



DEFINING LITERACY AND ILLITERACY

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Abstract

To understand the problem of illiteracy, a detailed review of the definitions of literacy and illiteracy is in order. A full definition of these terms in the current print and electronic context of adult American society in school and out of school, and for adult learners of English as both a first and a second language is presented here. Strong, explicit definitions can serve as the basis of recommendations for specific steps to expand and improve the teaching of critical literacy in schools and colleges, in community-based programs for basic education, and in second language learning contexts. These steps include, first, a move toward Reading Across the Curriculum, not only in higher education but also in K-12 public schools, community programs, adult basic education and ESL programs. A second step should be for educators to connect with librarians, newspapers and organizations like the Pew Charitable Trusts and the National Institute for Literacy to address the problem of illiteracy. These steps and others should be part of a widespread renewed focus on the kind of critical literacy described here as the ability to read and write effectively, efficiently and critically is the linchpin in full participation in a democratic society.

I've been studying literacy, one way or another, for about thirty years and really thought I knew something about it. I like to think I am a highly literate person: I read many different kinds of materials, have good comprehension and a large vocabulary, seldom have difficulty understanding a writer's point, can easily compare and contrast two articles on the same topic and have no difficulty assessing texts I read for accuracy, currency, authority and so forth. These skills are all parts of what many scholars define as critical literacy. Of course, I have all these skills in my native language. In the languages with which I have some familiarity, French, German and Hebrew, my literacy skills are much weaker. Although I can call words off the printed page accurately in all three languages, I would hardly describe myself as literate in any of them.

Indeed, my recent contact with Hebrew while traveling in Israel reveals just how complex and challenging literacy is, even at a minimal level like being able to read a menu. I know letter-sound relationships in Hebrew, have a limited vocabulary and marginal grammar knowledge. Confronted with signs, I'm stuck. For example, I learned the word for bathroom (kind of essential), but then, on one occasion followed that sign to stand in front of two doors labeled with Hebrew words but lacking the international

pictures for men and women. I could sound them out, but had no idea what the words meant. Sounding out the words, a slow and difficult, albeit possible process, still left me stuck for want of vocabulary. I was flummoxed by the language. Even reading a fast food menu was beyond me. It's a good thing the McDonald's menu had pictures, that the teenager behind the counter had a little English, and that the restaurant accepted credit cards. Otherwise, I would have been very hungry.

It would be fair to say I am illiterate in Hebrew, given these experiences. Reading a daily newspaper is completely out of reach; books are not remotely possible. And yet, I do know something and can follow a text being read out loud if it is printed in standard block print with the vowel markings included. It is hard to describe the sense of isolation and disorientation that results from illiteracy. However, my experiences with Hebrew have provided me with a different kind of understanding what it means to be illiterate. Even though I can call words off the printed page, and follow a text read aloud, the lack of real reading ability left me feeling cut off from the world around me. If I had to use Hebrew, I would not be successful in college, could not apply for a job, and it would be impossible for me to make an informed decision in an election. I want to argue that my limited experience with Hebrew shares some features with the experience of all people who lack strong literacy skills in their native language.

While my situation with Hebrew is something like the situation of people who are speakers of a language they cannot read, it is actually closer to the problem I want to address in this article. My status as someone who recognizes the letters and can render a text aloud in Hebrew is very much like that of American college students who can "read" English but who cannot get meaning from print at the level expected of them in college-level classes. That is, like me in Hebrew, they lack the kind of critical literacy ability defined in my opening paragraph. These students are upset if they are placed in a developmental reading course in college because they *can* read, if reading is defined as calling words off the page. But in fact, for the purposes of college work in reading and writing, with textbooks, web materials, scholarly journals and other kinds of materials, they and many other college students are illiterate. That is, not only those students who might be placed in a reading course based on the ACT or another test, but, I propose, a great many college students lack the critical literacy skills needed for success in college.

