

**Bibliothèque  
et Archives  
nationales**

**Québec**



Le présent fichier est une publication en ligne reçue en dépôt légal, convertie en format PDF et archivée par Bibliothèque et Archives nationales du Québec. L'information contenue dans le fichier peut donc être périmée et certains liens externes peuvent être inactifs.

Version visionnée sur le site Internet d'origine le 12 août 2013

Section du dépôt légal

# MJE

The McGill Journal of Education

Multicultural Teaching:  
Critical-reflective approaches

David Piper

Improving Health Education in Kenya

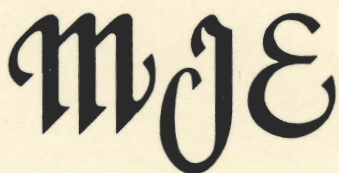
Thomas O. Eisemon

Vimla L. Patel

Linguistics and Literacy:  
A new understanding

Joe D. Palmer

Winter 1988 Vol. 23 No. 1



# The McGill Journal of Education

*Editor/Rédacteur-en-chef*

**William M. Talley**

*Managing Editor/Gérant*

**Greg Reid**

*Review Editor/Comité de révision*

**Andrew Hum**

*Members/Membres*

**Mark W. Aulls**

**Florent Dumont**

**James Hanrahan**

**Roger Magnuson**

**Theodore J. Maroun**

**Lila Wolfe**

*Member (ex-officio)/Membre (ex-officio)*

**David C. Smith**

*Editorial Assistant/Adjointe à la rédaction*

**Ann Keenan**

*Cover design & artistic consultant*

*Réalisateur de la page couverture & conseiller artistique*

**Clifford Papke**

The *McGill Journal of Education* is published three times a year, in Winter, Spring, and Fall.

Subscription rates, post paid: 1 year - \$18.00.

Single copies - \$6.50. Special Issue on Peace Education \$10.00.

Subscriptions payable to the *McGill Journal of Education*, should be sent to 3700 McTavish Street, Montreal, Quebec, Canada H3A 1Y2. Phone: (514) 398-4246.

The *MJE* is indexed by the *Canadian Education Index* and Educational Resources Information Center (ERIC). It is listed in Ulrich's *International Periodicals Directory*, abstracted by *Sociology of Education Abstracts* and *Canadian Social Science Abstracts*, and is available on microfilm from University Microfilms, Inc., Ann Arbor, Michigan. Back issues available in microform from Micromedia Ltd., 158 Pearl Street, Toronto, Ontario, Canada M5H 1L3. International Standard Serial No. CN ISSN 0024-9033.

All rights reserved. No part of this publication may be reproduced in any form or by any means without permission in writing from the publisher and from the individual authors.

© Faculty of Education, McGill University.

# Editorial

## An expression of appreciation

One year has passed since we appointed the editorial review board for this journal. The members of this board of reviewers have met our expectations in every way, and the amount of time and conscientious attention they have given to their role has truly been admirable. This editor and the *Journal* staff believe it is appropriate and right to thank them formally for their valuable contributions towards improving the quality of this publication. Their devotion has not gone unnoticed.

Manuscript review is a tedious, time consuming, and, sometimes, tiresome task. It requires, among other things, attention to minor but necessary details, a scholarly knowledge of the subject, proficiency in language, and a critical eye for composition and organization. In the lives of busy people, such as those appointed to our board, serving as an efficient referee, becomes an addition to the burdensome scholarly expectations required by the institutions in which they have an appointment.

It has been our experience this year that the comments of the reviewers have proved to be incisive and extremely useful, and they have served to sharpen and focus the articles we have published. In addition, the reviewers have made it possible for the editor to make difficult decisions relative to the acceptance or rejection of the many articles submitted to this journal.

It might be appropriate for persons whose articles are published to be reminded that in addition to noting the editor's scrutiny, there are others to whom they might be deeply appreciative for taking time to focus, clarify, or refine their articles.

The editor and the *Journal* board publicly thank the reviewers for their scholarly contribution to this journal.

While we have been impressed and flattered by the cooperation and assistance of our review board, we continue to rely on the members of the Faculty of Education as third and fourth reviewers. This is especially the case when we feel an additional opinion would be helpful. The Faculty reviewers deserve a good measure of recognition and appreciation for their insights and expertise in matters of review.

**W.M.T.**

## This Story

Sometimes as I sit in the dark  
chained to my word-processor,  
I think it has all been a dream –  
that I have only to say

*Let there be light*

and it would  
all start over – better.

But the words that sputter like fuses  
from under my fingers  
are too damnably graphic  
for any god to imagine.

People think that I sleep,  
treat me like a dead stick –  
not knowing that each night  
I blossom into phrases –  
condemned by my own existence  
to write this story.

Though words are still dangerous  
I have done with creation.

True, I set it in motion,  
now all I can do is keep  
up with events – a mere  
chronicler of destruction.

Some sun or other lights  
the horizon and a clock  
strikes seven.

It is time  
for resting.

**Paddy Webb**



David Piper  
University of Calgary

## Multicultural Teaching: Critical-reflective approaches

### Abstract

*There has been a growing recognition of the need for teachers to examine and to come to greater understanding about multicultural policies in Canada. What is less clear, however, is the kind of approach which best facilitates multicultural awareness. It is argued that Critical Pedagogy (as developed by Giroux, following Freire) provides a promising new framework for the consideration of multicultural ideology and for comparison between this and alternatives such as the anti-racist ideology being currently promoted within the British educational system. It is concluded that the processes of critical reflection are crucial to greater understanding of multiculturalist ideology, in the context of which multi-ethnic education in Canada is currently being developed.*

Many educators have recognized for some time that all Canadian teachers will benefit from some in-depth understanding of the issues underlying multicultural policy and the implementation of such policy in the multi-ethnic classroom. What is less clear and more debatable than this, however, is the question of what is the best way to bring about such understanding, of what are the central issues, and of how background knowledge and classroom practise are related to each other.

Various proposals have been made recently about what should be included in teacher preparation programs. Banks (1986), for example, argues that teachers need training which relates to their individual positions on a spectrum of personal awareness having six stages as follows:

1. *Cultural-psychological captivity*: where individuals internalize negative beliefs about their own ethnic groups,

2. *Cultural encapsulation*: where individuals practice ethnocentric separatism,

3. *Cultural identity clarification*: where individuals accept themselves and have clarified their attitudes towards their ethnic groups,

4. *Biculturalism*: where individuals have skills and attitudes to participate in two ethnic or cultural groups,

5. *Multiculturalism and reflective nationalism*: where individuals have reflective knowledge about their ethnic and national identities and the ability to function in a range of groups, and

6. *Globalism and global competency*: where individuals have reflective and positive identifications and the ability to function world-wide (see Banks, 1986, p. 18).

Banks' stages may be helpful for conceptualizing the gradual development of individuals towards an ideal point of multicultural maturity, but they are less informative when it comes to describing the details of the developmental process, to describing, that is, either what kinds of activities and knowledge will contribute most effectively to such development or what kinds of thinking underlie the stages. For example, do the "reflective identifications" at stage 6 mean that all thought of racial or ethnic distinctions, exorcised in favour of a version of multiculturalism, admits of no intercultural division, or does it mean that, while such divisions are perceived, they are simply not recognized in overt behaviour? Does such an ideal level of attainment, moreover, imply the absence of internal conflict and doubt? Banks himself recognizes the need for "[m]ore research and theory . . . about the kinds of training strategies and teaching techniques that work best with different kinds of teachers and students" (p. 19), and he acknowledges the full complexity of the issues when he calls for a "multi-factoral" multicultural paradigm to be implemented in the schools which takes account of attitudes, values, assessment procedures, curriculum, and racism, along with matters of status and individual motivation (p. 23).

What seems clear from all of this is the need to involve both **cognitive** and **affective** knowledge in developing multicultural awareness. There is little use in knowing everything about cultural history, or about the politics of multiculturalism, on the one hand, without some parallel development of sensibility towards cultural identity – one's own and other people's – on the other. There is every reason to suppose, moreover, that feelings which remain consistent and strong in the face of cultural variation in the classroom will develop most effectively in company with at least some knowledge of the historical, political, and psychological background to multicultural society. It seems that coming to understand more about multiculturalism involves both the heart and the mind; it involves both self-reflection and empathy, together with some more objective work on cultural theory. In reviewing the models so far proposed for helping teachers come

to grips with multiculturalism, Gay (1986) reflects these requirements when she finds that what is common to them is that they all emphasize "some combination of content and process, knowledge and skills, cognition and affect, personal growth and professional development" (p. 163). According to Gay, there are four components to preparing for multiculturalism: "understanding different theoretical conceptions and ideologies of ethnic pluralism and multiculturalism," the study of philosophical assumptions concerning multicultural education, study of the different characteristics and sociopolitical experiences of ethnic groups, and the learning of "skills and techniques for teaching ethnically different students, and for teaching multicultural content to all students" (p. 173).

If developing multicultural awareness involves both cognition and affect, it also involves thinking in ways that are both **critical** and **reflective**. This, in turn, implies that multicultural policy and philosophy themselves must be subject to critical inquiry. Certainly, there are alternatives to multiculturalism which can be considered, alternatives which, although they may be aimed like multiculturalism at achieving some acceptable, morally appropriate and workable form of pluralism, yet differ with multiculturalism on what are the best ways of achieving such a goal. In the Canadian context, there have in fact been several kinds of attack launched against multiculturalist policy. Mallea (1984) identifies six general sources of objection: first, it is illogical to have, on the one hand, an official policy of bilingualism which emphasizes two main linguistic and cultural groups and, on the other, a multicultural policy which emphasizes the equal importance of all ethnic groups; second, multicultural policy denies the aboriginal rights of native peoples; third, the policy treats Canada's non-official language groups as homogeneous, when there are substantial differences between them – for example, some wish to intensify cultural maintenance, while others are disinterested in it; fourth, multiculturalism is insufficiently well defined; fifth, as a result of unclear definition, the policy works towards maintaining groups rather than individuals in a way which erodes individual mobility; and sixth, the policy has duplicity in that it "enables government to praise the values of individualism and pluralism simultaneously" (pp. 10-11).

It is possible, then, that a well-developed critical understanding of the issues might lead to some dissatisfaction with multiculturalism, perhaps even to a complete rejection? Or can teachers work within a framework of acceptance of the general aims of multiculturalism while remaining skeptical about some individual aspects of the policy? Confronting these questions leads us to consider some of the more exacting problems associated with multicultural classroom teaching. In particular, it forces us to recognize some foundational questions in the field of multicultural education, and even to some logical contradictions that are difficult, if not

impossible, to resolve. What I will attempt to do in the rest of this paper is to specify some of these conceptual challenges in concise form, and to place them within the context of a critical pedagogy. Finally, it will be possible to return to consider the question of the range of viable interpretations of multiculturalism for classroom practise.

### **Critical Pedagogy and Multiculturalism**

Freire (1973) described the state of "critical consciousness" in a true democracy as follows:

The critically transitive consciousness is characterized by depth in the interpretation of problems; by the substitution of causal principles for magical explanations; by the testing of one's "findings" and by openness to revision; by the attempt to avoid distortion when perceiving problems and to avoid preconceived notions when analyzing them . . . . (p. 18)

Giroux and others have more recently developed these ideas into a "critical pedagogy" intended to heighten levels of critical awareness about the educational process both in the classroom and during teacher preparation (Giroux and McLaren, 1986).

Some of the central ideas in critical pedagogy have particular significance for the education of minority group students. First, Giroux insists on the importance of helping students in oppressed social groups to think about thinking itself – that is, to think about how they have come to feel oppressed and how, by way of this thinking, they may have become "accomplices to their own subjugation" (1983, p. 35). Second, what this also involves is thinking about the **dominant ideologies** in society through which social groupings are structured and through which cross-cultural relations are established. Giroux sees cultural relations as "problematical": i.e., they require critical attention since such relations are legitimated differently across cultures and are inseparable from particular forms of political and social control. Third, schools should be seen as "cultural sites that embody conflicting political values, histories, and practices" (1983, p. 37), as places where student groups, together with teacher and administrative groups, struggle for social identity and position, where groups are quite naturally both formed and protected. Fourth, cultural minority groups need to affirm themselves, to affirm their own cultural histories and their internal relationships in everyday life (p. 37). Fifth, ideologies are to be seen as potential teaching tools, which they can use to initiate open classroom discussion about matters of culture and power and to stimulate active critical inquiry rather than passive acceptance. (A critical pedagogy treats ideology as the "terrain for self-reflection and transformative action" [p. 145].)

Finally, this "transformative action" involves high levels of critical consciousness which lead to the development of students and teachers as "engaged" citizens, capable of asking critical questions about their environment and of generating resistance when necessary. Teachers, further, are described ideally as "transformative intellectuals," who are able to engage their students in discussing the most appropriate questions in the classroom about society and about how knowledge is distributed through the "hidden curriculum" (see Giroux, 1983, pp. 60, 66, 71; Giroux & McLaren, 1986, p. 215).

These critical pedagogical principles clearly have bearing upon the interpretation of multiculturalism, since multiculturalism, like democracy itself, is an ideology which has potential for establishing and maintaining social control. The language of multiculturalism calls for the peaceful coexistence of minority and majority cultural groups, for the separate development of minority groups within the framework of a benign pluralism, and yet, as we have seen, many critical questions have been raised concerning the actual outcomes of such an ideology (see Mallea, above).

Giroux calls for the open confrontation of critical questions such as these statements above. At a practical level, this might involve students in discussing topics ranging from that of how different cultures are described in social science textbooks to that of the implications of holding ethnic celebrations in their schools. A critical pedagogical approach interpreted within the Canadian context, then is one which both stimulates open questioning of multiculturalism and validates justified resistance to it. It is an approach which would seem to have potential for yielding heightened levels of cultural awareness in both students and teachers and, ultimately, one which has potential for helping to achieve a brand of pluralism which is sufficiently robust to stand the tests of intercultural conflict and of time. What, then, are some of the more specific issues that will focus critical awareness about multiculturalism? It has been my own experience that three issues, in particular, that have great impact on individual interpretation of multicultural ideology have surfaced in classroom discussion with teachers. The first concerns the dangers of multicultural ideology *per se*, the second concerns the comparative merits of a "multicultural" as opposed to a more overt "anti-racist" stance, and the third concerns what might be called "the paradox of pluralism."

### *The problem of multiculturalism as ideology*

Some of the major sources of danger with multiculturalism are well expressed in the six points of counter-attack presented by Mallea (above). In addition to these, however, is the even more invidious possibility that

Canadian multicultural ideology is nothing more than a well-conceived plot to exploit ethnic diversity for purposes of economic gain. Part of this has much to do with the idea implicit in Giroux's program that ideology can sometimes act as a kind of anaesthetic to political consciousness, a process leading in the end to depoliticization.

Some vibrant criticisms of the depoliticizing nature of Canadian multicultural policy, indeed, have been put forward by Moodley (1983, 1984), who argues that:

Canadian multiculturalism greatly resembles the emperor's new clothes. Only unlike the emperor's audience, Canadian professional ethnics, cultural entrepreneurs and a coterie of academics are more directly and amply rewarded for their fantasies. It is they who benefit most from multiculturalism and the big business of culture. (1983, p. 321)

The principal danger seems to lie in the fact that once a policy such as multiculturalism has been developed and disseminated, it becomes a *status quo* which reflects neither the true feelings of cultural sub-groups nor the constant dynamic changes in society. On this point, Moodley argues that the character and motivations of recent immigrants to Canada have substantially changed in the direction of a need for upward mobility and to put aside what are seen to be the limiting obstacles of minority ethnic identity (pp. 325-327).

Another major problem, according to Moodley, concerns the continued dominance of the official bilingual policy allowing only English or French in education, broadcasting and business, thus reinforcing a linguistic political hierarchy rather than equality of multicultural opportunity. Perhaps the greatest danger of all, though, lies in the gradual change from an ethnically inspired version of multiculturalism towards one based upon economic and pragmatic criteria in which "[t]he instrumental value of multiculturalism is seen in better serving external markets and improving the country's sales image" (p. 326). In this sense, multiculturalism serves to tap the source of foreign expertise in its ethnic minorities for purposes of economic negotiation abroad, negotiation further supported by a strong image of equality at home. In this way, multiculturalism promotes unity in the service of its international image, covering up any underlying problems of discrimination and inequality in the interests of affording "external legitimacy to a heterogeneous state" (p. 330). Moodley's overall view of the ideological distortion produced by multicultural policy is perhaps best summed up in her critique of the federal government's report entitled *Equality Now*, in which she charges that the image of Canada as "one big happy family" does not truly represent the underlying reality, and that:

Such a utopia obfuscates the reality of wealth, differential power and political conflict generally. The image deflects criticism away from the dominance of the few and the manipulation of the many to the false sentiment that everyone is equal if he or she is only made to feel welcome. Despite the professed concern for more active political involvement, the ideology of equal opportunities and harmonious partnership (in the report) in fact depoliticizes the newcomers. (Moodley, 1984, p. 797)

It is clear, both from the criticisms identified by Mallea and from those more detailed charges of Moodley, then, that there is much substance for critical discussion by teachers and the students having to do with the foundations of multicultural ideology and with how such ideology can be manipulated and used for economic benefit abroad and social control at home.

It is not only in Canada where serious concerns have been raised about these ideological characteristics. Comparison with the British experience is especially enlightening here, just as it is concerning anti-racist ideology (see below). Over a decade ago, Troper (1976) wrote that faith in multiculturalism in Britain had "virtually become an end in itself . . . . One suspects that almost any program can get approval, and any expenditure authorized, if it is done in the name of multiculturalism" (p. 3). A recent review of anti-racist teaching practise, by Brandt (1986), is directed "in crucial opposition to the white multicultural tradition," in the context of a field "dominated by the liberal outpourings of mainly white multiculturalists," and in the interests of challenging "both the edifice of liberal racist 'scholarship' and the racist educational system in which this 'scholarship' is embedded, legitimated, and perpetuated" (p. vii).

The next critical question of interest, then, lies in asking why Canada continues to pursue multiculturalism, rather than exposing and politicizing racial disharmony, and in asking whether or not anti-racist policies are warranted. A useful way of focusing the issues here is to be found in some further reference to Britain and, in particular, to recent developments within the Inner London Education Authority.

### *Multiculturalism vs. Anti-racism.*

In reviewing the politics of race in Britain over the 1960s and '70s, Ben-Tovin and Gabriel (1982) present a picture of growing government restriction on immigrants from the "New Commonwealth," together with public alienation of black workers who managed to settle in Britain. They refer to these immigration policies themselves as a form of "state racism"

leading to the public perception that "black people are in themselves a problem and the fewer we have of them the better" (p. 146). In the present decade, concern in liberal political and academic circles about the black experience in Britain has grown considerably, and this is especially evident in responses to racism in schools. Husband (1982) presents transcripts of interviews with black immigrants to Britain which represent some of their typical kinds of experiences. A teacher, for example, describes the "daily tide of abuse from his pupils" as follows, where each of the movements in British society mentioned is founded on racism:

... they call me, you know, "Paki" and "Paki out," and they scrawl on the door of my teaching room. I mean, I've been in the school for seven years but now things are deteriorating. They may say, well, we're doing it for a laugh or something like that, but then they are influenced by the older people you see, because in that area where I live there are, you know, lots of demonstrations organized by the British Move-ment. . . . They write on my blackboard, they write BM, and then they have these Nazi signs you know under their lapel and they show it to me and they ask me to read their leaflets, they carry them around. Oh, yes, I know – the leaflets from these various movements, the New National Front, the National Front, the British Movement, kids now start saying to me, oh, you have taken our job: suddenly they have found that I have taken their job, so why don't I go back, you Paki, you see, they shout. (p. 190)

Evidence abounds that these are by no means isolated instances. (See, for example, other interviews in the same collection, and the extensive transcripts in the study by Sherwood, 1980.)

In an attempt to confront racism head-on, many British Education Authorities and, in particular, the Inner London Education Authority (ILEA) have replaced benign multiculturalism with overt anti-racism. The growing realization of the racial factor in education has led the ILEA (1983) to issue formal anti-racist statements and, more generally, to politicize race at every level of schooling. In particular, the Authority has demanded that:

... all educational establishments, through their staff and governing or managing bodies and in association with the committees they serve, prepare and publicize carefully thought-out statements of their position. This must be seen as part of the Authority's legal and educational commitment. (pp. 3-4)

This ideological orientation, then, provides a stark alternative to Canadian multiculturalism and a significant contrast through which it can be better understood.

One possible reaction to the British position might be to argue that such anti-racist ideology is appropriate in Britain but not in Canada, where history, immigration policies, and demographic distribution are simply different and have not led to inter-racial tension. Such an idealistic interpretation, however, seems to be quite unjustified in light of recent Canadian analyses of racism. Barrett (1984), for example, describes in some detail the activities of the Ku Klux Klan in major Canadian cities, as well as those of other racist groups like the Western Guard. Both Barrett and Wyatt (1984) support the general conclusions about Canadian racism drawn by Patel (1980), who stresses the need for greater attention to racism and the danger of assuming that "if we ignore racism it will go away" (Wyatt, 1984, p. 96). D'Oyley (1984) further describes racial minority groups in Canada as having come to realize how "many majority race-managed institutions operate with very little caring for the survival of minority individuals from some particular strands" (p. 161). While the situation in Canada may not be as severe as that in Britain, then, there seems, in light of a growing number of racist incidents in major cities (see Barrett, 1984) and of the presence of organized anti-racist groups, every reason to suppose that vigilance is necessary if a similar development is to be avoided. Comparison with Britain reveals the danger of the obfuscation and oversimplification of racial issues in multiculturalist policy, and it suggests that much more overt recognition of social conflict may, indeed be warranted in at least some educational arenas.

### *The paradox of pluralism*

The dilemma faced by educators pursuing multiculturalism is easily stated; it lies in working at one and the same time for ethnic **separation** (by encouraging ethnic affirmation) and for social **integration**. In discussing various pluralistic options in education, Appleton (1983), however, describes the version of pluralistic ideology taking complete autonomy and self-determination of ethnic groups for its main objective as only one of several possibilities. Another possibility is to treat ethnic affirmation as a matter of free choice (pp. 92-93). Arguments about multicultural pluralism, though, can be seen to be part of an even more fundamental debate about "cultural relativity."

Whorf (cited in Fishman, 1982) suggested that each culture is unique and that thought and language are culture-bound (or relative to different cultures). The deep paradox here is that if this idea be accepted, at least in its extreme form, it means that cultures cannot be understood "from the outside" – that Canadians, for example, cannot come truly to know other cultures represented in its immigrant population such as Chinese, Italian, or Punjabi. And, conversely, that immigrants can have no understanding of "Canadian culture" – be it English or French. What this potentially leads to

in classroom policy is the complete separation of cultures, a form of fragmentation in which integration is totally abandoned as an objective. Obviously, this is as unacceptable an educational response to the fact of multi-ethnicity as is any form of total assimilationism by which no acknowledgement is admitted of separate ethnic identity.

Fortunately, several theorists have suggested ways to find a middle or compromise position between these extremes. Fishman (1973, 1982, 1983) has argued, for example, that Whorf's true intention, an intention that he did not make clear enough, was not to stress the "unknowability" of other cultures but rather to stress the need to recognize ethnic diversity as the basis of cultural sensitivity and learning. Fishman (1983) argues that this was the spirit of Whorf's cultural relativity hypothesis, a version which he calls "Whorfianism of the Third Kind."

Zec (1981) finds another way out of the paradox by developing the notion of "cultural respect," or the kind of respect for other cultures that involves "someone who from where he stands seeing something in another culture and valuing it" (pp. 35-36). Critical evaluation of the paradox, then, can lead to workable compromises for teaching.

