept, one that takes on many approaches depending upon what part of the curriculum is in focus. This then takes the notion of information literacy and lays it at the feet of all educators, at all levels!

Doyle finds support in Australia for her definition through Candy's (1993, p. 297) affirmation that "all forms of literacy have assumed a central place in the process of skill formation." It is an applied concept. Christine Bruce's (1996) reflective article parallels Doyle's notion in that she asserts that information literacy concerns itself with the mastery of processes, is a learning tool, and is also something to be learned. Bruce endorses Doyle's list of attributes of the information literate individual by describing these attributes as behaviours. Candy also sees the attainment of information literacy as not only an educational goal, but also a lifelong goal. It would appear then that information literacy is a goal, which can be attained through a process that relies on the continuous learning of specific and evolving behaviours.

It is a cluster of abilities that the individual can employ "to cope with, and to take advantage of, the unprecedented amount of information which surround...us in our daily life and work"(Candy, 1993, p. 284). It is not library skills, nor computer skills nor even information-problem solving skills (Eisenberg & Berkowitz, 1990), but all of these are necessary enhancers of information literacy. One needs to be able to locate and access information, in all its forms and registers, or to solve information problems through enlisting a set of behaviours that develop competencies in the techniques and skills necessary to survive in the Information Age. As these techniques and skills strengthen, so too does the individual's metacognitive processes (Eshpeter & Gray, 1988), thereby affirming Doyle's belief that information literacy involves critical thinking behaviours, that is, knowing how to learn.

Owen (1996), although he finds agreement with Eisenberg and Berkowitz, Breivik, Doyle, and ALA's articulation of information literacy, provides a critical focus as a means of defining information literacy by examining what he considers myths regarding this concept. He acknowledges that information literacy is demonstrated through our capacity to confidently challenge ideas because of our ability to access and use information effectively, but he goes on to expand information literacy to include:

- that, beyond improving study and research skills, it serves to empower: to find out and act on information;
- it is a means of personal empowerment for all, not just young students;
- besides independent and self-directed learners, interdependent learners; and
- enrichment and enlivenment... of lifelong learning.

He strongly advocates that the understanding of information literacy be broadened to be inclusive, and that it becomes the key competency for individual and societal development in Australia, bringing the argument full circle. If information literacy is to be as Owen recommends, then teachers must be talking the language of information literacy. It must be a natural and inclusive part of the educational process in any curriculum, any unit of work, in any discipline.

It would appear then that information literacy is but a means to an end. What that end is depends on what the individual or community wants, that is, what the information needs are for that society, at that time. This notion also reinforces the ideal that has continually linked learning with information literacy: the paradigm of lifelong learning.

Whose Responsibility

An attempt has been made to bring together the many ideas, and interpretations surrounding the term information literacy and to accept a definition that is understood clearly by all stakeholders; a definition that can be interpreted universally in terms of process and outcomes. But questions still must be posed.

Attempts to advocate information literacy as a conceptual and process-oriented continuum of skills into system-wide outcomes continue to be thwarted in the various Australian school systems. Academics and teacher-librarians have a handle on information literacy within their terms of reference as does the business community and the community at large. Teachers' perceptions, as well as parents' perceptions and perhaps more importantly principals' perceptions, of information literacy are determined by their confrontation with information problem solving. Are teacher-librarians really in the most favourable position to be the leaders in developing an information literate community? Is it more appropriate to see this concern as a fundamental issue for all learning communities, whereby each facilitator works towards aspects of the prime goal, literacy, through an understanding of information construction and deconstruction, and the attendant skills of higher level thinking and problem-solving. Once again do we harp back to the notion that information literacy is but one way of articulating the many facets of literacy that is a whole school concern?

If the underlying principle of compulsory education is to develop the individual to be literate and if inherent in that concept are the skills or processes that foster lifelong learning or self-directed inquiry (cornerstones of information literacy?), then so be it. What needs to occur, though, is a continuous development within educational circles and/ or institutions to shape and deeply instill the pedagogy of information literacy as essential for the information society and hence the learning society. At this point in time, it is teacher-librarians who are carrying most of the burden in terms of guiding future generations in becoming lifelong learners, one accepted outcome of the process of becoming information literate. Papers are written, conferences organised, national bodies develop plans and international associations support theories, but what is missing is the link that takes all this intellectual activity and re-forms it into effective and considered change. Certainly all this activity fuels the interest and debate in information literacy, but information literacy appears to be synonymous with libraries, and not with essential learning areas for success in an information-based society demanding continuous learning as technical and social changes continue to reinforce a type of chaos. It is even further removed from everyday classroom practice! Perhaps it is time that we look seriously at redefining literacy (and hence information literacy) in terms of what Ross and Bailey call new literacy: one that is electronic, is image-driven, appeals to many senses, is emotional, communicates over distance, is multicultural, collaborative, artistic and interactive.

What appears to be the genuine concern is a need to look hard at the big picture of education. No matter how information-rich or information-poor a learning institution, the stakeholders in the goal towards lifelong learning - the one accepted and unchallenged outcome of information literacy - is everyone.

At the school level, this means working together within the same understandings, perceptions. It means working towards the same outcomes within an understood framework which is free from jargon, transferable from subject to subject, and a part of the natural discourse of educators: a move from pedagogic knowledge (conceptual) to standardised knowledge (process tool). The theory may eventually settle into something that becomes a part of all teaching practice as a learning community. In the interim, we,

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as academics and teacher-librarians, talk about information literacy but it is a sad indictment that it is not an embedded practice in our learning institutions. Despite some research by Todd (Booker, 1995, p. 17-26) to establish why information literacy is having such a trying childhood, school communities are still grappling with the concept, often see it as an add-on and not a genuine part of the business of education. There appears to be a gap in the literature in terms of the theory of information literacy and the everyday classroom practice. Some research has been documented in terms of tertiary students, including preservice teachers, and information literacy (Daniel, 1997; Wilson, 1997), but there remains a real need to explore ways in which the concept of information literacy becomes the natural or the basic practice of teachers. Whilst teacher-librarians know about information literacy from their perspective, and are well versed in the methodologies and frameworks that promote and extend their understanding of information literacy, classroom teachers and principals generally are not. Research is needed in exploring the attitudes and behaviours of classroom teachers and school leaders in the implementing of pedagogy that allows for the inclusion and development of information literacy as common practice.

We know that lifelong learning is more than a lofty ideal; it is the outcome of an information literate society. However, the very people responsible for empowering students to become lifelong learners appear to not understand the information process, let alone information literacy, well enough to be truly effective learners themselves. We need to understand why this is and how we can change existing practices. Research into working out ways in which classroom teachers can develop a belief, along with ensuing behaviours, in the teaching of enabling skills to permit our clients' to construct their own knowledge and learn through their independent and interdependent manipulation of information is long overdue.

Acknowledgement

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