I'm interested in the problem of illiteracy for a number of reasons. First, among my colleagues who are college writing teachers, I often hear the claim that students are "illiterate," and I often see, among some under-prepared students I work with, struggles with written text that could be described as illiteracy. In addition, though, I am intrigued by the fact that if I check the catalog of the University of Michigan's research library, I cannot find any current books devoted to the topic. Searches of the major scholarly data bases in education (ERIC), psychology (PSYCHINFO), linguistics and language (MLA) similarly provide little current work: ERIC searching with "illiteracy" and "adults" as keywords for 2000-2006 yields 29 references; PsychInfo yields 11, and MLA yields 2. Few of these articles bear on the specific issue of definition. Even Google-based searching yields almost no current material. And yet, illiteracy is a real problem. Moreover, a number of the definitions are quite unsatisfactory since they describe fairly rudimentary abilities with written text like being able to write one's name. Finally, literacy and illiteracy are not precisely all-or-nothing phenomena that pertain only to students, but occur in the population generally on a scale that requires thorough and

careful definition. And as a corollary point, these issues are also relevant for learners of English who speak other languages. Second language scholar Ilana Leki has noted that

In view of the place of English in the world today and the role it sometimes plays in both empowering and dramatically constraining the lives and futures of people from different L1 backgrounds, I feel an interrogation of the characteristics of L1 English literacy and its place among the other literacies in the world is a task that L1 English literates are morally and ethically obliged to undertake. (2004, p. 127)

My goal in this article is to take up Leki's challenge.

In order to fully understand the problem of illiteracy then, a detailed review of the definitions of literacy and illiteracy that have been proposed is in order. What is needed now is a full definition of these terms in the current print and electronic context of adult American society in school and out of school, and for adult learners of English as both a first and a second language. Strong, explicit definitions of literacy and illiteracy can not only provide the basis for continued theoretical exploration, and on-going thoughtful studies and surveys, but also can serve as the basis of recommendations for specific action to expand and improve the teaching of critical literacy in schools and colleges, in community-based programs for basic education, and in second language learning contexts.

Definitions From The Dictionary: A Starting Point

So, ordinarily, if you want a definition, the first place to look is in the dictionary, either an unabridged, or to really pursue words back to their sources in English, the Oxford English Dictionary. After I had been working on this project for a while, I turned first to the unabridged dictionary and what I found there surprised me. I looked at both literacy and illiteracy and saw that the writers of my dictionary, the Random House Unabridged (Stein, 1966) did a nice job of tying literacy and illiteracy together in a clear and consistent way. Here are the definitions:

Literacy: 1. the quality or state of being literate, esp. the ability to read and write. 2. possession of education. (Stein, 1966, p. 836)

Literate: adj... 1. able to read and write. 2. having an education; educated. 3. having or showing knowledge of literature, writing, etc.; literary; well-read. 4. characterized by skill, lucidity, polish, or the like. ... n.:5. a person who can read and write. 6. a learned person. (Stein, 1966, p. 836)

Illiteracy: 1. lack of ability to read and write. 2 state of being illiterate; lack of education. 3. a mistake in writing or speaking, felt to be characteristic of an illiterate person. (Stein, 1966, p. 710)

Illiterate: 1. unable to read and write. 2. lacking education. 3. showing lack of culture, esp. in language and literature. 4. displaying a marked lack of knowledge in a particular field: *He is musically illiterate.* (Stein, 1966, p. 710)

These various definitions are surprising in two particular ways. First, they mention ability in reading and writing without detail or embellishment. It's not clear if reading and writing means being able to read or record in a first or a second language one's name, or call words off a printed page, or get meaning from print, or analyze, synthesize and evaluate written material, or just what is meant by ability to read and write.

A second surprise, though, is that these definitions expand the notion of literacy to the way it is often used now, referring to education and knowledge in a particular area.

So, the dictionary's example is "musically illiterate" but it could well be "computer literate" or some other similar phrase. The use of literacy in this sense of education and knowledge is widespread. It is what people often mean in conventional uses of the word literacy. They don't really mean reading and writing ability in any sense, but are instead referring to the kind of background and training that often arise from education, and/or ability to perform in a specific area, like with computers or technology or music and so on.

The other basic source to consult for definitions is the Oxford English Dictionary. Like my unabridged, the OED takes up both literacy and illiteracy as follows:

Literacy: The quality or state of being literate; knowledge of letters; condition in respect to education, *esp.* ability to read and write. (Simpson & Weiner, 1989, Vol. 8, p. 1026)

Illiteracy: a. The quality or condition of being illiterate; ignorance of letters, unlearnedness, absence of education; *esp.* inability to read and write. Also used more generally in sense: ignorance, lack of understanding (of any pursuit, activity, etc.). b. An error due to want of learning. (Simpson & Weiner, 1989, Vol. 9, p. 656)