### *Summary and conclusions*

Following a review of some representative prescriptions for teachers' multicultural awareness as put forward by Banks (1986) and Gay (1986), it was argued that critical reflection about multiculturalism, together with acknowledgment of some of its ideological dangers and drawbacks, will be necessary if the cause of pluralism is to be served properly. While ideologies such as multiculturalism and anti-racism may each be elaborated in the attempt to attain similar political and educational objectives, they may differ substantially in their expression of how such objectives are to be achieved. Reference was made to several well-known objections to multiculturalism identified by Mallea (1984). To these could be added, as the review showed, the objection that the reality of inter-racial tensions as they are to be found in Canadian society is both obfuscated and ignored in such a policy. It was argued that the model of Critical Pedagogy, as developed by Giroux and others, gives further direction and impetus to teachers' critical and reflective examination of multiculturalism, and that there were three perspectives in particular that are of use in focusing such an examination: (1) recognition of the potential of multicultural ideology, as ideology, to become exploited by political and economic interests; (2) recognition of the alternative overt approach of anti-racist; and (3) recognition of the paradoxical nature of any policy-making (together, of course, with classroom decisions and curriculum design) that is founded in the perception of cultures as separate and of culture-bound thought as "relative."

Contrasts with Britain are particularly pertinent to a critical analysis of the Canadian scene, both for the reasons already stated and also, it could be added, in light of the recent placement of additional restrictions on refugees from Central America. Comparison with Great Britain provides insights both at the level of educational systems and at that more general level by which immigration policies have a tendency to exacerbate public discrimination more generally. Consideration of all of these themes contributes to a critical understanding of multiculturalism.

Apart from the need for critical examination of these issues within the Canadian educational context, several other conclusions seem possible. First, it seems that there can be no "set" definition of multiculturalism that will be appropriate to all educational situations; sometimes affirmation of ethnic groups may be a viable objective, while on other occasions such emphasis may be contrary to the motivations of particular groups of students. Second, it may in some situations be necessary to emphasize anti-racist ideology with an explicit recognition of racial conflict if progress is to be made either in particular educational settings or, more generally, towards a balanced pluralism.

The overall conclusion from the above review is that teachers, if they are to be the "transformative intellectuals" described by Giroux and McLaren, must remain sensitive to and able to analyze various educational situations in ways which permit these different approaches and emphases. Multiculturalism is an ideology which it is sometimes tempting to accept without critical reflection. In extreme cases, such critical reflection on issues such as those outlined here may entail completely rejecting multicultural dogma; at the very least, it involves constant recognition of the dangers of generalizing such ideology across all Canadian educational situations. Attention to minority students' own reactions to multiculturalism may in the end be our best guarantee of avoiding the pitfalls of ideological anaesthesia.

## REFERENCES

- Appleton, N. (1983). *Cultural pluralism in education: Theoretical foundations*. New York: Longman Inc.
- Banks, J.A. (1986). Multicultural education: Development, paradigms and goals. In J.A. Banks & J. Lynch (Eds.), *Multicultural education in western societies*. London: Holt, Rinehart and Winston.
- Barrett, S.R. (1984). White supremacists and neo-Fascists: Laboratories for the analysis of racism in wider society. *Canadian Ethnic Studies*, 16, 1-15.
- Ben-Tovin, G. & Gabriel, J. (1982). A political analysis of race in the 1980s. In C. Husband (Ed.), *Race in Britain: Continuity and change*.

- Brandt, G.F. (1986). *The realization of anti-racist teaching*. Lewes: Falmer Press.
- D'Oyley, V. (1984). Beyond the English and French realities in Canada: The politics of empowerment of minorities. In S. Shapson & V. D'Oyley (Eds.), *Bilingual and multicultural education: Canadian perspectives*. Clevedon: Multilingual Matters Ltd.
- Fishman, J.A. (1973). The Whorfian hypothesis. In J. Allen & S. Pit Corder (Eds.), *Readings for applied linguistics* (Vol. 1). London: O.U.P.
- Fishman, J. A. (1982). Whorfianism of the third kind: Ethnolinguistic diversity as a world-wide societal asset (The Whorfian hypothesis: Varieties of validation, confirmation, and disconfirmation II). *Language in Society*, 11, 1-14.
- Fishman, J. A. (1983). Language and ethnicity in bilingual education. In W.C. Macready (Ed.), *Culture, ethnicity, and identity: Current issues in research*. New York: Academic Press.
- Freire, P. (1973). *Education for critical consciousness*. London: Sheed and Ward.
- Gay, G. (1986). Multicultural teacher education. In J.A. Banks & J. Lynch (Eds.), *Multicultural education in western societies*. London: Holt, Rinehart and Winston.
- Giroux, H. A. (1983). *Theory and resistance in education: A pedagogy for the opposition*. London: Heinemann.
- Giroux, H.A. & McLaren, P. (1986). Teacher education and the politics of engagement: The case for democratic schooling. *Harvard Educational Review*, 56, 213-138.
- Husband, C. (1982). Personal experiences of multi-ethnic Britain. In C. Husband (Ed.), *Race in Britain: Continuity and change*. London: Hutchinson.
- Inner London Education Authority. (1983). *Race, sex and class: 4. Anti-racist statement and guidelines*. London: ILEA.
- Mallea, J.R. (1984). Introduction: Cultural diversity and Canadian education. In J.R. Mallea & J.C. Young (Eds.), *Cultural diversity and Canadian education: Issues and innovations*. Ottawa: Carleton University Press.
- Moodley, K.A. (1983). Canadian multiculturalism as ideology. *Ethnic and Racial Studies*, 6, 320-331.
- Moodley, K.A. (1984). The predicament of racial affirmative action: A critical review of 'Equality Now'. *Queen's Quarterly*, 91, 795-806.
- Patel, D. (1980). *Dealing with inter-racial conflict: Policy alternatives*. Montreal: Institute for Research on Public Policy.
- Sherwood, R. (1980). *The psychodynamics of race: Vicious and benign spirals*. Brighton: The Harvester Press.
- Troper, H. (1976). Multiculturalism in the classroom: Pitfalls and options. *The History and Social Science Teacher*, 12, 3-7.
- Wyatt, J. (1984). Implications of multiculturalism for curriculum. In S. Shapson & V. D'Oyley (Eds.), *Bilingual and multicultural education: Canadian perspectives*. Clevedon: Multilingual Matters Ltd.
- Zec, P. (1981). Multicultural education: What kind of relativism is possible? In A. James & R. Jeffcoate (Eds.), *The school in the multicultural society*. London: Harper and Row.

**Thomas Owen Eisemon**  
*McGill University, and Harvard  
Institute for International Development*

**Vimla Lodhia Patel**  
*Centre for Medical Education  
McGill University*

# Improving Health Education in Kenya

## Abstract

*Adopting new health practices is not simply a matter of being told what to do and doing what one is told. The primary health care interventions that are currently being introduced in Kenya and developing countries to reduce infant mortality require parents to perform complex cognitive tasks. These involve making inferences from knowledge of human biology and disease processes that may not be acquired from health instruction provided in schools or through public health campaigns. What is needed to design more effective health education programs is a better understanding of the knowledge structures and cognitive strategies that are involved in comprehending procedures associated with modern health care practices.*

## Introduction

Although mothers' schooling has been correlated with lower infant mortality and higher life expectancy in developing countries, the processes through which schooling affects health status are still poorly understood (Cochrane, Leslie, & O'Hara, 1982; Grosse, 1982; O'Hara, 1980). Most explanations of the impact of schooling on health have emphasized intermediate outcomes of schooling such as access to wage/salary employment and migration to urban areas as the mechanisms through which health practices change and better health occurs. Little is known about the effects of the health instruction mothers have received in school, about what they have retained from such instruction, and how it influences the way they treat diseases in their children.

In Kenya, we have examined mothers' comprehension of oral and printed instructions for using commercial products for treating dehydration

due to loss of body fluids and salts during diarrhea. These products are readily available in rural areas as a result of government policies which have encouraged the private sector to dispense modern medicines so mothers can administer them at home. It is intended that the information required for their use be obtained either from the printed instructions that accompany the products, or orally, from the persons who sell them.

Our research focused on the knowledge mothers use in comprehending instructions for oral rehydration therapy (ORT). The instructions elicit knowledge integral to explanations of illness (and well being) as well as to relating treatment to the presumed causes of disease. Among mothers with little or no formal schooling, disease is attributed to causes located in the relationship between an individual and his social and spiritual environment, although this does not preclude recognition of biological causes as factors contributing to illness.

Better schooled mothers, we have found, not only give more specific descriptions of symptoms of diarrhea and dehydration, but their explanations of diarrheal diseases emphasize environmental causes, especially the contamination of water, food, and utensils, and unsanitary conditions, generally. They are more likely to employ notions drawn from Western folk medicine such as germ and dirt theories of disease causation which receive much attention in health education and home science instruction in primary schools. These notions are important in building an understanding of the relationship between the causes of disease and their prevention. In addition, they are important to comprehending and following certain procedures recommended for administration of commercial oral rehydration salts solutions to children; boiling water, for instance. However, germ and dirt theories are less useful for explaining other procedures involved in using these products, particularly those having to do with providing enough fluid and nourishment early in the course of treatment to stabilize the child's condition. Such procedures require a more profound understanding of the biological and physiological bases of diarrheal diseases as well as of how oral rehydration therapy works in treating the diseases and, thus, alleviating the symptoms of dehydration.

Findings are presented from three studies showing how mothers' understanding and use of ORT can be fostered by designing instructional materials that provide explanations of treatment procedures that make "sense" in terms of lay theories of disease causation. In addition, the study examined school health education programs that impart knowledge necessary for the adoption of new health practices. The first examined how schooling may influence the way mothers think about and treat diarrheal diseases in their children, and revealed that even mothers with relatively high levels of schooling combine ORT with administration of traditional medicines which

are likely to weaken a child's condition. A second experimental study was carried out to show how comprehension of procedures for using commercial ORT solutions might be facilitated by relating the instructions to medical knowledge acquired from schooling or from social experience. The third study demonstrated how teaching about ORT and other health topics can be improved by modification of the instruments now being used to assess learning outcomes and teacher performance in Kenyan primary schools.

### **Influence of Schooling on Causal Attribution of Disease**

#### ***Study of causal attributions***

The theory of causal attribution was formalized by Kelley (1973) and is concerned with the attempts of ordinary people to understand the causes and implications of events in their daily lives. This theory views an individual as a lay scientist who attempts to infer causes for observed events, using systematic rules and strategies for assessing information and making judgments involving uncertainty. Einhorn and Hogarth (1986), Hammond (1955), Kahneman and Tversky (1982), and Mackie (1974) have argued that judgments of causal relevance are generally related to whether the events violate expectations. Events that are part of some presumed background or "causal field" are judged to be of little or no causal relevance. Abnormal events generate causal interest.

A central assumption is that common-sense explanation involves a co-variational notion of causality. Formal inference rules allow attributions to be deduced from particular configurations of the consensus, distinctiveness, and consistency of the information. However, this model has shortcomings as a representation of the process of causal attribution. The co-variance principle based on multiple observations requires the attributor to apply rules that are essentially logical or probabilistic in nature. In many circumstances, a person makes a causal inference on the basis of a single observation which provides more certainty than consistency characterized by a series of events. Moreover, inferential processes do not necessarily involve the operation of formal rules of inference (Johnson-Laird, 1983). Everyday explanation diverges from scientific explanation in the manner in which we select from conditions that we choose to designate a cause of any event, although the selection of the cause from the range of conditions necessary for occurrence of the event may be orderly and rule-governed (Hart & Honoré, 1959).

Fieldwork was carried out in the Kenyan village of Meto in Kajiado district in February 1986 to ascertain what problems literate and illiterate Maasai mothers experienced in comprehending instructions for using ORT solutions. Kajiado district with a population of about 150,000 has one of

the highest rates of infant mortality and one of the lowest rates of school participation in the country (Ole Sena, 1986, p. 3). Its inhabitants are primarily Maa speaking pastoralists living in temporary settlements in remote areas of the district or on group ranches and private plots near the district headquarters at Kajiado town, about 80 km south of Nairobi. Meto is the site of a rural training centre, a village polytechnique, and a primary school. It is the terminus of a pipe line providing water from mountains in neighbouring Tanzania. For this reason, the area is settled by pastoralists in the dry season.

Fifty-two mothers were asked questions about the size and characteristics of their families, where they obtained water, and whether they did anything special to it before drinking; information was also elicited about the frequency and nature of sickness among children in the village clinic, attitudes toward and uses of traditional and modern medicine, beliefs about the causation of diarrhea, and the identification of symptoms and usual treatments. Information obtained from these interviews was used to construct models representing how mothers think about treatment modalities in relation to the causation of diarrheal diseases (Patel, Eisemon, & Arocha, 1987a).

Unschooling Kenyan mothers typically treat diarrhea by giving herbal medicine and purgatives together with sheep fat as the example given in Figure 1 illustrates. The figure gives a detailed analysis of the semantic representations of a verbal protocol describing the causal (CAU), conditional (COND), and temporal sequence (ORD:TEM) or association (ASSOC) of events mentioned in relation to diarrhea.

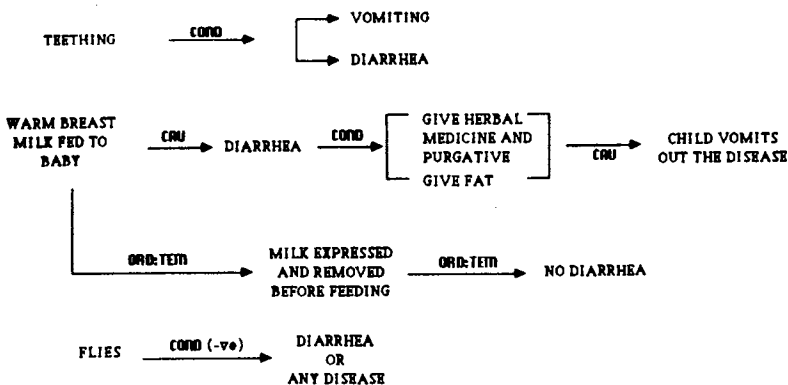


Figure 1: Structural representation of causality and treatment of diarrheal disease by an unschooled Maasal mother (#2)

In this example, taken from a twenty-year old unschooled mother with two children living in a traditional Maasai encampment, teething and warm breast milk are believed to be associated with or to be the cause of diarrhea in her children. Teething is indicated as an accompanying condition but not a necessary one for diarrhea and vomiting to occur. In other words, teething does not cause diarrhea, but diarrhea is always associated with teething. Asked whether the presence of flies has any role in diarrheal illness, the mother neither linked this condition to diarrhea nor to any other physiological or environmental condition considered to accompany the disease, even though in Maasai encampments human beings live with cattle, and flies are always present.

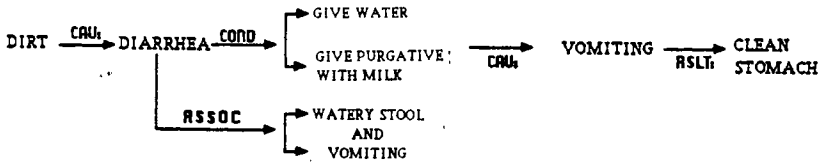
Warm breast milk is identified as the most likely cause of diarrhea. The mother explained that breast milk is warm when her breasts are exposed to the hot sun. Babies have difficulty in digesting hot mother's milk. Cow's milk is kept cool in calabashes placed inside the mother's *manyatta* (house made of cow dung and wattle). Babies do not get sick from drinking cool cow's milk. If some "warm" milk is removed after a woman has walked long distances in the hot sun, babies do not have diarrhea.

When children receive warm breast milk and develop diarrhea, they must be given herbal medicine, including *iseketek*, a strong purgative, mixed with cow's or sheep's fat. The administration of some indigenous medicines, of course, may significantly worsen the child's condition through mechanisms that are believed to promote recovery. They work by expelling the disease from the child. The strength and frequency of administration of the purgatives is determined by perceptions of the severity of the illness; stronger, more frequent administrations are given when the child is severely ill.

### *School effects*

Some schooling seems to profoundly influence how mothers think about diarrheal diseases although this cannot necessarily be attributed to the formal instruction in biology and health which they have received. In Kenya, health subjects are introduced only in the upper standards of the eight year primary cycle in which English is used as the medium of instruction. However, students in the lower standards are given much informal instruction about health and personal hygiene. They are, for instance, expected to wear clean uniforms to school. The cleanliness of their clothing, hair, and finger nails is frequently inspected; and they are often required to clean the school compound, classrooms, and pit latrines, especially as a punishment.

Below we have presented a protocol from a mother with six children who left primary school after three years of instruction (Figure 2).



**Figure 2: Structural representation of causality and treatment of diarrheal disease by a Maasi mother with three years of schooling**

Environmental conditions are indicated as the cause of diarrhea. In contrast to the unschooled mother, she explicitly linked diarrhea to a description of its symptoms, emphasizing watery stools, perhaps because it suggests to her the need to increase the child's intake of water, milk, and other fluids. This treatment is combined with administering purgatives to clean the child's stomach which will exacerbate rather than alleviate symptoms that are identified with the disease. The apparent contradiction may stem from the fact that while the manner in which traditional treatments work is understood, those acquired from schooling are not.

Like many mothers with little formal schooling, this woman has developed an explanation of diarrhea that has little utility for understanding home treatments based on the recognition that fluid retention and nourishment are needed for recovery. The knowledge that environmental conditions are somehow implicated in causing illness does not necessarily motivate preventative measures.

Higher levels of schooling produce better descriptions of the causes of diarrhea and its symptoms, and strengthen beliefs in the effectiveness of some treatments derived from modern medicine (Figure 3). Contamination of food and water caused by flies and dirt are mentioned by this mother as conditions associated with diarrhea. Although she makes no reference to "germs" in her description of disease processes, many of the mothers in this study who had more than six years of primary schooling used germ theories to connect conditions associated with diarrhea to causes as well as to treatment, e.g., giving boiled water to a sick child. The mothers often administer oral rehydration salts solutions to their children and/or purchase commercial mixtures from local shops as this mother does. Home preparation of oral rehydration salts solutions is dealt with in the standard VII primary schools syllabus, and in recent years the topic has been selected for examination questions in the health science paper of the Kenya Certificate of Primary Education Examination. From schooling and from other sources mothers learn of the importance of ORT and incorporate what they know about it into home treatments, but highly schooled

mothers do not give up traditional remedies. Rather, ORT is added to their repertoire of traditional treatments as its relationship to the causes and symptoms of diarrhea is not well understood.

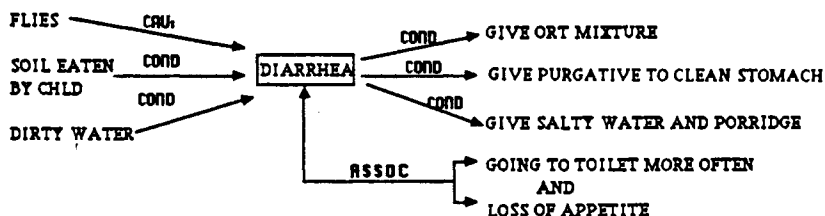


Figure 3: Structural representation of causality and treatment of diarrheal disease by Maasai mother with 8 years of schooling

### Research on Use of ORT Solutions

Information about ORT is disseminated in rural areas in many ways – through mass media campaigns (especially radio instruction); the distribution of flyers, posters, and printed media; demonstrations by village health workers; or some package of these techniques (USAID, 1985). The strategy adopted for popularizing ORT is determined by what mothers are to be taught to do. If preparation of ORT solutions from local ingredients is taught, then emphasis is usually given to face-to-face instruction with radio and other media having a supportive role. More innovative strategies for popularizing ORT have involved the use of traditional healers as instructors to generate greater acceptance of the therapy, particularly among unschooled mothers. In addition, pre-mixed ORT solutions are distributed through the private sector with shop owners and clerks having the responsibility for educating mothers as to their use.

Pre-mixed ORT solutions are available in many parts of rural Kenya where they are sold by the packet in *dukas* or small shops that stock canned goods, cooking utensils, tobacco, soft drinks, and some pharmaceutical products (i.e., aspirins, malaria pills, and treatments for intestinal worms or upset stomachs). In early 1986, at least five kinds of ORT packets were being sold in the country, some of them only in major urban areas serving as test markets. Most products are locally manufactured or packaged by firms that are subsidiaries of international pharmaceutical corporations. The printed instructions that accompany the products are usually developed abroad, and only one product is sold with a Kiswahili translation of the English instructions. While Kiswahili, the country's official language, is not the mother tongue of most Kenyans, it is a compulsory subject in primary school and is the *lingua franca* of daily commerce.

### *Informal instruction*

Most instruction about the use of ORT packets occurs in the context of exchanges between sellers and purchasers of these products. A February 1986 survey of thirty *dukas*, located in and around the town of Kajiado, indicated that thirteen distributed ORT packets but that only one brand of product was available.

Information about ORT preparation and administration is normally obtained in one of three ways, from (1) self study of the printed instructions and illustrations contained on the packet; (2) explanation of the instructions by the seller who may, in addition, make reference to information appearing on the cartons containing ORT packets, and in posters distributed to shop owners (which were not displayed and, with difficulty, found only in one shop in Kajiado); and (3) communication of the instructions by individuals who have studied them or obtained explanations from sellers of the products to the eventual user, usually a family member. In other words, the information is derived directly from the printed text and accompanying illustrations. The illustrations describe a portion of the set of instructions; specifically, mixing the content of the packet with boiled water and the administration of the solution in a tumbler to a child. Information about proportions, frequency of administration, and precautions cannot, of course, be easily provided or reinforced with graphics.

Sellers were asked to read the instructions and explain how to prepare and administer the solutions to an infant. Most sellers simply referred the purchaser to the illustrations. Asked to read the instructions aloud, sellers usually searched the text for information as to the frequency of administration ("You mix and give two or three times"), without noting that the amount of fluid and frequency vary with the age and size of the child, or that a child should be given more fluid at the beginning of treatment, and that treatment should continue for more than one day.

### *Comprehension of printed texts*

Two experiments (Eisemon, Patel, & Ole Sena, 1987) were designed to assess how schooled mothers process information contained in printed instructions for preparing ORT mixtures. The product studied required mothers to perform a number of procedures involving measuring, mixing, and administration of the medicine in recommended quantities to a sick child. These, in turn, involve mothers' recognition of the various stages of diarrheal dehydration, intervention at an early stage, and maintenance of hydration and nutrition during recovery. In sum, what is needed is an explanatory knowledge of how the medicine is supposed to work in treating diarrheal dehydration and the capacity to make inferences from this

knowledge, in addition to skills in preparing and administering modern medicines. The experiments were carried out with 40 randomly selected Maasai mothers, having at least one child less than five years of age, and who had obtained a minimum of six years of primary schooling and were living in or around the town of Kajiado.

The mothers ranged in age from 19 to 59; the average age being 29. Most had three children. Three fourths (75%) had obtained some secondary education, and 36% completed O level studies. Ten mothers were involved in some form of wage employment. All had previous knowledge of ORT and had used pre-mixed ORT packets.

It is estimated that about 60% of Maasai of school age are now enrolled in primary schools in Kajiado district (Ole Sena, 1986). Female participation rates are still below levels for males – approximately 1.5:1 – in part due to the fact that little official encouragement was given to the education of female pastoralists until very recently. Six years of primary schooling was adopted as a criterion for selection for several reasons. Four to six years of primary schooling is usually considered sufficient to acquire functional literacy (Hartley & Swanson, 1984, pp. 26-37). Moreover, six years of primary schooling implies at least three years of instruction in English as the medium of instruction, and six years of study of Kiswahili as a subject. In other words, a school leaver with six years of primary education should be literate in English and Kiswahili irrespective of the school attended.

Below are summarized the findings from the two experiments beginning with an analysis of mothers comprehension of the original instructions.

### *Comprehension of original instructions*

Two texts were used for the first experiment, one of which consisted of the printed information in English as given by the manufacturer along with the graphic information that appeared on the packet. This information was translated into Kiswahili to create a second text to determine whether this improved comprehension. The text was not translated into Maa because this language is seldom used for printed communication. Sentences in the text were numbered to facilitate recall of information and were typed to enable reading. Visual cues (e.g., bold letters) were added to correspond to the original instructions.

