

On Defining Literacy

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This study briefly examines contemporary approaches to literacy which, for purposes of clarification, it classifies in two basic categories: the "technocratic" (or "behaviorist") and the "progressive." The technocratic approach, it is argued, reduces the rich complexity of literate behavior in order to satisfy demands for a presumed scientific rigor and a simplified index of accountability. The progressive approach, on the other hand, acknowledges the complexity of literate behavior, yet fails to provide an analytical framework for a systematic investigation of its complexity. The authors discuss the currently popular concept of "functional literacy" in relation to the classical model of "high literacy." They further comment on Kirsch and Guthrie's (1977) attempt to extend and refine the notion of functional literacy. The focal concern of the authors is to outline the kinds of questions that must be asked in order to assess and to critically elaborate existing research into literacy achievement. They suggest, for example, that research must be guided by considerations of contextual factors influencing the acquisition and use of literate abilities. Finally, the authors suggest the importance of organizing research on literacy in relation to recently documented contradictions between Canadian culture and the democratic goals of Canadian society.

Cette étude examine sommairement les approches contemporaines au problème de l'alphabétisation et, pour les fins de simplification, les classe en deux groupes de base: l'approche "technocratique" (ou "béhavioriste") et l'approche "progressiste." L'approche technocratique, affirme-t-on, diminue la complexité du comportement de l'alphabétisé pour répondre aux exigences d'une supposée rigueur "scientifique" et d'un indice de responsabilité simplifié. L'approche progressiste, par contre, reconnaît la complexité du comportement de l'alphabétisé mais ne fournit cependant pas la structure analytique nécessaire pour une étude systématique de cette complexité. Les auteurs examinent le concept de "l'alphabétisation fonctionnelle," dont on parle beaucoup actuellement, par rapport au modèle classique de "l'alphabétisation supérieure." Ils font en outre certaines remarques sur l'ouvrage de Kirsch et Guthrie (1977) qui ont tenté d'élargir et d'épurer la notion de l'alphabétisation fonctionnelle. Les auteurs cherchent avant tout à passer brièvement en revue le genre de question qu'il faut se poser afin d'évaluer et d'élaborer de façon critique les recherches actuelles sur les réalisations de l'alphabétisation. Ils suggèrent, par exemple, que les recherches soient guidées par un examen des facteurs contextuels qui influencent l'acquisition et l'utilisation d'aptitudes à la lecture et l'écriture. Ils suggèrent enfin qu'il est important de structurer les recherches sur l'alphabétisation par rapport aux contradictions récemment documentées entre la culture canadienne et les objectifs démocratiques de la société canadienne.

Any attempt to make the world intelligible begins with some form of definition. This definition, which on the most basic level involves the figure/ground distinctions of perceptual processes, has special relevance

to the study of problem-solving. Communications theorist Paul Watzlawick (1974) argues that failures to respond adequately to problems at all levels of human endeavor often stem from a failure to define or "frame" a problem properly. Only when habitual and unexamined definitions of a problem are made conscious and their inadequacies are exposed can appropriate responses to the problem be substituted for inappropriate ones in a manner which allows positive change to take place.

This perspective on the dynamics of problem-solving provides important guidelines for the study of literacy, a "problem" which has recently provoked much controversy about the effectiveness of our educational programs. With the recent Labour Canada report (1979) that 20% of our population is "functionally illiterate," and in the face of an increasingly vociferous "back to the basics" movement in education whose appeal is to the "literacy crisis" and "falling standards," the alarming allegation of wide-spread illiteracy has become the focus of public, professional, and governmental concern. Despite massive economic investment — Canada having the highest percentage of its population engaged in full-time education of the 10 countries studied in the OECD Paris Report (1976) — approximately five million Canadians are reported to be functionally illiterate. Just what is literacy? What are its functions and aims? It is only when we have the requisite theoretical understanding to respond to these questions that we can ascertain the character and extent of illiteracy and determine which methods and programs best facilitate literacy. The view of the basics movement, of course, is that as a result of "progressive" instructional methods and curricular content, public moneys are increasingly being frittered away, with diminishing returns in terms of educational achievement.

In the face of this inflammatory situation, the primary question must be: What are the actual data on which the allegations of a literary crisis are based? Our preliminary investigations have revealed critical deficiencies in the literature concerned with data and definitions of literacy. Concepts of literacy and thus criteria for its achievement have varied significantly over time, place, and populace, so that the charge of falling standards appears as yet impossible to substantiate. National assessments of literacy achievement have been significant by their absence, and the sort of empirical research which might defensibly support a longitudinal study of literacy achievement appears not to exist.