Illiterate: A. adj. 1. a. Of persons: Ignorant of letters or literature; without book-learning or education; unlettered, unlearned; ...Also, more generally, characterized by ignorance or lack of learning or subtlety (in any sphere of activity). ... b. Of things: Characterized by or showing ignorance of letters, or absence of learning or education; unlearned, unpolished. (Simpson & Weiner, 1989, Vol. 9, p. 656)

Like the unabridged, then, the OED presents two senses of literacy and illiteracy. One of these has to do with abilities in reading and writing, albeit unspecified, and the other, more general knowledge or understanding or ability in, as the OED says, "any sphere of activity." Often in current usage, these two meanings get conflated, but they need to be kept distinct if we are to understand them in terms of how people understand and use written language. For the purposes of exploring what people need to be able to do with reading and writing, my focus in this essay will be exclusively on abilities to understand and produce written language.

Definitions: College Students

My colleagues mean various things when they say students are illiterate. First, they mean that students generally do not choose reading as a leisure, school or work activity. Many or perhaps most typical undergraduate students are not aware of the amount of reading they do as they surf the World Wide Web, and they are generally uncritical if and when they do read, especially screens, so that simply locating information on a topic via a Google search provides them with the "research" needed to support an idea or create a paper. This definition of illiteracy is just one of those used by college writing teachers. This view is held by these teachers despite the fact that students read and write text messages more and more, and often these messages are written in a language that resembles Hebrew, in the sense that vowels are frequently omitted. Interestingly, the absence of vowels does not seem to interfere with comprehension, a result of the psycholinguistic phenomenon of redundancy in language, a point made by both reading specialist Frank Smith (2004) and linguist Steven Pinker (Pinker, 1994, p.

181). Still, teachers commonly think that students are illiterate, in the sense that they are uneducated in reading, as well as in other areas.

The second sense in which I think my colleagues use the term illiterate is in the sense of critical literacy. The issue is not so much that students can't read (i.e., call words off the printed page) or don't get meaning from print but rather that they are not critically literate. That is, they cannot summarize a text accurately, but more importantly, they cannot go beyond summary to analysis, synthesis and evaluation. They have no sense about appraising a piece of written text for accuracy, currency, relevance, authority and so on. They cannot do these things with printed material like books and journals, and they cannot and do not do it with sources they find on the Internet.

In addition, they cannot even look critically at the kinds of materials they might find through search strategies: Wikipedia is just as good as a specialized encyclopedia in a subject area as far as many students are concerned. A thoughtful review of the authority and validity of Wikipedia as a source by historian Randall Stross (2006) raises the questions about authority, accuracy and related issues (http://web.lexis-nexis.com.huaryu.kl.oakland.edu/universe/document?_m=a1dc3786e667468ae6291ad1327da6bc&_docnum=1&wchp=dGLbVlz-zSkVb&_md5=7979ef9256af2a3267c966a976d42ad4); students I gave this report to recently did understand why Wikipedia is not an appropriate choice as a scholarly source in research, but were greatly surprised by the article's points about the anonymity of Wiki authors, the lack of editorial supervision, and so on. And they were surprised despite the fact that they had already received detailed bibliographic instruction from a library faculty member; the instruction specifically addresses the criteria by which sources should be appraised. Critical literacy is elusive even in the face of direct instruction.

Another definition sometimes used by my colleagues applies also to college students, but looks specifically at students who are not fully prepared for college, based often on some standardized exam like the ACT. The ACT measures students' reading ability by testing their comprehension of short passages of text in a timed multiple choice format, producing a score from 1 to 36 on the reading portion of this college entrance examination. At my institution, a fairly typical medium-sized state institution in the Carnegie Doctoral Research category, we currently recommend a developmental college reading course for students whose ACT Reading test score is at 19 or below. The ACT organization has looked at this issue in some detail, and there has recently been a National Survey of America's College Students (NSACS), done by the Pew Charitable Trusts (2006), using the same instrument as the national survey of the adult population to be discussed below.