The graphics that accompanied the instructions consisted of five pictures, the first of which depicted a pot of water set in a fire with the instruction: boil water. The next advised the user to cool the water by

removing the lid. The third and fourth pictures indicated that the cooled water should be poured into a tumbler, all powder from the packet added, and the contents stirred. A mother is shown giving the child a tumbler of the mixture in the final picture with the caption: give slowly.

Mothers were required to describe the pictures and to read the instructions for the product aloud. Seven questions were constructed in Maa to examine comprehension of the texts. These were of two types. The first required the mother to recall information from the text (e.g., "How much water do you mix with the powder?") while the second had to be answered in inferences from prior knowledge (e.g., "Why shouldn't you boil water after adding the powder?"). Finally, mothers were asked to translate a line in the text into their own language.

Protocols obtained from the administration of the two texts were scored for the correctness of responses by a Maa speaker who was not involved in the collection of data. For example, "What steps do you follow to make a mixture of (the product)?" was the first question asked. If the mother indicated that "you boil the water and wait until it becomes cool," she received a score of four out of a possible ten because only two of the five steps in the preparation of an ORT solution were mentioned. Answers to some questions had to be judged more subjectively. Asked to explain why the powder and water should not be mixed prior to boiling, one mother replied that "boiling the mixture would remove the medicine." This answer received a perfect score of ten because boiling would decompose the solution and some of it would evaporate.

The comprehension scores for the 20 subjects given the original instructions were low. The ten administered the English texts scored a mean of 52 of a possible 70. Those receiving the Kiswahili texts did not score significantly higher ( $\bar{x}=53$ ). Schooled mothers found the printed instructions difficult to comprehend for a number of reasons. Some vocabulary and units of measure were unfamiliar to them. The frequency of administration was presented in a way that required the user to make very difficult calculations of the amount to be administered to infants and to children over five years of age. Furthermore, the procedures for preparing the mixture in the printed text did not follow a temporal or logical order, nor were the precautions listed in order of their importance to the user.

When mothers had problems in comprehending the instructions, it was usually because they lacked knowledge needed to construct explanations that "made sense" to them. For example, many mothers felt that in preparing the mixture, the medicine should be added to water prior to boiling, ignoring information which can only be inferred from the printed instructions. Well-schooled mothers made the necessary inference if they possessed the knowledge to explain why boiling should precede mixing the

medicine with water. Mothers with little schooling speculated that the order of procedures might have something to do with ensuring that the medicine was strong (e.g., "It may kill the healing power of the powder."). Those with more schooling used evaporation and other explanations drawn from school science instruction. Similarly, mothers were more apt to follow instructions to boil water if they employed germ or dirt theories to explain the necessity of the procedure in terms of their beliefs about how diarrhea is caused. Boiling made little "sense" to mothers who did not use biological causes in explaining illnesses, including some who identified environmental factors, such as dirty water, as being associated with disease.

More serious difficulties were encountered in reconciling information about the maximum number of administrations in any twenty-four hour period with instructions to give babies boiled cooled water whenever thirst was apparent. Although mothers seldom thought that the medicine would suffice to promote recovery, combining this treatment with increasing the child's intake of fluids presupposed that mothers would know that the child's balance of body fluids should be restored as soon as possible to alleviate the symptoms of dehydration.

While no set of instructions for using this or other modern medicines can be designed well enough to close gaps in important prior knowledge, such instructions can be greatly improved. It was found that good graphics are very effective in communicating information about the temporal order of procedures in preparing and administering medicines. Unfortunately, some necessary information about correct dosages and precautions are difficult to communicate with graphics.

### *Comprehension of revised instructions*

A second experiment was designed to examine ways of improving the printed instructions through changing the language of the text, simplifying factual information, using colloquial vocabulary and familiar units of time and measurement, and arranging information into a temporal or substantive hierarchy of tasks. In addition, we sought to improve the texts by incorporating explanations of treatments and individual procedures that were likely to "make sense" in terms of prior knowledge obtained from schooling or which was embedded in indigenous medical practices. For example, instructions to continue feeding were combined with an explanation that the sick child needs energy to get better. This is the rationale that African mothers give for mixing herbal medicines with fat and other foods.

Comparisons of mothers' comprehension of commercial instructions with instructions which we revised showed that simple changes in text

construction produced gains in their ability to recall and make appropriate inferences from printed information, especially among mothers with little schooling.

Twenty mothers who received revised instructions in English and Kiswahili received higher scores for the seven comprehension questions we have described previously. The ten administered the English texts, for instance, obtained near perfect scores ( $\bar{x}=66$ ). The absolute differences in the mean scores across text and language conditions are large and statistically significant ( $F=5.51, p<.001$ ).

The lexical and semantic characteristics of the original and revised texts were examined, using techniques of propositional analysis to determine how the information presented in them was represented (Patel, Eisemon, & Arocha, 1987b). The two sets of instructions were found to be similar in complexity. In both, essential information was embedded in many conditional statements requiring the reader to re-construct information. The principal difference was that the revised texts offered more explicit guidance as to the temporal ordering of procedures to facilitate encoding and accessing of the information.

The mothers' responses were analyzed in terms of the proportion of propositions (semantic units) recalled or inferred from the texts compared to the information obtained from the illustrations and other sources. Mothers who received the original text made little use of the information it provided. Less than half (40%) of the propositions they recalled or inferred were derived from the printed instructions. Almost all (95%) of the information used by mothers who were given the revised instructions was obtained from the text. Moreover, the proportion of mothers whose answers correctly matched the propositions contained in the printed instructions was 100% for four of the five questions which required recalling or inferring from such information.

### **Improving Health Education**

While modifications in the design of printed materials may increase comprehension of instructions for using ORT products, effective treatment requires some understanding of the causes of diarrhea as well as of how the therapy works to alleviate dehydration and promote recovery.

Mothers who have attended school may understand that diarrhea can lead to severe dehydration. They know that diarrhea weakens a child's condition. They may routinely administer oral rehydration salts solutions to their children. However, as we have noted previously, mothers with complete primary education are often unable to explain why the solutions

are necessary and effective; and they sometimes combine this treatment with other harmful measures such as administering traditional purgatives and discontinuing feeding.

Health information is a compulsory part of the final examination administered at the completion of primary school. The test items currently used to determine whether students know how to prepare oral rehydration salts solutions from household ingredients, for instance, requires them to select the correct answer from one of the following choices: plenty of fruit juices; breast milk regularly; plenty of water with a little sugar and salt; or plenty of milk and porridge (KNEC, 1985). The administration of any fluids and nourishment is essential to recovery. School instruction is an important source of confusion about the effective treatment of diarrheal dehydration. When teachers prepare their students for this and similar examination questions, they drill them on the correct answer. Similar drill techniques are often used by adult educators and health care workers.

### ***Research in health studies***

In a third study (Eisemon, Patel, & Abagi, 1988), we sought to demonstrate how the test items used in the Kenyan primary school examination to assess knowledge of ORT, immunization, control of communicable diseases, and child nutrition could be changed to encourage teachers to explain disease processes so that students may better understand the importance of preventative measures and effective treatments.

Recent research on achievement testing (Glaser, Lesgold, & Lajoie, 1985) has drawn attention to the need for a better understanding of what test items actually measure. This is not revealed. Glaser *et al.* have pointed out, by present testing technologies which are oriented to analyses of item difficulty, discrimination, scaling and norming, and other procedures associated with instrument design and administration that, "In order to ascertain the critical differences between successful and unsuccessful student performance, we need to appraise the knowledge structures and cognitive processes that reveal degrees of competence in a field of study" (p. 1). Although testing theories propose diagnostic evaluation as a use of achievement testing, this is often carried out instead in the form of student selection and assessment of teacher and school "effectiveness." Achievement test results indicate what a student should know based on what someone has determined the student should have been taught. They do not provide many insights into the knowledge structures students possess or into the cognitive strategies they use, or into the kinds of instructional experiences they have had.

### *Revision of examination questions*

The health related questions given in the 1985 Kenya Certificate of Primary Education (KCPE) *Sample Papers* were extracted and compared to those which appeared in the mock KCPE examinations administered in Nairobi schools in 1985 and 1986. Five of these questions were selected for study and subsequent revision on the basis of the likelihood that they (or questions on similar topics) would be among the ones included in the Science and Home Science papers in the 1986 examination scheduled for November 1986.

The five questions dealt with nutrition, nutritional diseases, control of communicable diseases, and treatment of diarrheal dehydration. They covered several sections of the Science and Home Science syllabi used in the upper primary standards, and were related to important objectives of instruction. For example, school leavers are to be taught to "classify locally available foods into the three food groups, identify nutritional (deficiencies), plan and prepare balanced meals, diagnose common diseases, immunize and provide proper care for babies, and demonstrate an understanding and practice of preventative health measures" (Jomo Kenyatta Foundation, 1986, pp. 158-61, 282). Most of these health subjects are considered in Standard VII or in earlier standards, and merely reviewed in the final year of instruction.

It is difficult to know how the Kenya National Examinations Council might have classified the five questions in terms of the kinds of cognitive skills and knowledge required to obtain correct answers. Three seem to require recall of descriptive information to varying degrees. It is essential, of course, that students be able to recall information from the health instruction they have received if the knowledge is involved in the adoption of better health and nutritional practices. What is crucial is that the knowledge elicited be important to target behaviours in the sense that it is central to making appropriate inferences. To put it another way, the knowledge required for a correct answer should be fundamental to how students should think about something that should be significant to them. That the knowledge recalled is factual is less important than whether it is useful for reasoning in daily life.

The five original questions were transformed into ten questions which assessed competency in the same knowledge domains. The revisions followed two principles of item construction loosely drawn from Glaser's cognitive theory of the measurement of achievement to which reference has already been made, namely, that the knowledge elicited should be: (1) pertinent to structures necessary for integrating existing and new knowledge; and (2) explicitly related to the competent performance of some target behaviour. Thus, the first question about *bilharzia* (a parasitic disease) was

expanded into four questions about nutritional and communicable diseases, with the possible answers requiring students to select the correct cause and method of transmission of each of the diseases. The question on ORT was revised to make it clear that the "wrong" answers were wrong because they were equally suitable for treating other diseases. (For example, "plenty of fruit juice" could as well apply to treating a baby suffering from a vitamin deficiency as to treating one suffering from dehydration.) The original question seemed to follow our principles in other respects.

### *Demonstration study*

A demonstration study was carried out in two Standard VII classes in a Nairobi school whose students generally do well in the school leaving examination. The school places among the top 10% of the Nairobi Council schools in the proportion of its students who obtain places in government maintained secondary schools, about two-thirds in 1985. More than one thousand students attend the school. The majority are children of civil servants and members of the armed forces. Compared to other schools in the country, this school is well equipped with all-weather classrooms, enough benches and desks to accommodate all students, and multiple copies of student texts. In addition, all teachers are certified to instruct at the primary level.

The researchers visited this school in early November 1986 when Standard VIII students were being coached for the Kenya Certificate of Primary Education examination to be given later that month. It is usually difficult for researchers to have access to schools during the weeks preceding the examination. Preparation for the examination is serious business. Students in Standard VIII receive an additional day of instruction at the school beginning in September. Many are also coached by private tutors after school, some of whom are their teachers, although this is illegal. The day preceding the initial visit, one Standard VIII student experienced an anxiety attack from the pressure and had to be sent home.

Two teachers were needed for the experiment. One to teach the students to answer the original set of questions and the other to teach the revised set. It was anticipated that it would be necessary for the teachers to plan two forty-minute review lessons prior to the administration of the original and revised questions to both Standard VIII streams. The questions were printed in booklets with answer sheets similar to the ones used for the mock examinations. The different question sets were given to the teachers; the one who received the original set did not receive the revised set and *vice versa*. The school headmistress instructed the teachers that they would be held personally responsible for the performance of their students.

### *Drilling for the examination*

Initially, the two teachers did not know that they were preparing students to answer different kinds of questions and wondered why two review lessons might be necessary. The Standard VIII teacher who received the revised set soon appreciated that she had a more difficult task. Both teachers were given photocopies of the relevant passages in the health science texts for reference in preparing their lessons. The primary school teachers gave the impression of being very efficient in selecting information for lesson presentations generally, not just in reviewing subjects that had been previously considered. The scope of the school syllabus, the absence of textbooks, and methods of assessment combine to ensure that most teaching is restricted to examination essentials.

An important difference between the lessons prepared for this study and those observed on other occasions was that much greater use was made of the school texts. Lack of textbooks has been identified as a key factor in explaining the lower achievement scores of students in developing countries (Heyneman & White, 1986). Yet even in classrooms in which multiple copies of textbooks are made available to students they are often not used for instruction (Eisemon, 1988). Teachers rely on the syllabus, notes retained from teacher training, mock examination papers, and examination guides in preparing lessons. Review lessons are particularly likely to be taught without reference to textbooks.

The lessons given in the Nairobi school did not require students to study from textbooks, but teachers did use the teacher guides and photocopies of student texts in preparing their lessons. Since most of the content of all four of the review lessons was more pertinent to answering the revised questions, it is thought that changes in examination questions of the kind that were proposed increase teacher use of texts for lesson preparation. More specifically, these changes are likely to encourage teachers to understand what they teach well enough to construct explanations for students.

### *Test administration*

Students were administered both sets of examination questions, the order depending upon whether their teacher had received the original or the revised questions. It was expected that the students would perform differently based on the different ways teachers had prepared them to answer the questions. However, this could not be determined since the teachers exchanged examination questions and both focused their teaching on answering the revised questions. The seriousness with which they approached this task was evident in the high scores of the Standard VIII students. Average scores exceeded 80% for all four administrations.

The main purpose in conducting this study was not, of course, to boost the students' examination scores. Instead, the concern was with improving health education in primary schools and making it more useful to students. Five children were selected from each of the two Standard VIII streams and were interviewed to find out how they answered the examinations, i.e., what knowledge they used and how they organized this knowledge into explanations of disease processes from which principles could be drawn to guide health behaviour. The fact that students are able to select a correct answer from choices presented to them tells little about what and how they have learned.

Analyses of the interviews suggested that the instruction the students received imparted more than mere facts. Particularly interesting in this connection were the responses of students to the open-ended questions on diarrheal diseases. One student, Caroline, for example, answered the original and revised ORT questions correctly, the chief difference between these questions being that explanations of the treatments were provided in the hope that teachers would explain the importance of loss of fluids and salts. Caroline, a 14-year old girl, obtained a ranking of 402 out of the more than six hundred Standard VIII students who took the most recent zonal mock KCPE examination. Asked to explain why a solution of water, salt, and sugar is effective in treating severe diarrhea, she replied:

Caroline:           When you have diarrhea you produce watery stools, and then one is very weak and loses water.

Interviewer:       Yes . . .

Caroline:           Your body is a system of continuity and balance. There must be balance between what you eat and what you take out. You must eat and drink enough. When you have diarrhea you lose a lot of energy, and sugar and salt are necessary for energy and fluid balance . . .

Interviewer:       What do you think causes diarrhea?

Caroline:           Maybe we don't have good latrines or clean water. . . . You must have good latrines and fresh water. We should have many pit latrines. Clean ones. And we should have clean, fresh boiled water.

Caroline gave correct answers because she understood *why* they were correct. Her explanation is paraphrased from a portion of the teacher's lesson which is taken from a health science text, and is similar to the ones given by other students. The notion that ORT salts solution restores a food and

water balance in the body is central to recognition of the symptoms of diarrheal dehydration and to effective treatment. In other previous studies of Kenyan mothers' comprehension of procedures involved in ORT mothers who understood the treatment in any profound sense were never encountered.

### Summary

Previous research indicates that formal instruction influences beliefs about causation and treatment of children's illnesses and imparts reliance on modern health care. However, the studies that are summarized in this paper reveal that even mothers with relatively high levels of schooling, who have participated in adult health education programs, have difficulties in performing seemingly simple procedures involved, for instance, in the administration of commercial oral rehydration salts solutions. Although comprehension of these procedures can be increased with better printed instructions, this does not suffice to change health practices. In brief, while schooling imparts basic literacy skills and knowledge important to practices derived from modern science that improve health, functional use of schooling by adults has a great deal to do with the circumstances under which literacy and modern health knowledge is acquired.

Development of capacities to use ORT and similar medical technologies has been made the responsibility of teachers, village level health care workers, clinical officers, and other professionals who have conceived of health education, very simply, as exposing individuals to practices they should adopt in the belief that attitudinal and behavioural changes affecting their health status will occur. The findings of the studies reported here suggest that the knowledge involved in effectively using ORT for instance, is not merely a surface awareness of the symptoms and causes of diarrhea, and of the benefits of ORT, but an understanding of the physiological and biological causes of diarrheal diseases and an ability to explain the course of treatment. This research suggests that schooling can be effective in imparting the knowledge pre-requisite for ORT and other health practices. However, this will require profound changes in how health education is taught, especially at the primary school level. That, in turn, will necessitate changes in examination practices which foster explanatory instruction and understanding of disease processes and modern medical treatments.

## REFERENCES

- Cochrane, S.H., Leslie, J. & O'Hara, D.J. (1982). Parental education and child health: Intracountry evidence. *Health Policy and Education*, 2, 213-250.
- Einhorn, H.J. & Hogarth, R.M. (1986). Judging, probable cause. *Psychological Bulletin*, 99(1), 2-19.
- Eisemon, T.O. (1988). *Benefiting from basic education*. Oxford: Pergamon Press.
- Eisemon, T.O., Patel, V.L., & Abagi, J. (1988). Read these instructions carefully: Examination reform and improving health education in Kenya. *International Journal of Educational Development*, 7, 1-12.
- Eisemon, T.O., Patel, V.L. & Ole Sena, S. (1987). Uses of formal and informal knowledge in the comprehension of instructions for oral rehydration therapy in Kenya. *Social Science and Medicine*, 25, 1225-1234.
- Glaser, R., Lesgold, A. & Lajoie, S. (1985). Toward a cognitive theory for the measurement of achievement. LRDC working paper, University of Pittsburgh.
- Grosse, R.N. (1982). Literacy, education and health development: Research priorities. *Health Policy and Education*, 2, 105-108.
- Hamond, K.R. (1955). Probabilistic functionalism and the clinical method. *Psychological Review*, 62, 255-262.
- Hart, H.L. & Honoré, A.M. (1959). *Causation in law*. Oxford: Clarendon Press.
- Hartley, M.J. & Swanson, E.V. (1984). *Achievement and wastage: An analysis of the retention of basic skills and primary education*. Washington, DC: World Bank.
- Heyneman, S. & White, D. (1986). *The quality of education and economic development*. Washington, DC: World Bank.
- Johnson-Laird, P.N. (1983). *Mental models*. Cambridge, MA: Harvard University Press.
- Jomo Kenyatta Foundation. (1985). *Syllabi for Kenyan primary schools: Volume II*. Nairobi: J.K.F.
- Kahneman, D., & Tversky, A. (1982). The simulation heuristic. In D. Kahneman, P. Slovic & A. Tversky (Eds.), *Judgment under uncertainty*. Cambridge, MA: Harvard University Press, 201-208.
- Kelley, H.H. (1973). The process of causal attribution. *American Psychologist*, 28, 107-128.
- Kenya National Examinations Council (KNEC). (1985). *Sample papers*. Nairobi: K.N.E.C.
- Mackie, J.L. (1974). *The cement of the universe*. London: Oxford University.
- O'Hara, D.J. (1980). Toward a model of the effects of education on health. In S. Cochrane (Ed.), *The effects of education on health*. World Bank Working Paper No. 405. Washington, DC: World Bank, 34-55.
- Ole Sena, S. (1986). *Pastoralists and education: School participation and social change among the Maasai*. Ph.D. dissertation, McGill University.

- Patel, V.L., Eisemon, T.O., & Arocha, J.F. (1987a). *Causal reasoning and the treatment of diarrheal disease by mothers in Kenya*. Pre-publication manuscript. Technical report: CME87-CSI, Centre for Medical Education, McGill University, Montreal.
- Patel, V.L., Eisemon, T.O., & Arocha, J.F. (1987b). *Comprehending instructions for using pharmaceutical products in rural Kenya and urban Ethiopia*. Pre-publication manuscript. Technical report: CME87-CSII, Centre for Medical Education, McGill University, Montreal.
- United States Agency for International Development. (1985). *Communication for child survival: Lessons for five countries*. Washington: USAID.

Joe D. Palmer  
Concordia University

# Linguistics and Literacy: A new understanding

## Abstract

*A great literacy debate has been going on for some time, yet the debaters cannot agree on what they are talking about. The English teaching profession is in despair. Reading alone has not been proven to lead to higher-order cognitive skills. The acquisition of print literacy has not unfailingly led to social betterment and progress. Work on literacy should be informed by many disciplines, and especially by linguistics in which recent research on language in use is revealing definitions, and facts and insights into the nature of literacy.*

The scientific study of language has been a major influence in the teaching of foreign and second languages, but little influence on the teaching of English native-language skills. This essay is a rationalist plea for turning to linguistics as a tool of psychology, sociology, and communication for the improvement of the teaching of reading and writing.

Many authors decry the sorry state of literacy and public education today.

With skills down, assignments down, standards down, and grades up, the American educational system perpetuates a hoax on its students and on their parents. (Copperman, 1978, dust jacket)

And it is not only young students who fail to live in a typographic world of full literacy.

An all-out literacy struggle on our own home soil... is also one of the few responsible starting points for any further efforts to be teachers to the teachers of the Third World. Until we demonstrate that we can come to terms with the catastrophe in our own urban ghettos and our rural slums, there does not seem much reason to expect that other nations will, or ought to, seek out our advice. (Kozol, 1980, p. 101)

However true may be the assumption that literacy brings the benefits of progress and wealth, we must also recognize "our conviction that literacy does make a difference" (O'Barr, 1984, p. 273). Most people are convinced that literacy is a paramount goal.

The problem is how to give functional literacy to everyone. "Within the context of a given culture, a literate person is one who can gain access to information and transmit it to others" (Power, 1983, p. 22), and ideally these literates can then participate in a sort of global literacy across national and cultural boundaries, a seemingly worthy goal. It is believed that literacy breaks the vicious cycle of low income, high birth rates, and slow development. Yet, the absolute number of illiterates in the world today is rising. The distribution of literacy skills seems to mirror the power structure. Thus women, poor people, people in the Southern Hemisphere, rural people, and colored people read and write less than do others.

### *The English teaching profession*

While in North America remedial training in reading and writing for university students is becoming a commonplace, concerned professionals doubt whether English teachers are capable of solving the problems of a populace numbed by television and reduced to a kind of intellectual slavery by overpowering media. The experience of English teachers must be taken into account. They are frustrated, if not defeated, by the turns in our cultural life.

Research on the nature and acquisition of literacy is now being done in many disciplines: anthropology, linguistics, psychology and psychiatry, history, philosophy, literary theory, social and cultural history, and sociology. Few English faculty conduct or read broadly in such research; even fewer English composition programs are informed by it. Given their specialization, which is as narrow as that of any other discipline, I do not believe that English departments, as presently constituted or as likely to be constituted, will accommodate the research and training so obviously necessary to meet the needs of our students and our society. (Robinson, 1983, p. 18)

This assertion can be read as a challenge to the profession of applied linguistics. If professors of English literature and English composition will not or cannot meet the needs, others must do it. And who are better qualified by virtue of their having been for two hundred years in the middle of the study of language, mind, and society than the linguists?