Current responses to the so-called literacy crisis in Canada originate, we believe, in a failure to define or frame the problem appropriately. In what follows, we identify problems of methodology (operational frame), definition (conceptual frame), and application (contextual frame) which must be addressed in order to establish empirical research and instructional strategies on firm theoretical foundations.

REMARKS ON METHODOLOGY

In response to the alleged literacy crisis, proponents of what might be termed the technocratic (educational technologists') approach have advocated the formulation of strict instrumental goals with an eye towards increasing the institutional efficiency with which these kinds of goals can be reached. One of the consequences of this priority of instrumental ends via administratively efficient means has been a proliferation of research and development of standardized instructional systems and evaluation instruments. Because much contemporary educational decision-making has been subsumed with a Tylerian view of curriculum development based on standardized evaluation and "scientific" stipulation of educational objectives (Tyler, 1949), current research rarely has been guided by anything more than a perfunctory definition of literacy. Indeed, with the overwhelming emphasis on immediate, empirically measurable objectives came a tendency to consider such short-term pre-specified outcomes (behavioral objectives, skill acquisition, grade equivalency achievement) as conceptually adequate to guide research and development. The result has been an orientation among many reading researchers (Bormuth, 1978; P. Thorndyke, 1977) towards implicitly behavioristic views of literate performance, reinforcing a view that institutionally measurable performance consists of a sum of precisely specifiable subskills.

The early 20th century reading experiments of Edward L. Thorndike (1917) set the tenor for subsequent modern reading and literacy research. Canadian and American reading researchers, from Peter Sandiford, administrator of the first B.C. province-wide standardized reading instruments (Putman & Weir, 1925), to modern researchers like Perry Thorndyke and John Bormuth, have adhered to Thorndike's postulate that the reading process fundamentally involves textual stimulus and reader literate response. Sandiford, who from 1920 to 1940 greatly influenced standardized measurement of literacy in Canada (and British Columbia in particular), endorsed the behavioral suppositions of modern psychology. The language and concepts of stimulus and response were imported from physiology to education (Sandiford, 1926).

To be sure, such narrow definitions of performance have traditionally been opposed by progressive educators (e.g., curriculum designers H. B. King and D. L. MacLaurin in British Columbia during the 1930s) who recognized the need for a more comprehensively relevant definition of literacy. Since the advent of standardized instruction and evaluation of literacy performance, however, the performance goals recommended by progressive educators have been subsumed by the increasing emphasis on behaviorist instructional and evaluative methods. In British Columbia, for instance, as standardized evaluation and modern management methods came to dominate educational decision-making, the Research

and Standards Branch (under the direction of Dr. C. B. Conway from 1946 to 1973) employed this formula to derive appropriate means for progressive pedagogical ends (e.g., Conway, 1973). This was due in part to the fact that many educational progressives of the Deweyian era articulated desirable performance goals in terms so lofty and universal as to be effectively devoid of meaning. Historically, the Programmes of Studies in British Columbia went from explicitly specified goals in 1920 (Department of Education, 1920, pp. 2-4) to educational aims framed in increasingly vague and often romanticized terms in 1930 (Department of Education, 1930, p. 11). Contemporary progressive goals might include, for instance, "to allow self-discovery and personal growth through creative language use."

It becomes apparent that despite the appearance of opposition between the technocrats and the progressives, both movements embody the same failure with respect to methodological guidelines. They both fail, whether through excessive particularity or excessive generality, to provide utilizable criteria of literacy which take into account the subtleties and complexities of literate behavior.

Needless to say, the technocratic approach to education has come to dominate current educational practice and research. In B.C. during his tenure as Director of Research and Standards Branch, Dr. Conway supervised the administration of province-wide standardized intelligence and literacy-related achievement tests. Providing B.C. teachers with a volume of scientifically researched and documented guidelines for reading instruction and evaluation, Conway linked criteria for educational literacy in B.C. schools to the performance demands of standardized evaluation instruments. Such a move was related, in part, with the public's concern with getting value for the educational dollar. Because the technocratic approach is concerned with the manageable transmission of readily measurable skills, a simple quantitative index of "effectiveness" (like standardized results) can be presented as a central component of educational self-justification. Statements by both Conway and Dr. Norm Ellis (of the Vancouver School Board) in 1973 regarding falling scores on standardized reading tests were used by B.C. critics of the educational system to substantiate claims of a modern literacy crisis. The B.C. Core Curriculum (1977), with its focus on behaviorally assessable basic knowledge and skills, represents a modern response to this alleged crisis.