The recent report on national data drawn from administration of the ACT test of high school students presents useful findings on the nature of these students' literacy (American, 2006). The ACT analysis shows quite precisely the kinds of abilities students lack as they enter college, as discussed in this report, which can be found at the ACT website: <http://www.act.org/path/policy/reports/reading.html>. The ACT exam has an entire section devoted to reading; its questions examine students' abilities, first, in literal and inferential comprehension, second, in understanding textual elements such as main ideas, supporting details, vocabulary, generalizations and related items, and finally, in dealing with differing degrees of text complexity that arise from items summarized by the initials RSVP. These initials capture these elements of text complexity: relationships,

richness, structure, style, vocabulary and purpose (American, 2006, p. 13-16). The study's findings, based on data from 563,000 students who took the ACT from 2003-2005, show that "students who can master the skills necessary to read and understand complex texts are more likely to be college ready than those who cannot" (American, 2006, p. 16). This survey suggests that what it means to be literate goes well beyond literal and even inferential comprehension, and beyond the ability to recognize key text elements or deal with vocabulary; literacy hinges on handling complex texts. Moreover, the ACT report notes that

performance on complex texts is the clearest differentiator in reading between students who are likely to be ready for college and those who are not. And this is true for both genders, all racial/ethnic groups, and all family income levels.

(American, 2006, p. 17)

The ability to read and understand complex texts is clearly a very useful measure, and is fully explicated in the report, and is pertinent to this discussion as well.

The report goes on to make explicit what ACT means when it refers to complex texts. Complexity specifically entails these elements:

Relationships: Interactions among ideas or characters in the text are subtle, involved or deeply embedded.

Richness: The text possesses a sizable amount of highly sophisticated information conveyed through data or literary devices.

Structure: The text is organized in ways that are elaborate and sometimes unconventional.

Style: The author's tone and use of language are often intricate.

Vocabulary: The author's choice of words is demanding and highly context dependent.

Purpose: The author's intent in writing the text is implicit and sometimes ambiguous. (American, 2006, p. 17)

The ability to deal with these elements is an ability that should develop throughout students' high school years in order for them to be ready to do college level reading successfully. The ACT report points out that reading bears on every subject in college. The research findings show that students who meet the ACT benchmark score of 21 are more likely to enroll in college and be successful, and not just in English and history where there is intensive reading, but also in science, math and other subjects as well (American, 2006, p. 11-12). Good definitions of literacy and illiteracy should reflect the findings reported by the ACT. Using the ACT as a measure, it might be fair to say that students who do not achieve the benchmark score of 21 are illiterate.

The students I see in our College Reading course are a good example to support this claim. These students sometimes have ACT Reading scores much below 19, and then in class, they have difficulty in every area of reading, including all of those captured by the RSVP description. They have a hard time figuring out topic and main idea in even short passages of text. They can't sort major and minor details presented by a writer to support an idea. They can't draw inferences, compare or contrast positions on an issue in two different passages on the same topic, or follow the logic of an argument. Their vocabulary is poor and they lack skills to deal with unknown words by getting meaning from context or using word analysis. Finally, they are unable to evaluate one author's claims using evidence from prior knowledge or other reading or class material.

Altogether, it is probably fair to say they truly are illiterate. Like me reading Hebrew, they can follow a text read aloud from the printed page and know vocabulary words, probably many more than I do in Hebrew, but cannot really get meaning from print. Certainly for the purposes of doing inquiry projects or integrating outside sources in support of an argument on an issue, these students lack the necessary skills to perform well. But even students whose ACT reading scores are at or above 21 lack at least some of these skills as well.

It seems to me possible that students' inability to read can help to explain the current epidemic of plagiarism. Naturally, some plagiarism can be described as simple theft: students buy papers written by others, lift portions of works found on line and paste them into texts without citation knowingly and deceitfully, use work provided to them by friends, and so on. But the more worrisome, common kind of plagiarism may well be a result of the students' inability to read. They do not get the full meaning from the texts they look at, don't see how to analyze and synthesize different positions on an issue, don't know how to compare two writers' views on a question. That is, they are illiterate.

A second recent study, conducted by the Pew Charitable Trusts on college students' literacy levels supports this claim (2006). The Pew survey, called the National Survey of America's College Students (NSACS) tested a sample of college students nearing the end of their academic work, using the same instruments as the National Assessment of Adult Literacy. The survey "collected data from a sample of 1827 graduating students at 80 randomly selected 2-year and 4-year colleges and universities (68 public and 12 private) from across the United States" (Pew, 2006). Full results, which appear on the Pew website at

http://www.pewtrusts.com/pdf/The_Literacy_of_American_College_Students.pdf show that while college students generally have higher literacy levels than the population at large, they are still not as skilled in prose, document and quantitative literacy as they could be or should be (Pew, 2006, p. 20-21).