Since the publication of C.C. Fries' *The Teaching of the English Language* in 1927, "an effort to interpret the modern scientific view of language in a practical way for teachers" (preface), applied linguistic knowledge has only gradually affected teacher training and English language curricula. By 1969 most of the major rhetoric texts and series had incorporated some linguistics, if only in appendices (Palmer, 1969). Today teacher training usually includes little more than an introduction to linguistics, if that. I would like to suggest that knowledge about language use in the world should be at the heart of teacher training, and that linguists, by virtue of their scientific objectivity and theoretical training, are the ones to help solve the pressing problem that has been described in these words:

Print is now merely a residual epistemology, and it will remain so, aided to some extent by the computer and newspapers and magazines that are made to look like television screens. Like the fish who survive a toxic river and the boatmen who sail on it, there still dwell among us those whose sense of things is largely influenced by older and clearer waters.

... I believe the epistemology created by television not only is inferior to a print-based epistemology but is dangerous and absurdist.

... as typography moves to the periphery of our culture and television takes its place at the centre, the seriousness, clarity, and, above all, the value of public discourse dangerously declines. (Postman, 1985, pp. 27-29)

It is just this: "Whoever can't read or write his mother tongue is little more than a dead person" (quoted in Strauss, p. 98). Critical study of the nature of Western culture yields the conviction that with the advent of writing, language becomes an object of contemplation, and where language and reality intersect, the mind becomes an object of contemplation, and so modern consciousness makes modern philosophy possible. Literacy is what makes our world go around:

Literacy is for the most part an enabling rather than a causal factor, making possible the development of complex political

structures, syllogistic reasoning, scientific inquiry, linear conceptions of reality, scholarly specialization, artistic elaboration, and perhaps certain kinds of individualism and alienation. (Kathleen Gough, quoted in Bailey and Fosheim, 1983, p. v)

### *Is literacy reading?*

Who but the highly literate can read Solzhenitsyn, D.H. Lawrence, Ezra Pound, or T.S. Eliot, and understand the reasons for their alienation? Literary discourse being "a self-contained unit, and in suspense from the immediate reality of social life" (Widdowson, 1975, p. 45), it is not our primary concern here. By contrast, our present danger lies in the general threat to our print culture posed by the newer media. Walter Ong (1982) claims that we have moved from a pristine oral culture to a writing culture to a print culture to an electronic culture, where "secondary orality" or "electronic orality" has created a new world-view unlike any that has come before. This world-view includes the print media, but it goes far beyond the boundaries of books to include cognition and spatial visualization as a component of computer literacy. Marvin and Winther (1982) explain this idea as follows:

...the definition of print literacy continues to plague everyone with a serious interest in it. This is because the only measure of literacy is success in interpreting messages, and success in interpreting messages will always be a socially constructed rather than an objective category. In the twentieth century in the West, literacy has come to denote a consensual level of competence in deciphering and manipulating written material. But literacy may be thought of in broader terms as decoding or manipulating whatever message systems particular cultures regard as important. (p. 210)

The print and computer media are similar but differing experiences. Orality and print literacy are similar but differing experiences. It is the similarities and differences between message systems that we must study in order to gain a firmer grasp of the place of literacy in learning and problem solving.

To this end, probing and delicate studies of literacy and orality shed light on the attendant problems and suggest solutions. For example, Deborah Tannen (1983) claims that while

...oral strategies may underlie successful production of written discourse, ... differences between them may in fact grow out of other factors: specifically, communicative goals and relative focus on interpersonal involvement. (p. 80)

Higher goals and less interpersonal involvement characterize the registers of language that are not primarily concerned with the speakers and listeners or writers and readers.

Walter Ong (1982) holds that oral folk cannot organize concatenations of causes in analytic linear sequences that can only be set up with the help of texts, and that, in fact, writing restructures consciousness. He quotes Jacques Derrida to the effect that writing is not a supplement to the spoken word, but a quite different performance. He asserts that with literacy consciousness evolves into a self-conscious, articulate, highly personal interiority that is different in quality from the consciousness of illiterates. He contrasts literate thought and expression with orally-based thought and expression. Oral thought and expression is:

1. Additive rather than subordinate
2. Aggregative rather than analytic
3. Redundant or copious rather than terse
4. Close to the human lifeworld rather than distant
5. Conservative or traditionalist rather than changing
6. Agonistically toned (warmly human) rather than dispassionate
7. Emphatic and participatory rather than objectively distanced
8. Situational rather than abstract
9. Homeostatic or equilibrated rather than evolving.

"Literacy opens possibilities to the word and to human existence unimaginable without writing" (Ong, 1982, p. 175), he asserts forcefully in examining the **noetic process** – the intellectual act of shaping, storing, retrieving, and communicating knowledge. This view of the effects of print literacy on the minds of its users suggests that it is the syntactic explicitness of the highly-elaborated code of essay-text literacy that we value most highly. In other words, we perpetuate an ideology of schooled literacy (Gee, 1986, p. 732).

However crucial print literacy may be to higher consciousness, it is evident that reading and writing are ways to get things done, just as speaking and understanding speech are language practices that determine one's place in a given society. We use language to construct our social realities (Scribner & Cole, 1981). Another way to look at this is to say that all ways of using language, from essay-text to voodoo chant, are socially constructed. Uses of language (discourse types) are **literacies** in which thinking creates language necessary to communicative tasks. The world views of differing realities follow the social construction of literacy (Cook-Gumperz, 1986). Yet the term **literacy** means different things to different people.

### *Statistics and impressions*

The lack of understanding of just what literacy consists in doing can be seen in the following:

... a study published by the University of Texas in 1975 suggested that one in five Americans cannot read well enough to perform the simplest tasks. Of 15,000 tested, 20% could not write a check without an error so serious that a bank could not cash it; 22% were unable to address an envelope well enough to ensure postal delivery; 40% could not figure correct change from a store purchase; and more than half had at least some trouble with reading or writing. "We're talking about half the U.S. population being in a borderline or worse situation," says Texas Researcher Jim Cates, who directed the study. "There is no threat to the U.S. greater than that." (*Time*, May 5, 1986, p. 59)

The above figures are given in an article devoted to a U.S. Department of Education report on a basic literacy test administered by The Bureau of the Census (presumably in 1986). This test of "bedrock inability to read" suggests that 17 to 21 million adults in the U.S. cannot read. It contradicts a 1979 Census Bureau study that said that only one-half of 1% of Americans over 14 are illiterate. Contradictions and refutations are apt to occur when precise definitions are lacking. We must take all such figures with a grain of salt, realizing that numbers are often projections of hunches and impressions. To say that 85% of offenders who appear in juvenile courts are disabled readers (Copperman, 1978, p. 22), for example, is to say that a "lot of kids" who get into trouble with the law probably are not able to apply primary academic skills to the cultural and intellectual record of the society: history, literature, science, and mathematics. They lack sound decision-making abilities. They cannot participate actively in realizing their human potentials, and so on. The assumption of cause (illiteracy) and effect (trouble with the law) is specious and thus no more than a half-truth.

Further muddled thinking surrounds the belief that freedom, democracy, and literacy are somehow interdependent and necessary for economic development, modernization, and westernization, as if change in a given society does not depend upon differing cultural, social, and historical factors (Kaplan, 1984, p. vii). What are we to make of the literacy rates of Iceland, Cuba, Israel, Switzerland, and Japan (said to be 100%)? Are the United States and Canada Third World countries by comparison? Until we know more precisely in each case what part literacy plays in indigenous education, communication, transportation, technology, trade, investment, and so on, we cannot make valid comparisons or even talk about economic

and language development with any validity. This point was very well put by Harvey Graff (1981):

The belief in a modernization theory that social and economic progress follow from a change in persons from illiterate to literate is not only unconfirmed, but reflects a misplaced and exaggerated estimation of the power of literacy by itself. We do better to conceptualize literacy's correlates in more flexible, less unidirectional, and less causal ways. (p. 19)

How are we to conceptualize the correlates of literacy when the word *literacy* has so many senses and referents that it is often impossible to know what is meant by the term?

#### *Interdisciplinary cooperation*

We must get at sound definitions. Linguists should cross disciplines and insist on interdisciplinary cooperation. Scientific methodologies, resting on substantial knowledge, must reach out, accept and integrate interdisciplinary studies. Every linguist knows that there is much more to linguistics than empirical observation and objectivity. All science is based on intuition, hunches, and fortuitous discoveries. We all must try to use knowledge from other paradigms to help answer our questions.

The chances of gaining insight must surely increase as we look into substantial fields other than our own. The consequences of literacy in the past is a field of study that is yielding insight into the consequences of literacy today. For example, Kathleen Gough's study (1968) of literacy in traditional China and India contrasts myth in India with history in China, the Chinese written records stretching back 4000 years, the Indian only since the advent of Islam. She claims that Chinese rationalism influenced the rise of modern European science, in spite of the lack of an alphabet, because of early Chinese humanistic studies, magnetics (the compass, an 11th century invention), botany, zoology, and pharmaceuticals. Moreover, it is hard to generalize from literacy to political structure, for western individualism came not from literacy, but from capitalism (p. 83). This is the sort of understanding that we must search for.

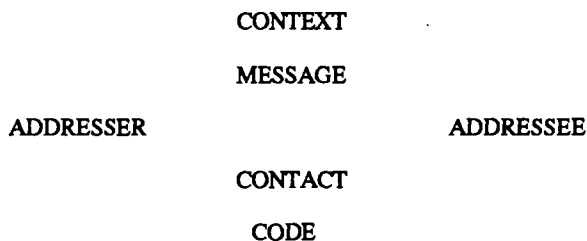
Similarly, and in a more practical vein is Stubbs' study (1980) of how the individual is affected by the necessity and desirability of literacy. He outlines the requirements for a theory of literacy based on the formal and functional characteristics of language in use in social settings, urging that work on literacy should be integrated with several disciplines. Because linguists and educationists cannot do each other's work, "it seems that linguists have the responsibility of trying to present in a helpful way those

parts of the subject which would be of use to others" (p. x), even though the relation between linguistic theory and educational practice will be indirect.

It follows that what linguists can do is to make known their understanding of the social and psychological bases of language in use. They can and must share their knowledge about language in order to help educationists think more clearly about the various kinds of literacy. In the following section, a pragmatic theory of literacy is postulated.

### *A pragmatic theory of literacy*

The great Russian linguist, Roman Jakobson, stated in 1960 that the six functions of language depend on six factors of communication. In any language in use we find the following:



Any recognizable piece of language in use, one with a beginning, a middle and an end, that is, a **discourse**, can be seen as a text. Many of the features of any text are known in advance by accomplished listeners and readers. Texts exhibit typical linguistic features of vocabulary, grammar, cohesion, style, intonation, punctuation, coherence, emphasis, order, unity, and so on, according to the **register** of each (Palmer, 1981). Register is defined as a describable variety of language that is found in particular situations. Register varies according to field, mode, and manner of discourse:

1. Field: its purposes
2. Mode: its medium (e.g., spoken or written)
3. Manner: its social function and style.

So we might describe a special register, say scientific reporting, as follows:

#### **Fields**

- a) Narration of sequence of processes already completed
- b) Description of results
- c) Interpretation of results

**Mode**

Written, to be read silently

**Manner**

- a) Formal, impersonal, objective tenor
- b) Specialist, technical province

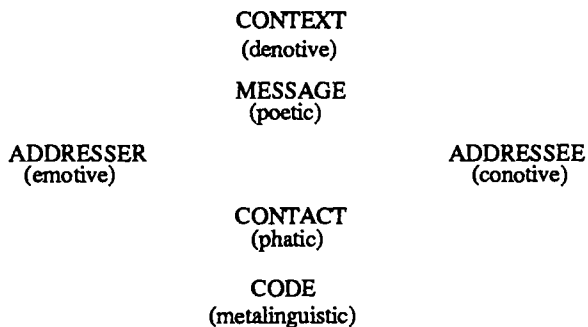
The able reader expects to find the typical features of this register in a scientific report. Scientific reporting is a very predictable register. Its characteristics can be quickly taught and learned. The special technical knowledge expressed in it is, however, another matter. Emphasis on this knowledge is what makes scientific reporting typical of one of six functions that underlie language in use – the denotive function.

In the denotive (or referential) function the language allows a reader to share a world of knowledge that may lie outside immediate experience. The function is referentially cognitive: it concerns itself with facts and ideas about the sociophysical world, its context. It is sufficiently impersonal to be interpretable by anyone with a proper background of knowledge. This impersonal, denotive function serves the purposes that most of us have in mind when we read in foreign languages, or when science and technology students learn to read special subjects in their native languages.

But the denotive is only one of six functions that must be to some degree interwoven in a given discourse. The other five are as follow:

1. Phatic (small talk)
2. Emotive (about me)
3. Conotive (about you)
4. Metalinguistic (about language)
5. Poetic (about itself)

The six functions correspond to the six factors of communication:



The phatic function serves to keep the channels of communication open. It removes threats while reassuring its users that they belong to the same group. It assures contact between the addresser and the addressee. It may be the first function that one masters. For example, we quickly learn that "How are you?" is not a question.

The emotive function is expressed in language about the speaker or writer. It concerns his or her emotions, beliefs, values, knowledge, and desires. Tone of voice helps carry this function along. It is sometimes so personal that special knowledge is required to interpret the casual or intimate information in it. Think of the text of a typical elementary school composition, "My Summer Holiday." Often the writers do not see why the readers don't understand what they were getting at because they don't realize that others do not share their knowledge, beliefs, and experiences completely.

The conotive function emphasizes the person(s) to whom the discourse is addressed. Using it we give commands, advice, directions, or make requests. A cookbook is strongly conotive and denotive at the same time. So are the assembly instructions that accompany toys and electrical equipment. My favourite conotive discourse is engraved on tiny plaques on the iron bars on the windows of the Erawan Hotel in Bangkok: "PUSHING ON THIS BAR HARDLY WILL MAKE A FIRE EXIT." A love letter may be both particularly emotive and/or conotive.

The phatic, emotive, and conotive functions are the principal uses of spoken language. These are the first functions we master when we learn our native language(s). Their main use is interpersonal management. When we learn to function phatically, emotively, and conotively in the written mode we may be said to be **functionally literate**. Of course, all of these three functions must accompany the denotive function to some degree in a discourse. But then the denotive may be nearly absent, too. Thus much of the elementary school curriculum concerns social behaviour, personal development, and linguistic interaction with others. Only incidentally does it concern knowledge, and that knowledge often is the same old stuff. In this regard, it is useful to look at studies of the relationship between literacy and cognition.

In their important study of the psychological effects of literacy among the Vai people of Liberia, Scribner and Cole (1981) found good reasons to doubt that literacy is associated with higher-order cognitive skills. They found in particular only that "school fosters abilities in expository talk in contrived situations" (pp. 242-43. See Gee's article for discussion.). I would submit that the Vai use their languages (Vai, Arabic, and English) mainly for the phatic, emotive, and conotive functions, and

that these functions seldom involve taxonomy, syllogism, or other types of abstract reasoning.

Two other functions that people use to a greater or lesser degree are the metalinguistic and the poetic. The metalinguistic function is language about language. We use it frequently when we ask others what they mean or what they have just said. Schoolteachers spend a lot of time in classrooms talking about language, especially in English classes. In foreign or second language classes there is even more teacher talk. The accuracy and utility of teacher talk are two matters of concern. How much should teachers know about language in order to work effectively? To what extent and in what circumstances should teachers talk about language? Could the students learn more and faster if the teachers would shut up?!

All of us are aware of the poetic function. We are caught by clever advertising copy, amused by comedians, charmed by song lyrics, entertained by stories (if only on television or at the movies). But not everyone is good at creating discourses the language of which is about the messages contained within them. Nor can many people get at the deeper meanings in the self-contained wholes of serious poetry, fiction, criticism, or metaphysics, meanings carried by the poetic function that are essentially not translatable. These are the meanings that a translator has to find analogs for in the other language, for they cannot be had outside the language they are expressed in. It is at the level of true acculturated literacy that one appreciates with ease and great profit the subtleties, style, tone, elegance, phrasing, irony, beauty, and originality of imaginative discourses. Without much practice in and knowledge of the metalinguistic and poetic functions, one cannot attain to what has been variously called essayist literacy, humanistic literacy, and aesthetic literacy. Without these sorts of literacy the world of the mind would be truly mundane, practical, transitory, and ordinary, and higher-order cognitive skills would be rare.

## REFERENCES

- Bailey, Richard W. & R.M. Fosheim (Eds.). (1983). *Literacy for life: The demand for reading and writing*. New York: The Modern Language Association of America.
- Cook-Gumperz, J. (1986). Literacy and schooling: An unchanging equation? In J. Cook-Gumperz (Ed.), *The social construction of literacy*. Cambridge: Cambridge University Press.
- Copperman, Paul. (1978). *The literacy hoax: The decline of reading, writing, and learning in the public schools and what we can do about it*. New York: William Morrow.
- Fries, C.C. (1927). *The teaching of the English language*. New York: Thomas Nelson and Sons.

- Gee, James P. (1986). Orality and literacy. From "The savage mind to ways with words," *TESOL Quarterly*, 20(4), 719-46.
- Gough, Kathleen. (1968). Literacy in traditional China and India. In J.R. Goody (Ed.), *Literacy in traditional societies*. London: Cambridge University Press.
- Graff, Harvey J. (Ed.). (1981). *Literacy and social development in the West: A reader*. New York: Cambridge University Press.
- Jacobson, Roman. (1960). Closing statement: Linguistics and poetics. In Thomas Sebeok (Ed.), *Style in language*, pp. 350-77. Cambridge: The Technology Press of MIT.
- Kaplan, Robert B. (Ed.). (1984). *Annual review of applied linguistics* (on literacy). Rowley: Newbury House.
- Kozol, Jonathan. (1980). *Prisoners of silence: Breaking the bonds of adult illiteracy in the United States*. New York: Continuum.
- Marvin, Carol & Mark Winther. (1982). Computer-ease: A twentieth century literacy emergent. In William Frawley (Ed.), *Linguistics and literacy*. New York: Plenum Press (Proceedings of the 3rd Delaware Symposium on Language Studies, 1981).
- Ong, Walter. (1982). *Orality and literacy: The technologizing of the word*. New York: Methuen (New Accents Series).
- O'Barr, William. (1984). Asking the right questions about language & power. In Cheri Kramarae, Muriel Schulz, & William O'Barr, (Eds.), *Language and power*. Beverly Hills: Sage Publications.
- Palmer, Joe D. (1969). *The grammars of English and curriculum reform*. Ph.D. dissertation. The University of Michigan. University Microfilms. Ann Arbor.
- Palmer, Joe D. (1981). Register research design. In Mackay and Palmer, first published in *Proceedings of the Fifth AILA Congress*. (Association internationale de linguistique appliquée). 1978.
- Postman, Neil. (1985). *Amusing ourselves to death: Public discourse in the age of show business*. New York: Viking
- Power, Sarah G. (1983). The politics of literacy. In Richard W. Bailey & R.M. Fosheim, (Eds.), *Literacy for life: The demand for reading and writing*. New York: The Modern Language Association of America.
- Robinson, Jay L. (1983). The users and uses of literacy. In Richard W. Bailey & R.M. Fosheim, (Eds.), *Literacy for life: The demand for reading and writing*. New York: The Modern Language Association of America.
- Scribner, S. & M. Cole. (1981). *The psychology of literacy*. Cambridge, MA: Harvard University Press.
- Strauss, Gerald. (1981). Techniques of indoctrination: The German reformation. In J. Harvey Graff (Ed.), *Literacy and social development in the West: A reader*. New York: Cambridge University Press.
- Stubbs, Michael. (1980). *Language and literacy: The sociolinguistics of reading and writing*. London: Routledge and Kegan Paul.
- Tannen, Deborah. (1983). Oral and literate strategies in spoken and written discourse. In Richard W. Bailey, & R.M. Fosheim, (Eds.), *Literacy for life: The demand for reading and writing*. New York: The Modern Language Association of America.

*Time Magazine*. (1986, May 5). p. 59.

Widdowson, H.G. (1975). *Stylistics and the teaching of literature*. London: Longman.

## BIBLIOGRAPHY

- Bendor-Samuel, David. (1984). On the study of literacy. In Robert B. Kaplan (Ed.), *Annual review of applied linguistics* (on literacy). Rowley: Newbury House.
- Cashdan, Asher, (Ed.). (1986). *Literacy: Teaching and learning language skills*. Oxford: Blackwell.
- Deely, John. (1982). *Introducing semiotic: Its history and doctrine*. Bloomington: Indiana University Press.
- Frawley, William, (Ed.). (1982). *Linguistics and literacy*. New York: Plenum Press (Proceedings of the 3rd Delaware symposium on language studies, 1981).
- Goody, J.R. & Ian Watt. (1968). The consequences of literacy. In J.R. Goody (Ed.), *Literacy in traditional societies*. London: Cambridge University Press..
- Jaynes, Julian. (1976). *The origin of consciousness in the breakdown of the bicameral mind*. Boston: Houghton Mifflin.
- Kindell, Gloria. (1984). Linguistics and literacy. In Robert B. Kaplan (Ed.), *Annual review of applied linguistics* (on literacy). Rowley: Newbury House.
- Kramarae, Cheri, Muriel Schulz & William O'Barr, (Eds.). (1984). *Language and power*. Beverly Hills: Sage Publications
- Mackay, Ronald and Joe D. Palmer, (Eds.). (1981). *Languages for specific purposes: Program design and evaluation*. Rowley: Newbury House.
- Merritt, John. (1986). What's wrong with teaching reading? In Asher Cashdan (Ed.), *Literacy: Teaching and learning language skills*. Oxford: Blackwell.
- Mertz, E. & R.J. Parmentier, (Eds.). (1985). *Semiotic mediation: Sociocultural and psychological perspectives. (Language, thought and culture; advances in the study of cognition)*. New York: Academic Press.
- Mitchell, Richard. (1979). *Less than words can say*. Boston: Little, Brown & Company.
- Pelletier, Kenneth R. (1978). *Toward a science of consciousness*. New York: Dell.
- Postman, Neil. (1979). *Teaching as a conserving activity*. New York: Dell.
- Sebeok, Thomas, (Ed.). (1960). *Style in language*. Cambridge: The Technology Press of MIT.
- Smitherman, Geneva. 1984). Black language as power. In Cheri Kramarae, Muriel Schulz & William O'Barr, (Eds.), *Language and power*. Beverly Hills: Sage Publications.

Susan Plaisance  
St. Charles Parish Schools (La)

# Negative Attitudes Toward Gifted Education

## Abstract

*This article examines some of the negative attitudes toward gifted programs. The author raises some provocative questions and sometimes stridently expresses the biases underlying problems regarding educating the gifted. Finally, the ramifications of these attitudes on the future leadership of a country are discussed.*

Education of the gifted student has met with substantial resistance and apathy. A survey of recent literature in the field identifies many negative attitudes in general toward education of the gifted. This article examines these specific issues and some possible ramifications of these attitudes on the education of the gifted in the future.

## Negative Attitudes Toward Gifted Education

No one thinks it is strange for the high school athlete to receive extra attention and assistance from coaches and trainers to develop his special talents, nor does anyone begrudge him the special help he often requires from teachers and/or tutors to keep up with his academic subjects. Likewise, few people resent the hiring of specially trained and qualified instructors to encourage and develop the special abilities of musically or artistically talented youngsters (although most regard the athlete's needs as a higher priority). Why then do we encounter such widespread popular resistance to the idea that intellectually gifted students are entitled to an academic program that challenges and maximizes their mental capabilities? In this article, the causes of this perplexing phenomenon and its detrimental effects on one of the country's greatest assets, its intellectually brightest youth will be discussed.

*Fear of elitism*

One explanation for the trend away from gifted programs focuses on an almost pathological fear of elitism in Western society. Bruce Mitchell and William Williams, in a recent article for *Gifted Education*, describe a 1984-85 survey of UNESCO members which yielded some interesting results. Of the democratic nations surveyed, only Israel and South Africa are currently providing concerted, well-funded gifted and talented programs, presumably because these beleaguered countries have recognized how much their future survival depends upon intelligent leadership.