Unfortunately, however, everyday life in the schools is now suffering under the influence of the well-meaning administrators and consultants whose unreflective enthusiasm for new and better instruments for assessing literacy achievement has been accompanied by a preoccupation with fine-tuning and standardizing the exacting processes whereby literacy is thought to be acquired. Empirically based technocratic literacy instruction, such as SRA, Distar, CRP, Ginn 720, and other commoditized and

packaged curricula generate uniformity and measurability of student response and teacher behavior. However, the efficiency that is evaluated by the testing devices which accompany or complement these curricula may be more indicative of internally stipulated levels of skill acquisitions rather than the achievement of a literacy in use. In other words, the quality control which these packages facilitate has come to depend on internal criteria of adequacy (the student's level of performance on a systemized evaluation instrument) to account for what is assumed to be an externally grounded process (developing literacy skills applicable in concrete practical contexts).

These realities of educational policy and practice reinforce the tendency of researchers to control against the influence of variable contextual factors (e.g., social background, situational appropriateness, pragmatic function), and to substitute for these internally stipulated criteria of validity and (frequently statistical) significance. In consequence, researchers are condemned to address the symptoms of the alleged literacy crisis without the valuable insights into the grounds of literacy which a linguistically and socially comprehensive theoretical overview would provide.

REMARKS ON DEFINITION

It is generally recognized that the demands of work and citizenship in modern society require some degree of literacy in a large proportion of the population — and in a democratic society the need, in principle, is for a high degree of literacy for all. The classical definition of literacy as the domain of high culture fails to address our situation, and we no longer make the conceptual association between literacy and an esoteric lettered class. Significant in such rejected definitions are notions of aesthetic appreciation and the intrinsic worth of literacy. As against classical definitions, and in recognition of changing societal requirements, new definitions of literacy have emerged. Attempts have been directed towards articulating a concept of literacy which is relevant to the more practical aspects of everyday life for society as a whole. The term currently used to express this instrumental perspective is “functional literacy.”

The generic term “functional literacy” was coined by the U.S. Army during World War II to indicate “the capability to understand written instructions necessary for conducting basic military functions and tasks . . . fifth grade reading level” (Sharon, p. 148). Now, some 40 years later, the term remains our principal referent in Canadian as well as American testing of vocationally related literacy (e.g., B.C.'s 1977 Provincial Reading Assessment; Florida's 1978 Minimum Performance Standards).

Other terms such as “survival literacy” and “basic literacy” have evolved from this definition, yet our vocabulary for dealing with literacy

as an educational goal and vocational goal has been limited. For example, John Bormuth (1977) writes, "Literacy may be broadly defined as being able to respond appropriately to written language; in this sense it is one of man's most valued skills" (p. 125). The ostensibly neutral terms of "appropriate response" and "valued skills" belie a fundamental unwillingness to examine covertly normative principles underlying any socially sanctioned conception of literacy.

The term "functional literacy" has been used widely in the Canadian context (Cairns, 1977; Thomas, 1976; Verner, 1964). The apparent neutrality of the concept and the vagueness of its formulation, in conjunction with its pragmatic, utilitarian appeal, attract extensive approval. Unfortunately, however, there have been few attempts to define the term rigorously. The Canadian Association of Adult Education (CAAE), for example, defines functional literacy in terms of years of schooling (Cairns, 1977).

This definition is taken up in recent statements on illiteracy in Canada. J. C. Cairns points out that "literacy and illiteracy are relative terms, and the concept of functional literacy is difficult to discuss with precision" (p. 43). He cites the definition of the 1971 UNESCO Committee for the Standardization of Educational Statistics which states: "A person is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group or community (p. 44)."

Cairns adopts the definition of the CAAE rather than that of UNESCO because he feels UNESCO's definition is expressed in terms too general to be utilized in empirical studies. At the same time, however, he cautions that the definition of functional literacy in terms of number of years of schooling "does not take into account individual differences in literacy need or use of literacy skills; nor does it consider the informal and non-formal learning acquired throughout life" (p. 44).