In particular, fewer than half of college students and much fewer than half of the population attain scores at the "proficient" level on any of the three dimensions of literacy according to both the Pew and the national assessments (Pew, 2006, p. 19). Moreover, the Pew study was designed to help colleges and universities but also looks at the preparedness for the workforce and "Ultimately, the NSACS helps educators and employers develop a better picture of the skills of the emerging labor force" (Pew, 2006, p. 1) Literacy is not only essential to performance in college, but also to performance on the job, so there is a lot of interest in it for economic and employment reasons as well as educational reasons.

Many colleges and universities and community colleges have a population of students whose test scores indicate a need for developmental work in reading, but even those that don't, including even the best colleges and universities in the country, have students whose reading skills are not where they should be. While their professors might not describe them as "illiterate" by using precisely that word, there is a widespread feeling that many students lack the reading skills necessary for success in college and for full participation in a democratic society, that is, they lack critical literacy. It should be clear that it is not only college students who lack the necessary abilities in reading, but also citizens in general in the United States and in many countries around the world.

Definitions: National And International Surveys

Illiteracy is a big problem every where as reflected in national and international definitions of literacy and illiteracy. Most of the national and international studies of adult literacy that have been conducted in the last fifteen years or so draw on the basic work done first in the National Adult Literacy Survey (hereafter NALS) in the United States, published in 1993 by the National Center for Education Statistics (Kirsch et al., 1993). The survey was conducted to provide information on household literacy in the U.S. by surveying a large sample of the population in response to a request from the U.S. Congress. NALS followed two other earlier surveys that used similar methodologies, asking people to respond to a series of tasks to measure their prose, document and quantitative literacy skills. NALS was the first large-scale study of adult literacy in America, undertaken as a joint project of the U.S. Department of Education's National Center for Education Statistics and its Division of Adult Education and Literacy with the assistance of the Educational Testing Service (Kirsch et al., 1993, p. xi).

Since NALS is the springboard for other studies, a full description, provided in its first report, is helpful:

During the first eight months of 1992, trained staff conducted household interviews with nearly 13,600 individuals aged 16 and older who had been randomly selected to represent the adult population in this country. In addition, approximately 1,000 adults were surveyed in each of 12 states that chose to participate in a special study designed to produce state-level results that are comparable to the national data. Finally, some 1,100 inmates from 80 federal and state prisons were interviewed to gather information on the skills of the prison population. Each individual was asked to spend about an hour responding to a series of diverse literacy tasks and providing information on his or her background, education, labor market experiences, and reading practices. (Kirsch, et al., 1993, p. xii)

The tasks given to sample participants provide a measure of literacy on each of the three dimensions, prose, document and quantitative literacy, on a scale consisting of five levels.

The levels of literacy and the tasks required of those who participated in the survey are also carefully defined in the various reports on this project. The survey set five levels of adult literacy and tested Americans' abilities directly with tasks designed to measure skills at each level, using both prose sources and documents of various kinds. The tasks call for reading of a variety of different materials like newspaper columns, government publications, and instruction manuals for consumer products and for drawing out information and inferences from charts, graphs, tables and similar materials. The focus here is on the measurement of prose and document literacy, though quantitative literacy was also tested in the survey, including specifically the ability to extract numerical information and do calculations or make inferences based on it.

In the initial NALS report (Kirsch, et al., 1993), prose literacy is defined this way:

The ability to understand and use information contained in various kinds of textual material is an important aspect of literacy. Most prose materials administered in this assessment were expository—that is, they inform, define, or describe—since these constitute much of the prose that adults read. ...The prose

materials were drawn from newspapers, magazines, books, brochures, and pamphlets...

Each prose selection was accompanied by one or more questions or directives which asked the reader to perform specific tasks. These tasks represent three major aspects of information-processing: locating, integrating and generating. Locating tasks require the reader to find information in the text based on conditions or features specified in the question or directive. ...Integrating tasks ask the reader to compare or contrast two or more pieces of information from the text. ...In the generating tasks, readers must produce a written response by making text-based inferences or drawing on their own background knowledge. (Kirsch, et al., 1993, p. 73-74)

Those participating in the survey worked on 41 tasks at different levels of difficulty, using different kinds of texts.