However, the vast majority of western European countries give minor emphasis at best to programs for gifted and talented youngsters, and many have scrupulously culled such programs from their schools. According to the authors: "The major concern [since World War II] has been to overcome a traditional system of privilege and elitism," (Mitchell & Williams, 1987, p. 531). The Scandinavian countries seem particularly resistant to the idea of gifted education. One Danish official predicted that "more harm than good" (p. 532) would come of singling out certain students as being particularly gifted or talented. Danish national policy calls instead for differentiated teaching in heterogeneous classes, a method that research has shown to be ineffective in promoting higher level cognitive processes (Golden, 1970, p. 6).

It is in Asian and Eastern Block countries that the greatest efforts are currently being made. Despite official emphasis on egalitarian socialist doctrine, gifted and talented Soviet youngsters are provided with special advanced instruction in such areas as math, physics, chemistry, and the visual and performing arts. The government also sponsors annual contests, called Olympiads, in which students compete for national and even international honours.

The People's Republic of China, in keeping with the new post-Mao pragmatism, has embarked on an innovative plan to establish "key schools" at both the elementary and secondary levels. These schools, especially designed to provide for high-ability students, are usually affiliated with a major university and receive extra funds, ultra-modern facilities, and the best available personnel.

In Japan no special provisions are made for gifted children in elementary school; however, high ability students are sifted out at the secondary level and sent to one of several highly prestigious special schools, where a tracking system allows for advanced placement and specialized instruction for top students (Mitchell & Williams, 1987, p. 532).

Two possible explanations for the discrepancy between East/West attitudes suggest themselves. First, such efforts meet with wider acceptance in China and Japan because in the traditional Oriental value system high scholastic achievement has always been seen as a way to bring honour to one's family and community. Secondly, the Eastern countries share neither the brooding guilt complex that still haunts western Europe in the wake of Nazi atrocities nor our own collective anxiety over compensating American blacks and other minorities for their former disenfranchisement. For this reason, educators in the East (socialist or not) feel less compelled to concentrate their efforts on leveling the socio-economic strata and less apprehensive about recognizing the special capabilities of some individuals.

### *Anti-intellectualism*

Another even more insidious reason for the de-emphasis on gifted education both here and abroad can only be described as a general trend toward anti-intellectualism. North Americans, like most Europeans, tend to consider the mere acknowledgement of mental superiority to be in bad taste – something one just doesn't mention. Furthermore, ironic as it seems in view of the intellectual ferment of the American Revolutionary period, modern Americans see mental rigor as antonymous to the macho image so emblematic of the 1980s.

While the political and fiscal conservatism of the Reagan years may well have played a role in promoting an overall climate of disinterest in gifted education, the basic problem may go even deeper. Some authorities believe that a deep-rooted antipathy exists between intellectuals and this country's power elite. They describe a generalized fear of the challenge that a strong, independent, and cohesive intellectual community might pose to penetrating article for the *Journal of Education* (1986), makes the following provocative statement:

The apparent elitism of irrelevant gifted programs is not a direct representation of the elitism of power in the larger society. Rather, as a symbol of our society, these programs contribute to widespread acceptance of social and economic hierarchies. Ironically, they also contribute to a pervasive attitude of anti-intellectualism in U.S. pedagogy, business, and government. (p. 123)

Howley further posits that members of the American Power elite are not necessarily themselves gifted, nor are their children. Despite our cherished belief in the doctrine of "meritocracy" (the idea that in a "free" society individuals will reap social, economic, and political rewards commensurate with their merits), the fact is that, generally speaking, intellectuals rank

relatively low on the economic scale and receive precious little recognition from the public at large. Most positions of wealth, power, and privilege are either inherited or held by virtue of political and/or social networking. This is a culture that values and rewards those who entertain us or provide some utilitarian service for us – make the touchdown, develop the perfect diet pill – but does not equally reward for scholarly, aesthetic, or even purely scientific achievement. In fact, those who allow their intellectual gifts to be too conspicuous often find their progress blocked. Despite Ted Turner's well-known admonition to "...lead, follow, or get out of the way," obstructionism is regrettably common.

Neither do we choose intellectuals for our national leadership. John Gardner (1987), writing for *Liberal Education*, cites three basic qualities we seek in a leader: a) someone whom we believe (consciously or unconsciously) to be capable of solving our problems and meeting our needs; b) someone who symbolizes our cultural norms; and c) someone whose image (authentic or not) corresponds to our inner environment of myth and legend (p.5).

Adlai Stevenson, one of the finest minds the United States has produced, and a distinguished statesman in every sense of the word, was twice denied the Presidency ostensibly because of his "egghead" image, while on the basis of vague but lofty rhetoric, carefully orchestrated image-making, and the latest Madison Avenue advertising techniques, Ronald Reagan, a man of very average intellect, was elected President by two successive landslide votes.

### *Perceived inefficacy*

Another reason for the general lack of enthusiasm for gifted education among professionals and lay people alike is the perceived inefficacy of many so-called "enrichment" programs which, admittedly, too often revolve around games, puzzles, and field trips instead of spirited intellectual inquiry. On the other hand there is little evidence of benefit in talented and gifted programs that isolate the gifted individual in a library carrell or behind a computer terminal in hopes he or she will somehow stumble upon enlightenment. Such programs, while no doubt well-intentioned, reflect an overall lack of understanding regarding the real needs of gifted students, leaving them either under-stimulated or under-socialized, or both.

### *Staffing problems*

The inevitable fact is, we do not and probably cannot staff our schools with gifted personnel. Lenore Higgins Worcester, in a 1981 article for *Gifted/Creative/Talented (G/C/T)*, makes this point in clear-cut terms:

The logistics of attempting to place a gifted teacher within commuting distance to a reasonable number of g/c/t students would be a formidable task. But, more to the point, g/c/t persons do not enter the teaching profession, particularly not at the grade school level. (p. 6)

Furthermore, schools are, by their very nature, profoundly conservative institutions, their primary business being to promote and perpetuate the attitudes and values of the larger society. The not-so-silent majority that comprises education's prime constituency is at least subliminally influenced by the media, which is, in turn, influenced by the interests of large corporate and/or political sponsors for whom a passive, conformist clientele is most malleable and, therefore, most desirable. Consequently individualists, analytical thinkers, performers, innovators, and creative people in general are regarded with some degree of suspicion. They ask questions, demand justice, challenge authority, make waves; and these are definitely not the traits that most schools reward.

### *Fears of maladjustment*

Yet another objection to special programs for the gifted centres around concern for the social adjustment of the enrollees. It is often suggested that separating these students from the mainstream, even for part of the school day, will result in their becoming alienated, either by their own choice or that of their non-gifted peers. Critics raise the spectre of the frail, bespectacled child trudging about forlornly with his briefcase and his calculator, an estranged, preoccupied look on his face.

Research findings do not bear this out, however. A 1979 study of academic and attitudinal outcomes, conducted by Claire Tremaine in her own California school district, yielded the following interesting results: a) students enrolled in gifted programs performed statistically higher on achievement tests and received more scholarships and academic honours than did gifted non-enrollees, and b) furthermore enrollees (as compared to non-enrollees) had significantly more positive attitudes toward work, college, and travel, as well as school and community involvement. Tremaine writes:

The criticism that enrollment in gifted programs narrows and inhibits friendships was not validated by the study. Instead, evidence was revealed that the enrolled gifted have as many friendly contacts in as wide a school setting as the unenrolled. (pp. 501-2)

As regards overall attitudes toward their schoolmates, when asked about their feelings toward other students at their school, 71.7% of the gifted enrollees chose the response, "Most of the kids are pretty good people," as opposed to 61.5% of their unenrolled classmates.

### *Intellectual community's role*

Finally, we must consider the responsibility (or lack of it) of the intellectual community itself. Twenty years ago involved and committed scholars, educators, clergy, scientists, and other professionals rallied to present a coherent and cohesive force for social, economic, and political change in the United States. In the politically vital sixties American intellectuals led the way, speaking eloquently for worldwide peace, freedom, and justice. It was a time of high ideals and high expectations, and the emblematic wire-rimmed spectacles of the reader and thinker were considered "hip," not "geek."

By contrast, the majority of intellectuals of the 1980s have systematically insulated themselves from the "messy" business of public controversy. Even in the world of applied science, work goes on discreetly behind the laboratory doors, and it is the rare scientist indeed who would risk his career by daring to speak out against "establishment" interests. As for arts and letters, products that do not pander to the lowest common denominator of public taste, they simply do not attract the attention of major publishers, producers, or dealers, so writers and artists either conform or sink quietly into nameless obscurity.

In the universities concerted efforts have been made to de-politicize the American campus. "Radical" professors have been nudged out, and reactionary administrators have been installed, people who will take a "firm stand" against the kind of publicity that might reduce alumni contributions, private and business sponsorship, and other means of financial support. Fiscal matters now take unrivaled priority in the minds of most university board members, and such peripheral issues as intellectual integrity, moral leadership, and political involvement must "stay on the back burner" while schools fight for survival.

In short, now more than ever before, money talks. The anthem of today's "Yuppies," the in-group of the 1980s, is a corruption of the Golden Rule: "He who has the gold makes the rules." Such cynicism would have been grossly out of place twenty years ago when Young Urban Professionals were organizing peace marches and making political speeches, but today's bright young people are too often being trained to perform tasks, not to ask questions. They have been encouraged to get ahead by playing the game, not by thinking for themselves. They have been told to look out for

number-one; not to be suckers, like those "bleeding hearts." They have been taught to follow directions, fall into step, submit to authority, pursue a brand of blind, chauvinistic patriotism that is downright dangerous to the safety of our species.

And where has this intellectual community been while all this was going on? Locked away in the "ivory tower," amusing itself with exhaustive exegesis and endless polemical discourse on such esoteric irrelevancies as the *Kantian Sublime* and the *Dialectic of Being*, while they are oblivious to the actual business of living going on around them.

Catherine Gallagher, in a 1985 article for the philosophical journal *Diacritics*, describes the "contentless universalism" of much critical thought. Intellectuals, in an effort to free themselves of bias and achieve a broader vision, have disavowed any specific moral, ethical, or aesthetic interest and couched their ideals in such vague and generalized terms that no real-life application follows. This abstract universalism is, according to Gallagher, the reason intellectuals have fallen out of the social mainstream and are consequently unable to exert any meaningful influence on broad-based culture. Gallagher goes on to assert that it is the critic's responsibility to "define the culture" and undercut the fixed power relationships that prevent social and political progress (p. 32).

This is not to argue against mental calisthenics as a viable sport, but we do suggest that a more profound social, educational, and philosophical contribution might be made if proportionate time were devoted to practical consideration of modern value systems, their origins, and their ramifications, particularly in view of the perilously mindless course of current world politics. Why should it be beneath the dignity of intellectuals to lead the fight for a better, happier, more moral, more enlightened world? If not this, what indeed are their goals and objectives?

With such ineffectual role models, it is not surprising that the general public takes a jaundiced view of philosophy, little wonder that young people look elsewhere for inspiration. Meanwhile, public schools, bristling with rules and regulations, obsessed with quantitatively measured task mastery, determined to produce uniformity rather than exceptionality, continue to practise their rites of intellectual castration on our sacred braintrust, confident that they are doing society a favour by keeping any one element of the population from "getting out of hand." And the gifted individual, caught between the babble of academia and the cacophony of commerce, too often becomes frustrated, disenchanted, and ultimately cynical.

### ***Conclusion***

It is beyond the scope of this paper to attempt to outline a specific course of action to counteract the unfortunate set of conditions described above. The most carefully organized and orchestrated plans to systematically change attitudes are dangerous anyway, because as soon as such a plan becomes institutionalized it begins to founder in the same kind of bureaucratic morass that created the mess to begin with. Perhaps it is enough to simply expose the underlying attitudes and values that promote ignorance, suspicion, and misunderstanding of gifted education, that keep us from realizing our full potential, as individuals and as a nation. At least it is a start.

### **REFERENCES**

- Gallagher, Catherine. (1985, Fall). Politics, the profession, and the critic. *Diacritics*, pp. 29-34.
- Gardner, John. (1987). Leaders and followers. *Liberal Education*, 168(1), 117-25.
- Golden, Mary Ann Hession. (1970). *Cognitive, behavioral, and affective activities in the classrooms of gifted secondary students*. Master's thesis submitted to the University of Southern California.
- Howley, Aimee. (1986). Gifted education and the spectre of elitism. *Journal of Education*, 168(1), 117-25.
- Mitchell, Bruce M. & William G. Williams. (1987, March). Education of the gifted and talented in the world community. *Phi Delta Kappan*, 68(7), 531-34.
- Tremaine, Claire D. (1979, Fall). Do gifted programs make a difference? *Gifted Child Quarterly*, XXIII(3), 500-17.
- Worcester, Lenore Higgins. (1981, September/October). Myths and realities of the gifted and talented. *G/C/T* pp. 4-6.

## A Few Paltry Things

Things that might be of use  
wither in that bone cave –  
my breast.

They try to force  
a way into mind,  
to turn  
into words,  
fly out of  
my mouth like butterflies,  
like seeds, like birds.

Tight lips  
clamp down on them,  
throat swallows  
them.

They are imprisoned  
in my heart  
and its beat  
stumbles over the one code  
that could set them free –

these few paltry things  
that might be of use.

Paddy Webb

**Brennan R. Hill**  
*Xavier University (Cincinnati)*

# **Alfred North Whitehead's Approach to Education: Implications for religious education**

## **Abstract**

*This article examines Alfred North Whitehead's educational theories with an eye on what implications these theories might have for contemporary religious education. Two central themes in Whitehead's theory of education will be explored: 1) education as self-creation, and 2) education as a holistic experience.*

Alfred North Whitehead once said that we cannot expect a scholar to be able to think about everything. This may be true, but as a matter of fact, Whitehead was able to think about quite a number of areas with amazing incisiveness. Whitehead was a distinguished mathematician at Cambridge University from 1885 to 1910, and at the University of London from 1911 to 1924. In 1924, while preparing to retire, he was rather surprised by an invitation to teach philosophy at Harvard University, and for the next decade developed his well-known "organismic" approach to philosophy, often described as a "process" philosophy. This was a unique approach to metaphysics which many have viewed as being in harmony with the contemporary evolutionary and scientific understanding of reality. Whitehead expounded a philosophical interpretation of the cosmic process that was characterized "by change, dynamism, inter-relationships or organic interpenetration, the presence of heights and depths of importance, and the quality of tenderness and love" (Pittenger, 1969). This unique approach to philosophy would have far-reaching effects, particularly in the area of theology, where it was most influential on the work of such scholars as Hartshorne, Ogden, Cobb, Williams, Meland, Pittenger, Wieman, and many others.

Whitehead has also made significant contributions to the field of education. Although he never composed a treatise on education or developed

a systematic philosophy of education, his addresses and essays in this area have been widely quoted, and have been the object of some significant studies on pedagogy (Brumbaugh, 1981; Dunkel, 1965; Meland, 1953). In the field of religious education Randolph Crump Miller, among others, has effectively applied Whitehead's process philosophy to this discipline (Miller, 1973, 1975).

My concern here is not primarily theological or philosophical; rather I have set out to examine Whitehead's educational theories, with an eye on what implications these theories might have for contemporary religious education. In looking at Whitehead's approach to education, I will be drawing mainly from his educational writing, although I will also refer to some of his philosophical positions. While it is true that Whitehead largely developed his philosophy after he wrote on educational theory, the two areas are of a piece, the one illuminating the other. The article will limit itself to the discussion of two central themes in Whitehead's educational thinking: (1) education as self-creation and (2) education as a holistic experience.

### **Education as Self-creation**

Whitehead viewed each individual person as a living organism that carries within the self the principle of creative change. Education, therefore, is a natural process of self-development, setting in motion what is "already stirring in the mind" (Whitehead, 1929, p. 24). For Whitehead, all things in nature, including learners, are not static substances to be shaped and formed, but living organisms in the process of becoming. He writes: "Consider how nature generally sets to work to educate the living organisms which teem the earth. You cannot begin to understand nature's method unless you grasp the fact that the essential spring of all growth is within you . . . What is really essential in your development you must do for yourself" (1968, p. 171).

Whitehead conceived the whole of reality as being "a process and that process is the becoming of actual entities" (Whitehead, 1941, p. 33). This creative process is everywhere, in the inanimate as well as in the animate. All reality moves through transitions involving change and permanence, growth and perishing, as it moves through a process of self-formation (Price, 1954; Whitehead, 1938). The role of education, then, is to assist others in discovering the role they play in their own self-development. Education follows the same pattern that we observe in the process of nature; the external nurturing of the potential growth that exists within.

*Self-development in stages*

Whitehead maintains that the on-going self creation of all organisms moves through various phases of change and permanence. The human organism enjoys the same process of growth, beginning with the dawn of the experience of self, and moving through the various stages of self-development. Human life, then, is essentially periodic and cyclic, with daily, yearly and seasonal periods of growth (Hartshorne & Peden, 1981; Whitehead, 1938).

Education must be attentive to these stages of growth, and Whitehead (1929) points out with characteristic bluntness that "lack of attention to the rhythm and character of mental growth is a main source of wooden futility in education" (p.27). Teachers must, therefore, be sensitive to the stage which each student is experiencing, as well as be attentive to the aptitudes which seem to appear at each given stage. Within this framework of awareness, "different subjects and modes of study should be undertaken by pupils at fitting times when they have reached the proper stage of mental development" (p. 21).

*The rhythmic stages of learning*

One of Whitehead's most oft-quoted theories of education is that regarding the three-fold rhythm of education: romance, precision, and generalization. These stages occur throughout the chronology of one's life, as one moves through childhood and adolescence toward adulthood. Yet, there are also cycles within cycles in each period of life, and within each period of an educational experience. One cycle leads to another, as there is a craving for new adventures of thought. Whitehead (1929) describes the process in education as follows:

Education should consist in the continual repetition of such cycles. Each lesson in its minor way should form an eddy cycle issuing its own subordinate process. Longer periods should issue in definite attainments, which then form the starting grounds for fresh cycles." (p.30)

*The stage of romance.* The stage of romance in education is described by Whitehead (1929) as the period of "first apprehension," wherein the subject matter is perceived as having a vividness of novelty, as holding within itself unexplored connections and possibilities. Emotions are integral to this stage of learning; there is an excitement gained from moving from bare facts to relationships among the facts. There is the feeling of encouragement as one encounters fresh content, new interests and challenges. This is the stage of learning which is characterized by discovery, curiosity, and wonder.

Whitehead (1954) sees romance as essential to education, for "without the adventure of romance, at best you get inert knowledge without initiative, and at the worst you get contempt of ideas without knowledge" (p. 285).

*The precision stage.* The stage of precision focuses on the exactness of formulation. Here the possibilities that were discovered in the romantic period are explored systematically and with exactitude. This is the time for learning the subject clearly in all its salient features. At this stage, a careful selection of materials and good pacing are extremely important. If the facts are presented too broadly or quickly the initial interest on the part of the student can easily be killed. If the facts are presented too narrowly, the student can fail to grasp the meaning of the material.

There are a number of other challenges connected with this stage. The first is attempting to keep a balance between a sound discipline and the ease of pace needed to keep the student's romance with the material alive. Whitehead cautions here that students should not be forced to memorize irrelevant material, and yet they should be expected to know the central content in precise fashion. Another challenge is that of not giving the students more material than they can handle at their stage of interest and development.

Whitehead's (1929) realization of the difficulties within this stage come through in the following: "The responsibility of this period is immense. To speak the truth, except in the rare case of genius in the teacher, I do not think that it is possible to take a whole class very far along the road of precision without some dulling of interest" (p. 55). Of course the danger of such boredom is increased if the stage of romance is by-passed in favour of precision, or if there is no move on to the next stage.

*The stage of generalization.* Whitehead often laments the fact that in so many schools and universities a paralysis of thought is brought on by aimlessly gathering inert knowledge that is never applied, or "generalized." For Whitehead, this third stage is the time to move toward effectiveness and production. The student has been attracted to knowledge, understands it, has acquired certain aptitudes for its application, and can now move toward application and action. Whitehead (1958) compares this final stage to Hegel's final stage of synthesis. The student moves from one pole (romance) to another pole (precision), and then returns to a certain romance experienced in the application of the knowledge. Thus the students have achieved the very essence of scientific thought: they have seen the general in the particular, the permanent in the transitory, and they can now make general connections and applications (p. 3-4). Just as all nature gains a certain "satisfaction" through moving from wonder to dynamic activity, learners experience the same excitement in moving from understanding the creative process to actually contributing to it.

*The social context*

One important aspect of self-creativity is that it does not occur in isolation, but in the context of connectedness. In his philosophy, Whitehead teaches a doctrine of internal relations, whereby all individual entities are related to the rest of the universe. Everything is actually a part of that to which it is related, and therefore, self-identity consists in a network of relations which stretch through the universe. The relations which make up all entities, Whitehead names prehension, and these make up "the most concrete elements of the nature of actual entities" (1941, p. 28). Prehensions are what constitute the process of unification and expansion of entities. All nature, in fact, is "a process of expansive development necessarily transitional from prehension to prehension" (1954, p. 106). All reality, therefore, is connected, interdependent. Whitehead speaks of a "togetherness of things," and points out that each happening is a "factor in the nature of every other happening" (1938, p. 225). Human development takes place, then, in "social space," the setting wherein self-creation takes place through exchange with others (Miller, 1985).

Whitehead (1929) maintains that education takes place through interaction with others. Teachers, of course, are of obvious importance, especially teachers who are able to guide and aid the natural process of self-growth. It is the teacher's task to "elicit enthusiasm by resonance with his own personality, and to create an atmosphere of a longer and firmer purpose" (p.62). To fulfill this role well, Whitehead maintains that teachers must have a unique genius of character, clear insight into the process of growth, and a sound intellectual grasp of the material at hand.

Interaction with other learners is also viewed by Whitehead (1933) as integral to effective education. He points out that the most effective education he gained at school came about in informal conversations and discussions with other students. He holds that there is a natural bond between people, and that in an atmosphere of mutual respect the natural capacity to reach out for ideals can be nurtured. Most certainly this was the kind of atmosphere which he himself attempted to create in his own lecture halls and tutorial sessions (p. 109).

We have so far discussed Whitehead's theme of education as self-creation, pointing out the following aspects of this thought: education is a process; the principle of growth is from within the person; there are stages and rhythms to such progress; and the process takes place through interaction with others. We will now consider some implications these insights might have on religious education, and then, we will consider Whitehead's views on holistic experience.

### *Implications for religious education*

*The "process" view is compatible with contemporary life.* Too often religion is seen as a separate compartment of life, set off from everyday secular life. Dichotomies are set between the secular and sacred, material and spiritual, natural and supernatural. Religion is often traditionally viewed as static, world-denying, and cut off from the world that is evolutionary and progressive. Religion can easily be presented as having little to do with real life as experienced, and as portrayed by the sciences.

Whitehead's perspective views all of reality as a unified process of becoming. Education is, therefore, a process which prepares individuals to experience and contribute to the creative process. Religion, in this context, takes on a new relevancy as the depth dimension of reality, and religious questions can be seen as relevant to everyday living. Religion becomes a reverence for the process of life, as well as a source of motivation for participating in all of life. Perhaps this is what Whitehead meant when he wrote that the very essence of education is "to be religious" (1929, p. 23). The root of the word religion means "tied into." Religious education, like all education, helps students to be tied into reality in all its dimensions. Obviously, religions and churches will go beyond Whitehead's broad observations on reality, and will teach more specific beliefs regarding the ultimate questions. Yet, each tradition can benefit from his "long-view" on the creative process, his unified perspective on reality, and his challenge to education to inculcate reverence for the creative process.