American researchers Kirsch and Guthrie (1977) stressed that no useful measurement of literacy achievement can take place before the concept is formulated adequately. Thus, they distinguish literacy in its most general sense, which includes traditional aesthetically oriented literacy, from functional literacy. Functional literacy, they suggest, "refers to how well a person can read materials associated with 'survival activities'" (p. 505). They further distinguish functional literacy from functional competence (which refers to the ability to perform adequately in a given situation). The error of conflating the two is evidenced in Sticht's 1975 JRTT (Job Reading Task Tests) Study, in which he found "low correlations between reading scores and practical on-the-job performance tasks, and essentially no relationship between these measures and supervisors' ratings of individuals performing at a given job" (p. 504). Kirsch and Guthrie conclude that in questions of functional literacy it is neces-

sary to specify precisely what levels and kind of reading abilities one wishes to measure.

Because of the underdeveloped state of literacy research in Canada, this task of defining the precise components of different reading skills must be high on our list of priorities. But it has become increasingly clear to us that this refining of definitions aimed at more accurate evaluation techniques is not enough. There also exists a need to rethink the problem in general terms — for questions of survival and performance are always contextual (situational).

Consider, for example, the three specific goals of Kirsch and Guthrie's approach to the conceptualization of functional literacy: (a) to specify minimal reading performance levels for various jobs, (b) to measure precisely the performance of individuals, and (c) to make inferences from an individual's performance to his competence to fulfil reading requirements of a given job. Kirsch and Guthrie also mention that concepts of functional literacy should be formulated in a manner which precisely specifies different kinds of job-related reading abilities (for instance, such a conception of functional literacy would specify the different kinds of reading competences required of a cook and an editor). As a general rationale for formulating the concept of functional literacy in this manner, they refer to the need for a concept "that includes sound measurement principles and a set of purposes useful to decision makers in education" (p. 505).

We do not dispute the fact that measurement principles which may be very useful to decision makers can be addressed through a systematic carving up of the universe of literate behavior into ever more specific kinds of competences. But we do question whether such a stance will provide a theoretical understanding of and practical strategies for teaching literate behavior. Missing from Kirsch and Guthrie's conceptual framework is a sensitivity to the underlying principles which enable an individual to select, modify and, apply an existing reading competence to a new reading task. A specific textual decoding skill, for instance, requires a secondary necessarily social skill for its appropriate application. Such related second order competences similarly enable an individual to apply in specific social circumstances the information processing strategies used in reading to other information coding and decoding processes such as writing, speaking, and nonverbal communication.

Also absent from Kirsch and Guthrie's perspective is a sense of the pragmatic context within which linguistic interaction occurs. The contextual nature of linguistic interaction influences both the acquisition and use of literacy. We are thinking first of the social conditions of the acquisition of various competences — such as the social experience and dominant speech codes of the learner in relation to the context and transmission of instructional materials — and, further, of the second-

order competence to use appropriately a particular first-order competence within various social contexts.

Though little attention has been paid to this contextual aspect of literate behavior in contemporary industrial societies, three important sources of information suggest themselves. First, the ability to exercise competence consistently with the variables of social context has been identified as "expanded competence" by Pierre Bourdieu (1977):

Language is a *praxis*: it is *made for saying*, i.e. for use in strategies which are invested with all possible functions and not only communication functions. It is made *to be spoken appropriately*. Chomsky's notion of competence is an abstraction that does not include the competence that enables adequate *use* of competence (when to speak, keep silent, speak in this or that style, etc.). What is problematic is not the possibility of producing an infinite number of grammatically coherent sentences, but the possibility of using an infinite number of sentences in an infinite number of situations, coherently and pertinently. (p. 646)

The second source is historical. Classical studies of discourse, for example, speak not only of explicit rules of grammar (which correspond to notions of precisely defined skills), but also of when and how to apply rules (as in the notions of "appropriateness" which are examined by rhetoricians). Attention to these classical views on literate behavior, while clearly relevant to the issue of contextualization, will also enable us to address the subtleties and complexities of literate behavior.

A third source of insight on the importance of context in literacy comes from modern communications theory. Watzlawick, Beavin, and Jackson (1967), for example, provide a conceptual framework which includes much more than just the grammatical and semantic components of human speech. Drawing from a variety of sources (information theory, cybernetics, systems theory) they attempt to elucidate the pragmatic aspects of human speech and linguistic behavior in general — that is, the effects of human literate behavior, and its uses and functions in various contexts. The central guideline of Watzlawick's research is instructive: "a phenomenon remains unexplainable as long as the range of observation is not wide enough to include the context in which the phenomenon occurs" (p. 21). Investigation into such theoretical sources, both traditional and modern, enables us to discuss the various precisely defined literacy skills in a manner more sensitive to (a) the possibilities and limits of trans-contextual application, and (b) their relationship to actual performance outcomes.