Document literacy, a second component of literacy, is defined this way in the 1993 NALS report:

Another important aspect of being literate in modern society is having the knowledge and skills needed to process information from documents. We often encounter tables, schedules, charts, graphs, maps and forms in everyday life, both at home and at work. ...The ability to locate and use information from documents is therefore essential.

Success in processing documents appears to depend at least in part on the ability to locate information in complex arrays and to use this information in appropriate ways. Procedural knowledge may be needed to transfer information from one source or document to another, as is necessary in completing the applications or order forms.

...Questions and directives associated with these tasks are basically of four types: *locating*, *cycling*, *integrating*, and *generating*. Locating tasks require the readers to match one or more features of information stated in the question to either identical or synonymous information given in the document. Cycling tasks require the reader to locate and match one or more features, but differ in that they require the reader to engage in a series of feature matches to satisfy conditions given in the question. The integrating tasks typically require the reader to compare and contrast information in adjacent parts of the document. In the generating tasks, readers must produce a written response by processing information found in the document and also making text-based inferences or drawing on their own background knowledge. (Kirsch, et al., 1993, p. 84)

To measure document literacy, participants were offered 81 tasks at different levels of difficulty using different kinds of documents. The last two types of tasks should ring bells for writing teachers. Integrating and generating tasks relate clearly to the skills need for inquiry-based work of all kinds including research papers, Power Point presentations, web site construction and so on.

The findings of the NALS project give a solid overall picture of the status of literacy in America as of the early 1990s. Approximately 20 percent of the adult population performed at the two highest levels of literacy on all three dimensions (Kirsch, et al., 1993, p. xv). While this result does not mean that 80 percent of the population is illiterate, it does suggest that the vast majority of citizens cannot perform at the highest

levels of literacy needed to function in contemporary society. So those “illiterate” college students are not alone. It seems likely that easily half or more of the students currently taking the College Reading course at my institution would not perform at the highest levels of literacy defined by the survey, and that perhaps half of all the students at my institution would score similarly. The NALS survey did not address the college student population specifically, but the recent Pew study shows that, as noted above, college students do better than the population at large, but not even half of either group attains scores at the “proficient” level.

The findings of the 2003 National Assessment of Adult Literacy show little change from the NALS findings in 1993 (U.S. Dept. of Education, 2006). While there was some improvement in overall average scores in quantitative literacy, and some improvement in prose and document literacy for some minority groups, there was virtually no change in the status of literacy in the population as a whole over these 10 years (U.S. Dept. of Education, 2006, p. 1-4). It is fair to say that the overall situation has not changed; too many Americans are not scoring at the Proficient level on these carefully done national surveys of the population.

The definition of literacy that emerges from the NALS survey, NAAL, and the Pew study focuses on four key capacities that highly literate individuals should have in dealing with prose and documents, as described previously: locating, cycling, integrating and generating. Thus, to be fully prose and document literate, people must be able to locate (find by matching), cycle (match at multiple points), integrate (compare and contrast at multiple points), and generate (write based on info processing, inferences and background knowledge). Few college reading or writing teachers would find much to argue with here. Most would say, I think, that these elements capture the essence of critical literacy that is the goal of most reading and writing programs across the country.

But it is not a goal we are achieving effectively in the population at large or among college students. It may well be the single biggest reason for the appalling college drop out rate of about 50% (Tinto, 1993, p. 1; U.S. Department of Education, National Center for Education Statistics, 2005). It is also not a goal that colleges and universities can achieve on their own. There must be support for it from the public schools at all levels. And for now, there is no such support, despite No Child Left Behind, despite work on assessment of student abilities at various levels and despite various government programs at both the state and national levels. Some of the problem is actually in the state-mandated testing programs that do not move students toward the goal of prose and document literacy. Some of the problem is that even in some of the best school districts in the country, students seldom receive ANY direct instruction in reading after fifth or sixth grade; the instruction they do get may focus on literary analysis, which does not promote the skills in critical literacy that require locating, cycling, integrating and generating described above, and for which only extensive reading of non-fiction prose will do.