*The self-creative approach provides a basis for recognizing personal religious experience.* Whitehead's educational perspective reminds religious educators that they are indeed "drawing out" the religious insights and experiences of the learners. As Groome (1980) has reminded us, religious education is not a matter of "banking" religious content, but of fostering a process of reflection and sharing (p. 77). Learners have within them the capacity to grow in faith, to experience the mystery of God in their lives. Learners, as Rahner (cited in Hill, 1971) points out, are "questioners" that are open to the movements of God in their lives. They have their own valuable religious experiences to reflect upon and to share with others. Their insights are important to instructional content. Religious educators, then, are not properly "indoctrinators," who impose beliefs and manipulate religious commitment. Rather, they are facilitators of a religious process that comes from within each person. Recognizing the religious freedom which learners have as a human right, religious educators provide clarification and invitation. Intimidation or coercion of any kind would neither be compatible with Whitehead's views of education, or with any approach to religious education influenced by his perspective.

*Stages and rhythms complement contemporary studies on human growth and faith development.* In many ways the developmental work of Piaget in education, Erikson and others in psychology, Fowler in faith, and Kohlberg in moral values have gone beyond the views of Whitehead. Experimentalists have been able to give us a great deal of data and insights on human development, and have approached the subject from a much more person-centred point of view than Whitehead. Still, Whitehead's metaphysical and educational views on human development offer a broader context in which to understand the stages of personal development of participants in religious education. Where many contemporary developmental studies are limited to a Western, middle-class, and male point of view, Whitehead's analysis seems to be much more universal in its approach (Dykstra & Parks, 1986; Stokes, 1982). Perhaps his broader process views can serve as a corrective to narrowness in developmental studies. Used in conjunction with contemporary studies, Whitehead can assist religious educators in becoming more aware of the complexity of personal faith needs on all levels, whether it be children, young adults, adults, or the elderly. His observations about the rhythm of romance, precision, and generalization most certainly have to be studied more carefully in terms of learners' needs and capacities at various stages of development. His organismic approach to self-development and his descriptions of the periods and cycles of human development, might well be integrated into the more contemporary studies on faith development.

*Value of social connectedness: useful framework for approaches to religious education.* Whitehead reminds educators that persons, and therefore learners, are not passive beings sitting next to each other waiting to receive knowledge. Human development, and indeed education, takes place through interdependence, interaction, and exchange. In religious education the task is not to indoctrinate passive students, but to create learning communities where there is a dynamic sharing of experiences and views. Both Westerhoff (1976) and Nelson (1971) have reminded us of the power of the community in passing on tradition. Marthaler (1978) has described religious education as the process of socialization. Whitehead offers us an educational and philosophical framework for such a process of sharing faith in religious communities, both formally and informally.

### **Education as a Holistic Experience**

Whitehead insists that authentic education is ultimately a discipline for living. Knowledge must be connected with life, just as actual entities are connected with the universe. All life is a unity, a totality, and thus all human reflection should begin and end in the experience of this totality. All individual things are constituted by the interplay of the objective and the subjective, and are made up of individual occasions of experience. For Whitehead, "all knowledge is conscious discrimination of objects

experienced" (1933, p. 228). Humans are part of a universe in which all actual entities are in the process of becoming through experience. All growth, including human growth, demands an experiential participation in this universal process of becoming. Whitehead writes:

I have termed each individual act of immediate self-enjoyment an "occasion of experience." I hold that these unities of experience, these occasions of experience, are the really real thing which in their collective unity compose the evolving universe, ever plunging into the creative advance. (1961, p. 12)

In a very real sense, we are our experiences, and our experiences are one of the components of the world itself. There is an organic unity in Whitehead's universe, a kind of organic life and experience in all of reality. Humans best link themselves to reality by participating as fully as possible in reality. Educational institutions, then, are "homes" where young and old can participate in the adventure of reflecting on and experiencing life in all its manifestations. Education is a holistic experience, an experience that is physical, intellectual, emotional, aesthetic, and volitional.

### *The physical dimension*

Whitehead reminds educators that learners also are physical in their nature. He writes: "I lay it down as an educational axiom that in teaching you will come to grief as soon as you forget that your pupils have bodies" (1929, p. 78). He firmly believed in the connection between the physical and the intellectual in life and in education. We are not only minds, but we are also bodies, and are driven by the experiences of our bodies. "Mankind is an animal at the head of the primates, and cannot escape habits of mind which cling closely to habits of body" (1933, p. 58). The body is an organism, which regulates our cognizance of the world. In a sense, the spatio-temporal world is mirrored in our bodily life, so that the unity of our perception is dependent on the functioning of the body. We "feel" with the body and, therefore, the witness of the body is an ever-present element in our perception of reality. Whitehead, therefore, had little tolerance for what he considered to be the disastrous antitheses between mind and body, and thought and action that often exist in traditional education.

### *The intellectual dimension*

Education for Whitehead is best described as the activity of thought. He writes: "What education has to impart is an intimate sense of the power of ideas, for the beauty of ideas" (1929, p. 18). He vehemently opposed education that merely sets out to impose scraps of information, or what he

called "inert ideas." He once commented sharply: "A merely well-informed man is the most useless bore on God's earth" (1929, p. 1). Inert ideas are ideas that are merely taken into the mind without ever being used, tested, or placed into fresh combinations with other ideas. Those who view education in terms of imparting such information wrongly see the mind as a mere passive instrument that needs to be sharpened with facts. In contrast, Whitehead viewed the mind as a living organism that is in perpetual activity; delicate, receptive, responsive to stimuli. It responds best when nature is authentically presented as full-blooded and happening with dynamic immediacy. Thus Whitehead recommends that teachers be "alive with living thoughts," and that these thoughts be carefully selected, put into all kinds of interesting combinations, and applied to the circumstances of life. Such living knowledge is not so much a "content," as it is a "process of exploration," wherein the past is applied to the present, the abstract to the concrete, and theory to action (1929, p. v).

**Understanding** is a key word in Whitehead's approach to grasping reality in education. It was his conviction that the expansion of understanding is of prime importance for the very survival of civilization. Such understanding is internal, in that it involves the comprehension of the composition of entities, seeing how all the factors interweave to form a totality. Understanding is external when it comprehends that each total unity is related to, and thus affects, the whole process of development (1938, p. 63). Education is aimed at both internal and external understanding in order to gain an "understanding of that stream of events which pours through life," especially through life as experienced by the learner (1929, p. 3).

**Importance** is another key term for Whitehead. It refers to a characteristic of knowledge as applied not only to parochial situations, but also linked to the whole cosmological process. Importance thus implies that the learner has the intellectual freedom to make selections and applications. It is the importance of entities which generates interest, and retains the value of things through time. The awareness of importance, for Whitehead, is the ultimate power in education. Such importance "takes the various forms of wonder, of curiosity, of reverence, of worship, of tumultuous desire for merging personality in something beyond itself" (1929, pp. 62-63).

Ultimately it is wisdom that is the goal of understanding knowledge. Whitehead points out that, although wisdom is the vaguer ingredient in intellectual formation, it is of greater importance than mere knowledge. We can easily acquire much knowledge, and yet remain bare of wisdom. It is only when knowledge culminates in wisdom that we have genuine education. Wisdom is the way knowledge is held; the way it is employed to add value to our experience. It goes beyond intellectual acuteness to include

reverence for, and sympathy toward, reality. Wisdom indeed indicates the kind of balanced development which Whitehead sees as the very aim of education (1954, p. 284).

### *Emotion, imagination, and the aesthetic dimension*

Whitehead, in his holistic approach to education, also gives attention to the importance of affectivity in human formation. He maintains that "besides conceptual experience, life also includes the enjoyment of emotion" (1938, p. 229). Mere knowledge is an abstraction of little value, whereas genuine knowledge is "always accompanied with accessories of emotion and purpose." The true learning experience does not consist, therefore, in merely learning facts or verbal phrases, but in the "clashes of emotion and unspoken revelations of the nature of things" (1968, p. 216). The teacher's role is thus extended to moving the learners, and not merely instructing them.

Imagination is also given attention in Whitehead's consideration of progress in culture and education. Progress in civilization happens when imagination causes thought to run ahead of realization; when it brings recognition of dreams of things to come, of possibilities still unrealized. In education, it has been imagination which has given freshness and vitality to ideas. As Whitehead humorously put it: "Knowledge does not keep any better than fish. You might be dealing with an old species, but somehow or other it must come to the student just drawn out of the sea and with the freshness of its immediate importance" (1929, p. 147). Education is an "imaginative consideration of learning," wherein imagination illumines the facts and enables learners to envision new worlds and new possibilities. Thus Whitehead calls for teachers who are "lighted up with imagination," and asks them to be open to learn from the young, because the young are experiencing the most imaginative period of their lives (1929, p. 146).

In Whitehead's educational scheme there is also a place for aesthetic experience, for it is here that one is able to value that which is beyond mere knowledge. He writes: "When you understand all about the sun and all about the atmosphere and all about the rotations of the earth, you may still miss the radiance of the sunset. There is no substitute for the direct perception of the concrete achievement of a thing in its actuality" (1954, p. 286). The aesthetic experience is a needed source of stimulation and discipline in learning, a necessity for the deepening of one's individuality. It was Whitehead's conviction that "once young people are grasped by the beauty within knowledge, a certain self-surrender occurs" (1933, p. 370).

Finally, freely chosen action is a necessary element in Whitehead's holistic approach to education. It is in activity that all entities, including

the human self, are produced. It is in activity where we realize that we are part of the creative process; that we are "the potter and not the pot" (1929, p. 58). Action moves us beyond thought, and even beyond self, and thus enables us to be linked with transcendence. Therefore passive contemplation is not an adequate means of meeting the facts of reality. Only action brings direct knowledge of reality, and therefore the very aim of education is "the marriage of thought and action" (1968, p. 127).

We have seen that for Whitehead education is preparation for living, a holistic experience that heightens the participants' awareness of their link with, and their participation in, the process of reality. The educational experience involves all the dimensions of the person: the physical, intellectual, emotional, imaginative, aesthetic, and volitional. This perspective is especially useful as a framework for contemporary religious education. We will proceed to look at some of the more important implications.

### *Implications for religious education*

*View religious experience as the centrepiece of religious educators' work with learners.* For Whitehead, human growth entails experiential participation in reality. Most certainly this principle applies to growth in faith. Westerhoff (1984) points out: "We cannot know God by objective reflection, but we can know God through subjective experience" (p. 64). Religious education is concerned with much more than intellectual instruction; it is aimed at providing the "green spaces," where learners can experience their faith. It provides an experience of a caring and supportive community where learners can experience the creative power of love. Whitehead extends the boundaries of this experience for us, and offers us new horizons of participation with all of reality. He leads us to a deeper reflection on our experiences of the beauty and creativity in the world. Moreover, Whitehead gives us a sense of unity with those around us, as well as with the entire process of becoming.

*Contrast between inert ideas and living thoughts useful when applied to religious traditions passed on by religious educators.* In the past, there often has been a certain objectification of the religious tradition, which has been viewed as a static body of doctrine, a "deposit of faith," passed down from generation to generation in an unchanged fashion. The "catechism" and "Sunday school" approach to religious education was often satisfied if the teachings were merely memorized, even if there was little understanding. The doctrines somehow were presented as ahistorical, with little awareness that much of the content was actually late medieval or perhaps nineteenth century versions of Christian beliefs. As one of the great pioneers in modern religious education, Josef Jungmann (1983), has pointed out, the

faithful were often given "a string of dogmas and moral principles," and not the person of Jesus Christ and his living message (p. 213).

Whitehead reminds us that the only knowledge that will move the living organism of the mind, and indeed the organism as person, is knowledge that is alive, dynamic, and challenging. The Christian tradition, therefore, is not to be seen as a "box of doctrines" but as a living, evolving tradition that has fresh and novel things to say to the pressing questions of today. If this tradition is to touch the learner and become part of life, it must be presented as "alive." Moreover it must be presented by teachers who in fact are themselves living the tradition.

*The role of affectivity in learning is a reminder that the goal of religious education is not limited to cognitional growth.* Whitehead stresses the excitement of learning, the wonder of discovery, the enjoyment of understanding, and the satisfaction in being able to apply knowledge to live. Similarly, the emotions play an important part in effective religious education. Too often this aspect of religious conversion is not given its due. Without the emotional and passionate elements, religious meaning systems are sterile, unable to bond people to each other in community, and unable to move people to unselfish service (Lang, 1983). Therefore, the religious educator is not only a resource, but one who can touch learners in the depth of their feelings. As Palmer (1983) puts it: "Teachers must also create emotional space in the classroom, space which allows feelings to arise and be dealt with" (p. 83).

*The accent on imaginative learning provides religious education with an incentive to retrieve this aspect of personal growth.* For Whitehead the imagination is the very "light" that illumines knowledge and gives freshness to the content of education. Much of what he has to say in this regard has application in religious education. Indeed, most of revelation is contained in imaginative literature, and is only accessible to one whose imagination is properly attuned. Fischer (1983) says:

Far from endangering the faith, the imagination evokes and nurtures it: revelation occurs first on the level of imagination and so does the initial response of faith to revelation. The imagination, properly understood, provides access to the deepest levels of truth . . . (p. 6)

It is our fantasies and our dreams which so often reveal our deepest longings, our most profound questions regarding Mystery. Moreover, it is through symbols and imaginative rituals that we are able to communicate with the divine. Paul Ricoeur (1965) reminds us that people are not moved by direct appeals to their will, but by experiencing their imagination

touched by someone or something that excites them into hoping and acting (p. 127). Religious education which creatively stimulates the imagination is often more effective than that which merely instructs or gives preachments. This explains the increased interest in approaches to religious education that are more oriented to the right hemisphere of the brain than to the left.

*The aesthetic dimension of education pays tribute to beauty that is connected with coming to the truth.* Whitehead was a profound thinker who gave a vision of a world in process, a world teeming with creativity. To read his writing is often to be taken to the heights and depths of reality, and to experience a sense of awe in the sweep of his vision. In a sense, religious education must attempt to provide learners with similar experiences of the beauty of the Christian vision. In many ways, those who teach the tradition invite learners to an aesthetic experience of God and creation, an encounter with ultimacy that is both transcendent and immanent. It is through such experiences that learners are given a "sacramental" outlook on reality, a sensitivity to both the natural and supernatural marvels which surround them. As Anthony Padovano (1979) puts it: "Aesthetic experience and sacramental experience deal with the physical world directly but beneath the surface appearance. They transform the vision of the world which engages us. . . . We encounter the familiar as charged with mystery" (p. 3).

*Emphasis on action as the culmination of education is consonant with religious education's current stress on active faith.* Application, action, and creative productivity are the culmination of sound education, according to Whitehead. His approach gives incentive to religious education to continue to insist that the life of faith goes beyond belief and trust to "lived faith" and action. Although Whitehead did not have as radical an edge to his notion of action as we might find in those who speak of education as "conscientization" and "liberation," he did advocate the same sense of reverence for life and our duty to preserve it. His writings do offer a philosophical and educational framework within which religious educators can continue to carry out their commitment to involving others in preserving the sacredness of life and resisting oppression and injustice.

### Conclusion

I have singled out two of the themes in Whitehead's educational thought: self-creation and holistic experience. In this perspective, learners are seen as living organisms, in process from within, and moving through stages of development; a process which is both social and holistic in its movement. The implications of this educational perspective for contemporary religious education are, as we have seen, indeed manifold.

## REFERENCES

- Brumbaugh, Robert. (1981). *Whitehead: Process philosophy and education*. Albany: State University of New York.
- Dykstra, C. & Parks, S. (Eds.). (1986). *Faith development and Fowler*. Birmingham: Religious Education Press.
- Dunkel, H.B. (1965). *Whitehead on education*. Columbus: Ohio State University Press.
- Fischer, Kathleen R. (1983). *The inner rainbow*. New York: Paulist Press.
- Groome, Thomas H. (1980). *Christian religious education*. San Francisco: Harper and Row.
- Hartshorne, Charles & Peden, Creighton. (1981). *Whitehead's view of reality*. New York: The Pilgrim Press.
- Hill, Brennan R. (Fall, 1971). Karl Rahner's transcendental method. *Carmelus*, pp. 27ff.
- Jungmann, Josef. (1983). Theology and kerygmatic theology. In Michael Warren, (Ed.), *Source book for modern catechetics*. Winona: St. Mary's Press.
- Lang, Martin A. (1983). *Acquiring our image of God: The emotional basis of religious education*. New York: Paulist Press.
- Marthaler, Bernard. (1978). Socialization as a model for catechetics. In Padraic O'Hare, (Ed.), *Foundations of religious education*. New York: Paulist Press.
- Meland, Bernard E. (1953). *Higher education and the human spirit*. Chicago: University of Chicago Press.
- Miller, Randolph Crump. (May, June, 1973). Whitehead and religious education. *Religious Education*, pp. 315-322.
- Miller, Randolph Crump. (July, 1975). Process thinking and religious education. *Anglican Theological Review*, pp. 277-288.
- Miller, Randolph Crump. (October, 1985). Dewey, Whitehead, and Christian Education. *Living Light*, p. 4.
- Nelson, Ellis. (1971). *Where faith begins*. Richmond: John Knox Press.
- Palmer, Parker. (1983). *To know as we are known: A spirituality of education*. San Francisco: Harper and Row.
- Padovano, Anthony. (1979). Aesthetic experience and redemptive grace. In Gloria Durka and Joanmarie Smith, (Eds.), *Aesthetic dimensions of religious education*. New York: Paulist Press.
- Pittenger, Norman. (1969). *Alfred North Whitehead*. Richmond: John Knox Press.
- Price, Lucien. (1954). *Dialogues of Alfred North Whitehead*. Boston: Little, Brown and Co.
- Ricoeur, Paul. (1965). *History and truth*. Evanston: Northwestern University Press.
- Stokes, Kenneth (Ed.). (1982). *Faith development in the adult life cycle*. New York: Sadlier.
- Westerhoff, John H. (1976). *Will our children have faith?* New York: Seabury Press.
- Westerhoff, John. (1984). On knowing the bicameral mind. In Norbert Greinacher and Virgil Elizondo, (Eds.), *The transmission of the faith to the next generation, concilium*. Edinburgh: T. and T. Clark Ltd.

- Whitehead, Alfred North. (1929). *Aims of education and other essays*. New York: The Macmillan Co.
- Whitehead, Alfred North. (1929). *Function of reason*. Princeton: Princeton University Press.
- Whitehead, Alfred North. (1933). *Adventures of ideas*. London: Cambridge University Press.
- Whitehead, Alfred North. (1938). *Modes of thought*. New York: The Macmillan Co.
- Whitehead, Alfred North. (1941). *Process and reality*. New York: The Macmillan Co.
- Whitehead, Alfred North. (1954). *Science and the modern world*. New York: The Macmillan Co.
- Whitehead, Alfred North. (1958). *Introduction to mathematics*. New York: Oxford University Press.
- Whitehead, Alfred North. (1961). Nature. In Ruth N. Anshen, (Ed.), *Alfred North Whitehead: His reflections on men and nature*. New York: Harper Bros.
- Whitehead, Alfred North. (1968). *Essays in science and philosophy*. New York: Greenwood Press.

**Margaret MacLean**  
*University of Ottawa*

# **Technology Can Help: Children comment on computers**

## **Abstract**

*Although there are several studies which have documented how computers are used in schools, there has been relatively little research which has considered children's perceptions of computers. This paper presents results from interviews with elementary grade students to find out what they thought about computers and learning, what uses they saw for them inside and outside school, and what difficulties they had with them. Their comments are grouped into three areas: computer as tool, collaborative learning, and dealing with difficulties. Implications of their perceptions in these areas are discussed.*

Although there has been a tremendous influx of computers into schools there has been relatively little research which has considered children's attitudes towards using computers. Logan and Padro (1986), in their research on the impact of computers in the classroom, stated that "children's perceptions of educational technology has only received the most cursory attention to date" (p. 13).

One researcher who did examine children's perceptions and use of computers was Trumbull (1986). She observed grade 5 students, using mainly drill and practice programs, in a computer lab. She interviewed twenty-one of these students to find out what they thought about computers. She found that while the children thought that computers were important, most of them saw the computer, both in and out of school, as a machine for playing games. Few of them seemed to know much about how computers could or would be used in the future.

Turkle (cited in Rhodes, 1986), in a recent interview in *Educational Technology*, presented a different perspective on children's use of computers. She stated that in many schools, children are using computers as "productivity tools" to help them get their work done and as "vehicles for fantasy" which enabled them to create texts or drawings to express their fears and fantasies.

Trumbull and Turkle provide rather different perspectives on children's perceptions and uses of computers in schools. The purpose of this paper is to provide additional insights into how elementary children perceive and use computers. Students in a suburban Montreal elementary school were interviewed to find out what they thought about computers. (A research team had been in the school as part of a larger study on educational uses of computers. As a result, the children were used to talking with them about computers.)

All the children in the school (about 550 students), from kindergarten to grade six, used computers on a regular basis. Teachers ensured that their classes had computer time each week. For the past few years, each class had been time-tabled for at least one thirty-minute session per week in a resource room which had fourteen computers. During their computer sessions, kindergarten students used computers mainly for math and language games; students from grades one to six used them regularly for either LOGO or word processing. Besides these scheduled sessions, the resource room was also open to all students at noon-time and after school. These open times were very popular with the students who used the computers for both school and personal projects.

To ensure that in the interviews there was a cross-section of students which included novice and expert users, classroom teachers were asked to recommend five or six students from their class whom they felt represented a range of computer knowledge from most to least proficient. A random selection of 26 boys and 23 girls from these lists (approximately 10% of the school population) were interviewed. Each student was interviewed individually; all interviews were tape recorded and then transcribed.

The interviews were open-ended. Students were asked what they thought of computers and learning, how they used computers in school, and what difficulties they had with them. In considering their comments, three general areas of concern emerged: computer as tool, collaborative learning, and dealing with difficulties.

### Computer as Tool

The children thought that computers were versatile and valuable tools that could be used for a variety of different purposes, such as writing

stories, doing experiments, learning numbers, managing things at work, keeping track of information, helping people find out things, drawing pictures, paying bills, and figuring out accounts.

Students frequently mentioned that the computer helped them do their work more efficiently. "It takes a long time to write things out by hand and it's just better to type it up and let the printer type it out." Others mentioned that they liked the computer because it produced an attractive looking product. "It's fast and it's easier than writing because if your writing isn't that great, the computer is neater."

They also recognized the time and labour saving features of computers which enabled the user to produce a clean copy without frequent recopying. "It's an easier way of writing. You don't have to erase it all. Like a rough copy, you can save it on the screen and then go back and correct your mistakes and print it out." Another student commented that he liked to use the word processor for writing because "you can put the text the way you want."

In addition to being an efficient tool which helped them finish their work more quickly, produce an attractive copy, and organize and review information quickly, many students felt that the computer also helped them in math. A girl in grade 1 commented, "LOGO shows us how to make pictures and designs of things and then we can make them that way in math time." Children in the upper elementary grades mentioned that working with LOGO helped them estimate angles and distances. "Like with angles, you know them better. Like if you say a 45 degree angle you'll know just about where it is . . . . It makes you faster in math. You can get the answer right away." A sixth grader commented, "It must have helped us a lot because this year we have no problems with our angles and all that." It appears from these comments that these children saw the computer as a tool which helped them get their work done. In Turkle's terms, the computer served as a productivity tool for them.

However, in addition to acknowledging how computers helped them in school, the children also recognized the useful role that computers play outside school in areas such as banking ("you know everything about everyone"), hospitals ("to keep track of births"), architecture ("to design buildings"), business ("to keep accounts"), education ("put report cards and information of the school like students' names, phone numbers, and where they live"), and investing ("my Dad put stocks and everything on it"). Computers were seen as especially useful in the space industry. "Instead of . . . men lifting the shuttle up, you have computers to control things . . . . Everything gets done a little faster. That's why men invented them."

Very few students saw themselves directly involved in computers in future years. Only two students thought they would get a job in the computer industry. One of them thought that she would like to "make up programs for little children to play." The other one stated that he wanted to become a computer expert because he liked experimenting with new programs.