APPLICATION

If our concern is the remediation of functional illiteracy in the Canadian context, it is clear that any useful definition of this competence must be constrained by consideration of factors (level of development, rate of social/technological change, schooling policy and practice, expectable

geographic and social mobility, cultural character, form of political organization) peculiar to the Canadian context. Tuinman's (1978) thesis that literacy is necessarily situational entails that the operational definition of functional literacy and the criteria for its assessment must be culturally and historically determined. Yet the (minimal) theoretical research on functional literacy which exists has been imported from Anglo-American and European literature (e.g., Bormuth, 1978; Resnick & Resnick, 1977; Sharon, 1972).

Kirsch and Guthrie's definition of functional literacy, representative of the current state of the art, can be seen to be inadequate for use in Canadian educational research on at least two counts. First, its specificity (defining "functional literacy" for an individual exclusively in terms of literacy demands of his particular occupation) fails to provide for social and occupational mobility. The implicit conservatism of such a definition functions to reproduce existing societal stratifications, and as such is both inconsistent with and inadequate for the promotion of the particular egalitarian political, social, and economic ideals of Canadian society. Second, with respect specifically to the responsibilities and obligations of members of a democratic community, participation in the political process implies not only the ability to operate effectively within existing social and economic systems, but also to make rational and informed judgments concerning the desirability of those systems themselves. The distinction can be formally expressed in terms of knowledge of rules, the ability to follow rules, and the capacity to conceptualize alternative possible rule systems as a pre-condition of enlightened discrimination of desirable versus undesirable rule-systems. Where the citizen has rights and duties with respect to social, political, and economic organization, the intelligent exercise of such rights and duties necessarily presupposes competences above and beyond the ability to carry out limited interpersonal and specific occupational responsibilities.

It is evident that these issues are of pressing concern in the Canadian context. Recent studies (Clement, 1977; Marchak, 1978) of the structure of Canadian industry have revealed what might be termed a branch plant economy: an economy dominated by large non-Canadian corporations. Correspondingly, sociologists and psychologists have argued convincingly that forms of a particularly Canadian identity may be moulded along lines of a passive branch-plant mentality (Friedenberg, 1978; Travis, 1979; Wilden, 1980). In the preface to a recent anthology entitled *Socialization and Values in Canadian Society*, E. Zuriek and R. M. Pike (1975) remark: "...the reader of the anthology is frequently confronted with a vision of the maintenance of consensus through coercion. By coercion we mean the utilization by dominant groups of manipulative socialization in order to foster internalization of particular perceptions of social reality to the exclusion of alternative viewpoints" (p. x). Clearly, then, we must be particularly wary, within the Canadian

context, of concepts of literacy which embody a built-in passivity factor (e.g., functional literacy qua acquiescent consumer competence or restrictively defined occupational skills). The intent of literacy instruction in Canada must not be the creation of manipulable populace, characterized by passive acceptance of information and prescribed behavior. Yet the definitions of functional literacy available for import from the U.S. fail to lead us beyond that level of literacy competence.

A contextually adequate definition of functional literacy, therefore, will consider not only the literacy demands of interpersonal and vocational practice, but also literacy needs for social and political practice as determined by the demands of Canadian citizenship.

THEORETICAL FOUNDATIONS OF FUNCTIONAL LITERACY: THE RESEARCH AGENDA

The intent of these preliminary critical remarks has been to indicate areas of deficiency in existing definitions of functional literacy as these preclude any significant use being made of empirical data on literacy achievement, and any significant improvements effected in literacy instruction. A correlative task has been to identify the specific areas of theoretical concern in proposing a practicable redefinition of the concept. Our intent then must be to formulate a conception of functional literacy which (a) makes explicit the normative presupposition of a concept of functional literacy situated within the Canadian context; (b) recognizes and caters to the particular requirements of Canadian society; (c) enables trans-contextual literate competence required for social and vocational mobility; and (d) accommodates to a linguistic theory which includes pragmatic as well as semantic and syntactic elements.

NOTE

A bibliography on functional literacy and literacy achievement in Canada is available from the authors on request.

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