If we compare the broad-based, government-sponsored survey reported in NALS and its follow-up findings internationally in the International Adult Literacy Survey (hereafter IALS) (Murray, et al., 1998), it is clear that there is widespread difficulty with literacy. The IALS had to address a number of challenges in trying to measure literacy abilities across languages and cultures and the technical report details the key issues at some length. However, a number of steps were taken in the analysis of the data from the

survey to address these problems. And the overall results show that in many countries, a similar situation to that in the U.S. can also be found. The results of both IALS and the more recent results of the 2003 NAAL survey, found online at their respective web sites, for IALS (<http://www.statcan.ca/english/Dli/Data/Ftp/lsuda.htm>) and for NAAL 2003 (http://nces.ed.gov/NAAL/PDF/2006470_1.PDF) confirm this claim. That is, most adults do not have essential abilities at the highest levels of literacy.

To explain fully the nature of literacy proficiency, the leading scholars on the NALS, NAAL and IALS surveys created a theory of the underlying processes that are essential to literacy (Murray, et al., 1998, p. 144-45). This analysis by Kirsch and Mosenthal, two academic reading scholars who have published extensively on reading research, shows that there are two sets of variables that play a role in the difficulty of literacy tasks like those in the surveys: task characteristics and material characteristics (cited in Murray, et al., 1998, p. 145). For prose and document literacy, the task characteristics that play a key role in difficulty are the type of match the reader needs to make, the plausibility of distractors that may lead the reader to an incorrect answer, the type of information, whether abstract or concrete, and the structural complexity of the material, ranging from simple lists to multiple documents. For prose and document literacy, the material characteristics that account for difficulty include some readability measures like the number of syllables per hundred words, the number of sentences per hundred words, the number of labels or headings, the type of document and how much information the reader must get from the text. Of all these measures, just a few make a real difference according to the IALS report:

for both prose and document literacy, the variables most highly related to task difficulty were type of match, plausibility of distractors, and type of information. Readability, as measured by number of syllables and number of sentences per hundred words of text, was less significant. (Murray, et al., 1998, p. 145)

In addition, the skills described here are similar for both prose and document literacy and for quantitative literacy as well, suggesting that there is a general set of literacy skills that are essential for all readers, regardless of their language or culture.

The International Adult Literacy Survey (hereafter IALS) gives the following very general definition of literacy:

For the purpose of this survey literacy has been interpreted as "Official Language Literacy" and defined as "the information processing skills (reading, writing and numeracy skills) necessary to use printed material commonly encountered at work, at home and in the community." (International, 2005)

So the national and international surveys set a definition that is skill-based. It does specify that to be literate, people must be able to both understand and produce written language. It also specifies that people must be able to use their skills in various environments. It is not as detailed in terms of dealing with complex texts as the ACT definition; however it does specify what people need to be able to DO with written language.

By merging the information from the national and international surveys, key features of a definition of literacy and illiteracy emerge. It seems clear that people need to be able to both understand written language and produce it in a variety of contexts and situations. They need to be able not only to read to get essential information or ideas, but

also to go beyond basic content to appreciate the elements captured in the ACT's analysis of relationships, richness, structure, style, vocabulary and purpose (the RSVP mnemonic discussed above). And beyond all this, people need to be able to use what they read to produce their own ideas and information in written form, drawing also on their own prior knowledge and inferences drawn from what they have read. These goals are a tall order, to be sure, but essential to full participation in a democratic society, and increasingly essential in our ever "flatter," electronically interconnected world (Friedman, 2006, p. 339-40).

International Definitions

Yet another definition comes from the United Nations Development Program, which is interested in illiteracy from an international perspective. It draws on a definition used by the United Nations' Educational, Scientific and Cultural Organization (UNESCO). The following definition is presented in the UNDP's Human Development Report for 2004, which includes discussion of adult literacy rates around the world:

The adult literacy rate is defined as the percentage of people ages 15 and above who can, with understanding, read and write a short, simple statement about their everyday life. (United Nations, 2004)

This report goes on to point out the difficulties in measuring literacy and illiteracy rates. The information is often drawn from national census data, relying on citizens' self-reports. Alternatively, countries around the world may use levels of education as the basis for literacy rates even though attendance and level of completion can be variable. These comments on the problem of defining literacy provide very useful insights into the complex nature of illiteracy. Schooling implies literacy, and yet my faculty colleagues work with students who all have high school diplomas but are, by the faculty's definition, illiterate. On the other hand, schooling may be a viable measure in some places, since at least some of what constitutes literacy and illiteracy is cultural and requires consideration of the social context in which people develop literacy skills. The advantage of the measurements taken by the ACT reading test and the definitions used by NALS, NAAL and IALS is that they rely on test takers' or survey participants' actual performance on literacy tasks rather than on a multiple choice test, school measures or self-report data.