Most of the children, however, imagined that they would use computers in the future. One student suggested that computers could be used to build robots which he could then teach to do things he wanted done, such as making his bed and driving his car. A boy in grade 6 suggested that it could be used for social purposes, "Well, to upgrade life a little bit. Like, some people don't have homes. We could use the computer to fix it up."

For many children the computer was not only a functional tool which helped them and others do their work, it was also something that encouraged them to explore and play with ideas and concepts. A sixth grader explained that on the computer he gets "more out of myself . . . They're good for guys like me. They're fun to program, learn stuff about them, inquire your mind . . . It's fascinating." Another student felt that word processing made him more creative. "It's great for the imagination, well the computer doesn't really have anything to do with that, but you put your imagination to the story . . . When you work with the computer your mind opens but when you're writing, you're sort of dull, you know what I mean." These comments mirror Turkle's (cited in Rhodes, 1986) statements about the computer as a "vehicle for fantasy" and provide some insights into the kinds of excitement that computers generate among these children.

Most of the children enjoyed using the computer. As one grade six student explained: "You want to do it, instead of like, you have to do it." Another student agreed: "You can have fun as well as doing work." With these comments and others where they talked about how much they enjoyed using the computer to play video games, it appeared that the computer is often seen as a toy or games machine. However, rather than limiting the students to a passive role which many of the drill and practice programs do, the computer as toy seemed to provide them with opportunities to create, to discover, and explore in playful and personal ways.

It appears that although children were aware of a variety of ways that the computer could be used inside and outside the school, they were not overwhelmed by them. From their own experiences, they realized that they controlled the computer. A grade 3 student put it most succinctly: "It's us who give the commands." Other students also mentioned this issue of control. "You've got to tell it everything, you know. When you turn it off, it doesn't remember anything"; and, "If you want to draw pictures and you're

not that good an artist, then you can get the computer to do it for you. But you have to tell it what to do. It doesn't do it by itself."

It appears from these comments that students saw computers in school and in society performing a variety of jobs, ranging from simple record keeping to more profound social changes, such as helping people have better homes and jobs. Yet although they were cognizant of the multi-faceted role of computers, they realized that they were in control; they told the computer what to do. In this sense, the computer was a tool which they made work for them to fulfill a variety of creative and functional purposes.

### Collaborative Learning

Sheingold, Hawkins, and Char (1984) argued that the presence of computers can alter the framework for the social organization of teaching and learning in classrooms in interesting ways. One way computers can do this is by facilitating collaborative interaction among children. Another way is by increasing opportunities for children to act as resources for other children. Because neither of these forms of interaction appears very often in most traditional classrooms, we were interested in talking with the children to see whether they saw interactions among children and between children and teachers changing as a result of using computers. The questions in this study focused on preferred style of working, alone or with a partner, and the exchange of information among users.

The children interviewed preferred working with others because they could share information, help each other, and also manage to have fun. One student explained: "I like it better with a partner because if I get tired typing he could type. It's easier with two people because he also has ideas for writing." Another student agreed that working with someone else was helpful. "You can talk. You can learn a lot of things. What he knows, I don't know. Everyone knows a little."

Several students had developed strategies for working together. A grade 5 student explained that he and his partner "usually discuss what kinds of programs we should make, why we should not do that program. If we agree on something we do it. If not, we flip a coin." A grade 3 student described a somewhat different collaborative arrangement. "I get all the thinking and she gets all the printing." This division of tasks is similar to an example cited by Sheingold *et al.* (1984) where a student, describing the relationship with her partner, stated: "I'm the thinkist, you're the typist."

Coming to terms with each other as partners was not always an easy process. One problem that children working together often faced was the issue of resolving conflict. A grade 2 student indicated that he preferred to

work alone because "they always scream at me . . . this one and that one and this one. When I am alone I can figure out all the words by myself." A grade 6 student also mentioned the issue of conflict. "It's faster if you don't have to listen to the other kid or argue what you're gonna write."

Several children stated that they learned more on their own. One student said that she liked to work alone "because you learn more, instead of someone knowing more and you know less." Another student also preferred working alone because "it keeps my concentration to myself."

Whether they worked alone or in pairs, however, children frequently mentioned that they shared information with the teacher. One boy commented, "Our teacher doesn't know really that much. He comes in to see how we're doing and he asks us questions about it, so he's learning kinda on the job." Another student noted: "My regular teacher, she knows just a little about computers . . . . She watches the kids and me. By watching them work . . . she can learn from that."

It is important for children to see themselves as knowledgeable, with expertise they can share with others. Although they frequently called on each other for help, the fact that some children knew more than others about computers occasionally created problems. One student complained, "The experts on computers can do more things faster. I still don't know how to print, and my friends do, and that gets me a little behind, and a little lost in pride."

Because of the novelty of computers in schools, teachers have often been unable to keep abreast in this field as much as they would like. This often means that children can find themselves in the role of knowing as much, if not more, than their teachers. This is by no means a bad thing. On the contrary, this shift in roles allows children to share their expertise with teachers and with other students. One teacher commented that she often relied on the students to help her when she did not know how to run a program. She felt that computers were "a great leveller" between students and teachers. However, in order for the "leveller" to work, there must be active encouragement of information sharing and collaboration between and among students and teachers.

### **Dealing with Difficulties**

Several researchers have argued that working through problems on a computer enables the user to develop good problem-solving skills. We were interested in finding out what kinds of problems children experienced with computers and the kinds of strategies they used to solve these problems.

One of the most frequently mentioned difficulties was keyboarding. Comments included statements such as, "Well, sometimes I get a bit frustrated 'cuz if I'm typing something . . . I have to think where the 'h' is and everything"; and "It's confusing where the letters are. You have to wait two seconds to find each one." Students dealt with their keyboarding problems in different ways. Most of the children felt that with practice they would gradually become more familiar with the keyboard. A few children found typing tutor programs useful. However, not everyone wanted to use them. A grade 6 student pointed out that he didn't need to use these programs as he could go fast as he needed with two fingers.

The second main complaint that students had was the lack of time to finish work. A grade 2 student made the following comment about his LOGO sessions: "We never have enough time! Well, once I did, but I couldn't put the smoke on the chimney." Another student complained: "I don't like making houses because it takes a long time and when everybody is doing it, we're still trying to do it and then when we figure out how to do it, we have to go."

A third complaint related to difficulties with the process. Students were aware that problems sometimes arose in the creation of the product. They suggested a variety of techniques for dealing with "process" difficulties. Several stressed the need to take good notes as a way of being able to review the process. A grade 3 student noted, "The teacher explains something on the blackboard, but the computer doesn't do it like the blackboard says. Sometimes you have to go back to the class and review." A grade 5 boy provided another alternative, "If I have a problem I would ask the friend on my side and if he doesn't know I would ask the teacher. He would say 'find it for yourself.' So I would. He encourages me like this, so I found it."

The children interviewed did not appear to be discouraged by their problems with computers. Most felt that many of their difficulties were due to lack of expertise and, with practice, they would become more proficient and more self-reliant in solving their problems.

### Conclusion

What became very clear from interviews was that, for the most part, these elementary grade students were comfortable with computers. They had assimilated a great deal of computer terminology and knowledge. They were aware of the power of computers, but at the same time were not overwhelmed by them. As one grade four student commented, "Everyone could live without computers, you know. The computer isn't the most precious thing in the world."

Most of the children interviewed clearly distinguished between what the teacher could do and what the computer could do. A boy in grade 6 stated that "computers are not smarter than teachers because a human made it and put his own information inside it." However, there were advantages to working with computers. In the words of a grade 3 student: "We can't command our teacher, but we can command the turtle."

The children frequently mentioned that computers could help students and teachers do their job. However, very few of them saw computers replacing teachers. Students felt that teachers were more flexible in that they could explain things in a variety of different ways, whereas the computer was really quite rigid in its approach. Nevertheless, students thought that it was important for teachers to learn how to use computers. One boy suggested that "teachers just have to go into the computer room after class and learn."

It appears that using computers helped many of the children become more resourceful learners. Several children mentioned that they enjoyed trying to figure out ways to solve their problems. Most of the children had developed particular strategies such as note-taking, reviewing information when things do not work out, and referring to other children for help. These problem-solving strategies would also be useful to them in other learning contexts.

Sheingold *et al.* (1984) stated that new kinds of learning interactions such as collaborative learning, power sharing, or restructuring of expertise may arise when children work with computers. They suggest that these new learning interactions must be valued and supported by the overall learning environment for change to take place. Teachers who are aware of the difficulties that children have in working with a partner can help their students develop effective strategies for collaborating. Several researchers (Ryba & Chapman, 1984; Starshine & Fortson, 1984) have suggested that working together on computers can help children develop collaboration skills. Comments from the children in these interviews suggest that in order for children to work effectively together, they may need help in learning how to develop a good working relationship.

Teachers also need to be aware that limited access to computers may cause problems for students. It is important to organize frequent and flexible access to computers so that students are able to finish assignments. Students may become frustrated and develop negative attitudes towards computers if they do not have the opportunity to finish projects during regularly scheduled sessions.

Not all of the children felt that they would use computers in the future. However, they did foresee a variety of different roles for computers as a tool for functional and creative tasks both inside and outside school. They seemed to enjoy the computer and were willing and interested in sharing their knowledge with other students and teachers. They appeared confident in using computers and seemed to enjoy discovering what computer technology could do for them.

This research was supported by a grant from FCAR (EQ-2902). The author would like to thank the members of the research team (Marilyn Caplan, Frank Greene, Janet Humphrey, Sharron Wall, Norm Henchey) for their contributions to earlier drafts of this paper.

## REFERENCES

- Logan, R., & Padro, S. (1986). *Research questions on the impact of computers in the classroom*. Toronto: Ontario Ministry of Education, Education and Technology Series.
- Rhodes, L. (1986). On computers, personal styles, and becoming human: A conversation with Sherry Turkle. *Educational Technology*, 43(6), 12-16.
- Ryba, K., & Chapman, J. (1984). Toward improving learning strategies and personal adjustment with computers. *The Computing Teacher*, 11(3), 48-53.
- Sheingold, K., Hawkins, J., & Char, C. (1984). "I'm the thinkist, you're the typist": The interaction of technology and the social life of classrooms. *Journal of Social Issues*, 40(3), 49-61.
- Starshine, D. & Fortson, L. (1984). First graders use the computer: Great word processing. *The Reading Teacher*, 38(2), 241-243.
- Trumbull, D. (1986). Games children play: A cautionary tale. *Educational Technology*, 43(6), 18-21.

## Incident

Odour of sulphur and honey,  
larch twigs lit from within with a  
pale gold flame.

Fur-white moths tremble  
in clots over a body  
slumped on the asphalt  
in an ooze of black blood.

Houses gather their skirts about them,  
squat on their haunches  
like Indian squaws, waiting.

More moths and more keep arriving,  
flutter up and down in circular  
motion. Each has the dead man's  
face on.

The hunters' moon lifts  
free of the roof tops.  
Sycamore seeds float screaming  
to the ground. Branches snap like  
gun shots. A jeep whirls into  
the square and soldiers leap out.

Before they reach the man,  
he is wafted high on a pillow  
of moths which hovers over  
the armed ones' heads, rises,  
then sets off at speed for the stars.

They watch it dwindle to a swarm  
of gnats, to specks of dust, to an  
illusion in the mind's eye.

Behind its windows each house  
consigns to memory this  
palpable blank in the  
pages of history.

Paddy Webb



## Refugees

To apply for official refugee status you must have sponsors registered in a recognized government approved scheme.

You must speak English, be willing to learn another language – French, have no left-wing political affiliations, no relations accepted as refugees in another country.

You must be in good health, have money, clothes, practise cleanliness, use (or not use, according to sponsors' religious beliefs) birth-control; use (or not use – as above) safes to prevent the spread of AIDS. We do not as a general rule accept homosexuals.

You must be prepared to work immediately upon arrival, even if such work is menial.

Forget your Ph.Ds, your professional qualifications, and start again at the bottom to get a *proper* training after work, at night school.

Forget other family members you have left behind (remember your sponsors cannot sponsor them).

Forget all previous commitments of a racial, religious, language or territorial kind. And be prepared to suffer prejudice as regards the colour of your skin.

If you are accepted, you cannot go on welfare for one year. But as a landed immigrant you may, one day, qualify to become a citizen.

Paddy Webb

## Book Reviews

**Leonard L. Stewin, and Stewart J.H. McCann (Editors).  
CONTEMPORARY EDUCATIONAL ISSUES.  
Toronto: Copp Clark Pitman, 1987.**

This text is a compendium of issues that confront teachers in today's schools and classrooms. The editors have provided an overview of original readings oriented to a senior undergraduate audience of various backgrounds. It would seem that they have been successful, as this book could be used in the classes they suggest: educational foundations, sociology of education, and Canadian studies. There are 44 articles focusing on contemporary issues concerning school in society, and the predominant emphasis is on how those issues affect teachers' work.

There are nine major sections: 1) human rights in Canadian education; 2) the impact of computers; 3) standards and value conflicts; 6) social problems and issues; 7) the education of exceptional children; 8) teacher training; and 9) Canadian education in the future.

The editors have drawn on the work of important people in their fields, and have endeavoured to represent both the breadth of the country as well as of the issues involved. Ronald Ragsdale (OISE) has written on computers in education. Bernard Shapiro (Commissioner of the 1985 Report on Private Schools in Ontario) has written with Brian K. Davis on private education. Donald Wilson (UBC) has an article on social issues. Lawrence Bezeau (UNB) writes on the important issue of the financing of Canadian education. And David Livingstone (OISE) continues his important work on the possibilities of educational reform.

But this book is more than a collection of illustrious authors. The text emphasizes changing social trends: centralization, finance, accountability, technology, rationalization, and human rights. The articles

are not difficult, and while this would be a disadvantage to a graduate audience, or to an expert in the field, it is an advantage for the audience intended. For both teachers and administrators this book is a good introduction to the breadth of research in Canadian education.

Stewin and McCann's text is a broad overview of the field, and a useful one; and the selection of articles conveys the sense that social issues in Canadian education are different. However, a major issue not treated in the text is the fundamental differences provincial and regional divisions bring to education. Differences persist in per capita and per student spending, the availability of libraries, retention rates, the extent of dependence of school finance on the economy, and administration. While there are similarities in provincial systems, the differences must be explicitly addressed in a study devoted to the articulation of problems facing Canadian education today.

**Chris McCormick**  
York University

**Ratna Ghosh and Mathew Zachariah, (Editors).**  
**EDUCATION AND THE PROCESS OF CHANGE.**  
New Delhi: Sage Publications; 1987.  
pp. 301. \$36.00

This is a quite remarkable collection of essays which were derived from a conference held at McGill University in 1985. A dozen speakers, mostly Indian, who either hold important positions in India, or who teach about that country in universities outside, discussed a wide range of broadly educational aspects of social development in India since independence was achieved in 1947. One of the editors, Ratna Ghosh, writes in her introduction that the "conference aimed at taking a comprehensive look at the role education has played in the reconstruction and revitalisation of Indian society over the past four decades," and its purpose was "to rekindle interest in India as an area worthy of scholarly study in the social sciences, particularly in education."

There is little doubt that the aim has been achieved. Western educators who have read these well written papers will have gained at least a superficial understanding of the relations of education to changes in the social structure of India with all its disconcerting complexities and inter-relations. They will have seen something of the antagonistic forces of change on the one hand and of inertia on the other. They will see how education, which in the euphoric days following independence, was seen as the major instrument of advance, can also retard growth. In the system of

are not difficult, and while this would be a disadvantage to a graduate audience, or to an expert in the field, it is an advantage for the audience intended. For both teachers and administrators this book is a good introduction to the breadth of research in Canadian education.

Stewin and McCann's text is a broad overview of the field, and a useful one; and the selection of articles conveys the sense that social issues in Canadian education are different. However, a major issue not treated in the text is the fundamental differences provincial and regional divisions bring to education. Differences persist in per capita and per student spending, the availability of libraries, retention rates, the extent of dependence of school finance on the economy, and administration. While there are similarities in provincial systems, the differences must be explicitly addressed in a study devoted to the articulation of problems facing Canadian education today.

**Chris McCormick**  
York University

**Ratna Ghosh and Mathew Zachariah, (Editors).**  
**EDUCATION AND THE PROCESS OF CHANGE.**  
New Delhi: Sage Publications; 1987.  
pp. 301. \$36.00

This is a quite remarkable collection of essays which were derived from a conference held at McGill University in 1985. A dozen speakers, mostly Indian, who either hold important positions in India, or who teach about that country in universities outside, discussed a wide range of broadly educational aspects of social development in India since independence was achieved in 1947. One of the editors, Ratna Ghosh, writes in her introduction that the "conference aimed at taking a comprehensive look at the role education has played in the reconstruction and revitalisation of Indian society over the past four decades," and its purpose was "to rekindle interest in India as an area worthy of scholarly study in the social sciences, particularly in education."

There is little doubt that the aim has been achieved. Western educators who have read these well written papers will have gained at least a superficial understanding of the relations of education to changes in the social structure of India with all its disconcerting complexities and inter-relations. They will have seen something of the antagonistic forces of change on the one hand and of inertia on the other. They will see how education, which in the euphoric days following independence, was seen as the major instrument of advance, can also retard growth. In the system of

education inherited from the British, instruction from infancy through to the university was given in English. It prepared students for work in government, in the professions, and in management. Since then there has been an enormous increase in educational provisions at all stages. Private schools patterned on the English "public schools" have proliferated, with instruction still in English; at the same time indigenous schools using one of the very many vernacular languages and others using more than one language have been provided. It was hoped that universal access to elementary education would give equal opportunity to all who wished it to enter the highest levels of education that their abilities would allow. Unfortunately this has not happened. Almost all children now have physical access to school, but socio-economic factors and cultural inertia ensure that very many children of rural and labouring parents reject the use of the available facilities. The children from middle and upper class homes, whose parents had been educated in English at public school-type schools, are the ones who have benefitted greatly from the expanded educational provisions. These are the children who fill the universities and make India's the biggest university population of the whole world (p. 14). Women, rural children, and children of the Scheduled Castes and Scheduled Tribes are important among the large group which has very little more mobility today than they had 40 years ago.

American readers will recognize a similar situation in the U.S. where special provisions for black students have been seized by those from already successful, well-off homes, while the poorest children are left in their poverty.

Many of the essays make it clear that the English-speaking, educated elite, who shaped the new constitution, planned the patterns of industry, the economic structure, and the system of education, were wildly optimistic in the time-scale they envisaged for the development of a revitalized, secular democracy. A very great deal has been achieved in industry, manufacturing, technology, research, and training, but in many important areas much less has been accomplished than was hoped and than is urgently needed. The special case of the position of women in the new democracy has a prominent position in the topics presented in these essays. Many people outside India noting, not only a woman head of state, but also such public figures as Rajkumari Amrit Kaur, a cabinet minister, Mrs. Vijayalakshimi Pandit, President of the United Nations General Assembly, and Dr. Sushila Nayar, a Health Minister, formed the opinion that Indian women had been dramatically liberated from seclusion and powerlessness into the limelight of high public, even international, office. Unfortunately this was not true. The number of distinguished, influential women was a very small part of a huge population. Their backgrounds were exceptionally privileged; they were educated in English, usually in England or in the U.S.; they had little

in common with the vast majority of Indian women and had only limited contact with them. It is pointed out by Vina Mazumdar (p. 198) that although the Government has removed virtually all restraints impeding the entry of women to higher education and to employment in the professions, the civil service, management and so on, and even though the ratio of women to men in higher education is higher than in many developed countries, nevertheless the over all proportion of illiterate women in the population has hardly changed in forty years. About three-quarters of all Indian women are still illiterate. Further, and quite disturbing, those areas of India with the most liberal provision of educational facilities have the highest proportion of illiterate women to illiterate men. The opposite is also true in those areas judged to be more educationally backward.

It is argued that better designed schemes of educational provisions might attract more women and reduce female illiteracy. This could accelerate the effect which newspapers and other non-formal educational media have on personal development. A higher female rate of literacy is thought to be associated with a lowering of the birth rate through knowledge of contraception and planned parenthood. Similar problems arise over the resistance of the armies of working children to education. By joining the labour force at a very early age and doing low level jobs, these children turn their backs on formal education which they think irrelevant to their needs and a poor return for their investments in time and effort. Further, they and their families are so poor that they cannot afford to give up their employment in order to go to school. At present, this impasse seems insurmountable. Mahatma Gandhi's schemes of basic education do not seem to have much support; among the many possible arrangements discussed, that of setting up day-care centres near schools seems promising. Mothers and older children could then attend school while sharing the care of younger children.

The problems of learning and instruction in particular languages is very real. There is no longer strong nationalistic pressure to teach, learn, and work in a vernacular language, but the present system creates and maintains a great cultural chasm between the English-speaking elite who hold the high status jobs and the much larger group of poorly paid workers in menial work who speak one of the large number of regional languages. The hope that the traditional elite would be gradually replaced by well educated indigenous vernacular speakers has not been realized. Economic reality has increasingly made English the language of business, of the professions, and of research publications. A target of 100 percent literacy in one language has been set for 1990. But in the light of the problems associated with the production of teaching materials in English, Hindi, and even the most used regional languages, and of the fact that in developed countries, with only one language, perhaps one in six adults is functionally

illiterate, this would seem unrealistic. Frequent references to the use of remedial education may also be indicative of unwarranted optimism.

A striking feature of this collection of essays is their frankness over the problems, failures, and shortcomings of India's educational endeavours. In fact there seems an almost masochistic need to downplay achievements and emphasize deficiencies. The purpose of this may well have been to find a way of identifying and defining problems and then of formulating possible solutions. This is specially true with reference to the universities. These are exposed as being of poor quality with little evidence of scholarly publishable work, with widespread dishonesty by staff and students. References are made to plagiarism, to spurious data and inappropriate methods of research, to falsified mark-sheets, and fraudulent entry qualifications. The prodigious rate of expansion in higher education has outrun the available resources in high quality man-power and materials.

Among the many questions posed by these essays, the most immediate and probably the most important is: "What will happen as a result of the discussions, opinions, and hypotheses formulated here?" The stated purpose of the original conference was the very modest one of rekindling interest in the study of India among academics in the social sciences; but one would hope for much more. Academics in developed countries like Canada can do little except discuss and perhaps, from greater or less ignorance of the lives of Indians, offer tentative solutions to some of the problems outlined here. What is necessary is that ideas should be propagated in India where they may have an impact on those who have the knowledge and the power to change the social structure, including the educational system.

**L.B. Birch**  
McGill University

**Russell L. Hanson.**

**THE DEMOCRATIC IMAGINATION IN AMERICA.**

Princeton: Princeton University press; 1985.

312 pp. \$45.00 US, hard cover/\$9.95 US, paper.

The author is critical of progressive and revisionist historians. To him both of these schools are essentially antihistorical and transhistorical. The basic weakness of these approaches is that they assume American democracy to be a developmental process, advancing in a positive direction under a pre-designed, utopian manifesto. Its designer is a mythological hero, or some trans-terrestrial divinity who sowed democratic seeds that would bring forth in time the American democracy in full bloom. The final product is seen as a result of progressive stages that follow a "preordained" format.

illiterate, this would seem unrealistic. Frequent references to the use of remedial education may also be indicative of unwarranted optimism.

A striking feature of this collection of essays is their frankness over the problems, failures, and shortcomings of India's educational endeavours. In fact there seems an almost masochistic need to downplay achievements and emphasize deficiencies. The purpose of this may well have been to find a way of identifying and defining problems and then of formulating possible solutions. This is specially true with reference to the universities. These are exposed as being of poor quality with little evidence of scholarly publishable work, with widespread dishonesty by staff and students. References are made to plagiarism, to spurious data and inappropriate methods of research, to falsified mark-sheets, and fraudulent entry qualifications. The prodigious rate of expansion in higher education has outrun the available resources in high quality man-power and materials.

Among the many questions posed by these essays, the most immediate and probably the most important is: "What will happen as a result of the discussions, opinions, and hypotheses formulated here?" The stated purpose of the original conference was the very modest one of rekindling interest in the study of India among academics in the social sciences; but one would hope for much more. Academics in developed countries like Canada can do little except discuss and perhaps, from greater or less ignorance of the lives of Indians, offer tentative solutions to some of the problems outlined here. What is necessary is that ideas should be propagated in India where they may have an impact on those who have the knowledge and the power to change the social structure, including the educational system.

**L.B. Birch**  
McGill University

**Russell L. Hanson.**

**THE DEMOCRATIC IMAGINATION IN AMERICA.**

Princeton: Princeton University press; 1985.

312 pp. \$45.00 US, hard cover/\$9.95 US, paper.

The author is critical of progressive and revisionist historians. To him both of these schools are essentially antihistorical and transhistorical. The basic weakness of these approaches is that they assume American democracy to be a developmental process, advancing in a positive direction under a pre-designed, utopian manifesto. Its designer is a mythological hero, or some trans-terrestrial divinity who sowed democratic seeds that would bring forth in time the American democracy in full bloom. The final product is seen as a result of progressive stages that follow a "preordained" format.

Hanson's operational use of democracy allows him to limit its meaning to an elastic, abstract concept that changes over time. Democracy is therefore an ephemeral, relative construct rather than a constant, absolute phenomenon. Within this limited construction, he sees American democracy as a loose entity being periodically defined in the context of democratic rhetoric. Its time-limited meaning comes from an array of historical arguments presented by significant contestants whose intent is to control its connotation by manipulating political symbols in order to augment their own ideological preferences. The fluidity of democracy is demonstrated by the displacement of one ideological conception with another. The circulatory conceptualizations are associated with economic changes, and are symbolized by new rhetoric seen in linguistic language (e.g., party platforms and party slogans).

In his interpretation he relies heavily upon the neo-Marxist theories of Marcuse and Habermas. The emerging definitions of democracy shift in the direction of the ruling class. This interplay between the dominant ideology and the economic reality is ever present. In this he agrees with the Marxist dictum that "the ruling class of every age are ideas of the ruling class" (p. 9). The major economic transitions in the American system are the movements from mercantilism to competitive capitalism, and finally to welfare capitalism. In clarifying the association between ideology and economic systems, Hanson assures his readers that "economic transformations are the occasions of significant ideological shifts, but not their causes" (p. 9).

Most of the book (chapters 2-11) is an interpretation of American history from the republican rhetoric of the founding fathers to the conservative Reagan era. Hanson attempts in this major section of the work to justify his theoretical model developed in chapter one, and then he prepares the readers for his closing arguments in chapter twelve. The nine in-between chapters are more concise and non-ideological than is his rather elusive and undisciplined discourse in the first and last chapters. These ten chapters, which are less innovative and argumentative, wear better than the two chapters which begin and end with abstract, ideological arguments. However, it must be added that if Hanson is to make any significant contribution to our understanding of American democracy, it must be from his theoretical paradigm. Yet it is this model that is rather murky and formless in its development.

In these ten relatively unprovocative chapters, he reviews the unfolding of American democracy. The debate in the liberal democracy begins with the founding fathers and continues until the New Deal, at which time the debating ends and the real crisis of the system begins. The Federalists and the Republicans carried on their lively, engaging debate until

the Civil War. Until the Progressive Era of Teddy Roosevelt, the bourgeois economy remained essentially intact. It survived the federalist, republican, and Jacksonian periods. Lincoln's conservative views confirmed the longstanding economic system, and it was to retain its vitality on into the twentieth century. Throughout this period there was an ongoing debate, so the rhetoric of democracy was still alive (e.g., Whigs and Populists). It was the Progressive Era and the New Deal that modified the plutocratic *laissez faire* doctrine. The New Deal subordinated the system to the extent that it was dominated by materialistic consumerism and bureaucratic experts (p. 291). Liberal discourse was displaced by technocratic consumerism. With a drugging of the popular mind, democratic discourse was sabotaged. Hanson's critique of the New Deal is simplistic and myopic; however, it does set the stage for his liberation theology in the final chapter.

Liberation theology challenges the status quo, or the quagmire into which the nation has stagnated. Almost with a magician's sleight of hand, Hanson rests his final argument on a time line, linearly bifurcated into the past and future, or if you will, the interlinking of traditionalism and eschatology. The oppressed people of the present can ensure a liberated future by wisely discarding the status quo with actions stimulated by remembrance of past traditions. "Remembrance restores the possibility of liberation as present action oriented toward the future" (p. 403). The future must be summoned by liberation rhetoric if it is to come with a meaningful repertoire.

To Hanson the telling and the making of the story is the primary role of history. Liberal democrats are obligated to act upon the hope of a better future; thereby, they can translate a stagnated present into a viable future. By so doing, they revise the rhetoric of democracy, and help secure the perpetuity of our political system.

Hanson's mystical future is illusionary at best. In essence he seems content to hand over our free society to an unclear, uncharted future. He opts for an imaginary future with a happy ending without addressing the real possibility of a *coup d'etat* staged by an oppressive party that capitalizes on the naivete of the confused masses who become captive to an orchestrated cohort of potentially evil tyrants. His moral, utopian society of the future is unrealistic and apolitical where political realities of the actual world are circumvented by a dream that could easily become a political nightmare.

S. Mont Whitson  
Morehead State University (Ky)

## Books Received

The following is a list of books received by the M.J.E. Not all the books received can be reviewed, although reviews of some of these books may appear in future issues. We wish to thank all of the publishers who have sent us review copies.

Duckworth, Eleanor. (1987). *"The having of wonderful ideas" and other essays on teaching and learning*. New York: Teachers College, Columbia University. 168 pp. \$13.95.

Friesen, John W. (1987). *Reforming the schools for teachers*. Lanham, MD: University Press of America. 151 pp. \$24.50. Paper \$11.25.

Gaskell, Jane, & Arlene McLaren. (1987). *Women and Education. A Canadian perspective*. Calgary: Detselig Enterprises Ltd. 398 pp. \$14.95.

Goldenberg, E. Paul, & Wallace Feurzeig. (1987). *Exploring language with logo*. Cambridge, MA: MIT Press. 338 pp. \$19.95.

Henchey, Norman, & Donald Burgess. (1987). *Between past and future: Quebec education in transition*. Calgary: Detselig Enterprises Ltd. 294 pp. \$21.95.

National Forum Secretariat. (1987, October). *The forum papers - National Forum on Post-secondary Education* (\$10.), and *Proceedings* (\$15.). Halifax: The Institute for Research on Public Policy.

Richards, Donald M. & Eugene W. Ratsoy. (1987). *Introduction to the economics of Canadian education*. Calgary: Detselig Enterprises Ltd. 127 pp. \$17.95.

Secretary of State & Statistics Canada. (Marion Porter & Gilles Jasmin). (1987, April). *A profile of post-secondary students in Canada*. The 1983-84 National Post-secondary Students Survey. Ottawa: Education Statistics Analysis & Education Support Sector, Department of the Secretary of State. Cat. No. 32-179-1987.

## Contributors

**Thomas Owen Eisemon** is a professor of Educational Psychology and Co-Director of the Centre for Cognitive and Ethnographic Studies at McGill University. He is also attached to the Harvard Institute for International Development and is presently working on a series of studies examining cognitive outcomes of primary schooling in East African and South Asian countries.

**Brennan R. Hill** was educated at Cambridge University, Catholic University of America and Marquette University where he received his Ph.D. in Religious Studies. He is presently Assistant Professor of Theology and Religious Education at Xavier University in Ohio. His most recent publication, *Key Dimensions of Religious Education*, is published by St. Mary's Press.

**Margaret MacLean**, an assistant professor in the Faculty of Education at the University of Ottawa, teaches courses in the educational applications of computers, and is Co-ordinator of the Computers in Education Program in Teacher Education (English). Her research interests include school uses of computers and the impact of computers on reading and writing development.

**Joe Darwin Palmer**, Associate Professor of Applied Linguistics, has been at Concordia University since 1973. A native of Indiana, he completed his doctorate at the University of Michigan. He has been a visiting professor at universities in Bangkok, Mexico City, Senegal, and Cairo. His primary research interest is literacy and English for specific purposes.

**Vimla L. Patel** is Associate Director of the Centre for Medical Education, an associate professor of medicine and an associate member of the Department of Educational Psychology. She has published extensively on cognitive studies in medicine, particularly in the area of medical reasoning and comprehension. Her recent research applies cognitive methodologies to the study of educational aspects of health care delivery.

**David Piper** currently teaches courses in special education and psycholinguistics in the department of Educational Psychology at the University of Calgary. He has experience in teaching English as a Second Language both in Britain and Western Canada, and is interested in all aspects of language development and language education. He is currently conducting research on writing development in a multi-ethnic grade 2 class in Calgary.

**Susan Plaisance**, a native of Kalamazoo, Michigan, received a B.A. in secondary education from Western Michigan University (1965) and her M.Ed. at the University of New Orleans (1983). She has done graduate studies at Nicholls State University, and is currently a doctoral candidate in the English Department at Louisiana State University. Ms. Plaisance has co-authored a book on Louisiana parish governmental seats, with Randall Detro (Nicholls State University).

**Paddy Webb** comes from Essex, England. She retired from McGill University, Faculty of Education, in 1987. Publications include individual poems that have appeared in numerous literary magazines and periodicals; two books of poetry, *Between Two Fires*, (Delta Canada, 1971), and *Children & Milkweed*, (Priapus Press, England, 1978); a novel, *Rough Passage*, (Quadrant Editions, 1985). A new book of poetry (*Women Listening*) and a second novel (*On The Margins*) are awaiting publication.

## Collaborateurs

**Thomas Owen Eisemon** est professeur de psychopédagogie et co-directeur du Centre d'études cognitives et ethnographiques à l'université McGill. Il est également attaché à l'Institute for International Development de Harvard et travaille actuellement à une série d'études qui porte sur l'examen des résultats cognitifs de la scolarité primaire dans des pays d'Afrique orientale et du Sud-Est Asiatique.

**Brennan R. Hill** a fait ses études à l'université de Cambridge, à l'université catholique d'Amérique et à l'université Marquette où il a obtenu un doctorat en théologie. Il est actuellement professeur adjoint de théologie et d'éducation religieuse à l'université Xavier. Son ouvrage le plus récent, *Key Dimensions of Religious Education*, est publié aux presses St. Mary's.

**Margaret MacLean**, professeur adjoint à la faculté des sciences de l'éducation de l'université d'Ottawa, est chargée de cours sur l'informatique éducative et elle est coordinatrice du programme d'informatique éducative dans le cadre de la formation des maîtres (anglais). Ses recherches portent sur l'utilisation des ordinateurs à l'école et sur l'impact des ordinateurs sur la façon dont les enfants apprennent à lire et à écrire.

*Joe D. Palmer* a mis au point des programmes d'enseignement de l'anglais spécialisé dont il s'est lui-même servi aux Etats-Unis, en Somalie, en Thaïlande, en Egypte, au Japon, au Mexique et au Sénégal. Il est actuellement professeur agrégé de linguistique appliquée au Centre for Teaching English as a Second Language, de l'université Concordia à Montréal.

*Vimla L. Patel* est Directrice Adjointe du Centre d'éducation médicale, professeur agrégé de médecine et membre adjoint du département de psychopédagogie. Elle a abondamment publié sur les études cognitives en médecine, surtout dans le domaine du raisonnement et de la compréhension médicale. Ses recherches les plus récentes l'ont amenée à appliquer des méthodologies cognitives à l'étude des aspects éducatifs de la présentation des soins de la santé.

*David Piper* est actuellement chargé de cours d'éducation spéciale et de psycholinguistique au département de psychopédagogie de l'université de Calgary. Il a enseigné l'anglais langue seconde en Grande-Bretagne et dans l'Ouest du Canada et s'intéresse à tous les aspects du développement linguistique et de l'enseignement des langues. Il fait actuellement des recherches sur le développement de l'écriture dans une classe multi-ethnique de deuxième année à Calgary.

*Susan Plaisance*, originaire de Kalamazoo au Michigan, a obtenu son B.A. en éducation secondaire à la Western Michigan University (1965) et son M.Ed. à l'université de la Nouvelle-Orléans (1983). Elle a fait des études supérieures à la Nicholls State University et est actuellement inscrite en doctorat au programme d'anglais à l'université d'état de la Louisiane. Mme Plaisance est l'auteur avec Randall Detro (Nicholls State University) d'un livre sur les sièges paroissiaux en Louisiane.

*Paddy Webb* est originaire d'Essex, Angleterre. Elle pris sa retraite de la Faculté des sciences d'éducation de l'université McGill en 1987. Ses publications comprennent des poèmes individuels qui furent publiés dans de nombreuses revues littéraires, et journaux; deux livres de poésies, *Between Two Fires* (Delta Canada, 1971), et *Children & Milkweed* (Priapus Press, England, 1978); un roman *Rough Passage* (Quadrant Editions, 1985). Un nouveau livre de poésies (*Women Listening*) et un second roman (*On The Margins*) sont dans l'attente de publication.



**Linguistics and Literacy** **Joe D. Palmer** **37**

Un grand débat sur l'alphabétisme est en cours depuis quelque temps déjà et pourtant personne ne s'entend même à convenir sur ce qui fait l'objet du débat. Les professeurs d'anglais sont au désespoir. Il n'a pas été prouvé que la seule lecture favorisait le développement d'aptitudes cognitives supérieures. L'apprentissage de la lecture et de l'écriture n'est pas toujours associé à l'amélioration sociale et au progrès. Les recherches sur l'alphabétisme doivent refléter de nombreuses disciplines, particulièrement la linguistique où les recherches récentes sur la langue en usage révèlent des définitions, des faits et des aperçus sur la nature de l'alphabétisme.

**Negative Attitudes** **Susan Plaisance** **50**  
**Toward Gifted Education**

L'auteur de cet article examine quelques unes des attitudes négatives que suscitent les programmes pour élèves surdoués. L'auteur soulève plusieurs questions controversées et exprime parfois avec vigueur les préjugés qui sont à la base des problèmes concernant l'éducation des enfants surdoués. Enfin, il analyse les conséquences de ces attitudes sur le leadership futur d'un pays.

**Alfred North Whitehead's** **Brennan R. Hill** **59**  
**Approach to Education**

Dans cet article, l'auteur examine les théories pédagogiques d'Alfred North Whitehead en s'interrogeant sur les conséquences que ces théories pourraient avoir sur l'éducation religieuse contemporaine. Il étudie deux thèmes centraux dans la théorie de l'éducation de Whitehead: 1) l'éducation en tant qu'autocréation, et 2) l'éducation en tant qu'expérience holistique.

**Technology Can Help:** **Margaret MacLean** **74**  
**Children comment on computers**

Bien qu'il y ait plusieurs études consacrées à l'utilisation des ordinateurs à l'école, les recherches portant sur la perception des ordinateurs par les enfants sont relativement rares. Dans cet article, l'auteur présente les résultats d'entrevues qu'il a eues avec des élèves du primaire pour savoir ce qu'ils pensaient des ordinateurs et de l'apprentissage, quels usages ils prévoyaient en faire à l'intérieur comme à l'extérieur de l'école et les problèmes que cela leur posait. Leurs observations sont regroupées en trois sections: l'ordinateur comme instrument, l'apprentissage en collaboration et la résolution des difficultés. L'auteur analyse alors les conséquences de leur perception dans ces secteurs.

## Review Board/Comité consultatif

- |   |   |
|---|---|
| <b>Glen S. Alkenhead</b><br><i>University of Saskatchewan</i>                 | <b>Wayne K. Hoy</b><br><i>Rutgers University</i>                              |
| <b>Anthony Adams</b><br><i>Cambridge University</i>                           | <b>Roselmina Indrisano</b><br><i>Boston University</i>                        |
| <b>Rodney Bain</b><br><i>University of Western Ontario</i>                    | <b>J.D. Jefferis</b><br><i>Bishop's University (Retired)</i>                  |
| <b>Garth Boomer</b><br><i>Commonwealth Schools<br/>Commission (Australia)</i> | <b>Henning Johansson</b><br><i>Luleå University (Sweden)</i>                  |
| <b>André Brassard</b><br><i>Université de Montréal</i>                        | <b>Vivian F. Kinsey-Talley</b><br><i>St. Charles Parish<br/>Schools (La.)</i> |
| <b>N. Peggy Burke</b><br><i>University of Iowa</i>                            | <b>Donald M. Little</b><br><i>Acadia University</i>                           |
| <b>Pierre Calvé</b><br><i>University of Ottawa</i>                            | <b>Barry Lucas</b><br><i>University of Saskatchewan</i>                       |
| <b>Richard Coe</b><br><i>Simon Fraser University</i>                          | <b>Neil McDonald</b><br><i>University of Manitoba</i>                         |
| <b>James Draper</b><br><i>Ontario Institute<br/>for Studies in Education</i>  | <b>Charles P. McFadden</b><br><i>University of New Brunswick</i>              |
| <b>Eleanor Duckworth</b><br><i>Harvard University</i>                         | <b>Alice Morgan</b><br><i>Kentucky Christian College</i>                      |
| <b>Glen Eskedal</b><br><i>Suffolk University</i>                              | <b>Hugh Munby</b><br><i>Queen's University</i>                                |
| <b>Avigdor Farine</b><br><i>Université de Montréal</i>                        | <b>Douglas Ray</b><br><i>University of Western Ontario</i>                    |
| <b>Mona Farrell</b><br><i>Concordia University</i>                            | <b>Bruce Roald</b><br><i>Dalhousie University</i>                             |
| <b>Gerald Grace</b><br><i>University of Wellington (New Zealand)</i>          | <b>Douglas A. Roberts</b><br><i>University of Calgary</i>                     |
| <b>Janet Hansche</b><br><i>Tulane University</i>                              | <b>Ronald Smith</b><br><i>Concordia University</i>                            |
| <b>Paul Hirst</b><br><i>Cambridge University</i>                              | <b>Karen Watson-Gegeo</b><br><i>University of Hawaii</i>                      |
|   | <b>Janice Yalden</b><br><i>Carleton University</i>                            |

*Le McGill Journal of Education* paraît trois fois par an, en hiver, au printemps et à l'automne.

Tarif d'abonnement, post payé: 18\$ pour une année.

Prix du numéro: 6.50\$. Le numéro special sur la paix: 10.00\$

L'abonnement est payable au *McGill Journal of Education* et toute demande doit être adressée au 3700, rue McTavish, Montréal (Québec) Canada H3A 1Y2. Téléphone: (514) 398-4246.

Le *MJE* est indexé par le *Canadian Education Index* et par le Centre d'information sur les ressources pédagogiques (CIRP). Il figure dans l'*International Periodicals Directory* d'Ulrich, il est résumé dans *Sociology of Education Abstracts* et dans *Canadian Social Science Abstracts* et il existe en microfilms chez University Microfilms, Inc., à Ann Arbor dans le Michigan. Les anciens numéros sont disponibles sous microforme auprès de Micromedia Ltd., 158 rue Pearl, Toronto (Ontario) Canada M5H 1L3. Numéro de série international: CN ISSN 0024-9033.

## Table of Contents

<b>Editorial</b>	W.M.T.	3
<b>Multicultural Teaching: Critical-reflective approaches</b>	David Piper	5
<b>Improving Health Education in Kenya</b>	Thomas O. Eisemon Vimla L. Patel	17
<b>Linguistics and Literacy: A new understanding</b>	Joe D. Palmer	37
<b>Negative Attitudes Toward Gifted Education</b>	Susan Plaisance	50
<b>Alfred North Whitehead's Approach to Education: Implications for religious education</b>	Brennan R. Hill	59
<b>Technology Can Help: Children comment on computers</b>	Margaret MacLean	74
<b>In Memoriam</b>		
– Helen V. Gougeon		85
– Lois Tetreault		87
<b>Book Reviews</b>		89
<b>Books Received</b>		96
<b>Contributors/Collaborateurs</b>		97
<b>Résumés</b>		100
<b>Poems</b>	Paddy Webb	Passim

Intending authors should be aware that the *Journal's* readership extends well beyond the ranks of academics and professionals in education to which they are likely to belong. While the content of an article is expected to stand up under the scrutiny of specialists in its field – during the process of review before its acceptance for publication – its language and tone should not follow the conventions of scholarly writing in such a way as to shut out the non-specialist. (Unless they are of exceptional clarity, the *Journal* does not normally accept articles intended for specialist audiences alone.) The terminology employed should be accessible to intelligent lay readers; and notes, tables, and other apparatus of the formal paper should be omitted or else kept to the minimum necessary for the purposes of an interested reader. In short, the *Journal* asks for the lucidity that is a hallmark of the expert.

The *Journal* accepts English or French articles in the form of essays, interviews, descriptive reports of research, and critical reviews of books. Lighter pieces, humorous material, poetry and graphics of quality are also welcome. All written material should be furnished (following the style outlined in the American Psychological Association Publication Manual, 3rd edition) double spaced, in triplicate. Each copy should have a separate title page containing the author's name, which should not appear on the manuscript itself. A desirable length of article is between 10 and 15 pages. Articles (except book reviews) must be accompanied by a 100-200 word abstract (if possible, in the other language), and a short biographical note about the author. It is assumed that articles submitted for consideration have not been simultaneously submitted to any other publication. Authors whose articles are accepted for publication will be requested to assign all rights to copyright to the *Journal* by means of a standard form.

All submissions should be addressed to the Editor, McGill Journal of Education, 3700 McTavish Street, Montreal, Quebec, Canada H3A 1Y2.

Les futurs auteurs doivent comprendre que les lecteurs du *Journal* dépassent largement le groupe de spécialistes et de professionnels de l'enseignement dont font partie les auteurs. Bien que le contenu d'un article doive être en mesure de supporter l'examen des spécialistes dans le domaine – au cours de l'étape de révision précèdent l'acceptation du texte destiné à la publication – la langue et le ton ne devraient pas suivre les règles de la rédaction savante au point d'être hermétique aux non spécialistes. (A moins qu'ils ne soient d'une limpidité exceptionnelle, le *Journal* n'accepte normalement pas d'articles destinés à un auditoire composé uniquement de spécialistes.) La terminologie utilisée doit être accessible aux lecteurs intelligents mais profanes; les notes, tableaux et autres éléments en retrait du texte doivent être omis ou du moins réduits au minimum pour répondre à l'intérêt du lecteur. En d'autres termes, le *Journal* demande aux auteurs de faire preuve de la lucidité qui est un trait propre aux spécialistes.

Le *Journal* recherche des articles rédigés en français ou en anglais, sous forme d'exposés, d'entrevues, de rapports descriptifs de recherche, ou d'études critiques d'ouvrages. Il accueille aussi des articles de style plus léger, des éléments humoristiques, des poèmes et des illustrations graphiques de qualité. Tout article doit être soumis (selon les indications de style données par le manuel des publications de la American Psychological Association, 3<sup>e</sup> édition), à double interligne, en trois copies. Chaque copie doit comprendre une page de garde portant le titre de l'article et le nom de l'auteur, mais celui-ci ne doit pas apparaître sur le manuscrit même. La longueur ordinaire d'un article est de 10 à 15 pages. Les articles (sauf les comptes rendus de livres) doivent être accompagnés d'un résumé de 100 à 200 mots (si possible dans une autre langue) et d'une courte biographie de l'auteur. Les articles soumis sont censés ne pas avoir été présentés simultanément à une autre publication. Les auteurs dont on accepte de publier les articles seront tenus de céder tous les droits d'auteur au *Journal* au moyen d'un formulaire standard.

Tout manuscrit doit être adressé comme suit: Le Rédacteur en chef du McGill Journal of Education, 3700 rue McTavish, Montréal (Québec), Canada H3A 1Y2.

**McGill Journal of Education**  
Faculty of Education  
3700 McTavish St.  
Montreal, P.Q., Canada  
H3A 1Y2