The United Nations has declared 2003-2012 the International Literacy Decade. In conjunction with this declaration, it has established the goal of increasing adult literacy around the world by 50% according to its website (United Nations, 2006). The UN's approach entails the use of survey instruments, but draws on the same essential definitions of levels of literacy and component skills used in NALS, NAAL and IALS. Thus, international definitions bring us back to the same essential definitions proposed and developed in surveys in the United States and other western nations.

Broader Definitions: Adult Basic Education And Community Literacy

George Demetrios, director of basic literacy programming for the Literacy Volunteers of Greater Hartford, who has been working in the area of adult literacy since 1987, has reviewed the issues relevant to literacy and illiteracy from a community perspective. In Conflicting Paradigms in Adult Literacy Education he explores the political implications of various aspects of adult literacy, adult basic education and second language learning. In this context, he claims that literacy is "a metaphor for

knowledge that includes the skills of reading and writing, but is defined by the symbols and sign systems operative in a given sociocultural setting” (2005, p. 267). Reviewing the development of standards for adult literacy, Demetrian describes the widespread disagreement and difficulties over the definition and setting of standards for adult literacy programs (2005, p. 130). The problem of definition ties directly to the setting of standards and, as Demetrian points out, it is impossible to set standards without an agreed-upon definition of what constitutes literacy (2005, p. 133). Thus, the problem of definition is widespread and is shared not only in academia and across the public school to college/university continuum, but is a problem in community-based programs as well.

Definitions: Illiteracy And Critical Literacy

There are better ways to think about this very complicated problem. Suppose that the focus in literacy is on just what it is that readers need to be able to do to function in contemporary society: to live and work, to get educated, to participate fully in the democratic system of government, to take care of themselves and their families. To achieve these goals, not only literacy, but also critical literacy is essential. Here’s the definition of critical literacy that I have proposed:

Critical literacy is best defined as the psycholinguistic processes of getting meaning from or putting meaning into print and/or sound, images, and movement, on a page or screen, used for the purposes of analysis, synthesis and evaluation; these processes develop through formal schooling and beyond it, at home and at work, in childhood and across the lifespan and are essential to human functioning in a democratic society. (Horning in preparation)

Using this definition, which moves far beyond being able to call words off a printed page or write one’s name, it is clear that self-report and schooling data do not help to establish who is or is not literate. Task performance from NALS, NAAL, IALS and other studies yields specific data but these data need close study to see the kinds of tasks readers are asked to perform, and must also examine whether there is writing involved. The ACT Reading test may give another performance-based measure, albeit limited to multiple-choice testing of reading only.

With this definition as a goal, several specific steps are in order to move people toward full critical literacy. First, while the movement in colleges and universities toward Writing Across the Curriculum is a positive step, there should also be a move toward Reading Across the Curriculum, not only in higher education but also in K-12 public schools, community programs, adult basic education and ESL programs. As things stand at the moment, there is no formal instruction in critical reading in the public schools after about sixth grade. A second step should be for educators to connect with librarians, newspapers and organizations like the Pew Charitable Trusts and the National Institute for Literacy to address the problem of illiteracy. There should be a widespread renewed focus on the kind of critical reading described here as the ability to read effectively, efficiently and critically is the linchpin in full participation in a democratic society. Finally, specifically in colleges and universities, there is an urge need to ratchet up the focus on critical reading in every course by demanding more and better reading from students and giving them many and varied opportunities for guided practice and skill development.

Perhaps the most useful approach is to look directly at what ordinary people actually do with respect to literacy. For example, fewer than half the people in the U.S. typically turn out for a national election. Is the lack of critical literacy skills an explanation for why this is the case? About half the students who start college don't finish. What role does the lack of critical literacy play in that situation? The No Child Left Behind legislation has created a cottage industry in testing and evaluation. How many of those measures directly examine students' skills in critical literacy? The NALS data suggest that a number of people in prison for serious crimes lack literacy skills. Illiteracy can be defined and measured in many different ways as this review of dictionary definitions, and surveys of college students, and national and international populations indicate; international and community-based definitions rely in part or altogether on this earlier work. The practical evidence in the behavior of adults in the US suggests that there is a very serious problem with illiteracy in the country as a whole, as well as around the world. This review of extant definitions helps clarify what literacy is and sets a clear goal for the entire population to achieve it.

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